

strategy is for staff in the support agencies to focus on developing relationships between them and the owner/manager participants. Similarly, the Council for Excellence in Management and Leadership (2002), recommends that intermediaries that the managers of small firms trust (such as accountants, bank managers etc) be used to persuade the managers of small firms to engage in developmental initiatives. However, this view (which implies that the firm's current support network is the most appropriate network to use) is challenged by others (Devins, Johnson, Gold, & Holden, 2002) who present a model of how to encourage micro-enterprises to reach beyond their usual network of support and advice.

The assumption of all these studies is that if individuals can be persuaded to engage in training and/or other appropriate developmental activities, then the firm will benefit, through enhanced 'capability' and improved performance.

Method

During preliminary discussions with the project sponsor within the Ministry it became clear that the BCP was primarily interested in the sort of insights that could further amplify some of the issues identified by a previous piece of work by the same research team, in which 50 firms were visited and their owner-managers interviewed (Coetzer, Lee, Lewis, Massey, & Perry, 2007). This research (which primarily focused on employee learning) suggested that a range of factors influenced whether this occurred or not – and that not all firms were equally affected by these factors. The research also indicated that owner-managers frequently relied on low-cost learning resources that were relevant to their firm's problems, priorities and work practices, such as those provided by trade associations and suppliers – which often became important parts of the small firm's 'learning networks'.

As a result of a series of conversations about this research (and other studies summarised in the literature review) these conversations, a qualitative research approach was selected and a decision was made to undertake interviews with the owner-managers of 25 firms in the Wellington region – all of whom could be described as aware of the opportunities for management development (MD) that were available. All firms were drawn from a database of firms provided by the local economic development agency and the fact that they had contacted the agency was used as an indicator that the firm manager was aware of these opportunities.

The specific objectives of the research was to: assess the nature and significance of management development (MD) in small New Zealand firms; understand the impediments to managers engaging in MD; and identify the most appropriate MD practices for the owner-managers of small firms. A semi-structured interview schedule was designed in consultation with the Management Focus Advisory Board. This drew on the framework developed by Marsick and Watkins (1990), which identified formal learning, informal learning and incidental learning as being the main ways in which managers develop their skills.

The research involved interviews with the owner-managers of 25 Wellington-based SMEs. The interviews were carried out between August and November 2008 by a team of three researchers. A total of 25 firms in the manufacturing and services sectors in the Wellington region were visited and their owner-managers interviewed. The firms were selected from a database of firms provided by the local development agency (Grow Wellington) which allowed us to get a sample of firms that were aware of management development activities but were not currently engaged in any. Each firm was visited by a member of the research team and the owner-manager was interviewed. All interviews were recorded and the interview transcript was sent back to this individual for approval. This approach followed the guidelines provided by the Massey University Human Ethics Committee which approved the way in which the team planned to select the interviewees and collect and store the data.

Results

Of the 25 firms, 16 employed fewer than 20 employees, while nine employed over 20. Most firms were limited liability companies, with only three being partnerships. Four firms could be best described as sole proprietors, nine were family owned and the rest were either partnerships (5) or had shareholders (7). The average age of the firms interviewed was 23 years with the youngest firm being a year old and the oldest 112 years old. The average turnover was NZ \$3.6 million a year and only four firms were currently exporting. Thirteen firms were in the Wellington CBD, 9 were in nearby Lower Hutt and the remainder were in the wider Wellington Region.

Table 1: Demographics of respondents

Interview No.	Gender	Qualification ¹	Establishment year	Size (FTEs)	Turnover (NZ\$)	Currently exporting
01	F	8	2007	3	250k	n
02	M	5	-	15	5m	n
03	M	5	2001	6	2m	n
04	F	9	2004	1	130k	n
05	M	9	1993	35	3.5m	n
06	F	7	2002	19	3.m	n
07	M	8	1999	25	7m	n
08	M	3	1982	13	2.4m	y
09	M	8	1997	100	10m	y
10	F	9	2005	2	450k	n
11	F	6	1978	7	750k	n
12	M	5	1987	10	3m	n
13	M	8	2005	7	2m	n
14	M	3	1986	27	5m	n
15	M	7	1976	20	4.2m	n
16	M	5	1966	9	7.5m	n
17	M	2	1945	22	2m	n
18	F	8	2003	15	5.5m	y
19	M	6	2002	6	750k	n
20	M	3	1990	24	12m	n
21	F	8	1991	13	1m	n
22	M	8	1934	30	3.5m	n
23	F	8	1992	12	4m	n
24	F	9	1991	10	3m	n
25	M	9	1896	50	undisclosed	y

¹ Highest qualification of interviewee: 1=Less than secondary; 2=secondary; 3=school certificate or NCEA1; 4= sixth form certificate or NCEA2; 5=university entrance; 6=bursary exam/high school certificate; 7=technical or trade certificate; 8=bachelor degree/diploma; 9=graduate degree; 10=postgraduate degree.

Just over a third of the individuals interviewed were women (9), with the remaining 16 being men. Roughly half of those interviewed had bachelors' degrees (or the equivalent), 15 percent had not finished secondary school and a further 16 percent had university entrance. Five of those interviewed currently owned other businesses as well as the one they were interviewed about. The average age at the time of becoming self-employed was 32 years old.

Management development and its significance

In this section of the interview we explored perceptions of the importance and nature of MD. We started out by asking interviewees to explain how important MD was to them. We then set out to understand how they had gone about developing their managerial capabilities. Here we used Baldwin and Patgett (1994) and Mumford and Gold (2004) as a way of explaining MD to our interviewees – as a complex learning process through which managers 'develop' and 'learn' to manage effectively.

After giving the interviewees an understanding of what we meant by MD, we tried to ascertain how managers view their own MD and the importance they attach to it. Most of those interviewed considered MD to be an important factor in managerial performance and firm success. Their reasons for considering it to be important included the following: (1) MD increases confidence levels; (2) MD compensates in some way for perceived shortcomings in formal education and training, especially in relation to others through affirmation; and (3) MD helps to address specific management issues.

In some cases, participating in management training was seen as a way of increasing confidence and as an opportunity to bounce ideas off fellow business people. *For my role it has been immense... it gives you a bit more confidence in yourself and for me doing these courses it just makes me aware that there are other people out there in the same situations as us and we can actually put ideas back and forwards with people. It's just to give you that confidence in yourself that you can do it. It can be quite intimidating sometimes.* (Firm 18).

Another grouping in the responses included those who felt it was important to make up for lack of formal training in management, or, in some cases, limited formal education. *I think it's very important ... being a self taught manager, ..., I haven't done an MBA or any ... tertiary business studies, I think it is important that those facilities are there for self taught people that want to extend themselves* (Firm 12).

Finally, some participants took management training in order to address specific issues that they encountered. This was usually at the early stages of the business set up. *We're doing a lot or learning about how to run a business and how to develop it and then how to manage our systems, our finances; we're learning all of this from scratch* (Firm 1).

After trying to establish how important managers in this study considered MD to be, we set out to understand what they had done to develop their managerial capabilities. In general, the decision to engage in formal MD activities appeared to be a reactive response to an immediate development need. *If I want to understand Key Performance Indicators better, I would go on a half day course* (Firm 24).

As is clear from the previous section, there did not appear to be a common reason for engagement in MD, nor was a uniform approach to MD apparent. What did become evident was that there appears to be 'triggering circumstances' that prompt some owner-managers to engage in MD with a view to enhancing their managerial capability. These triggering circumstances can be summarised as follows:

- Engaging in MD was most likely to take place at the early stages of the individual's involvement as an owner-manager. During this phase the main incentive was to overcome the manager's perceived shortcomings due to the novelty of the management role and of being in charge of a business. For many, attendance at a seminar or short course was seen as a useful way of confirming that they were on the right track, through information gleaned from the course content and through interaction with other course attendees. This interaction with

fellow business owners appears to have given those that used this strategy a boost in confidence. These types of interactions were also found useful as the ‘new’ small business owners were able to learn without having to ‘reveal their ignorance’ and feel exposed. *The training helped because it was with like-minded people, you weren’t giving away your weakness because everybody in the room had the same weakness* (Firm 1).

- As the small business owner became more experienced in running their business it was often the case that he or she required particular knowledge, prompting them to seek specialist advice on specific issues arising from the business. This knowledge was often sought from friends, family or other business owners. It could also involve mentors, accountants, lawyers and bank managers. Often this form of knowledge acquisition was highly valued as the owner would apply this knowledge to future situations. *When I have something I don’t understand I will go and ask somebody I know, not for the answer, but how to think about it, or who could help me. So ... that’s my natural way of sort of developing myself is ask, to ask other people* (Firm 13). In this way the knowledge from family, friends and business associates had fostered their learning and development because it was used as a building block in the development of his or her managerial capability.
- As the business grew, the manager found his or her role changing and this created a need for managerial capabilities that were more dynamic and diverse. This prompted engagement in learning and development related to specific issues, such as dealing effectively with staff, dealing with compliance issues or, in some cases, looking at strategies to develop and grow the business in the medium term.

The next section of the interview schedule looked at the type of learning processes that had been used by the participants in this study to develop their managerial capabilities. As could be expected, the type of learning that was undertaken by the sample of interviewees was not uniform and different learning processes were used at different times, according to the needs of the individual and the business. In order to categorise these learning processes we used the theoretical framework developed by Marsick and Watkins (1990). This framework distinguishes between ‘formal’, ‘informal’ and ‘incidental’ learning.

Formal Learning. Formal learning is considered to be an organised learning event or package that is institutionally sponsored, highly structured and classroom based, and which may be undertaken with the aim of achieving a recognised qualification. The learning content is typically chosen by an educator or trainer and presented to the learner (Marsick & Watkins, 1990). Accordingly, in this category we grouped learning episodes that included attending an evening seminar, a half-day or more intensive training course, through to a more involved course or management-related tertiary education.

Most interviewees had attended short courses that were related to specific needs at a given stage of the life-cycle of their firm. They were more likely to use this mode of learning in the early stages of firm development, more specifically at start-up. *I did go to a couple of small business workshops earlier on* (Firm 11).

However, there was a small group of interviewees who disliked classroom type learning and had consequently avoided this type of training. *I used to go to the odd seminar and whatnot and I find ... most of them are quite banal and have very little application to what we do* (Firm 8).

On the other hand, some had gone to more structured and intensive courses, such as those offered by the Icehouse (a business accelerator attached to the University of Auckland – a city at considerable distance from Wellington), and found them rewarding. *It was really good; I really enjoyed it* (Firm 18).

As the owner-manager developed new skills and capabilities in running the business, and the business itself entered a new phase, managers were less likely to engage in formal training, especially in a classroom-type setting. This was partly due to the perception that they would not learn anything new because most of these courses were aimed at new businesses. For instance, in

one case an interviewee reported attending a workshop where business owners were meant to share experiences with each other but found that although he was able to share his experiences with others (and enjoyed doing so) he was not getting much out of it for his own development. While not dismissing this type of interaction, the manager in question expected not only to share his experiences with others, but also to gain insights for the development of his own managerial capabilities. Nevertheless, experienced owner-managers, such as this one, still saw value in 'refresher' type courses: *Well ... when you've been in business for ten years you know so much and ... some of that information is more reminding you about what you know rather than teaching me anything new, but there's always something new in it which is valuable. It makes you just aware again* (Firm 12).

Informal Learning. Informal learning was another type of learning that was used by the owner-managers we interviewed. Marsick and Watkins (1990) refer to learning that occurs outside formal contexts as informal and incidental learning. Informal learning has the following attributes: it is based on learning from experience; it is embedded in the organisational context; it has a focus on action; it is governed by non-routine conditions; it is concerned with tacit dimensions that must be made explicit; it is delimited by the nature of the task, the way in which problems are framed, and the work capacity of the individual undertaking the task; and it is enhanced by pro-activity, critical reflection and creativity. We kept this category as broad as possible to be able to incorporate as many insights about the participants' informal learning as possible. In this category we grouped learning that was gained from mentors, coaches and networking interactions.

Although there is a difference in the academic literature between mentoring and coaching, for the purposes of this research we have used the terms interchangeably. Many of the interviewees had experienced business coaching or mentoring at one or more stages of their business' development. As might be expected, coaching seemed to be used at particular transition points during the business life-cycle. In one instance the firm experienced substantial staff cutbacks and coaching was used as a way of developing a strategy for the firm's direction. *He did a cold call and approached us and it just seemed to be the right time because it was a couple of months after we had laid off the guys and ... it was sort of just trying to figure out what we actually...could do ... and it has helped us understand how to run a profitable company* (Firm 18).

The opportunities that coaching gave the managers to focus on themselves and on their own personal development was another positive aspect of coaching. It allowed the manager to take time away from the business to focus on his or her personal needs. *I've had personal development coaching...I did that for two years, that was good, because it was about me. And when you're a manager and an owner of your own business you're often about everybody else so it was about understanding what it is that makes me work and what I need to focus on to make it work for me* (Firm 12).

Other types of informal learning activities involved seeking out of specialist knowledge in response to specific learning needs. This type of knowledge could be accessed by asking professional specialists (such as lawyers, accountants and bank managers). *Usually when I have something I don't understand I will go and ask somebody I know, not for the answer but how to think about it or who could help me. So I have quite a way, you know, that's my natural way of sort of developing myself is ask, to ask other people* (Firm 13).

Specialist knowledge could also be accessed through knowledgeable family, friends and businesses associates. *Family and friends I mean both families tend to be quite knowledgeable in different areas of business so that's been really helpful what with one being lawyer has been helpful as well... talking to other businesses as well how do you guys do this how do you guys handle this situation...be in everybody's pie because it is so small and when you get that you just talk to other people about how do they go and what are they up to at the moment and when they ran into this situation what did they do and it's just vice versa its share it really helps a community as a whole be a little bit stronger in the business community* (Firm 19).

Incidental Learning. Incidental learning is considered a subset of informal learning, and is usually the by-product of some other activity, such as carrying out a task, or interacting with other people. As such it is never planned or intentional, always delimited by the nature of the task that influenced its creation, and unexamined and embedded in the individual's closely held belief system. While strategies for informal learning include self-directed learning, coaching, mentoring and networking, incidental learning includes learning from mistakes and learning by doing (Marsick & Watkins, 1990). It is worth noting that while incidental learning requires self-reflection to take place for it to be successful, this process can be implicit.

In this study incidental learning played a big part in the development of our research participants. In fact many valued this type of learning highly but were also aware of the risk it could pose to the business as learning from mistakes could prove costly. *The one great advantage of a family owned business is that the advantage for me is that I have been allowed to learn by mistakes, you don't get that advantage in open market* (Firm 8).

Often incidental learning was triggered by a crisis in the business. *Sometimes it was crisis management, so learning through a crisis and that could be staff related, it could be project related* (Firm 12).

Others were adamant that it was the 'Kiwi way' to do things, and were perversely proud of this learning approach despite the limitations it could have. *This is New Zealand, that's how you do it* (Firm 9).

What "worked". After they had described their learning experiences we asked interviewees to identify which experiences had been successful in terms of the development of their managerial capabilities. In their opinion, the most effective learning took place as a result of a one-to-one personal approach, such as a mentor or a business coach, where issues relevant to the owner-manager (and the business) at that moment in time were able to be addressed. *But the whole idea of having coaching is like I find that... that's one of the best ways to learn* (Firm 13).

In terms of more structured learning settings, such as courses or seminars, having small groups of similarly placed participants was favoured. *For me personally I think it was the Icehouse course that was... being with like-minded people ...And the facilitators of the course, they had such a variety of skills they brought in so many different people to talk to us. I just thought that was just brilliant it just made you understand the business so much more and what was involved in the business* (Firm 18).

Networking, for example, at industry conferences and at chambers of commerce meetings was often used to bounce ideas off others and to build knowledge through interactions with the other participants. *Yeah, so for matters closer to managing a business, yes it is. We have quite a, we are quite free and able to talk to other organisations such as us about their business because we work quite openly and closely with them...and the fruits of our methods may well benefit them and vice versa so yes there is a lot of information sharing amongst people in similar kinds of organisations to us* (Firm 9).

What "didn't work". The most common complaint about structured learning and development activities that managers had participated in was that they did not address the development needs of the manager and the business, nor were most interviewees always satisfied with the quality of the expertise on offer. *I feel he doesn't quite understand how unique our business is because it is very unique* (Firm 18).

There was sometimes a feeling that the advice given was not really targeted at the needs of the business. *Every time you do employ somebody to come in when they go you think mmm, it wasn't really financially worth it. Yeah, I did have about three or four people come to do different things in the company but in the end I thought no, they haven't actually brought us forward and we're still where we were* (Firm 11).

The theme of *lack of relevance* was also highlighted in relation to formal training courses. Many interviewees were wary about undertaking these due to a perceived lack of relevancy. *Most of them are quite banal and have very little application to what we do* (Firm 8).

This perception of courses not being directly relevant made involvement in this type of learning less likely, especially when cost was taken into account. *[We have] a natural suspicion to have a formalised training, we probably think it would be better to get someone in here than to do it here. And I guess just always thinking too, considering the cost of it, is it really worth it?* (Firm 9).

Not only was the relevance of courses found to be wanting but also the approach taken in these courses was often criticised. For instance, one owner-manager complained that the courses she attended focussed too much on successful businesses and not enough on giving her tips on how to deal with the challenges of running a business. *I really need somebody to work with me to solve problems that I have in my business and not highlights of other people and their business* (Firm 11).

Barriers to engagement

Several authors have explored and categorised factors that facilitate or impede managers' engagement in structured management learning and development activities. In the main these authors have found that the barriers to engagement can be categorised into two broad areas *extrinsic* (e.g. lack of suitable development opportunities, high cost of training courses) and *intrinsic* (e.g. fear of failure, lack of motivation). We used this categorisation scheme to code the interview data. Extrinsic barriers tend to outnumber intrinsic in most studies of barriers to engagement in MD (McCracken, 2005). Consistent with previous studies, our results suggest that there were a small number of intrinsic barriers and a much wider range of extrinsic barriers that potentially affected the study participants' propensity to participate in structured management learning and development activities.

Extrinsic Barriers. As might be expected, the interview participants placed considerable emphasis on the very practical issue of *lack of time* available for participating in structured management learning and development activities. This was reported to be due to factors such as the owner-manager's desire for a healthy work-life balance, the critical importance of the wide-ranging knowledge of the owner-manager to the effective day-to-day functioning of the business, and the participation of the owner-manager in day-to-day operations of the businesses due to staff shortages. *The barrier for me is that I simply don't have time to go out to breakfast seminars and network with people at luncheons and staying after work and going for business dinners. My time is split between my family and my work, beautiful balance. I really enjoy it. So the time I'm at work, 6-7 hours during the day, I need to work. I haven't got time to go out and waffle on at a lunch* (Firm 8).

As reported in the previous section of this report, another extrinsic barrier that emerged from our analysis of the interview data was a *perceived lack of relevance* of seminars and courses. *Very early on I used to go to the odd seminar and whatnot. I find most of it fairly, oh, I don't know, most of them are quite banal and have very little application to what we do* (Firm 8).

Some participants perceived the *uncertainty regarding the benefits* (for the individual and for the business) of participating in structured management learning and development activities as a barrier. *The barrier would be an uncertainty of what I might get from it, and therefore how clear are the benefits that are going to come from it and benefit me. So the benefits, the time it would take, and the cost of it* (Firm 12).

Related to this, some participants noted that *technical training was given priority* in their organisations, and that the business benefits of investing in technical training were more certain. *As a technical sort of organisation in the computer industry, training is a big part of what we do with our staff. We make quite a large investment in training, but that training is very much orientated towards technical training and that's what's seen as the priority as it were. Management training does take a second level seat* (Firm 14).

In technical training, what is being learned in the training session is often near-identical to what the trainee has to perform on the job. In contrast, management training typically teaches general concepts and broad principles and seeks to develop ‘soft’ skills that are all applied to a greater set of contexts than those that are presented in the training setting. Consequently, there are usually more obstacles to transfer this type of training to the workplace (Noe, 2005). One of the participants perceived these *obstacles in transferring learning back to the workplace* as a potential barrier to managers in his firm participating in future management training courses. *A few years ago as a senior staff and directors we went through the Dale Carnegie programs. We learnt a bit more about our personalities and how we relate to staff. They were very successful. But I think all of those programs; you fall back in to your old ways pretty quickly* (Firm 22).

Such lapses (i.e. where training participants fail to incorporate their new skill into their daily work schedules) can be less likely to occur in large organisations, because managers who have attended training might receive support from both higher-level managers and their peers in applying learned capabilities (Marx, 1982). This type of support is less likely to be available to owner-managers of small firms.

Intrinsic barriers. Intrinsic barriers to engagement in structured management learning and development activities did not feature prominently in the interview data. Just three of the managers in the sample alluded to this category of barrier. The comments extracted from the interviews with these managers suggest that *fear of failure, lack of motivation* and *lack of education* potentially affected engagement in structured learning and development activities.

The only one is lack of confidence to attempt to learn something new. In Warehouse Stationery I had a very driven CEO, and one of his key drivers was building a level of confidence within his managerial team. He spent a lot of time and energy developing our confidence levels. So he certainly took away a lot of the barriers in terms of desire or fear factor to go out and learn something (Firm 2).

For me to start studying an MBA or a degree, I would find that difficult, running the business and putting in the after-hours study that’s required. Not that I couldn’t do it, it’s just that I’m really not that motivated to do it, but it could be done (Firm 7).

Well I think the main barrier facing manufacturers today probably with themselves and their own staff is lack of education (Firm 20).

We asked participants to rate selected barriers to their participation in management training courses on a scale of 5 (major) to 1 (minor). Participants’ ratings were used to arrange the barriers in a rank order, i.e. the barrier that received the highest overall score was ranked first. The results are shown in Table 2. The results suggest that time, cost, and a perceived lack of relevance were the major barriers to participation in management training courses. This finding is consistent with the findings of several other studies mentioned in the literature review that have examined barriers to engagement in management training in small firms.

Table 2: Ranking of barriers to participation in management training courses

Barrier	Ranking
The difficulty of taking time off work to attend training	1 st (major)
Courses lack relevance	2 nd
Financial cost of courses	3 rd
Lack of awareness of available courses	4 th
Lack of expertise to choose suitable courses	5 th
Difficulties applying learning from courses	6 th (minor)

As noted previously, several participants reported that they had cultivated informal mentoring and business coaching relationships. We also wanted to explore barriers to participants' engagement in formal mentoring and business coaching. Various interviewees indicated that they either currently had a formal mentor, or had recently been involved in a formal mentoring or business coaching programme. Most of these owner-managers believed that their mentor had made significant contributions to their personal learning and development, and to the development of their businesses. However, some participants also pointed out weaknesses of formal mentoring programmes that might act as barriers. *It's suddenly blossomed into quite an industry. Every man and their dog who has perhaps had some degree of management experience suddenly is a guru and mentor. I've had experience at handling two or three different mentors with mixed success. Very expensive. Quite frankly I look back, and if anything, in some respects the mentor was more a hindrance than a help. In many cases they had their own methods, their own ideas, yet they had the luxury of standing aloof and they'd say, 'You know, perhaps this is a good idea, perhaps that, try this, try that.' There's no buy in, no risk as far as they're concerned. They can sit back, but it's yourself that has to actually make it happen and live with the consequences. These days I'm a little sceptical of mentoring programmes, and if I was to get involved with a mentor, I'd look very, very hard at their background, what sort of success they had, what their management style was (Firm 14).*

Similar concerns were aired about the quality in the provision of business coaching, where the level of expertise was not thought to be appropriate to the needs of the owner-manager and the business. *Sometimes I just struggle with the fact that here is a guy who is an insurance broker telling us how to run this business (Firm 18).*

Finally, it is worth noting that barriers to engagement with MD appear to be cumulative in nature, that is, it is no one barrier that prevents an owner-manager from undertaking MD, but the combination of several. Hence, the cost of a course may be a barrier, but also lack of time or perceived relevance of the content.

Strategies for fostering engagement

The final section of the interview schedule sought to identify what would encourage owner-managers of small firms to increase engagement in MD. Interviewees were able to describe past experiences but were not able to articulate clearly what would encourage engagement with MD. This finding was not surprising, given the complexity faced by owner-managers who have to balance individual development needs with business development needs, as well as current and future needs. Another constraint in eliciting strategies from interviewees in this section of the interview was the possibility that they had only been exposed to certain strategies and so were not in a position to comment on others.

Because of the difficulty that our interviewees had in describing strategies that could foster engagement in MD, we used a list of the suggestions that emerged from the literature review as a way of generating a reaction. This suggested that those responsible for designing MD should:

- Provide an accessible point of information of what is available for managers.
- Assist SMEs to identify needs, and support them in satisfying those needs.
- Identify market gaps in terms of demand and supply of management training
- Use industry, trade and professional organisations to provide learning opportunities.
- Review quality of current provision.
- Promote structured networking among SME owner-managers.
- Develop management diagnostic tool kits to help identify development needs.
- Promote case studies that highlight the benefits of participation in management training.
- Provide financial support to encourage participation in management training.

- Encourage SMEs to share examples of best practice in MD.
- Facilitate collaborative or group learning.
- Facilitate engagement in action learning.

To identify strategies that might foster engagement in MD in New Zealand we asked the interviewees to review this list and identify those approaches that had worked best for them and what, in an ideal world, would encourage them to engage more. The strategies to foster engagement in MD that they identified as a result of this exercise confirmed what we had found in the literature. Overall we found that participants wanted *targeted* assistance, provided by an experienced business professional, preferably one-to-one or within a small group where there was the opportunity for interaction. Although input by people with professional expertise is valued, what we also found is that owner-managers also valued opportunities for interaction with peers.

There was also a strong preference for targeted assistance on different aspects of running a business: *I think a resource that did target training for managers and issues relating to building a company would be a good one. You know if it's very targeted about all the things you need to do which could be financial management, sales management, forecasting, HR things you need to know, you know you could probably bundle up a dozen things but if you narrow it across many companies and many business industries that would be good* (Firm 9).

There was also agreement that the mode of training delivery was important. In the opinion of participants, suppliers of courses were not delivering the training content effectively and this needed to be addressed by a delivery mode that furnished the business owner with building blocks to develop his or her managerial capabilities. *Just simple fact of a course maybe in the university just teaching you how to understand your balance sheet better, teaching you to draw up a set of ratios so you understand where your business is how healthy it is or how unhealthy it is. And yeah they can bring in guests, people from different industries or government departments that can talk to you about it* (Firm 20).

Another issue that became evident was that the needs of the owner-managers, in terms of their managerial capability, evolve and change over time. One manager felt the business had benefited from his participation in a 'virtual' advisory board but had now moved on to a different stage, and this approach was no longer useful. *We had what was called a virtual board where we met with other businesses once a month and we all set objectives for our businesses that we worked towards over the month and we sort of reported back on them and talked about issues that were that had come up for each of us and discussed them as a board really and based on people experiences and opinions or whatever. And that was quite valuable and after about two years of that we were ready for something else* (Firm 6).

Another strategy suggested was a form of on-the-job training with immediate feedback provided on the manager's performance, such as monitoring and feedback by an experienced manager. *If somebody came to us and spent an hour sitting with us while we were picking up the phone and saying why did you say that, and there is a better way of doing that sales technique or you sounded a little bit snappy on the phone or if somebody was to sit with us that would probably be very helpful* (Firm 1).

And finally, owner-managers would welcome some 'quality' time in which they could step away and think about the business, without the usual distractions of the day to day running of the business. *Yeah I've done two big trips by myself one was 2001 when I went down to Queenstown for ten days by myself and did a tramp and same thing generally once a year twice a year I like to get away. I travel a lot with business and that's good I generally sit in a hotel room and just make notes and work out what I want to do* (Firm 5).

Sources of learning. To further develop strategies to engage SMEs and increase uptake of MD, we felt it was important to look at the current sources of learning used by the owner-managers interviewed. At this point the interviewees were shown a list of 15 potential sources and were asked to rate them using a scale of 1 to 5 where 1 was very unlikely to use the source and 5 was very

likely to use it. Table 3 shows these results in percentages, where we grouped together those who were likely or very likely to use a source and those who were unlikely or very unlikely to use a source.

As the results show the top five most likely sources of learning are the internet, followed by family and friends, other businesses, private training providers and industry associations. In contrast, the bottom five sources of learning were BusinessNZ (a peak organisation representing approximately 70 industry associations), the Inland Revenue Department, tertiary institutions, economic development agencies and chambers of commerce.

Table 3: Potential sources of learning

Sources of learning	% of managers <i>likely or very likely</i> to use source	% of managers who <i>may or may not</i> use source	% of managers <i>unlikely or very unlikely</i> to use source
Banks	34.7	17.4	47.8
Economic Development Agencies	18.18	18.2	63.7
New Zealand Trade & Enterprise	27.2	18.2	54.5
NZ Institute of Management	20	35	45
Industry Associations	40.9	9.09	50
Chambers of Commerce;	26	13	60.9
Industry Training Organisations	35	20	45
Tertiary Institutions	14.2	19	66.7
Private Training Providers	50	10	40
Inland Revenue Department	19	14.3	66.7
Business Mentors NZ	30	15	55
BusinessNZ	11.7	11.8	76
Books, journals and/or internet	78.3	13	8.7
Family and/or friends	60.8	13	26.1
Other businesses	56.5	26.1	17.4

The use of books, journals and/or the internet as a potential source of learning scored highest. This is not surprising as these are convenient and accessible sources. When rating these sources, most interviewees referred to the internet although books and magazines were also found to be useful, especially for those at transition points in their business.

These results show that for many of the owner-managers we interviewed, other businesses as a source of learning are at least as important as mentors or coaches. This matches up with our findings mentioned in the first section of this report where we found that a significant amount of management learning had been through interaction with other businesses. It also reflects the importance placed on peers rather than ‘experts’ and it is interesting that they are willing to continue this reliance on other businesses as a source of learning.

Another interesting finding is that family and friends have also scored highly as a likely or very likely source of learning. This is consistent with previous research conducted by the team (Lewis, Ashby, Coetzer, Harris & Massey, 2005). The advantage of this group as a source of learning was their in-depth knowledge of both the business and the person, giving them a unique advantage in providing focussed and timely advice. The added advantage is the perspective they bring to the owner-manager because they are able to see the business in the wider context in which

it is embedded. On the downside, their advice may be biased and could be tinged by an emotional/relational element.

Of the organisations offering support to small businesses, industry associations scored best, although there were more interviewees who were unlikely or very unlikely to use them as a source of learning than those who were likely to do so. The fact that 40.9 percent of those interviewed were likely or very likely to use these associations as sources of learning, but that 50 percent were unlikely or very unlikely, could point to a need to encourage these associations to offer more targeted assistance.

Industry training organisations were found to be wanting in capacity to deliver MD to small business managers, as 50 percent were unlikely or very unlikely to access them and only 35 percent were likely or very likely to use them. Interviewees held the view that ITOs and industry associations should be in a position to provide these opportunities to members on a more regular basis than they currently do. *The Institute of Chartered Accountants have a few that come through but they're very few and far between, there's not so much* (Firm 22).

This expectation that ITOs would provide opportunities to engage in MD seems to indicate that they are viewed by owner-managers as a proxy for the support 'usually' given in a large organisation to small firms.

Conclusions

The overall aim of this research was to develop an understanding of what can be done to get small business owners more involved in management capability building activities. As a project which relied on qualitative methods, the purpose was to gain insights into this aim, which can point to strategies that could assist owner-managers rather than to assess the extent to which any of these development activities are carried out in the New Zealand business population.

Managerial capability is often abbreviated to 'management development' and can be defined in many different ways but it is important to make a distinction between management capability (mainly the skills and knowledge needed to be a manager) and business capability (the practical skills and knowledge to operate the specific firm). For the purposes of this project we defined management development as a complex learning process through which managers 'develop' and 'learn' to manage effectively. This allowed us to concentrate on the learning processes and how effective these were in terms of developing managers' managerial capability (as perceived by the 25 owner-managers we interviewed).

Our participants attributed the acquisition of managerial knowledge and skills primarily to incidental learning processes. They also signalled a strong preference for informal learning processes, such as learning through mentoring, coaching and knowledgeable social contacts. Their engagement in more structured and formal learning and development activities, such as management training, tended to be ad hoc and reactive in nature.

They also consistently reported that they considered MD important because they perceived it to: increase confidence levels, compensate for perceived shortcomings in formal education and training, and help them to address specific management issues. Despite the clarity with which they described the advantages of engaging in MD, the reasons for engagement were less clear. Having said this, it was apparent that as the business became more established the manager found his or her role changing and this created a need for managerial capabilities that were more dynamic and diverse. Equally, there seemed to be a number of 'triggering circumstances' including the changing knowledge demands of the individual owner-manager and changing managerial roles. This notion of different needs at different stages (both of the firm and the manager) was supported by the fact that engagement with MD was most likely to take place at the early stages of the individual's career as an owner-manager. As he or she became more experienced in the running of their business it was often the case that he or she required particular knowledge which was available from specialists or experienced business people – and at this stage formal mentoring and business coaching

programmes did not always meet their expectations. This was because as business needs grew it became necessary for the manager to develop managerial capabilities that were related to specific issues.

The interviewees found it difficult to describe the circumstances that would encourage them to engage with MD more frequently. This was partly because they had only been exposed to certain strategies and, therefore, were not in a position to comment on others. However the perception of most interviewees was that the most effective learning took place as a result of a one-to-one personal approach, such as that provided by a mentor or a business coach, where issues relevant to the owner-manager (and the business) at that moment in time were able to be addressed. In terms of more structured learning settings, such as courses or seminars, this research found that participation in small groups, where owner-manager participants were in a similar stage of management and business development was favoured.

In relation to barriers, the interviewees report the lack of time available as a major hindrance in their ability to participate in structured management learning and development activities. Other major barriers that emerged from our analysis of the interview data included a perceived lack of relevance of seminars and courses, the uncertainty regarding the benefits (for the individual and for the business) of participating in structured management learning and development activities and the cost involved. Overall we found that participants want targeted assistance, preferably of a one-to-one or small group interactive nature, and provided by an experienced business professional.

There are a number of implications for policy makers: Firstly, managers of small firms will not engage with a MD agenda that fails to recognise the constraints under which they operate. Secondly, the more involved the owner-manager is in the day-to-day operation of the business, the less likely it is that he or she will participate in structured learning and development activities during work hours. Thirdly, the owner-manager's learning and development needs to be integrated with daily work activities of the business and be relevant to the issues, problems and priorities that confront the business. Lastly, recognition and support of existing informal learning processes is important if MD is to occur.

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PROCUREMENT AND SUPPLIER DIVERSITY IN THE LONDON 2012 OLYMPIC GAMES

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The Olympic Delivery Authority (ODA) has a budget of more than £7 billion to deliver the infrastructure for the 2012 Olympics Games. The paper assesses the extent to which the procurement policies and practices of the ODA are benefiting SMEs, making recommendations as to how this might be increased. The research was undertaken in the summer of 2008, when procurement for the 2012 Olympics was in its early stages. The methodology employed in the study was qualitative in nature, using a variety of data sources.

The research showed that most opportunities for SMEs lie at lower tiers of the supply chain, or in the ODAs own corporate procurement. SME contract winners typically have previous experience in tendering with public sector organisations. Good practice features of the ODAs procurement practice includes use of a Web-based pre-tendering tool. The results have implications for the wider procurement policy agenda with respect to SMEs within the European Union.

Track: 3. Entrepreneurship and Public Policy

Sources of Small Firm Innovation in Low Agglomeration: Comparing High and Low Agglomeration Regions

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And
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This paper is concerned with ways in which high technology firms develop new products in 'high' and 'low' agglomeration regions. The literature on the geography of innovation suggests that is dominated by a search for external factors that explain innovation in regions with high concentration of firms i.e. 'high agglomeration'. Thus, external factors influencing innovation in low agglomeration regions are rarely studied. Moreover, traditional research has generally viewed innovation as a one-dimensional construct, and expects the same set of factors to explain all kinds of innovation. The geography of new product development (NPD) as a specific type of innovation has not received much attention in the research community, despite its apparent importance in policy circles concerned with economic development.

A framework is built in which small firms develop new products in two distinct environments: regions with local concentration of firms in high-tech industries (i.e. 'high agglomeration'); and regions lacking concentration of firms in high-tech industries (i.e. 'low agglomeration'). The framework allows for the categorisation of external influences on NPD as *knowledge spillovers* (referred to as non-market based external sources of knowledge), and as *pecuniary knowledge* (i.e. market based external sources of knowledge). The Silicon-Fen of Cambridge and Essex in United Kingdom (UK) are chosen as 'high agglomeration' and 'low agglomeration' regions, respectively. This selection is based on the two sub-regions above or below average densities of their workforce and firms in high-tech industries in the eastern region of the UK. Twelve pilot interviews were conducted to ascertain if potential differences exist between the two regions in small firms' perceptions of external knowledge. Thereafter, surveys of 52 SMEs in the Silicon-Fen and 48 in Essex electronic and software industries were carried out with a view to determining the nature of new product development in the two sub-sets.

We found that small firms in low agglomeration regions can be characterised as 'imitator's when compared to those in high agglomeration. However, there are similarities in that small firms in both regions are more influenced by knowledge spillovers over pecuniary knowledge, and by international knowledge relative to local and national sources. The paper thus makes several contributions to the knowledge spillover theory of entrepreneurship, pecuniary externality theory and the literature on technological capabilities literature. The findings should also help regional policy makers located in both high and low agglomeration regions to understand the significance of 'spatial levels' – local, national or international – of analysis and decision making. From a business strategy perspective, a critical understanding of the sources of external knowledge – spillovers or pecuniary - are likely to influence new product development by small firms in their regions. This is crucial in an era in which 'geography' (especially that of regions) is seen as an integral part of innovation policy, and where new product and new business model development are seen as critical for firms as they struggle to stay alive and emerge from the recession. Implications are also drawn for educators and trainers especially those focusing on explaining different aspects of entrepreneurship and innovation.

Keywords: Small and medium-sized enterprises (SMEs), agglomeration, new product development, geography.

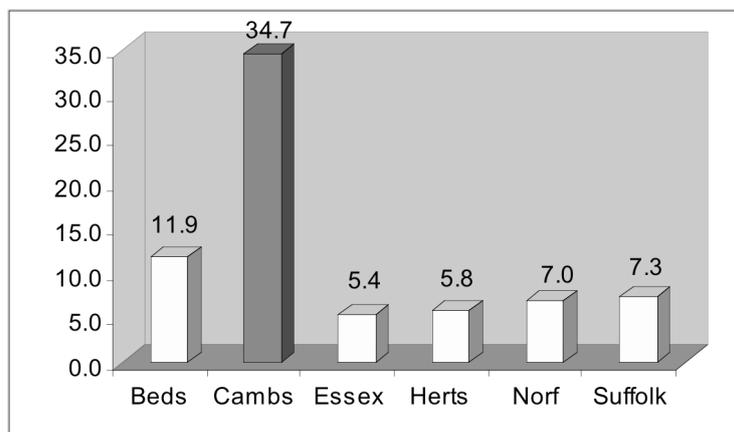
I. INTRODUCTION

From the pioneering works of Alfred Marshall in the 1890s to the numerous contributions of Zoltan Acs, innovation and regions have captured the imagination of economists, entrepreneurs and policy makers (Schumpeter, 1934; Grossman and Helpman, 1994; Acs, 2002). Innovation is today seen as one of the fundamental drivers of regional economic development and therefore features on the policy agenda of many regional development agencies in different parts of the world (Audretsch, 1998; DTI, 1998; Acs, 2002; DIUS, 2008). Affirmative action has become the policy of choice to support innovation at the regional level (Cooke, 2003; Acs, 2002). It is estimated that in England alone, cumulative expenditure by regional development agencies (RDAs) on promoting innovation for the years 2005 to 2008 has exceeded £1 billion (DIUS, 2008). These policies, however, are now at the centre of intense debate, as to whether similar or different policies need to be designed for supporting innovation across all regions (Breschi and Lissioni, 2001a and b; Heraud, 2003).

One example is found in the East of England, where the regional development agency, as part of its top priorities, is spending £ millions, with a view to becoming by 2031, an area with a global reputation for innovation (EEDA, 2008). Yet, despite the very huge effort, innovation is concentrated around a few regions of East of England, largely around the world renowned - Cambridge Silicon-Fen region, with most of the other areas having a relative dearth of innovation (Arthur D. Little, 2003; Abubakar and Mitra, 2007).

Thus, regional disparities in innovation prevail in East of England with some areas being highly innovative while others appear to be less innovative (Arthur D. Little, 2003; Abubakar and Mitra, 2007). The East of England's Cambridge Silicon-fen area is ranked as one of the most innovative regions in Europe (OST, 1998 in Keebe, 1998). The region is home to \$1 billion worth of home-grown success stories such as ARM, which controls over 75% of processors in the world's mobile phones, in all iPods and GameBoys; but also Cambridge Silicon Radio (CSR), which provides over half of all Bluetooth chips worldwide (Craig, 2007). By 2004, Cambridge Silicon-fen had contributed more than £50 billion and over 150,000 jobs to the UK economy (Library House, 2006 Craig, 2007). However, despite Cambridge Silicon-fen's success story, many of the other regions of East of England lag behind in innovation (Arthur D. Little, 2003; Abubakar and Mitra, 2007). Existing data shows that while Cambridgeshire has a proportion of firms reporting innovative products of 14%, the corresponding figure for other parts of East of England, such as Essex is 1% (Novalis Research, 2004). Thus, a large share of government funding for innovation in East of England goes mostly to firms in Cambridgeshire (see figure 1).

Figure 1: Number of Firms Applying for Innovation Finance per 10,000 Firms in East of England Sub-regions - 2008



Adapted from: EEDA (2008b) and ONS (2005).

The problem is therefore not much about Cambridge. The problem is how to boost innovation by firms in other regions that are less innovative (Heraud, 2003). This suggests the need for some conceptual broadening to account for factors influencing innovation in varying regional contexts (Heraud, 2003). This is so that theoretically and empirically informed innovation policies can be designed that take into account the regional context of innovation (Heraud, 2003). Thus, we begin by looking at the literature on concept of innovation in varying regional contexts. This is so that critical research issues on sources of innovation in different regions that have long been neglected by current literature can be brought-out.

II. NEW PRODUCT INNOVATIONS AND SMALL FIRMS

The discussion on factors influencing innovation usually begins with the firm (Arrow, 1962; Mansfield, 1988; Audretsch, 1998). Firms are seen engage in the pursuit of knowledge as an input into the process of developing new products (Griliches, 1979; Audresch, 1998). In this context, one of the most important, but not the only source of new knowledge is taken to be research and development (R&D) conducted internally by firms (Cohen and Levinthal, 1989; Audretsch, 1998). Sony, Nokia and IBM are some of the world's most innovative companies (Business Week, 2008), and this is partly because they tend to have some of the highest investments in R&D in the world (DIUS, 2007). Therefore, the relationship between R&D and innovation is very strong especially at the industry level (Audretsch, 1995).

According to Schumpeter (1939), innovation involves the production of 1) new products; 2) the introduction of new process; 3) the opening up of a new market; 4) the identification of new sources of supply of raw materials and; 5) the creation of new types of industrial organisation. However, recently, Schumpeter's definition of innovation has been criticised as lacking clarity for empirical applications (Burns, 2001). Further, there are also differences between the varying types of innovation with regards their importance for economic development, as most studies emphasise new product innovations (Tratjenberg, 1990; Audretsch, 1998; Acs, 2002). For example, Acs (2002) empirically linked product innovations with economic growth in 43 regions of United States (US). Thus, new product development is an important aspect of innovation (Trachtenberg, 1990). Prominent economists have therefore long pointed-out that it is important to measure and understand better the inputs of new product development and why there are variations with which they are pursued in different regions (Trachtenberg, 1990; Feldman and Florida, 1994). Therefore we focus on new product innovation and small firms in high-technology industries, the choice of which is due to the particularly important role that regional location plays in small firm innovation (Acs, 2002; Stuart and Sorenson, 2003).

In this context, scholars have observed that models emphasising firm internal R&D become relatively weak when small firms are included in the sample, thus suggesting that small firms conduct little or no R&D (Audretsch, 1998; Acs, 2002). Nevertheless, research clearly shows that small firms account for a higher share of innovations, given their low R&D expenditures (Acs and Audretsch, 1990). Further, research has also shown that relative to large firms, small firms tend to have innovative advantages especially in industries which are R&D intensive, such as electronics, and computer software and biotechnology known as high-technology industries (Acs and Audretsch, 1987; Audretsch, 1995; Audretsch, 1998). Yet small firms, despite having little or no R&D, portray high innovative activities in high-technology industries, thus making a whole range of theories to emerge explaining where small firms get there innovation inputs (Audretsch, 1998; Acs, 2002; Stuart and Sorenson, 2003). In this context, one line of inquiry has emerged in economics literature which suggests that small firms tend to have innovative advantages when they locate in regions with large concentration of firms known as 'regional agglomerations' (Audretsch, 1998; Acs, 2002).

III. TECHNOLOGICAL INNOVATION, SMALL FIRMS AND REGIONAL AGGLOMERATIONS

The case of Cambridge Silicon-fen highlighted above is by no means unique, as other innovative regions with high concentration of firms and employment in high-tech sectors have also been observed in Scotland's Silicon-Glen, California Silicon Valley in the US and the Bangalore cluster in India among others (Saxenian, 1994; Manimala, 2006). The success story of these regions is today is widely attributed to their well-known characteristic of being regional 'agglomerations' (Saxenian, 1994; Keeble *et al.*, 1999; Athreye, 2001). By regional agglomeration, reference is being made to a concentration of economic activities, such as firms and employees in related sectors in a geographical area (Audretsch, 1998; Mayhew, 2004). The origin of this idea that regional agglomeration facilitates innovation can be traced to the work of the renown British economist - Sir Alfred Marshall (1890), who developed a theory that individuals learn better from each other when they live and work in close proximity. Marshall's theory thus provided the background for understanding benefits of external knowledge for innovation. The theory was later extended into at least two major perspectives: pecuniary externalities (Krugman, 1991 and b; Antonelli, 2007) and knowledge spillovers (Romer, 1986, 1990; Acs, 2002).

The pecuniary knowledge perspective headed by the 2008 Nobel Prize Laureate – Paul Krugman (1991a and b) argues that firms locate in regional agglomerations because agglomerations offer pecuniary advantages to firms in terms of reduction in transportation costs, larger local markets and pecuniary knowledge advantages i.e. in sourcing knowledge that requires monetary transactions (Krugman, 1991a and b; Fujita, Krugman and Venables, 1999; Antonelli, 2007). However, most of the works on this tradition although very interesting with significant contributions to agglomeration literature, are focussed on transaction costs and international trade (Krugman, 1991a and b; Fujita, Krugman and Venables, 1999) or productivity growth (Antonelli, 2007). Thus, they largely lack focus on innovation, not to even speak of small firm new product innovations.

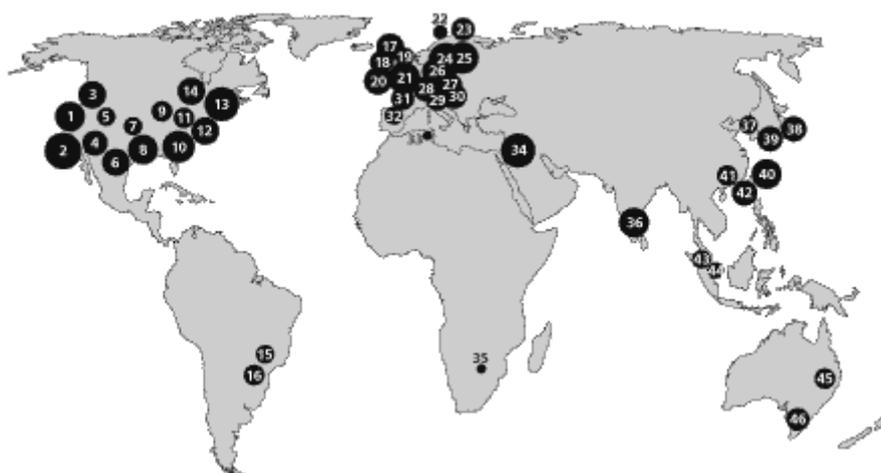
On the other hand, scholars of the knowledge spillover approach focus by-and-large on innovation, arguing that concentration of firms in the same industry in a region helps knowledge to flow among firms thereby facilitating innovation as a result of knowledge spillovers (Jaffe, 1989; Audretsch, 1998; Acs, 2002). Knowledge spillovers refer to the use of knowledge by a firm, which is produced by other firms or institutions, without compensating the original source of knowledge (Grossman and Helpman, 1994; Harris, 2001). In this regard, regions with high agglomerations of firms are seen as facilitating knowledge spillovers because high concentration of people and firms in a region creates an environment in which ideas move quickly from person to person and from firm to firm (Carlino, 2001; Acs, 2002). Employees of different firms in an industry can thus exchange ideas about new products, and the greater the concentration of employees in a common industry in a given location, the greater the opportunity to exchange ideas that lead to new product innovations (Audretsch, 1998; Carlino, 2001; Acs, 2002).

Consequently therefore, today, political leaders in many parts of world look-up to regional agglomerations like Cambridge Silicon-fen and California Silicon Valley in the United States as model regions for fostering innovation and local economic growth (Saxenian, 1994; Brown and Duguid, 2000). These policies are however faced with intense difficulties, as only a few regions in world are regional agglomerations (Brown and Duguid, 2000; Wired, 2000). Thus, despite millions of dollars being spent, attempts at imitating the success of regional agglomerations in regions lacking agglomeration has often proved difficult (Brown and Duguid, 2002), thereby causing a growing concern as to how governments can effectively develop innovation policies across different regions (Brown and Duguid, 2000; Heraud, 2003).

IV. NEED TO STUDY SOURCES OF NEW PRODUCT DEVELOPMENT BY SMALL FIRMS IN LOW AGGLOMERATIONS

Recently, there has been a growing sentiment, that the rush to imitate regional agglomerations in other regions that lack agglomeration needs caution, as not all regions are high-technology agglomerations (Brown and Duguid, 2002; Heraud, 2003). The fact is that ‘few’ regions in the world are regional agglomerations (Audretsch, 1998; Wired, 2000: see figure 2), thus implying that many new products are developed by firms within regions lacking agglomerations or more precisely - low agglomeration regions (Suarez and Walrod, 1997).

Figure 2: Need to Study Sources of New Product Innovations in Low Agglomerations: “Few” regions in the world are high-tech Agglomerations¹



Source: The American magazine Wired (2000).

- | | | |
|--|---|------------------------------|
| 1. San Francisco | 16. Sao Paulo, Brazil | 32. Sophia Antipolis, France |
| 2. Silicon Valley | 17. Cambridge Silicon-fen, Great Britain | 33. El Ghazala, Tunisia |
| 3. Seattle | 18. Thames Valley, Great Britain | 34. Israel |
| 4. Los Angeles | 19. Glasgow-Edinburgh | 35. Gauteng, South Africa |
| 5. Salt Lake City, Utah | 20. Dublin | 36. Bangalore |
| 6. Albuquerque, New Mexico | 21. London | 37. Inchen, South Korea |
| 7. Santa Fe, New Mexico | 22. Trondheim, Norway | 38. Tokyo |
| 8. Austin, Texas | 23. Oulu, Finland | 39. Kyoto |
| 9. Chicago | 24. Stockholm | 40. Tai-pei |
| 10. Raleigh-Durham-Chapel Hill, North Carolina | 25. Helsinki | 41. Hong Kong |
| 11. Virginia, | 26. Malmo-Copenhagen | 42. Hainshu, Taiwan |
| 12. New York City | 27. Sachsen, Belgium | 43. Kuala Lumpur |
| 13. Boston | 28. Flandern, Belgium | 44. Singalore |
| 14. Montreal | 29. Baden-Wurtemberg, Germany | 45. Queensland, Australia |
| 15. Companies, Brazil | 30. Bayern, Germany | 46. Melbourne |
| | 31. Paris | |

The evidence that many new products are developed by firms in low agglomeration is found in the work of Suarez and Walrod (1997) who show that firms in regions lacking agglomeration also introduce new products. But the key issue is that the sources of knowledge used for new product developments in low agglomeration regions still remain largely obscure, as existing studies on regional agglomerations hardly address sources of knowledge for new product development in low agglomeration.

¹ Note: Regions were selected based on their performance in the following domains: These regions have captured a significant share of companies developing the technologies of tomorrow. They are attractive to the local community as they create high value and thereby generate the basis for a high remuneration to the owners and to the staff (The American magazine Wired, 2000).

According to Breschi and Lissoni (2001b), contributions to geographic theories on innovation can be classified into two main categories: 1) studies from mainstream economic approach and (2) studies employing non-mainstream economic approach. Researchers from mainstream economics have examined why innovative activity is located in a minority of regions, largely emphasising the role of localised knowledge spillovers in influencing the regional distribution of innovative activity (Jaffe, 1989; Feldman and Florida, 1994; Audretsch, 1998; Acs, 2002). Scholars of this perspective have a great emphasis on 'local' knowledge spillovers as primary source of innovation. In this context, the first researcher to examine the geographic extent of knowledge spillovers was Adam Jaffe (1989), who found a positive effect of university research on innovative activity at the U.S. state level. In 1994, Maryann Feldman extended Jaffe's (1989) study by incorporating regional knowledge infrastructure at the U.S state level, and found results that strengthened Jaffe's conclusions. Since then several other researchers have employed the econometric perspective to contribute to our understanding of the role of knowledge spillovers in fostering innovative activities (Acs, 2002; Stuart and Sorenson, 2003). These studies in general, examine associations between measures of the local R&D spillovers and local innovation outputs such as patents and innovation counts across space (Jaffe, 1989; Feldman and Florida, 1994; Acs, 2002; Stuart and Sorenson, 2003;).

On the other hand, studies employing non-mainstream economic perspective, that is, studies not using econometrics (e.g. using surveys, case studies etc.) have focussed for the most part on identifying mechanisms of local knowledge spillovers in large regional agglomerations of firms in high-technology industries. The findings emerging from this sphere brings to light the importance of informal personal networks, local labour pooling, imitation of rival firms especially in the local area, as the critical mechanisms that transfer knowledge among local firms in the U.S. high-technology agglomerations such as the Silicon Valley and their European counterparts (Saxenian, 1994; Keeble and Wilkinson, 1999; Simmie, 2002, 2003).

Yet, a third and relevant literature on use of external knowledge for innovation is that of technological capabilities, which argues that firm level technical change is a result of a learning process through activities such as R&D, that allow firms to absorb external knowledge and create new products (Mansfield, 1988; Cohen and Levinthal, 1989; Bierly and Chakrabarti, 1996; Kessler, Bierly and Gopalakrishnan, 2000). These studies argue that most external learning for new product development by firms requires investments in internal resources (Cohen and Levinthal, 1989; 1990; Kessler, Bierly and Gopalakrishnan, 2000; see Chapter 2 for more details).

Although the above studies take us a long way towards understanding the role of knowledge externalities in new product development, there are at least four key reasons why obscurity regarding differences in the use of external knowledge for new product development by small firms in regional agglomerations and regions lacking agglomeration prevails. First, there is an overwhelming tendency to concentrate on regional agglomerations by studies on knowledge externalities and innovation (Jaffe, 1989; Saxenian, 1994; Keeble, 1999; Acs, 2002). This makes the role of externalities in regions with a dearth of agglomeration largely neglected. Secondly, studies on knowledge externalities and innovation have historically, from Jaffe (1989) to Krudsen, Florida, Gates, and Stolarick (2007), focussed mainly on knowledge spillovers – which as defined earlier refer to knowledge acquired from non-market based sources (Grossman and Helpman, 1994; Breschi and Lissoni, 2001a). Thus, these studies by and large overlook the role of knowledge acquired through market related mechanisms (Breschi and Lissoni, 2001a and b). The fact that knowledge spills over is hardly questionable, but at issue is the extent of spillovers and just how pervasive they are (Harris, 2001: p.29; Breschi and Lissoni, 2001a and b).

Thirdly, it is extremely difficult using econometric approach, to examine the relative importance of local, national and international knowledge, as it will appear to small firms

developing new products (Breschi and Lissoni, 2001b). Rather, although prominent scholars such as Krugman (1991a and b) acknowledge the importance of spillovers, both Krugman (1991b) and Simmie (2002) disapprovingly say that only sociological surveys could measure the extent of knowledge spillovers. Therefore, emphasis on the importance of localised knowledge spillovers lacks conceptual clarity when it comes to disentangling the different ways knowledge flows are utilised by economic agents, both local and non-local (Breschi and Lissoni, 2001a: p.257). Attempts at examining non-local knowledge flows have largely been descriptive (Simmie, 2002, 2003). This has obscured our understanding of differences and/or similarities in the relative association of local, national and international knowledge flows (acquired through market and non-market related externalities) and new product development by small firms in regional agglomerations and regions with a dearth of agglomeration.

Finally, in studies that emphasise localised knowledge spillovers, internal technological learning by the firms are not empirically investigated; while on the other hand the literature that looks at technological learning at the firm level does not systematically take into account spatial factors influencing innovation (Caniels and Romijn, 2003; p.1253). Thus, there is surprisingly little integration between the two approaches (Caniels and Romijn, 2003; p.1253), even though the very use of external knowledge by firms requires that they invest in R&D so as to be able to understand and assimilate external knowledge (Cohen and Levinthal, 1989; 1990). We therefore argue that the integration of the two approaches will contribute immensely to our understanding of differences and similarities in the use of external knowledge by small firms in different regions.

The above four reasons help explain why our understanding of differences and similarities in the use of external knowledge for new product development by small firms in high and low agglomeration remains unclear. Consequently, although the importance of externalities for generating innovative new products in high agglomeration is widely acknowledged (Saxenian, 1994; Audretsch, 1998; Acs, 2002) it is rather ironic that differences and similarities with low agglomerations remain unexplored. There is therefore a need for theoretical and empirical investigations into the determinants of innovation that take into account the differences in regional contexts (Heraud, 2003). In this context, since the global demand for developing new innovative products by small firms is high and growing rapidly, (Audretsch, 1998; Acs, 2002) it is imperative that researchers study sources of knowledge for new product development by small firms in low agglomeration as there is currently a dearth of such studies. Such studies are likely to be of benefit to policy makers especially in regions with low agglomeration, by helping them to understand the important sources of knowledge that influence firms in their regions, so that effective policies for promoting innovation can be developed.

Based on the above discussion, the problem addressed in this paper is:

- *What differences and similarities exist in the external knowledge used for new product development by high-tech small firms in low agglomeration region, in comparison those in high agglomeration region?*
 - **RQ1:** *Are the key spillover mechanisms used by small firms developing innovative new products in low agglomeration different from those of high agglomeration?*
 - **RQ2:** *Are the key pecuniary knowledge mechanisms used by small firms developing innovative new products in low agglomeration different from those of high agglomeration?*
 - **RQ3:** *What is the relative influence of knowledge spillovers vs. pecuniary knowledge on new product development by small firms in high and low agglomeration?*

- **RQ4:** *What is the relative influence of local, national and international sources of knowledge on new product development by small firms in high and low agglomeration?*

Thus, the study compares small firms in high and low agglomeration vis-à-vis sources of knowledge used in new product development. In contrast to previous studies on innovation in regional agglomerations which mostly focus on only knowledge spillovers, we broaden the analysis to examine the use of both pecuniary knowledge (knowledge acquired through market related sources) and knowledge spillovers (knowledge acquired through non-market sources) in high and low agglomeration. The findings of the study, we hope, will help inform regional policy in terms of crucial sources of knowledge used for new product development by small firms in varying regional contexts.

V. CONCEPTUAL FRAMEWORK

A very important distinction to be made in this study is that between knowledge spillovers and pecuniary knowledge externalities. Whereas the two are of course not entirely independent, they should not be equated, as equating them can be grossly misleading (Breschi and Lissoni, 2001a and b; Antonelli, 2007). There is presently a huge debate as to whether the forces which bring about new product development, are predominantly knowledge spillovers mechanisms acquired through non-traded sources (Jaffe, 1989; Audretsch, 1998) or pecuniary mechanisms sourced through trade related sources (Breschi and Lissoni, 2001a and b; Antonelli, 2007). According to Antonelli (2007), pecuniary or market related externalities are transferred through inter-firm supply and demand linkages, and therefore arise through trade related sources that have impacts on creation of new knowledge and goods. Knowledge spillovers on the other hand are transmitted outside the market system and arise when new ideas and knowledge, crucial for enhancing a firm’s innovation potential, flows between firms through personal exchanges in the labour market (Grossman and Helpman, 1994; Saxenian, 1994). Thus, we speak of knowledge spillovers as occurring through non-trade related mechanisms outside the market, and pecuniary knowledge externalities more appropriately through trade and market related mechanisms (see table 1).

Table 1: Theoretical distinction: External sources of knowledge

	Definition	Mechanisms
Knowledge spillovers (Jaffe, 1989; Audretsch, 1998; Grossman & Helpman, 1991)	Firms (or entrepreneurs) acquire information created by others outside market transaction. No compensation given to the original source.	Personal networks, labour mobility, reverse engineering, conferences etc.
Pecuniary knowledge externalities (Johansson, 2004; Caniels & Romijn, 2005; Antonelli, 2007)	Firms (or entrepreneurs) acquire information created by others through market or trade related mechanisms	Technology licensing, formal collaboration, subcontractors, suppliers, consultants etc.

*Definitions – The definition of knowledge spillovers is based on Grossman and Helpman (1991), while that of pecuniary knowledge externalities is based on Breschi and Lissoni (2001a and b) and Antonelli (2007)

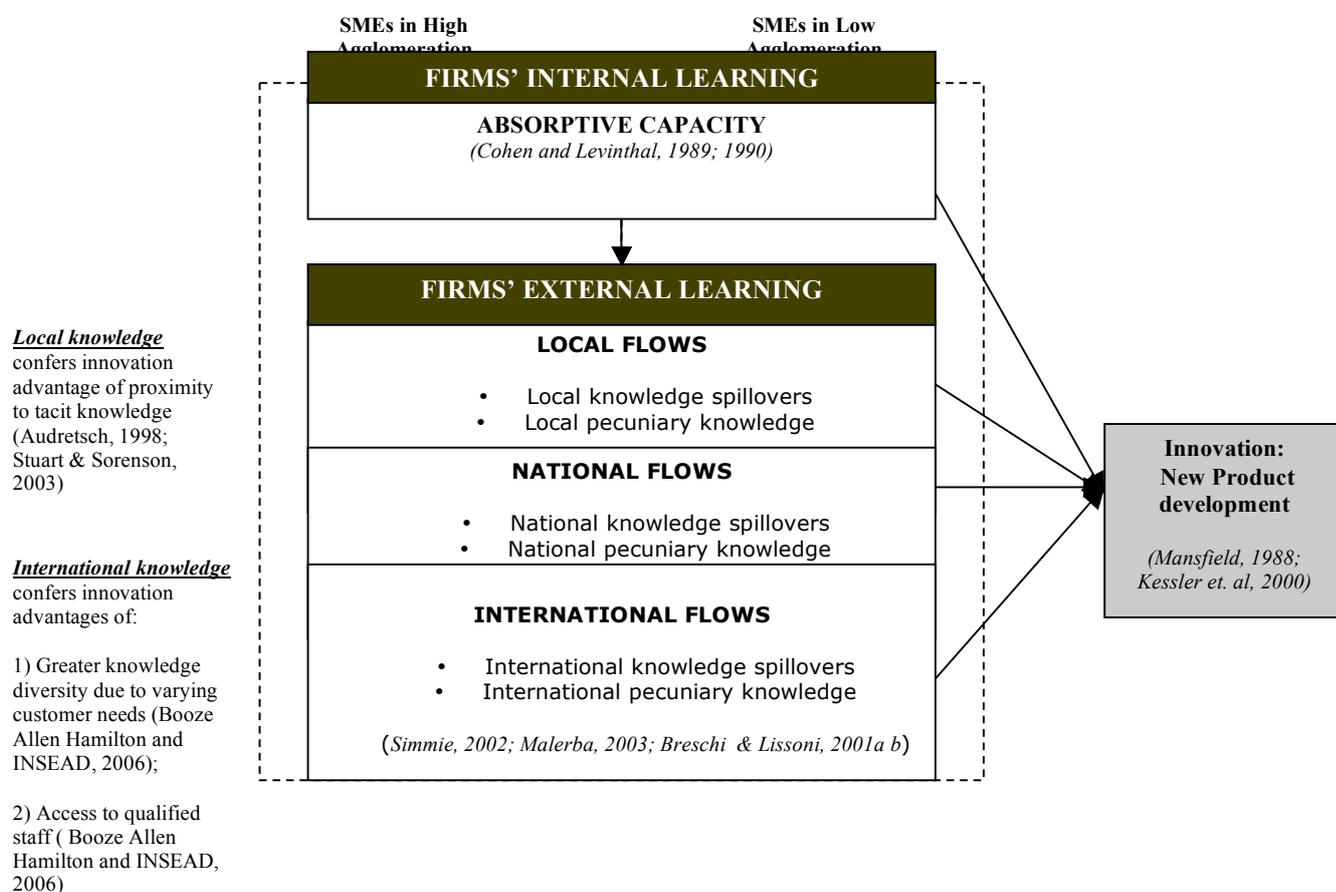
**This distinction is based on Johansson (2004), Breschi and Lissoni (2001a and b)

***Knowledge spillover mechanisms are based on Audretsch (1998), Saxenian (1994), Stuart and Sorenson (2003), while that of pecuniary knowledge externalities are based on Breschi and Lissoni (2001a and b) and Antonelli (2007)

Based on the insights provided by the literature, we have developed a conceptual framework, which is summarised in figure 3. As Figure 3.3 suggests, firms may use a variety of external sources of knowledge to develop new products. These sources can be located within the firm’s locality, at the national or international levels.

When a firm acquires knowledge locally outside of market relations, it makes use of *local knowledge spillovers*. But a firm may acquire knowledge locally, but through formal market relations, thus making use of *local pecuniary knowledge*. Knowledge needed for new product development may also be transferred through informal non-market relations at the national level thus making use of *national knowledge spillovers*. At the same time, at the national level, a firm may acquire knowledge through formal market relations, thus drawing from *national pecuniary knowledge*. Knowledge may also be transferred at the international level in an informal way, which may induce *international knowledge spillovers*. And finally, *international pecuniary knowledge* externalities can occur when firms acquire knowledge in a formal way through international actors. In particular, the framework in figure 3 summarises the knowledge flows.

Figure 3: Framework of External Knowledge Influencing New Product Development by SMEs in High and Low Agglomeration



This framework is developed by integrating different theories, which are:

- *Knowledge spillovers* (Jaffe, 1989; Audretsch, 1998; Acs, 2002; Simmie, 2002, 2003)
- *Pecuniary externalities* (Breschi and Lissoni, 2001a and b; Antonelli, 2003)
- *Innovation: New Product development* (Mansfield, 1988; Kessler et. al, 2000)
- *Technological capabilities: Absorptive capacity* (Cohen and Levinthal, 1989, 1990)

Based on the above, we develop various propositions related to our research problem (see below). We however begin by acknowledging that high agglomeration regions have more

R&D activities than low agglomeration (Stuart and Sorenson, 2003), which is due to having greater presence of finance institutions (Florida and Kenney, 1988). This is likely to give them greater ability to utilise external knowledge that is related to R&D (Cohen and Levinthal, 1989, 1990). This means that there is a high possibility that small firms in low agglomeration will have a disadvantage in accessing external knowledge that is R&D intensive. Thus, some firms in low agglomeration may be inclined towards using different forms of external knowledge in comparison to those in high agglomeration for their new product development activities, because of their relative dearth of R&D. This is likely to lead to variations in key sources of knowledge influencing new product development between small firms in high and low agglomeration. We therefore propose that:

P1: There are like to be variations in key knowledge spillover mechanisms influencing new product development between small firms in high and low agglomeration.

P2: There are like to be variations in key pecuniary knowledge mechanisms influencing new product development between small firms in high and low agglomeration.

Furthermore, advocates of knowledge spillovers have argued that spillovers are the key drivers of innovation in high agglomerations and they mainly occur in high agglomerations (Audretsch, 1998; Acs, 2002). However, many spillover mechanisms such as patent disclosures are not constrained by distance (Breschi and Lissoni, 2001b) thus implying that small firms in low agglomeration are also likely to benefit from many knowledge spillover mechanisms beyond their localities. Also, being that spillovers are relatively more ‘free’ sources of knowledge compared to pecuniary sources (Breschi and Lissoni, 2001a and b), it seems logical that they are easier to acquire since they often require no monetary payments (Von Hippel, 1989). Logically, considering that small firms in low agglomeration have less access to finance (Florida and Kenney, 1988) it seems plausible that they are more likely to draw from free sources of external knowledge than pecuniary sources. However, this is not in anyway to undermine the importance of pecuniary knowledge. Rather, pecuniary knowledge sources are also likely to significantly influence NPD in both regions, as firms may also acquire knowledge inputs through market related mechanisms. Thus, we also propose that:

P3: Knowledge spillovers sources are likely to have greater influence than pecuniary knowledge sources on small firm NPD ‘not’ just in high agglomeration but also low agglomeration.

In addition, the advocates of localised knowledge spillovers try to over emphasise on the importance of ‘local’ knowledge for innovation, even arguing that firms in low agglomeration could hardly acquire external knowledge resources due to lack of proximity to knowledge sources (Audretsch, 1998; Stuart and Sorenson, 2003). However, our exploratory work appears reveal some *inconsistencies* with the literature. This is because our exploratory interviews suggest that although local knowledge is important for firms in high agglomeration, sources beyond the local region might be relatively more important for new product development than local knowledge. This is because even in high agglomeration, intense competition in acquiring local resources such as labour, often means that innovative firms have to look beyond their local regions for resources. For example, Mike Beadman of Cambridge Design Partners explains the difficulty of acquiring local labour in Cambridge, saying:

Funny enough, if I had to say that, I’d say there is a huge shortage and the reason is that they are already doing it, that’s the only downside and in the last five years for recruiting we had to go outside Cambridge, or we are effectively poaching staff from other consultancies. It’s either a long way

ahead or people are already working in similar businesses. So it is a problem, recruiting is probably our biggest single limiting factor at the moment to growth. It's always been a problem. There is not a huge unemployed population of high quality engineers to think about.²

Similarly, Ray Anderson of Cambridge based Bango Ltd remarks on the labour situation in Cambridge, saying:

(It is) better than average although we still gonna have to bring a range of people from outside to fulfil a range of roles.³

Likewise, Paul Johnson of Cyan Technology in Cambridge also revealed that the people he worked with were not Cambridge based, although it's in Cambridge that product development comes together, saying:

The initial people, one was in Hertford, one was in North London and one was in Suffolk. But Cambridge is the area where it all jells together, yeah. It all sorts of come together and anybody working in sort of like Hertfordshire, Cambridgeshire, Suffolk, Essex, they're going to be naturally attracted to Cambridge; not that far away is the technological centre.⁴

Thus, the most innovative firms have high tendency to source knowledge beyond their localities. As noted by an authoritative report (PACEC (2003: p.43):

The most successful companies that developed from the science base in Cambridge include ARM, Autonomy and Cambridge Silicon Radio (CSR). These companies tend to develop and sell global but niche technologies — integrated circuits, software, design tools and development systems — which are integrated into OEM (Original Equipment Manufacturer's) equipment that is developed and manufactured elsewhere.

Thus, in 2005, CSR won UK's biggest innovation prize, that is Royal Academy of *Engineering MacRobert Award*⁵, and much of this success is attributed to the companies' international operations. "Since 1999 they (CSR) have designed over 30 different BlueCore™ chips, which are manufactured in Taiwan, and the company is now ranked number one in every Bluetooth market segment (in the world). CSR has shipped more than 100 million chips since its foundation, covering 60 per cent of all qualified Bluetooth enabled products, to customers which include global industry leaders such as Nokia, Dell, Panasonic, Sharp, Motorola, IBM, Apple, NEC, Toshiba, RIM and Sony using BlueCore™ chips in their range of Bluetooth products"⁶. Thus, CSR's internationalisation has played a crucial role in its being a leader in innovation. This is especially because customer needs vary by regions, thus globalisation plays a vital role for identifying the potential for new products as needs of customers in diverse nations have to be met (Booze Allen Hamilton and INSEAD, 2006).

Based on the above, we argue that international sources of knowledge are more likely to influence new product development than local and national sources. This is especially in the case of regions with low agglomeration, since they have a dearth of local knowledge. As

² Author's interview with Mr Mike Beadman, a co-founder of Cambridge Design Partners, Cambridge

³ Author's interview with Mr Ray Anderson, a co-founder of Bango Ltd, Cambridge

⁴ Author's interview with Dr. Paul Johnson, a co-founder of Cyan Technology Ltd, Cambridge

⁵ Wireless wizards scoop UK's biggest innovation prize. Online: <http://www.csr.com/pr/pr196.htm> (Accessed: 28th January, 2009).

⁶ Wireless wizards scoop UK's biggest innovation prize. Online: <http://www.csr.com/pr/pr196.htm> (Accessed: 28th January, 2009).

Brian Back of Radio-tech Ltd, winner of 2006 prestigious best small scale innovation⁷ explains about labour acquisition in Essex:

People we employed from all over the world. We had to employ people from Poland; we had to employ people from all over the world.⁸

So, innovative small firms in low agglomeration are even more likely to benefit from international sources. Thus, we propose that:

P4: International knowledge sources are relatively more likely to be associated with small firm new product development than local and national knowledge sources in both high and low agglomeration. This is likely to hold true for both spillovers and pecuniary knowledge.

VI. The Research Contexts: Cambridgeshire ‘Silicon Fen’ and Essex

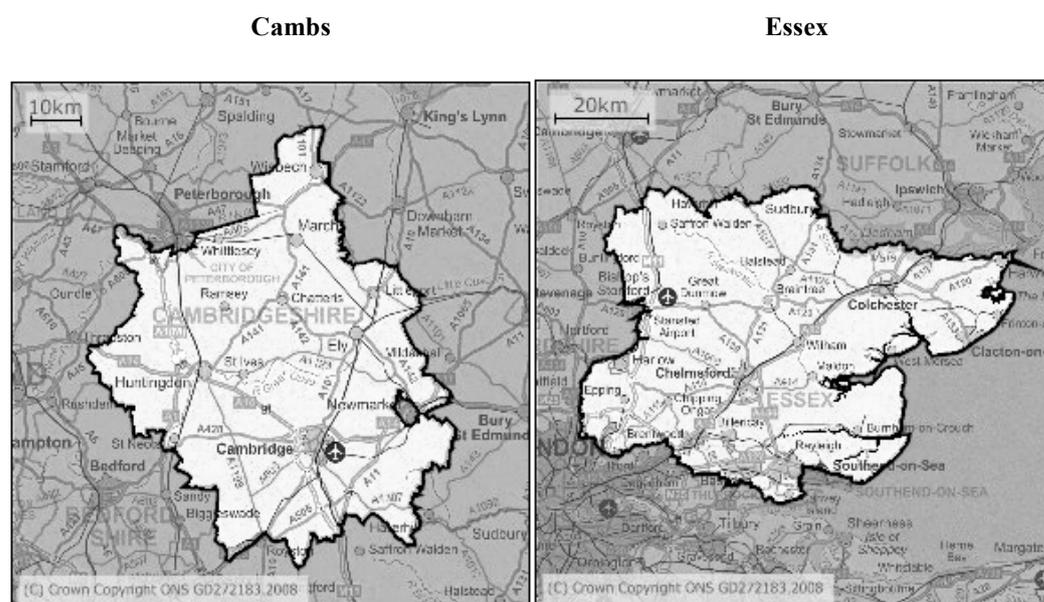
Cambridge Silicon-Fen and Essex are two centres of electronic and software entrepreneurship and innovation located on the opposite side of each other. One of the most noted contrasts between the regions is the fact that the Cambridgeshire industrial agglomeration of high-tech firms is visibly concentrated around the City of Cambridge, while the Essex high-tech software and electronic industries go almost unnoticed as they spread out across the vast county (Abubakar, 2009).

The celebrated phenomenon known as the ‘Silicon Fen’ is a geographic area of intense high-technology agglomeration encompassing the City of Cambridge at its heart and the sub-regional Greater Cambridge hinterland of about 20 mile radius. It is located in wider region of the East of England, about 50 miles north of London, and is one of the fastest growing regions in the UK and Europe (Barrell, 2004). In 1999, the Cambridge area of Cambridgeshire accounted for 60% of all hi-tech establishments and over 70% of all hi-tech employment in the County (Athreye, 2001). Research and development employment in the region has a location quotient of 7.1 (i.e. a share of R&D employment seven times the national average (Barry, n.d.). The Cambridge Silicon Fen is now recognised globally as a remarkable example of a dynamic knowledge-based economy, based on the spontaneous development of a myriad of small innovative technology intensive firms, embedded in a rich and diverse science base and providing some 50,000 jobs (PACEC, 2003). Thus, the Cambridge cluster is largely centred around the City of Cambridge, in a setting of close proximity (also see figure 4 below).

⁷ Radio-Tech Wins Innovation Award for Rail Temperature Monitor. Online. Available at: <http://halmapr.com/news/radiotech/2006/08/14/radio-tech-wins-innovation-award-for-rail-temperature-monitor/> (Accessed: 28th January, 2009).

⁸ Author’s interview with Mr Brian Back, the founder and Chairman of Radio-Tech Ltd, Essex

Figure 4: Key Regional Economic, Knowledge and Clustering Indicators



	Cambs	Essex
GVA per resident	£17,631	£13,631
GVA per local job	£32,404	£29,786
Population qualified to NVQ 4+	27%	17.4%
Specialised sectors that are 'knowledge intensive' (prop. All)	16%	10%
Employees in specialised and 'Knowledge intensive sectors'	11%	1%
Proportion of local employees in highly clustered sectors	6%	1%
ICT start-ups per 10,000 population	4.15	1.82

Sources: Annual Business Inquiry (2004), Arthur D. Little (2003), FRESA (2002), Abubakar and Mitra (2007)

Thus, while Cambridgeshire and Essex advance similar technologies, the contrast in clustering and knowledge intensive activities between Cambridgeshire and Essex is revealing. Data on clustering and knowledge intensive activities in the two regions seems to reinforce this notion. Today, Cambridgeshire has a massive proportion of employees in specialised and 'Knowledge intensive sectors' of 11% while Essex has a corresponding figure of 1% (Annual Business Inquiry, 2004 cited in Essex County Council, 2006; see figure 5 below). Data on Proportion of employees in highly clustered sectors further highlight the divergence in local agglomeration between Cambridgeshire and Essex; with the regions recording 6% and 1% respectively (see figure 6 below).

Figure 5: Proportion of employees in highly clustered sectors - 2004

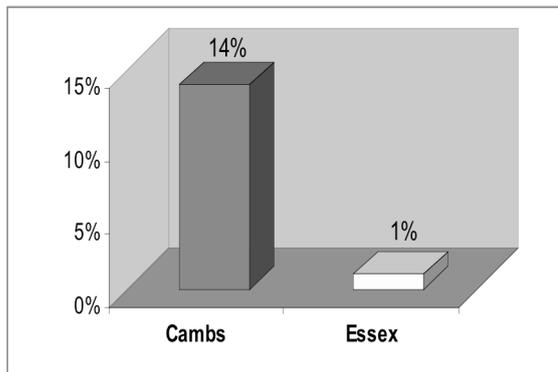
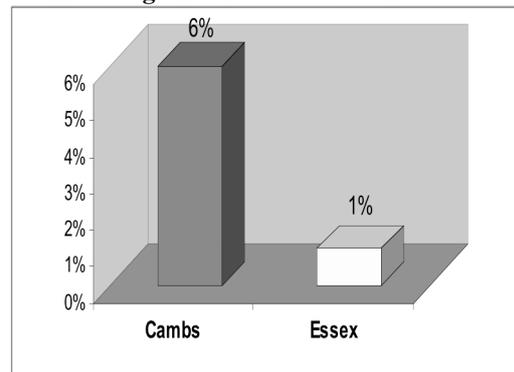


Figure 6: Employees in specialised & knowledge-intensive sectors - 2004



Source: Annual Business Inquiry 2004 cited in Essex County Council (2006)

Thus, if small firms in both regions develop new products, but differ in availability of local agglomeration - in terms of proximity to related firms and workforce - then a crucial question for those interested in fostering innovations in low agglomeration environments is – through what sources do firms in regions with low agglomeration source external knowledge for new product development? Put differently - what differences or similarities exist between small firms in high and low agglomeration exist in key external sources of knowledge used for new product development? These are crucial questions if we are ever going to design effective policies for boosting innovation performance of firms located in regions with low agglomeration, but also high agglomeration.

VII. Research Methodology

The empirical data for this paper focuses on differences and similarities in external sources of knowledge used for new product development by small firms in high and low agglomeration. A common questionnaire was developed to collect cross-sectional data for the years 2004-2007 in order to facilitate comparison between small firms in the two regions. The firms were sampled based on the criteria of being: 1) SMEs i.e. having less than 250 employees; 2) belonging to high technology sectors - software development and electronic engineering (CCC, 2004); 3) being located in the high agglomeration of Cambridgeshire Silicon Fen and low agglomeration of Essex (see below).

To further ensure that small firms were selected from areas with high and low agglomeration, the relative agglomeration of electronic and software firms was calculated for each Local Authority of East of England in order to identify areas with above average densities of electronic and software workforce and workplaces. Workforce density was calculated as – number of employees per km², and firm density was calculated as number of workplaces per km². The areas with above average employment and workforce density were considered high agglomerations, while those with below average scores were considered having relatively low agglomeration. Correlation between workforce and workplace density as the two measures of agglomeration was 0.86 (R Square) thus indicating that the two measures are highly related. The Silicon Fen cluster around Cambridge City (Keeble and Lawson, 1998; Myint *et. al.*, 2005) had a density of 69.3 employees per km² and 8.3 workplaces per km² in comparison to East of England average of 12.1 employees per km² and 1.7 workplaces per km². Thus firms in Cambridge ‘Silicon Fen’ cluster were considered located in local agglomeration. The vast of Essex had below East of England average for both workforce and workplace density. Firms in Essex areas were therefore considered located in low agglomeration.

Two sampling frames were obtained of SMEs in the local agglomeration of Cambridgeshire Silicon Fen and SMEs in low agglomeration of Essex from the following sources: Yell.com; Cambridge Networks; Apple Gate Directory and Essex ICT Directory. The data was collected using the research questionnaire administered through internet and postal surveys (Bryman and Bell, 2003). A total of 52 SMEs were surveyed in Cambridge Silicon-Fen and 48 in Essex, yielding a response rate of over 20% in each region. The data collected was analysed with SPSS using factor analyses, cluster analysis and multiple regression as commonly used in comparative studies in entrepreneurship (Manimala, 1999; Lublinski, 2003; Bryman and Bell, 2003). The two samples from which data was collected were randomly selected, and this improves external validity (Bryman and Bell, 2003). The construct validity was improved by developing measures based on well acknowledged innovation studies i.e. constructs such as new product development and externalities (CIS3, 2004). All factors derived from factor analysis were tested for reliability using Cronbach's alpha and thus the knowledge spillover factors had an average score of 0.79 while the pecuniary knowledge factors had an average score of 0.73, and can therefore be considered to be reliable (Manimala, 1999; Schutte et al., 2000; Bryman and Bell, 2003).

VIII Empirical Results

- ***PI: Variations in key knowledge spillover mechanisms between small firms in high and low agglomeration***

The first objective is to explore and identify differences in key knowledge spillover mechanisms influencing the development of innovative products in high and low agglomeration. We therefore focus on identifying and rating innovativeness of sub-groups firms based on the spillover mechanisms they use for developing new products. First, to identify the subtypes, hierarchical factor analysis of 27 knowledge spillover variables collected from the questionnaire was conducted. The rationale for using factor analysis was to simplify the knowledge spillover variables from the questionnaire into fewer meaningful factors. The 6 factors that emerged on knowledge spillovers are significant and meaningful explaining 72.2% of the total sample variance and can be readily interpreted in economic terms. The 6 factors can be interpreted as: labour mobility, research institutes spillovers, spillovers from conferences, spillovers from informal contacts, imitation of existing products (reverse engineering) and international spillovers (see appendix 6).

The next logical step after the factor analysis in order to identify the subgroups of firms is cluster analysis, which aims at constructing homogeneous groups of firms in terms of the variables considered (Rabellotti and Schmitz, 1999). In both Cambridge Silicon Fen and Essex 4 subtypes each were found.

In order to assess the innovativeness of products developed by firms belonging to each subgroup, we construct a measure known as 'Product Novelty Index (PN Index)'. The Product Novelty Index is a combined measure for assessing the novelty of the new products developed by firms, based on common four different types of innovation indicators commonly used in major innovation studies (OECD/EC/Eurostat, 1997; European Commission, 2002; CIS, 2004). Thus, each small firm was assigned a Product Novelty Index score based on the presence or absence of four types of innovation related activities (see table 2). The score for each firm ranged from a minimum of 0 to a maximum of 4.

Table 2: The Product Novelty Index (PN Index)

Components	Score
The development of product "new to firm"?	1
The development of product "new to market"?	1
Changing product in a substantial manner for individual customers?	1
Patent application?	1
Maximum (total) score	4

As shown in table 3, the subtypes found in general are: a) *Imitators*– that is a sub-group characterised by firms which take other firm’s product and reverse engineer it by finding new applications for it; b) *Research institute spillover oriented firms* – which are small firms that focus on utilising mostly ‘free’ knowledge from universities and research organisations, which could be in the form of free conversations with academics and researchers in universities and colleges, public research that is made available without restriction to users etc; c) *Loners*– firms are which negative scores for virtually all the knowledge spillover factors identified in the study, thus indicating that these firms remain somewhat isolated from knowledge spillovers; d) *Labour oriented firms*- subgroup characterised by small firms with recruiting of new labour as their core external spillover focus; e) *International spillover oriented firms*- which are firms that focus their attention, as it relates to spillovers, primarily on sourcing knowledge from international sources.

Table 3: Subtypes of Firms based on Knowledge Spillover Sources and their PN Index Scores

a) Cambridge Silicon Fen

Knowledge Spillover Factors								
	<i>Research institutes</i>	<i>Professional associations</i>	<i>Informal contacts</i>	<i>Labour mobility</i>	<i>Reverse engineering</i>	<i>International spillovers</i>	Size (%)	Product Novelty Index(PN Index)
INTERNATIONAL SPILLOVER ORIENTED FIRMS	-0.45	-0.07	1.29	0.49	-0.64	1.39	18%	2.44
LABOUR ORIENTED FIRMS	0.00	0.23	-0.27	0.89	0.41	0.08	44%	2.68
LONERS	-0.01	-0.08	-0.16	-0.77	-0.20	-0.29	36%	2.06
RESEARCH INSTITUTE SPILLOVER ORIENTED FIRMS	3.17	-2.82	3.20	0.77	2.16	-0.04	2%	3

N = 50

Note: These subtypes are based on spillover sources from ‘local’, ‘national’ and ‘international’ sources taken all together.

b) Essex

Knowledge Spillover Factors								
	<i>Research institutes</i>	<i>Professional associations</i>	<i>Informal contacts</i>	<i>Labour mobility</i>	<i>Reverse engineering</i>	<i>International spillovers</i>	Size (%)	Product Novelty Index(PN Index)
Imitators	-1.29	-0.09	0.37	-1.16	3.10	-0.19	9%	2
Research Institute Spillover Oriented Firms	1.55	1.02	-0.08	1.11	0.22	0.70	11%	2
Loners	0.37	-0.09	-0.23	-0.86	-0.29	-0.05	47%	1.86
Labour Oriented Firms	-0.60	-0.20	-0.15	0.43	-0.61	-0.73	33%	1.6

N = 45

Note: These subtypes are based on spillover sources from ‘local’, ‘national’ and ‘international’ sources taken all together.

Our main finding as regards unique sources through which innovative firms in low agglomeration acquire external knowledge is that the subgroup of firms known as ‘imitators’ appear to have greater presence in Essex than in Cambridge Silicon-Fen. Imitators are firms which rely on reverse engineering other firms’ products. This is likely because firms in Essex have significantly lower internal R&D ($p < 0.05$) and imitation requires less R&D (Kim, 1997). Reverse engineering in software industry can be described as “the analysis of a competitor’s program by examining its coding and structure in order to develop programs which either

compete with the program which has been analysed or interface with that program" (Gerald, 1990). It therefore has to do with the disassembling of the object code into a readable source code right up to the development of a new product based on the ideas revealed by disassembling (Mishra, 1997).

Interestingly, the subgroup of firms in Essex with imitative technological learning through reverse engineering appears to have a high score for Product Novelty Index (2.0), which is above the local average of 1.87. This suggests that imitation may be an important source of learning for firms in low agglomeration especially considering their relative dearth of internal R&D. Similarly, reverse engineering has had a significant role in the early technological progress of developing countries such as Korea especially with the country's initial state of low R&D activities (Mishra, 1997; Kim, 1997; Wong, 1999; World Bank, 2000). Thus, our results suggest that gaining new product development capability for firms in low agglomeration may also be gradually influenced by imitation through reverse engineering. In contrast, imitators are hardly found in the high agglomeration of Silicon Fen, perhaps because of their high R&D.

In Cambridge Silicon-Fen subgroups of small firms with above average for Product Novelty Index scores appear to be those that rely on labour mobility (PN Index score = 2.68) and research institute spillovers (PN Index score = 3.0). Labour mobility however does not appear to have a high effect for firms in Essex (PN Index score = 1.6). This is likely because taking advantage of labour mobility seems to be highly associated with firm R&D, which is another issue that has been overlooked by knowledge spillover theorists (Audretsch, 1998; Stuart and Sorenson, 2003: see figure 7).

Figure 7: Correlation of Firm Internal R&D⁹ and Labour Mobility

⁹ The measures for R&D Index are from our questionnaire and they were taken directly from Albaladejo and Romijn (2000). The is made up of three questionnaire items that gauge on a scale of 1 to 5, the importance of: a) Formal in-house R&D; b) Other in-house technological activities; b) ideas generated from marketing etc. The reliability test for Cronbach's Alpha is 0.67, which is considered reliable in innovation studies (Manimala, 1999)

($p < 0.01$; Pearson's $r = 0.33$; $N = 87$)

- ***P2: Variations in key Pecuniary Knowledge Mechanisms between Small Firms in High and Low agglomeration***

The second objective of the study is to explore and identify variations in key pecuniary knowledge mechanisms influencing new product development between small firms in high and low agglomeration. Again, the proposition that we try to explore is whether innovation learning behaviour of the most innovative firms in low agglomeration is uniquely different from the most innovative firms in high agglomeration. Accordingly, first we conduct a hierarchical factor analysis of the 27 pecuniary knowledge variables collected from the questionnaire, so as to simplify the variables into fewer more meaningful factors. The analysis yielded 7 pecuniary knowledge factors (. The factors can be interpreted as collaboration with research institutes, licensing competitor's technology, subcontractors, knowledge from national market, knowledge from local market, and knowledge from international market (see appendix 2 for statistics on the factors).

Secondly, we carried-out cluster analysis of the 7 pecuniary factors to identify different external learning behaviours of small firms in Silicon-Fen and Essex. The cluster analysis revealed 5 subtypes of firms in high agglomeration and 4 in low agglomeration that have previously not been discussed in the literature. Table 4 depicts the subtypes of small firms in high and low agglomeration based on pecuniary knowledge orientation.

The subtypes are: a) *Market knowledge oriented firms* - a group of small firms whose knowledge (and learning) for new product development is based primarily on market relations they engage in; b) *Consultancy oriented firms* - these firms develop their new products based on advice and other consultancy services received from consultants; c) *Technology license oriented firms* - this subgroup of small firms is characterised by firms that develop new products with their external orientation based fundamentally on licensing the technology of competitors; d) *Collaborators with research institutes* - These are small firms that collaborate or use paid services of universities and research institutes which are traditionally known as providers of basic research; e) *Loners* - this represent a sub-group of autonomous small firms that are not oriented towards pecuniary knowledge sources.

Table 4: Subtypes of Small Firms based on Pecuniary Knowledge Sources and PN Index

a) Cambridge Silicon-Fen

Pecuniary Knowledge Factors									
	<i>Contracts with public organisations</i>	<i>Technology licensing & R&D employees</i>	<i>Sub-contractors</i>	<i>National customers & suppliers</i>	<i>Local customers & suppliers</i>	<i>International customers & suppliers</i>	<i>Consultants</i>	<i>Size (%)</i>	<i>Product Novelty Index(PN Index)</i>
Market knowledge oriented firms	-0.02	0.05	-0.43	0.37	-0.12	0.34	-0.45	43%	2.41
Consultant oriented firms	0.34	-0.15	-0.06	-0.76	-0.18	-0.52	0.83	25%	2.23
Technology license oriented firms	0.05	1.04*	0.64	-0.91	-0.25	0.92	-0.45	18%	2.67
Subcontractor oriented firms	-0.58	0.43	1.65*	0.93	0.59	-1.32	0.14	12%	2.33
Collaborators with research institutes	5.03*	-3.7	0.45	1.07	1.16	-0.33	0.93	2%	3

N=51

Note: These subtypes are based on pecuniary knowledge sources from 'local', 'national' and 'international' sources taken all together

b) Essex

Pecuniary Knowledge Factors									
	<i>Contracts with public organisations</i>	<i>Technology licensing & R&D employees</i>	<i>Sub-contractors</i>	<i>National customers & suppliers</i>	<i>Local customers & suppliers</i>	<i>International customers & suppliers</i>	<i>Consultants</i>	<i>Size (%)</i>	<i>Product Novelty Index(PN Index)</i>
Market knowledge oriented firms	-0.84	-0.2	-0.48	1.63	-0.7	0.23	1.18	16%	1.43
Collaborators with research institutes	3.07	2.27	0.36	1.13	1.21	0.24	1.18	5%	0.50
Loners	-0.03	-0.14	-0.46	-0.4	-0.11	-0.37	-0.24	61%	1.63
Subcontractor oriented firms	-0.67	-0.85	1.14	0.04	0.97	0.88	-0.33	18%	2.75

N=44

Note: These subtypes are based on pecuniary knowledge sources from ‘local’, ‘national’ and ‘international’ sources taken all together

Our results suggest that the firms developing the most innovative products in Essex tend to base their use of external knowledge on sub-contractual relations, which contrasts with those in Cambridge Silicon-fen where firms collaborating with research institutions (e.g. universities) have the highest score for Product Novelty Index (3.0). Considering that collaboration with research institutes is carried out by firms with high investments in R&D (see figure 8), our results suggest that formal collaboration with research institutes has only relatively small impact on firms in low agglomeration. Thus, for firms in Essex, subcontracting to other firms appears to play the most significant role in helping firms develop innovative products.

Figure 8: Correlation of Firm Internal R&D and Collaboration with Research Institutes

($P < 0.01$; Pearson's $r=0.29$; $N = 87$)

Since the findings in P1 and P2 above all suggest that small firms in both Cambridge Silicon-fen and Essex use knowledge spillovers and pecuniary knowledge sources, the next logical step is to compare the relative importance of knowledge spillovers and pecuniary knowledge for new product development by firms in both regions. This will allow us to identify which external sources of knowledge are more crucial for new product development especially in low agglomeration (Essex), thereby providing possible direction for policy

- ***P3: Knowledge Spillovers vs. Pecuniary Knowledge on NPD***

In this part of the analysis, we examine the primary source of external knowledge i.e. whether knowledge spillovers or pecuniary knowledge that provides the maximum explanation to new product development by small firms in high and low agglomeration. In statistical terms, this means identifying the ability of knowledge spillovers vs. pecuniary knowledge externalities to explain new product development.

To test those external sources which are most favourable for new product development, we opt for multiple regressions. The importance of multiple-regression is that it allows the examination of the impact of independent variables on the dependent variable (Bryman and Cramer, 2001). Thus, for the purpose of the regression analysis, knowledge spillover and pecuniary knowledge factors identified through factor analysis in P1 and P2 (above) were employed. This is because the original spillover and pecuniary knowledge variables collected from the questionnaire are not appropriate for multiple regression analysis as there are high inter-correlations among some of the variables, thus risking multi-collinearity (Bryman and Cramer, 2001). It was therefore decided to use the factors identified in P1 and P2 of the data analysis, since they already combine the original variables that are inter-correlated into meaningful and reliable factors. The knowledge spillover orientations and pecuniary knowledge orientations identified account for 72.2% and 71% of the total sample variance respectively. Thus, it is very reasonable to compare their relative impact on new product development. In this context, we consider knowledge spillovers to be more important than pecuniary knowledge externalities in high agglomeration if it provides the maximum explanation for new product development by small firms.

The Product Novelty Index developed above does not relate to number of products developed but mainly novelty of the products. Thus, since the study is limited to technology product development, we employ 'number of patents' applied for by small firms as the main proxy for new product development. Patents are commonly used in a number of major innovation studies (Jaffe 1989; Jaffe, Trajtenberg and Henderson, 1993; Breschi and Lissoni, 2006; Krudsen *et al.*, 2007). Many of the major authors note that there exists a strong relationship between patenting and research and development (Scherer, 1983; Jaffe, 1989; and Griliches, 1990), thus implying that patents are a good measure of inventive activity. This is also indicated by our results, as we found a strong relationship between patents and internal R&D activity ($p < 0.01$). We also note a significant relationship between patents and the Product Novelty Index in both Cambridge Silicon-Fen and Essex ($p < 0.05$). Therefore, the number of patents held or applied for by small firms was considered a useful measure of new product development in technology based industries. The validity of the regression findings based on patents was further strengthened as similar results were obtained when internal R&D was employed as the 'dependent variable', thus making the results more robust.

It should be noted however that although the knowledge spillover and pecuniary knowledge factors are regressed with the number of patents, causality cannot be directly inferred, since the variables were not measured with a time gap between them. In this context, our effort serves probably as the first attempt to measure the relative influence of knowledge spillovers versus pecuniary knowledge externalities on new product development in high and low agglomeration.

a) Cambridge Silicon-Fen: Knowledge Spillovers vs. Pecuniary Knowledge

We begin the analysis with the Cambridge Silicon-Fen sample. Table 5 below displays the results of the multiple regression analysis. Our results suggest that both spillovers and pecuniary knowledge are significant in explaining new product development in Cambridge Silicon-Fen. However, while Knowledge spillover sources are significant at $p < 0.001$ explaining 45% of the variance, pecuniary knowledge orientations are less significant than

knowledge spillovers at $p < 0.05$ with less explanatory power at 32%. Thus, the findings suggest that in a high agglomeration region, knowledge spillovers have greater explanatory power than pecuniary knowledge externalities on our proxy of new product development. Thus, the explanatory power of knowledge spillovers on new product development appears to be stronger (see table 5).

Table 5: Cambs: Influence of Spillovers vs. Pecuniary Knowledge on New Product Development

	Unstandardised Coefficients	Standardised Coefficients	Sig.	% Variance Explained (R Square)	Sig.
MODEL 1: KNOWLEDGE SPILLOVERS					
<i>International spillovers</i>	2.54	0.58	0.000	45%	0.000
<i>Spillovers from research institutes and patent disclosures</i>	1.45	0.28	0.027		
<i>Spillovers from Labour mobility</i>	1.40	0.27	0.031		
<i>Free' knowledge from informal contacts</i>	-0.84	-0.19	0.117		
<i>Reverse engineering</i>	-0.98	-0.17	0.186		
<i>Spillovers from Conferences and Associations</i>	-0.54	-0.11	0.383		
Constant	1.247				
<i>N = 49</i>					
MODEL 2: PECUNIARY KNOWLEDGE					
<i>Technology licensing</i>	1.75	0.38	0.015	32%	0.017
<i>International market knowledge orientation</i>	1.52	0.34	0.022		
<i>Collaboration with research institutes</i>	1.50	0.33	0.026		
<i>National market knowledge orientation</i>	-1.16	-0.23	0.091		
<i>Consultants</i>	0.94	0.18	0.171		
<i>Sub-contractors</i>	0.82	0.16	0.245		
<i>Local market knowledge orientation</i>	-0.28	-0.05	0.683		
<i>N=50</i>					

b) Essex: Knowledge Spillovers vs. Pecuniary Knowledge

Having explored the relative influence of knowledge spillovers vs. pecuniary knowledge in the Cambridge Silicon-Fen, we now turn to the Essex sample. Again we use the same indicators of new product development, knowledge spillover and pecuniary knowledge. Table 6 below displays the results of our analysis.

Table 6: Essex: Spillovers vs. Pecuniary Knowledge and New Product Development (Number of Patents)

	Unstandardised Coefficients	Standardised Coefficients	Sig.	% Variance Explained (R Square)	Sig.
MODEL 1: KNOWLEDGE SPILLOVERS SOURCES					
<i>International spillovers</i>	0.10	0.06	0.700	30%	0.027
<i>Spillovers from research institutes and patent disclosures</i>	0.42	0.28^a	0.056		
<i>Spillovers from Labour mobility</i>	0.41	0.27^a	0.063		
<i>Free' knowledge from informal contacts</i>	-0.56	-0.310	0.048		
<i>Reverse engineering (imitation)</i>	0.35	0.27	0.069		
<i>Spillovers from Conferences and Associations</i>	0.09	0.06	0.677		
Constant					
N=44					
MODEL 2: PECUNIARY KNOWLEDGE SOURCES					
<i>Technology licensing</i>	0.25	0.13^a	0.537	21%	0.254
<i>International market knowledge orientation</i>	0.78	0.44^a	0.015		
<i>Collaboration with research institutes</i>	0.03	0.02^a	0.931		
<i>National market knowledge orientation</i>	-0.22	-0.13	0.392		
<i>Consultants</i>	-0.19	-0.19	0.236		
<i>Sub-contractors</i>	-0.48	-0.28	0.103		
<i>Local market knowledge orientation</i>	-0.19	-0.12	0.423		
N=43					

Again similar to Cambridge Silicon-Fen, the results replicate themselves. Knowledge spillovers again appear to have greater influence on new product development than pecuniary knowledge spillovers. Thus, while knowledge spillovers appear to explain 30% of new product development (p=0.027), pecuniary knowledge could only account for 21% (p=0.254) of the variance. Thus, regression of knowledge spillovers vs. pecuniary knowledge on new product development shows that spillovers have greater influence in both regions.

Having found that knowledge spillovers are relatively more important in both high and low agglomeration regions, it is now important for us to understand more clearly where these spillovers come from, especially for firms in low agglomeration? Is it from the local, national and international sources? Such information is also likely to help provide direction on spatial focus of innovation policy. Thus in P4, we investigate the relative importance of local, national and international sources of knowledge on new product development by small firms in different regions.

- **P4: Relative Influence of Local vs. National and International Knowledge on NPD**

Our interest here is in investigating the relative influence of local versus national and international knowledge sources for new product development by small firms in high and low agglomeration. Firms were asked in the survey to rate the importance for developing products of various sources of knowledge acquired at the local, national and international levels. We then constructed variables for local knowledge, national knowledge and international

knowledge. For example, the local knowledge variable was constructed in the following way: for each firm, we added up the scores of importance assigned to the sources of knowledge acquired locally.

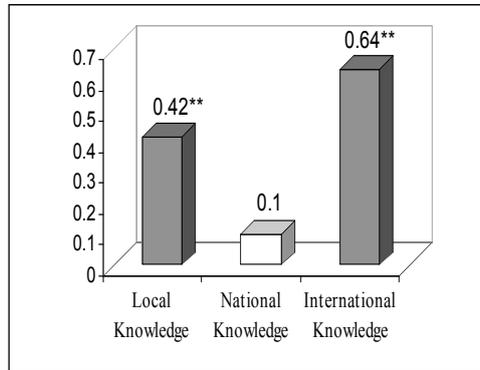
Our main goal in this section of the data analysis is to investigate the relative influence of local versus national and international knowledge for new product development in high and low agglomeration. In operational terms, the focus of the analysis is the relationship between use of knowledge at a particular spatial level and new product development. Accordingly, we employ the spatial variables developed on local, national and international knowledge to examine their relationship with new product development. We again employ number of patents as the proxy for new product development.

Figure 8 below displays the results of the analysis. For the Cambridge Silicon-Fen sample, two spatial levels appear to be significantly associated with new product development. These are 'local knowledge' ($p < 0.01$) and 'international knowledge' ($p < 0.01$). In contrast, in Essex low agglomeration, 'international knowledge' ($p < 0.05$) is the main spatial level that appears to be associated with new product development activities. The results also hold even if sources of knowledge are divided into knowledge spillovers and pecuniary knowledge (see figure 9).

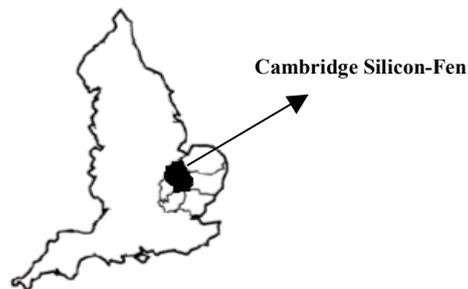
Thus, we have been able at least to some extent, to empirically show the significance of international knowledge sources for new product development in low agglomeration over and above the national and local levels. On the other hand, in high agglomeration, local and international sources of knowledge appear to be the key sources of knowledge influencing new product development.

Figure 9: Cambridge Silicon-Fen: Correlations between Geographic Knowledge Sources and New Product Development

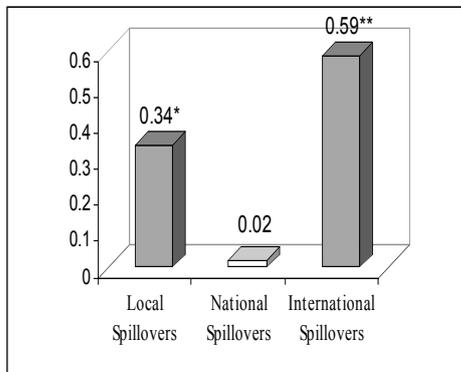
a) All knowledge Sources



N= 51

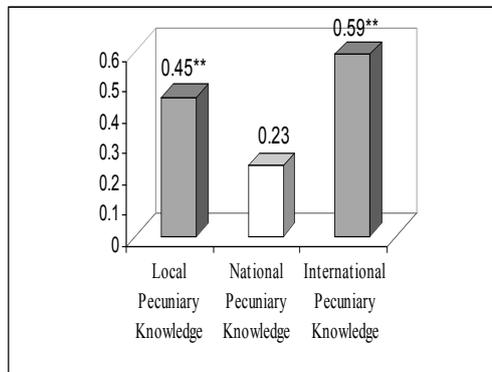


b) Spillovers Sources



N= 51

c) Pecuniary Knowledge Sources



N= 51

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

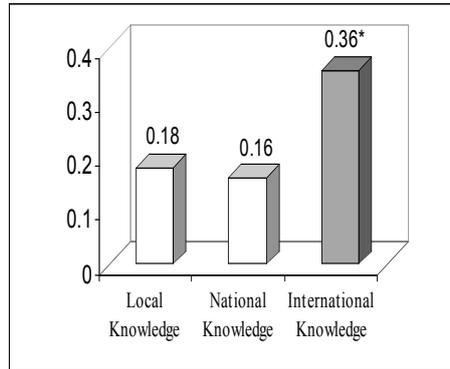
Significant on NPD at the 0.05 level (2-tailed)/highest influence



Not significant

Figure 10: Essex: Correlations between Geographic Knowledge Sources and New Product Development

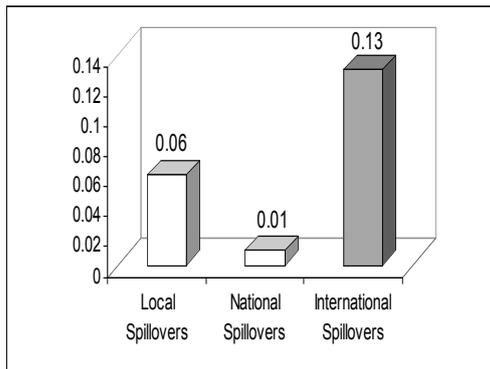
a) All knowledge Sources



Essex = 47

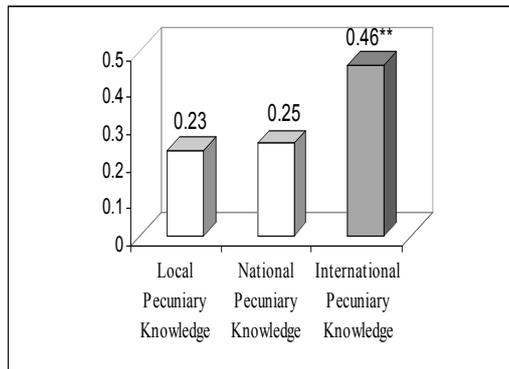


b) Spillovers Sources



Essex = 47

c) Pecuniary Knowledge Sources



Essex = 47

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

Significant on NPD at the 0.05 level (2-tailed)/highest influence



Not significant

IX. CONCLUSION: THE 4 KEY SOURCES OF NPD IN LOW AGGLOMERATION

In this paper, we have investigated sources of new product development by small firms in low agglomeration by comparing them with those in high agglomeration. We end with a simple premise. **If we stop thinking of small firms in low agglomeration regions as lacking proximity to sources of R&D, formal collaborations with research institutions and start recognising them as having other sources of innovation, a whole new world of opportunities could open-up for promoting technological innovations.** The result of over three year intensive research, our results analysis that the key to understanding sources of new product development in low agglomeration lies in what we call the '4 sources of NPD in low agglomeration'. Our analysis suggest that small firms' emphasis on sourcing knowledge through *imitation*, *subcontracting*, *Knowledge spillovers* and *international knowledge sources* are strong differentiators as to which firms develop new products in low agglomeration.

1) IMITATION (relative to other spillover mechanisms):

We found 'imitators' i.e. firms relying on reverse engineering products of others are more likely to be found in low agglomeration regions, and have far less presence in high agglomeration. Imitators, a sub-group of firms in low agglomeration that rely on reverse engineering appear to have the highest PN Index. Thus, it seems the role of imitation in geography of innovation research has long been neglected. The find in low agglomeration somewhat contrasts with high agglomeration, where we found firms with high scores for PN Index to be focussed on labour mobility and 'not' imitation. However, studies of rapid technological developing countries such as Korea, Singapore and Taiwan have shown the importance of imitation for innovation (Kim, 1997; Wong, 1999; World Bank, 2000). For example, an authoritative study published by Harvard University Press argues that the evolution of imitation to innovation has played a crucial role in Korea's rapid technological development (Kim, 1997). Thus, our findings suggest that even in advanced countries, imitation is crucial for innovation by small firms mainly in low agglomerations.

2) SUBCONTRACTORS (relative to other pecuniary sources).

Small firms in low agglomeration appear to have quite different pecuniary knowledge approaches to developing capability for technological product development. Firms engaging in sub-contractual relations appear to have the highest PN Index score in low agglomeration, thus suggesting the particular importance of such relations. Interestingly, sub-contractual relations have been particularly important for developing countries that have achieved remarkably rapid technological catch-up (Wong, 1999). For example, many firms from Singapore initially started as subcontractors and contract manufacturers for world class electronics Multinational Corporations (MNCs) e.g. Natsteel Electronics (Wong, 1999). Indeed, Singapore has now emerged as a leading hub for contract manufacturing specialists in the world (Wong, 1999). Likewise, firms in low agglomeration regions even in advanced countries like UK, appear to benefit particularly from sub-contractual relations, which is a phenomenon that has hardly received any attention from geography of innovation literature.

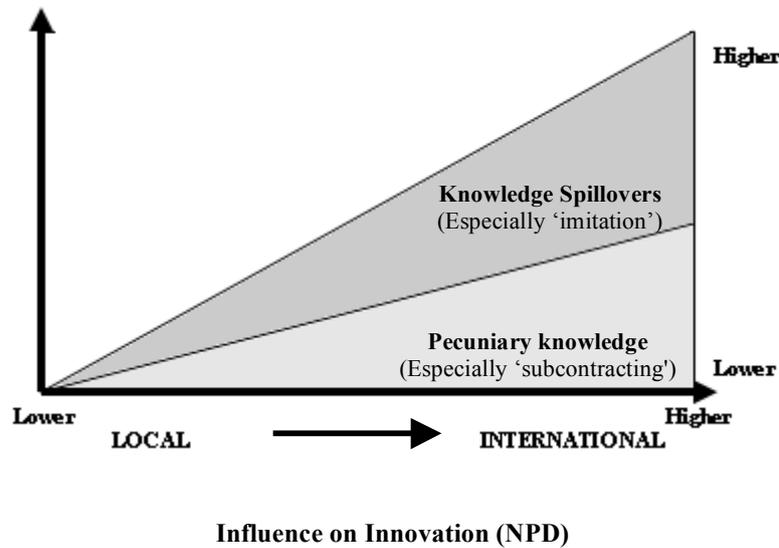
3) KNOWLEDGE SPILLOVERS (relative to pecuniary knowledge)

Knowledge spillovers have traditionally been thought of as mainly relevant to agglomerations (Audretsch, 1998; Stuart and Sorenson, 2003). Rather our results suggest that knowledge spillovers are relevant and significant for firms in low agglomeration. Thus, relative to pecuniary knowledge sources, we found Knowledge spillover sources as the key external factors influencing new product development by small firms in both high and low agglomeration. Thus we suggest that a new research agenda for advocates of spillovers, by focussing on the use of spillovers in low agglomeration rather than high agglomerations so that policy makers and small firm managers can be beneficially enlightened about important externalities.

4) INTERNATIONAL SOURCES (relative to local and national)

Although in a high agglomeration region local knowledge is clearly significant as pointed out by champions of agglomeration (Saxenian, 1994; Audretsch, 1998; Acs, 2002), our findings suggest that international knowledge sources appear to be the most correlated with new product development in both high and low agglomeration regions (also see figure 10). This finding holds for both regions even after dividing knowledge sources into knowledge spillovers and pecuniary knowledge, thus making the results more robust. This is likely because as firms cross regions, national and international boundaries, they are likely to encounter varying customer needs, meeting which often requires developing new products (Booze Allen Hamilton and INSEAD, 2006). This is a very crucial finding that appears to suggest that there might be a solution for technologically lagging regions, in an era where the disturbance over the universality of local policies is escalating.

Figure 11: External Sources of small firm Innovation in Low Agglomeration



WHAT ARE THE POLICY DEMANDS?

To support firms in low agglomeration and avoid wasting public funds, the public sector may need to develop new policy models. Traditional 'local' innovation policies will hardly ever work. Supporting firms in low agglomerations to develop new products may require changing the dominant logic of innovation policy. We therefore conclude by asking policy makers and small firm managers 'to tread the path of innovation and entrepreneurship with morality and honesty' (Prahalad, 2008) by developing new models that take into account regional contexts of innovation (Abubakar, 2009).

Changing the dominant logic of innovation policy in Low Agglomeration



From 'local' innovation policies:	To developing the 'New' Models???
<ul style="list-style-type: none"> Low agglomerations lack R&D sources (Florida and Kenney, 1988; Stuart and Sorenson, 2003) 	1. Focus on creative imitation (especially sources beyond local boundaries and within legal boundaries)???
<ul style="list-style-type: none"> Low agglomerations lack formal collaborations with research institutions 	2. Focus on subcontracting/outsourcing (especially beyond local boundaries)???
<ul style="list-style-type: none"> Spillovers are localised in agglomerations (Jaffe, 1989; Audretsch, 1998) 	3. Spillovers are also effective for firms in low agglomeration???
<ul style="list-style-type: none"> Low agglomerations lack 'local' resources (Stuart and Sorenson, 2003) 	4. Access to 'global' resources???

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Beyond Business Planning: A Case Study of Prototyping and Commercialisation of Innovations by Entrepreneurship Students

By David H. Gilbert

This paper reports on an applied approach to educating young entrepreneurs about the realities of innovation development and commercialisation. The purpose of this approach is to provide undergraduate students with a unique capability set that enhances both their employability and ability to launch and sustain their own ventures in increasingly dynamic and complex environments. Students were taken beyond the business planning for new venture creation paradigm into product/service prototyping and business model development.

Introduction

Most new start-ups are SMEs and SMEs have long been acknowledged as the life blood of a nation's economy (Tomioka, 1974; Clarke, 1979; Schmidt, 1990). Hence, it would appear there is merit in providing an educational context for entrepreneurship students, intent on creating new business opportunities, that enables them to experience in a real sense what is required to conceptualise, design and commercialise innovations. The implications of this are self evident in terms of new venture creation, more innovative approaches to enterprise development and management as well as enhancement of workforce skill and attitude. This paper reports on an on-going partnership between an undergraduate Entrepreneurship Program at one of Australia's leading universities based in Melbourne and the Accelerated Innovation Group (AIG) at Deloitte Digital also based in Melbourne.

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In 2007, the author who is the Director of the Entrepreneurship program was approached by a member of the AIG, an alumnus of the university with a broad proposal to ‘do something innovative together’. This came on the back of a certain amount of frustration with how the now Innovation Manager himself had been educated in his computing science degree; he detailed that he felt he had learned more from ‘playing around with things’ than he had in lectures and tutorials. Though his feelings did not entirely align with educational objectives of the Entrepreneurship Program, it was evident that an opportunity had been provided for students undertaking an undergraduate business degree in Entrepreneurship to actively apply what they had learned in the program and to not only extend current capabilities but to learn new skill sets, in a real world setting.

It is of note that there has and still is, significant support for this experiential learning pilot from the CEO, Deloitte Digital, without which the project would not have achieved what it has. It is not everyday that one of the world’s most successful professional services firms opens its inner innovation sanctum, so that undergraduate students can in the words of the CEO ‘play with all the toys in the sandpit’. Engagement and commitment are key contributing factors to the program’s success and will be further discussed in detail in following sections of this paper.

The first year of the program was deemed successful (reported on last year at the 2008 ICSB conference), with students, industry mentors and faculty staff unanimous in their support for the ‘Innovation Program’ as it is known. The program also gained national and international press coverage as a result of some of the findings from the collaboration. The inaugural year of the program saw 22 students from the Bachelor of Business (Entrepreneurship) embedded in 7 groups into the AIG at Deloitte Headquarters in Melbourne, each under the guidance of a mentor from the AIG. Groups were assigned an innovation from the AIG innovation bank that comprised of essentially filtered or screened business concepts proposed by employees from across the various departments at Deloitte. The innovations were concerned with business proposals involving

technology in the form of mobile phone applications, web 2.0 based architectures, knowledge development services, sustainability auditing and data visualisation software applications.

Following completion of the first year of the Innovation Program, a workshop was held that involved student representatives, Deloitte staff and faculty staff to analyse results of research conducted throughout the course of the program. This involved all in the program being surveyed prior to commencement and once again upon completion of the program. As well, in-depth interviews were conducted upon the completion of the program to assist in triangulating results from the surveys and to further investigate critical issues. Key results and recommendations from this workshop were incorporated into the year two offering of the Innovation Program, which is reported on in this paper.

Literature Review

Policy-makers and educational institutions in Europe, particularly the UK, North America and Australia have targeted the need for Higher Education (HE) institutions to focus on Work-Based Learning (WBL) due to critical skills shortages in many developed countries. In the UK there have been numerous White and Green papers linking educational institutions of all levels to workforce skill development. The underlying thrust for this according to Keep (2006) is the assumption that higher standards of living will be enabled through higher skill levels which promote greater workforce productivity and effectiveness. In the US, increasing numbers of national and international students are undertaking work-based programs to boost their career opportunities (McConnell 2006). The National Commission for Cooperative Education in the United States has a long history with approximately 200,000 students participating each year in Cooperative Education programs (NCCE, 1998). While in Australia, Reeder (2000:205) notes that “60% of Australian university courses include some form of learning in the workplace”, and Jancauskas *et al* (1999) report that 20 of Australia’s universities offer cooperative education, involving 10,000 students, over 3,000 employers, and student earnings in excess of \$60 million (cited in Reeder, 2000). It

appears the value of WBL programs is clearly understood by policy-makers, industry and higher educational institutions. Yet, this strategic approach to producing more work-ready graduates is not without issues. Raelin (1997; 1998) in developing his ‘Comprehensive Model of Work-Based Learning’ reports that in North America, “unfortunately, classroom and real-world development experiences are typically provided independently as if there was no need to merge theory with practice” (1997:574). While Boud and Symes (2000:3) detail that “work-based learning is still an idea in search of a practice, a pedagogy that is undergoing development as it accommodates itself to the exigencies of the workplace and the university”. Part of the conundrum appears to be that prescriptive approaches to WBL are inherently problematic and whilst there may be common elements germane to what Bransford *et al* (2000) call ‘the new science of learning’ grounded upon experiential learning (Dewey 1938; Polanyi 1966; Kolb 1985), it would seem effective WBL programs are both content and context-specific. Raelin (1997) argues the dynamics of WBL extend beyond the experiential learning paradigm which he observes adds “a layer of experience onto conceptual knowledge”, to an amalgam of theoretical and practical modes of learning underpinned by explicit and tacit forms of knowledge. This conceptual extension aligns with the OECD’s observations on collaborative approaches to knowledge development in enabling national competitive advantage; they state “The nation that fosters an infrastructure of linkages among and between firms, universities and government gains competitive advantage through quicker information diffusion and product deployment...The performance of an innovation system now depends, more than in the past, on the intensity and effectiveness of the interactions between the main actors involved in the generation and diffusion of knowledge” (2000:161).

The (NCVER) or National Vocational Education and Training Research and Evaluation Program Report (2008) produced by academic researchers for the Australian Federal Government provides an analysis of successful features in past, current and emerging models of employment-based training, highlighting a set of fundamentals for effectiveness that include:

- being pedagogically sound;
- leading to quality skill formation;

- having positive outcomes for both individuals and the enterprises;
- functioning effectively and
- being sustained over time.

The report details that in pedagogical terms, WBL is more effective when the workplace learning complements experiences in educational institutions. Furthermore, five main elements are outlined that the authors indicate contribute to making such an approach effective in developing vocational competence.

1. experiences of the vocational practice
2. the duration of the learning contract
3. expert support
4. link to formal education
5. assessment and certification.

These observations regarding effective WBL programs and findings from other researchers in regard to WBL models underpinned development of content and context-specific issues for the second year of the Innovation Program. Along with direction from the literature review, results from research conducted during the first year of the program also assisted in developing a conceptual framework used to guide the Innovation Program throughout its second year. Discussion now turns to the conceptual model and improvements and changes made to take the program forward to ensure effective outcomes were delivered for the students, the industry partner and university faculty.

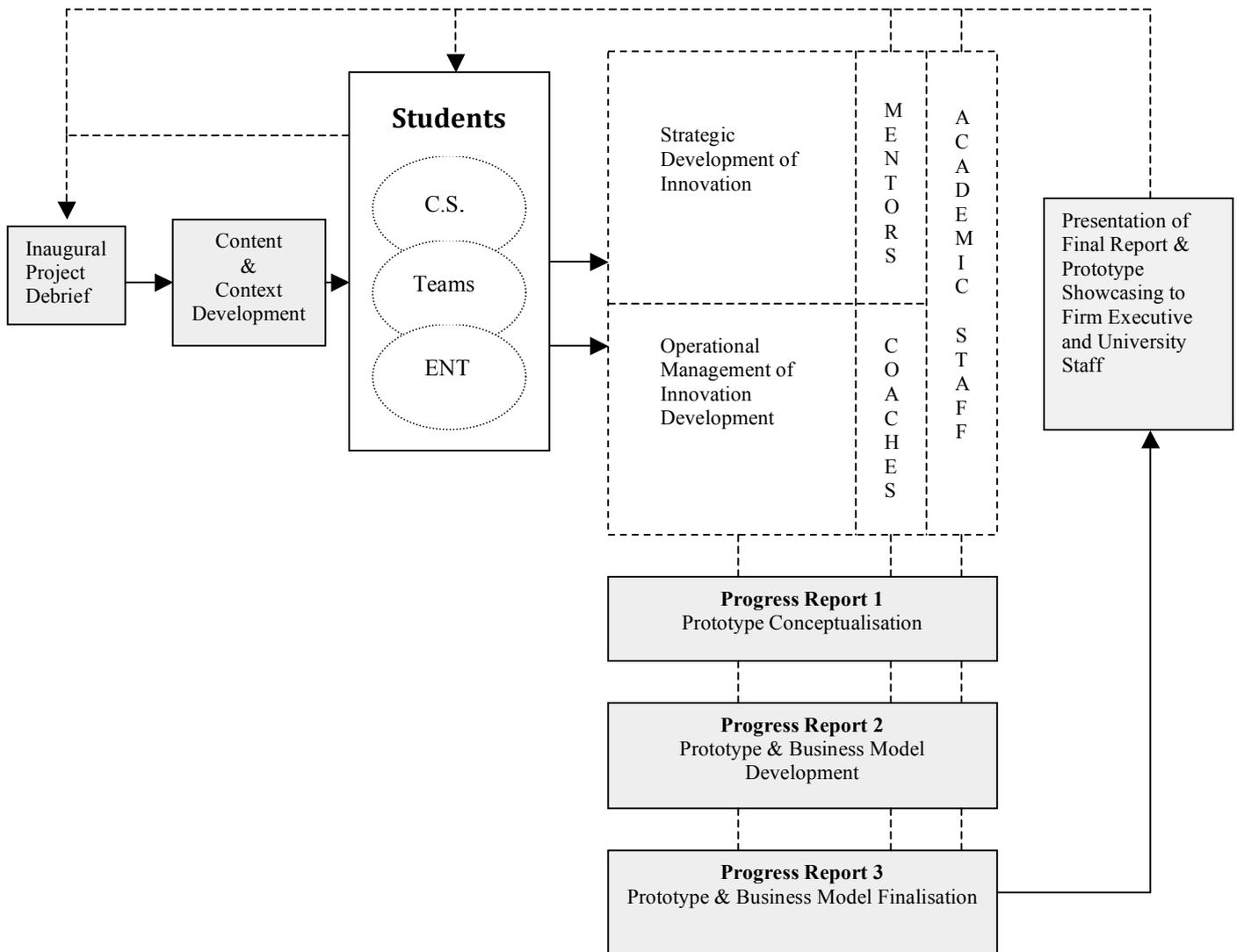
Conceptual Framework

The first iteration of the Innovation Program was somewhat loosely structured or rather structured on the run, as effectively there was but three weeks to put things together before semester began. In spite of this, all concerned considered the project a solid success, albeit one that could go on to bigger and better things. Year two saw a more structured pedagogical approach that built both on more extensive research and knowledge gained from the experience of having flown partially blind

the previous year. The conceptual framework presented below guided year two; the subsequent sections discuss additional elements added since year one as well as changes made in improving the content and context of the WBL experience for all stakeholders.

Figure 1

Innovation Program Conceptual Model



As can be seen from Figure 1, the conceptual model details three groups of stakeholders; students (Entrepreneurship – ENT and Computing Science – C.S.), industry partners comprising coaches and mentors, and academic staff. Development of the conceptual model began with a comprehensive debriefing of year one that involved presentation of research results by academic staff along with literature review of WBL models to all three groups of stakeholders. The research

results included data gathered from both students and mentors who participated in year one of the Innovation Program. As a result of this debriefing several key changes were formulated regarding content and context. In the first instance students (both domestic and international) who wanted to take part in the Innovation Program were asked to submit an Expression of Interest that addressed four criteria, 1) a brief understanding of Deloitte and its core businesses, 2) what students hoped to achieve by participating in the Innovation Project, 3) the skills and experiences that students have to offer the Innovation Program and potential team-mates and 4) ways in which innovation can be implemented in a large corporate culture. The Expression of Interest was to be submitted with an accompanying resume so that students could introduce themselves to the Deloitte AIG. It also served to ensure that students were willing participants in the project and understood that it was an opportunity for them and that to participate they would need to make a professional application for a place in the program. Each step in the conceptual model was carefully designed to replicate activities that would normally occur in a real world environment. The next element added was the inclusion of computing science students to expand the project in a cross-discipline fashion to foster cross-pollination of skills and knowledge and facilitate achieving the strategic aim of year two which was to take students beyond the business plan paradigm into prototyping of innovations and development of business models to commercialise innovations. A combination of Masters level students and undergraduate students from computing science volunteered to participate along with over 40 entrepreneurship students. Following careful consideration of the Expression of Interests 29 students were selected to participate, 18 from entrepreneurship and 11 from computing science.

The NCVER report (2008) as well as numerous authors including Nicholls and Walsh (2007) observe that one of the biggest hurdles faced in implementing successful WBL programs is the misalignment of expectations between industry partners, HE institutions and students. To overcome this issue, strong collaboration and communication has been developed between the three key stakeholder groups identified in the Innovation Program Conceptual Model. To this end there was close consultation regarding assessment development and in the way assessment was undertaken with Deloitte staff in particular having considerable input so that aims in regard to the innovations

in a commercial sense, aligned with what academic staff wanted to achieve in a pedagogical sense in extending new business development beyond the business plan regime. The assessments consisted of three items, 1) Initial Brief – 25%, 2) Three Progress Reports worth 10% each and 3) Final Report and Presentation to Board of Directors – 45%.

The scope of innovations for year two was rationalised for several reasons, to enable focus and to also engender different perspectives to be generated regarding individual innovations. Thus six groups were formed and two groups assigned to each of the three innovations which were, 1) financial data visualisation using XBRL (eXtensible Business Reporting Language), 2) Deloitte Digital organisational well-being Web 2.0 platform and 3) eco-monitoring software and hardware for business analysis and eco-auditing. Each team was to receive exactly the same information regarding the innovations in terms of industry/market knowledge, technical development and specifications and also financial information, but were completely free to approach prototyping and business model development in their own way as long as they could justify their approach. Another positive outcome from the inaugural project was that Deloitte offered to sponsor an award worth \$2,500 to the best performed team over the semester. This of course added to the healthy competitive context deliberately fashioned for the program (as again it replicates what generally happens in the ‘real world’).

Each team was assigned both a coach and a mentor. The coach was a new feature from year one and was a critical success factor for the second year of the program as the coaches were graduates from the year one project who had been subsequently employed by Deloitte; another successful outcome of the inaugural year. The coaches were able to bridge any divide between industry and academia overcoming alignment issues authors in the WBL field cite as a constraining factor for WBL approaches. The coaches were to handle the day-to-day operational issues in managing six groups of students who were suddenly ‘honourary’ employees of Deloitte. It should be mentioned that attention to detail in terms of for example risk mitigation was not overlooked in designing the content and context for the Innovation Program; issues such as insurance to cover

students and Deloitte staff in terms of professional indemnity was organised and Non Disclosure Agreements signed by all to protect Deloitte IP. The mentors were either Innovation Managers or Directors within the AIG at Deloitte and were tasked in guiding the strategic development of the prototypes and business models for the individual innovations. They were also to ensure that information to each of the groups was symmetric in nature. The mentors had all volunteered for the program in contrast to year one where two of the mentors were 'assigned' to the program. This ensured engagement and ownership of the project from all sides. From the Conceptual Model it can be noted that the dotted lines representing communication channels are open in nature between the mentors, coaches and the students. Each team also elected a team leader and the team leaders, coaches, mentors and academic staff met on a weekly basis to discuss progress and deal with any constraints. The first three weeks of the 12 week project were spent in concerted collaboration developing an initial brief for the innovation development and commercialisation. This was submitted at the first Progress Report and both formal and informal feedback was provided to the teams by academic staff and the coaches and mentors.

It was of note that each team approached the prototyping and business model development in quite contrasting manners. For example, the teams working on the data visualisation innovation took two totally different trajectories with Team 1 focussing heavily on in-house development of the data visualisation prototype driven by the computing science students. This team was the frontrunner of all groups in delivering the 'wow' factor in their first two Progress Reports. While Team 2 took a more business focussed approach, adapting existing 3D data visualisation techniques to enable XBRL handling of financial data, then concentrating on the commercial aspects of delivering such an innovation to market. By the end of the program it transpired that Team 1 became too reliant upon the building of the prototype (which unfortunately suffered some data integration issues during the final presentation detracting from what was overall a very strong performance) and caught up in the euphoria of their initial success, did not deliver on the commercialisation considerations as Team 2 managed to do.

The final presentations were conducted at Deloitte headquarters in Melbourne and the teams presented to the Deloitte Digital AIG, senior partners, university staff including senior professors and the Pro Vice Chancellor (PVC) of the Business College. This was designed to place the students under the same pressure they would experience in a real world setting, once again focussing on the context in which WBL programs should be delivered. The presentations were in the words of the CEO Deloitte Digital ‘exceptional’. The PVC came away from the presentations convinced she had witnessed something ‘truly extraordinary’. The author of this paper has an extensive background in both the international corporate world and in private enterprise before entering academia and based on this experience could factually state that the content and delivery of the presentation that integrated on-line DVD streaming, 3D visualisation in virtual environments as well as simulation of the innovations via the developed prototypes; all backed by rigorous industry and market research was commiserate with or indeed more sophisticated than any seen in his 20 odd years in business. This is testament to providing appropriate content and context for students to develop a level of self efficacy they believed they were not capable of. In finalising presentation of this innovative approach to WBL, expectations and outcomes of the project as measured by both qualitative and quantitative research will now be presented.

Expectations and Outcomes of the Innovation Program

Students, coaches and mentors completed a qualitative questionnaire and were interviewed in focus groups at the onset of the Innovation Program (Yr 2) to gauge their expectations for the project. Participants were asked among other things why they chose to participate in the project, what skills and capabilities they believed would be enhanced and developed, what benefits they hoped to gain from participating and what challenges they envisioned. To summarise findings, students acknowledged that they were inexperienced when it came to actually doing business and expressed a keen willingness to immerse themselves in the Innovation Project so that they could learn from experts, from each other and also from the experience. Feedback from the students who had participated in the first year had filtered down to the current cohort and it would appear from

many of the responses that the experience for the senior students had been more than satisfactory. Students were keen to see if what they had learnt in their degree program could be applied in the 'real world' (as both faculty staff and Deloitte staff were) and were intent on learning about how a big corporate goes about managing innovation. Students' major concerns revolved around teamwork and communication and the differences between computing science and entrepreneurship students were highlighted. One of the key findings that emerged from the first year of the program was the noticeable boost to students' self-efficacy; they realised they belonged and this gave them enormous confidence. This was noticed by other students and detailed often in responses to the questionnaire as an expected outcome for students. Likewise, students hoped to develop their skills in project management, research, prototype development (which they perceived to be an enormous challenge and rather exciting), presenting themselves and their work and improving their communication and inter-personal skills. Students were aware that participating in the program could enhance their employability and directly cited that six students from the first year had been employed by Deloitte and that other graduates had used their experience in the Innovation Program to secure positions with other companies. The overall tone of responses to questions regarding expectations spoke of enthusiasm and engagement and in many ways this was due to both the concrete outcomes from the first year (students employed, skill/capabilities development, press coverage and greater brand profile for the Entrepreneurship degree, Deloitte scholarship prize, one of the participants receiving the highest academic/leadership award across the entire university and the satisfaction of developing an effective WBL model that could subsequently be rolled out into other course offerings) and the flow-on outcomes (boosting faculty staff morale and the pride of all students in belonging to the Entrepreneurship program, other industry partners wanting to do 'the same as Deloitte' and submission of a multi-million dollar research grant)

The mentors and coaches also exhibited a similar level of enthusiasm and engagement in their responses and in regard to what they hoped to gain from the Innovation Program were quite explicit about developing their mentoring and leadership skills so they could improve on what they do in their company on a day-to-day basis. The mentors spoke of giving back to the community and

found the opportunity of working with a university exciting, in fact questioning why this does not occur more often. The coaches also spoke of giving back but to the Entrepreneurship program from which they had graduated. As the Director of the program it was most satisfying to see these young people comfortable in their own skins and willing to do whatever was necessary to ensure that the Innovation Program continued to be a success. Mentors and coaches also spoke about gaining ‘fresh perspectives’ regarding the innovations as being one of their primary expectations, with a view to hopefully progressing the innovations toward market launch. Both mentors and coaches expressed concerns regarding the involvement of computing science, though were highly supportive of the initiative. We understood we were taking a risk, but if you never try you will never know. To mitigate this perceived risk students were not referred to as CS (computing science) students or Entrepreneurship students but rather Team 1 members etc. Likewise, CS staff were involved in all facets of the program, though they did express feelings of being ‘intruders’ and this is one aspect noted for attention in year three.

The pre-program research provided program staff with a barometer of expectations and assisted in developing both content and context to align and meet these expectations. As previously discussed informal judgements regarding outcomes of the second year of the Innovation Program were positive from all stakeholders. Upon conclusion of the second year program students, mentors and coaches were once again surveyed, this time in a quantitative fashion using questions anchored with 5-point Likert scales (except for the first question). The data recently to hand, is presently being analysed using SPSS 17.0 and initial descriptive results confirm overall positive impressions regarding outcomes of the Innovation Program in year two.

Year Two Outcomes

As detailed, findings to date indicate strong satisfaction with the outcomes of the Innovation Program and a summary of these findings is now discussed. All 29 students were asked whether the program had *not* met their expectations, *met* their expectations or *exceeded* their expectations (the three possibilities were scored as 1, 2 or 3 respectively). Mean response was 2.69. Mentors and

coaches were also asked to respond to the same question and the mean response was 2.85 ($n=12$).

The following table presents the descriptive statistics for all 16 ‘outcome’ questions.

Table 1
Student Outcomes

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Devi
Q1: Expectations met	29	2	3	2.69	.471
Q2: Able to apply degree knowledge	29	2	5	4.45	.736
Q3: Develop new skills & capabilities	29	4	5	4.52	.509
Q4: Skill/capability gaps identified	29	3	5	4.55	.632
Q5: Increased self-confidence	29	2	5	4.34	.769
Q6: Appropriate content	29	3	5	4.69	.541
Q7: Enhanced employability	29	3	5	4.69	.541
Q8: Understanding of product/service commercialisation process	29	2	5	4.17	.889
Q9: Learnings valuable in future business endeavours	29	3	5	4.52	.634
Q10: Effective team work	29	1	5	4.03	1.085
Q11: New skills develop in dealing with group dynamics	29	3	5	4.45	.632
Q12: Mentor satisfaction	29	1	5	4.34	.974
Q13: Coaching satisfaction	29	1	5	4.24	.872
Q14: Academic staff satisfaction	29	3	5	4.75	.572
Q15: Working with industry experts, valuable experience	29	3	5	4.71	.501
Q16: Overall rating of experience	29	3	5	4.62	.561
Valid N (listwise)	29				

As can be seen from Table 1, responses were overall quite positive. Of note is Q10 regarding effective teamwork, the mean response was somewhat lower and the SD wider than other responses validating concerns from students regarding team dynamics. A tactical response will be developed for the third year of the program which will in all likelihood involve a dedicated workshop to managing team dynamics for all participants prior to the program beginning. There was strong satisfaction with learning outcomes; with skill and capability development; with guidance from mentors, coaches and academic staff and with perceived enhancement of graduate employability. Understanding of product/service commercialisation appears to be another area that requires further attention, though preliminary cross-tabulation undertaken indicates this could be a function of some groups working more effectively together than others.

Results from the mentor/coach questionnaire were also generally positive. Table 2 presents a summary of these preliminary results.

Table 2
Mentor/Coach Outcomes

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Devi
Q1: Expectations met	12	2	3	2.48	.443
Q2: Fresh perspectives developed	12	2	5	4.46	.616
Q3: Mentoring – enjoyable experience	12	4	5	4.72	.419
Q4: learnt from students	12	3	5	4.67	.655
Q5: Additional burden	12	1	2	1.34	.469
Q6: Other Unis should consider	12	5	5	5.00	.000
Q7: Enhanced employability	12	4	5	4.88	.421
Q8: Cross-discipline approach effective	12	4	5	4.88	.421
Q9: Better prepares students for employment	12	3	5	4.52	.634
Q10: Increased student self-confidence	12	3	5	4.53	.785
Q11: Students willing to learn	12	3	5	4.55	.642
Q12: Learnings valuable in future business endeavours	12	4	5	4.74	.474
Q13: Develop own leadership skills	12	2	5	4.14	.972
Q14: Will continue to mentor/coach	12	5	5	5.00	.000
Q15: Understanding of product/service commercialisation process	12	3	5	4.48	.634
Q16: Overall rating of experience	12	3	5	4.68	.564
Valid N (listwise)	12				

Initial results indicate that overall satisfaction was quite high. Of note, bearing in mind $n=12$, was that all mentors/coaches agreed that this approach to WBL is a model for other HE institutions to follow. Likewise, they were unanimous in indicating they were prepared to be involved with the Innovation Program in future years. This was supported by the reverse anchored question regarding their mentoring/coaching being an additional burden to existing duties/responsibilities; a proposition that was not supported. Similar to results from the students the mentors/coaches also perceived positive outcomes in terms of learning; with skill and capability development; with perceived enhancement of graduate employability and notably enhancement of understanding regarding product/service commercialisation indicating the preliminary results from the cross-tabulation may be supported.

In measuring outcomes of the Innovation Program over both years one and two, the Course Experience Survey (CES) that students complete following each course in their degrees were examined in conjunction with results presented above. The average across the faculty in all programs is 56%, with scores above 80% considered exceptional. Year one result for New Venture Creation (the capstone course of the Entrepreneurship degree where the Innovation Program is embedded) rated at 93.18%, while year 2 rated at 91.87%. These scores have resulted in concerted interest from the Business College's Learning and Teaching Advisory Committee with the Dean nominating academic staff for teaching awards.

In year one of the Innovation Program, one of the most important commercial outcomes for Deloitte was that research conducted by Entrepreneurship students indicated the software application they were developing would not meet the needs of Gen Ys who were the target market for the application. This resulted in Deloitte selling out and saving a further \$80,000 in proposed development costs. Likewise, in year two a significant result of the student's work has been the development of a major multi-million dollar collaborative research project involving international researchers to model and simulate in a virtual 3D environment the impacts of the introduction of Standard Business Reporting (SBR) using xml platforms such as XBRL on Australian businesses.

Conclusion

WBL approaches to applied education have become a strategic tool for government, HE institutions and industry in facilitating knowledge and capability development. It is hypothesised that a better skilled and knowledgeable workforce leads to increased productivity as well as opportunity development and diversification, that contributes in a flow-on effect to an increase in standards of living (see e.g. Keep, 2006). However, it has been observed that while this thesis is desirable, it is all too often undermined by constraints including misalignment of expectations, lack of engagement and poor content and context development. The Innovation Program reported on in this paper is a model that has proven in its two years of operation that it is possible to overcome these issues to enable valuable outcomes for all stakeholders. The conceptual model derived from

the research enables concerned stakeholders to optimise potential outcomes of WBL programs by focussing on content and context-specific elements that require effective integration to enhance prospects for success. Which leads us to the question, “Where to from here?” for pedagogical development should at the very least be incrementally on-going! It has been envisioned from year one that the Innovation Program would be scaleable and for the third year of the program it is proposed that content and context be broadened in scope. An Innovation Academy has been established through collaboration between Deloitte, other industry partners and several other universities besides RMIT University. It is proposed that a national innovation competition will be developed that will see industry partners develop innovation themes around which, cross-discipline student teams will develop concepts that will then be worked up to prototype stage with business models developed for commercialisation of the innovations. Building on the conceptual model developed in the Innovation Program, coaches and mentors from industry and academia will work alongside the students in developing the innovations. At present, negotiations are also underway with Federal Government officials charged with managing the national innovation agenda and its education system to explore ways in which innovative approaches to WBL can be developed and operationalised not only throughout HE settings but also back up the educational pipeline into secondary schools with the aim of promoting an enterprising climate throughout Australia’s education system.

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Innovation in New Zealand SMEs: Lessons from Active Innovators

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This paper reports key findings from an empirical study of innovation processes in 95 New Zealand SMEs which are active innovators. Results include the characteristics of innovative New Zealand SMEs, the types of innovations they are developing, and their perceptions of the context for innovation in New Zealand. The status of their innovation management processes were also evaluated using indices for Strategy, Market, Innovation, and Resource factors. These companies are well established, demonstrating significant growth, high propensity to innovate and a portfolio of innovations. Further, they are well organised to commercialise their innovations. However, significant inhibitors to growth were identified and these have specific policy implications which are important given the imperative for economic growth and productivity improvements in New Zealand.

Track: 6. Innovation in SMEs

**New Product Development Project Management:
Differences between Korean and US Small Business Executives**

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New Product Development Project Management: Differences between Korean and US Small Business Executives

Abstract

Small business is a significant segment of global economy in both US and Korea. Recognizing the preponderance and relative impact of small businesses as major contributors to job creation and economic growth, academic research on small business management practices has grown dramatically over the past decade in both US and Korea. In particular, topics of new product development project management of small businesses have received much attention from researchers. In recent years, project management has become an important part of strategic planning and growth in small businesses as firms increasingly strive for sustainable competitive advantages. This study provides important implications for both US and Korean small businesses to successfully create and manage competitive advantages.

Key Search Words: New Product Development, Project Management, Small Businesses

Introduction

“Our economy is increasingly characterized by change and change means projects” (Verzuh, 2003)

Recognizing the preponderance and relative impact of small businesses as major contributors to job creation and economic growth, especially during the past decade, academic research on small business management practice has grown dramatically in the recent past. In particular, topics of 'strategic growth' of small businesses have received much attention from researchers. In order to grow, many small businesses choose outsourcing projects (e.g., building and maintaining upstream or downstream portion of supply chain) as an externally driven strategic growth path or internally driven new product development projects (Kerzner, 2009; Lyles, Baird, Orris and Kuratko, 1993; Merz, Weber and Laetz, 1994; Pearson and Ellram, 1995; Pons, 2008; Shenhar and Dvir, 2007; Slevin, Cleland, and Pinto, 2002). That is, project management in the context of small businesses is of critical importance because of its impact on the company's strategic growth and long term performance.

A project is “a temporary endeavor undertaken to create a unique product or service” (Project Management Institute, 2001, p. 167). As firms have focused on enhancing their core competence and developing cooperative strategies over the last decade, their ability to manage projects has become a critical source of strategic competence and competitiveness in business. According to Shenhar and Dvir (2007), such factors as compression of the product life cycle, global competition, knowledge explosion, corporate downsizing, and increased customer focus have contributed to recognizing the importance of project management in business.

Effective project management has several competitive advantages. Besides aiding in the

improvement of overall customer value, effective project management can lower development and procurement costs, increase flexibility, spur innovation, and speed up product development (Gray and Larson, 2003). There are several anecdotal examples to support the notion that effective project management can be a source of sustainable competitive advantages (Jiang and Klein, 1999; Kerzner, 2001; Kloppenborg, Shriberg, and Venkatraman, 2003; Park and Krishnan, 2002; Shenhar and Dvir, 2007). According to Park and Krishnan (2002), effective project management has enabled firms (e.g., P&G, GE, Microsoft, Cisco, HP, UPS, Southwest Airlines) to take responsibility for quality, slash inventories, reduce defects and greatly improve the efficiency of their production and service.

In an attempt to explain the factors affecting project management practices and performance outcomes, recent research has focused on one important domain of project management: management effects (i.e., the “people” side of project management) (Cooke-Davies, 2002; Kloppenborg, et al., 2003). There is abundant research in the management literature on the impact of managers on organizational process and outcomes (Hambrick and Mason, 1984). However, there is little research on the impact of culture on project management process (e.g., selection and evaluation) and outcomes among small businesses (Slevin, Cleland and Pinto, 2002).

Project Management and Strategic Management

Gray and Larson (2003) suggest that “strategy is implemented through projects”(p. 23). Cleland (1998) also suggests that “project management must be an integral part of strategic management” (p. 27). Firms are increasingly adopting project management approaches in

formulating and implementing cooperative strategies (i.e., developing and managing R&D, strategic supply networks, and strategic alliances) in domestic and international competitive markets, recognizing that this is critical to gaining and sustaining competitive (e.g., “Strategic Networks”, special issue of Strategic Management Journal, 2000). Changes in the international business environment, rapid technological changes and increased investment intensity have forced many firms to forgo their traditional go-it-alone strategy and implement cooperative strategies with their domestic or international partners and suppliers. Project management plays a vital role in managing these changes and challenges. Nevertheless, previous management studies did not focus on the relationship between project success and corporate success. Cooke-Davies (2002) recently introduced a model of “corporate project management practices” (i.e., strategic project management) and emphasized a key role of project management in enhancing a firm’s competitiveness and shareholder value.

Strategic project management, a discipline that encompasses R&D, strategic supply networks, M&A, and strategic alliances, has become a source of inquiry for many organizational researchers and practitioners for the following reasons (Cleland, 1998; Kerzner, 2009; Meredith and Mantel, 2003; Miller, 1997; Pinto, 1998; Shenhar and Dvir, 2007).

First, strategic project management encompassing cooperative strategies can reduce a firm's risk by (1) spreading the risk/cost of a large project and business over more than one firm, (2) facilitating diversification strategy, and (3) overcoming trade or investment barriers. Second, effective strategic project management can achieve production rationalization (i.e., low cost and efficient sourcing) and economies of scale. Third, strategic project management can

facilitate exchanges of complementary technologies, manufacturing/ marketing know-how, and financial resources and thereby, bring about mutual benefits. Finally, strategic project management can become both defensive and offensive strategic options for firms facing strong challenges in domestic and international markets (Meredith and Mantel, 2003; Shenhar and Dvir, 2007).

Although a number of factors affect the success (or failure) of firms' strategic project management, the role of project managers is particularly relevant (Caldwell and Posner, 1998; Gray and Larson, 2003; Kloppenborg, et al., 2003; Meredith and Mantel, 2003; Posner and Kouzes, 1998). Recent project management studies indicate that the "relationship investment and management" is a key success factor in implementing strategic project management (Handfield and Nichols, 1999; Posner and Kouzes, 1998). According to Posner and Kouzes (1998), "successful project management is essentially about dealing effectively with people" (p. 249). Handfield and Nichols (1999) also argue that relationship management affects all areas of strategic project management (e.g., projects dealing with supply chain development and management) and has a significant impact on performance. However, relationship management is the most difficult part of strategic project management practices and there are few studies in this area.

Project Management and Cross Cultural Differences

Previous studies on relationship investment and management found that Asian (in particular, Korean) managers are more likely to possess a relationship-oriented style and are more effective than American managers in investing and managing relationships (Amsden,

1992; Chang and Chang, 1994; Chung and Lee, 1989; Hitt, Dacin, Tyler, and Park, 1997).

Additional differences between Korean and US managers were also reported by recent management studies (e.g., Baily and Zitzewitz, 1998; Christie, Kwon, Stoeberl and Baumhart, 2003; Dacin, Hitt, and Levitas, 1997). For example, Korean managers tend to be less individualistic, more favorable to nepotism, more favorable to share insider information with friends and family, and less willing to avoid uncertainty in comparison to US managers (Christie, et al., 2003). In managing projects (e.g., R&D collaboration and other strategic partnership projects), Korean managers pay attention to project partner's technical capabilities and partner's willingness to share expertise whereas US managers focus on partner's unique competencies, managerial capability, and financial resource availability (Dacin, et al, 1997).

According to the US Census in 2008, trade between Korea and the United States was approximately \$72 billion. This makes Korea the seventh largest trading partner of the United States and makes the United States the second largest trading partner of Korea. Remarkably, both Korean and US Small businesses played a key role in developing this trade partnership by focusing on developing new products and exporting (or executing other types of globalization) these products to each other. Given such importance, it is worth noting the differences between Korean and US small businesses in managing project management (in particular, new product development project).

Many US executives and their firms have failed to understand different management practices of their foreign project partners (Chao, Scheuing, Dubas, and Mummalaneni, 1993; Hitt, et al., 1997). Differences in project management practices of Asian countries such as

Japan, Korea, and China can often be traced to their unique culture and business systems. However, many US executives appear to believe that project management models adopted by Asian executives are very similar to the models adopted by other Asian executives: Japanese vs. Korean, Korean vs. Chinese, Chinese vs. Japanese. Contrary to this line of thinking, research has revealed that many Asian executives consider themselves to be very different from other Asians (Chung and Lee, 1989; Hitt, et al., 1997). These differences can result in Asian small business executives adopting different criteria in their project management practices (Kim and Choi, 1994).

The above discussion leads to the following research hypotheses:

Hypothesis 1. Criteria used in selecting new product development projects vary by an executive's home country (US and Korea).

Hypothesis 2. US and Korean small business executives place different emphasis on objective criteria when selecting new product development projects.

Method

Sample

Data were obtained through a survey instrument completed by 66 US and 62 Korean small business executives. In choosing the sample, this study employed one of the commonly accepted definitions of small businesses as having 500 or fewer employees (Baird, Lyles, and Orris, 1994). The US sample represented 200 small business executives chosen randomly from a list of 1,200 executives in the Midwest (Ohio, Indiana, and Kentucky) US. Each executive was contacted by telephone and asked to participate in the study. The 66 responses returned

represent a 33 percent response rate which is consistent with other studies in this area. The Korean sample of 140 executives was chosen in collaboration with executives in Korea. The 62 responses represented a response rate of 41 percent. Five of the US responses and 4 of the Korean responses had missing data on at least one of the instruments. The companies represented a variety of manufacturing industries (12 and 10 different 2-digit SIC codes for the US and Korean samples respectively) such as consumer goods, producer goods, and capital goods. The average age of the respondents was 42 (US) and 46 (Korea) years. The average work experience was 14 (U.S.) And 17 (Korea) years. The US firms and Korean firms averaged \$ 49 million and \$ 37 million in annual sales and 110 and 97 employees respectively.

Instrument

The instrument contained 30 cases with potential projects described through 15 objective criteria. The instrument was carefully translated into the Korean language for Korean executives. To ensure comparability of English and Korean versions, the Korean instrument was translated into English by independent sources.

The 15 objective criteria on which to evaluate target projects were adopted from Jiang, Klein, and Balloun (1996) and Pinto and Slevin (1988). The 15 objective criteria are: clearly defined project goals and mission, top management support, a competent project manager, a competent project team, sufficient resources, client/customer involvement, good communication, responsiveness to clients, proper monitoring and feedback, appropriate technology, risk analysis and management, time management, contribution to profitability, safety management, and synergy potential. These objective criteria were used to develop 30

cases on target new product development projects.

The procedure known as policy capturing was used to obtain and analyze the data. Such a procedure has been used in past research to model managers' decision processes (Ireland, Hitt, Bettis and de Porras, 1987). Policy capturing may be used to determine statistical weights applied to each criterion or variable based on a number of actual decisions. A decision maker's policy (or relative use of criteria available) is inferred through analysis of his or her ratings. The method is similar to a repeated measures design.

For this study, 30 cases were constructed by randomly varying the level of each of the 15 target project characteristics (criteria) on a scale of one (low) to five (high) across the cases. The random assignment of criteria levels was intended to avoid potential collinearity among the independent variables. Executives were asked to examine each case describing a target project on the basis of the 15 criteria, rate the attractiveness of the target project (on a one to seven scale) and rate the probability that this project would be selected (on a one to seven scale). The coefficient alpha for the scale combining these two questions was .86. This combined scale represented the dependent variable.

Results

The first hypothesis suggests that criteria used in project selection decisions would vary by an executive's home country (i.e., cultural background). This hypothesis was tested using moderated regression analysis with country as a moderator. Country was coded as a dummy variable (0=US, 1=Korea). The results of this analysis are presented in Table 2. As shown, the change in R^2 from the restricted to the full model is approximately seven percent and is

statistically significant, suggesting that US and Korean small business executives' project selection practices differ.

Insert Table 1 about Here

To test the second hypothesis, separate regression models were developed for the US and Korean small business executives. Results of these analyses are presented in Table 3. As shown, 10 decision criteria were statistically significant predictors in the US model and 8 decision criteria were statistically significant predictors in the Korean model. Differences between the regression coefficients for each criterion in the two models were tested using the Chow test. The differences in the coefficients for all 15 criteria between the two models were statistically significant. These results suggest definitive differences between the project selection practices used by US and Korean small business executives thereby providing further support for Hypothesis 2.

Along with the Chow tests, we examined the standardized regression coefficients of both US and Korean models. Hypothesis 2 states that Korean and US small business executives place different emphasis on objective criteria when making project selection decisions. The results provide mixed support for Hypothesis 2. US executives emphasized clearly defined project goals and mission, top management support, a competent project manager, sufficient resources, proper monitoring and feedback, appropriate technology, risk analysis and management, time management, contribution to profitability, and safety management. By

contrast, Korean executives emphasized clearly defined project goals and mission, top management support, a competent project team, client/customer involvement, good communication, time management, contribution to profitability, and synergy potential.

Insert Table 2 about Here

Discussion and Conclusion

The topic of international new ventures (INV) or global entrepreneurship (GE) has become a 'hot' subject in recent management research (Zahra, 2005). According to Oviatt and McDougall (1994), INV is defined as "a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of output in multiple countries." Trying to overcome the financial crisis (for example, Korea in 1998; US in 2009), many US and Korean firms focused on developing more innovative, efficient, and "green" products. New product development (NPD) project management is one of the most useful approaches. Kerzner (2007) argues that NPD project management became "not a choice, but a necessity."

Both U.S. and Korean small firms stand to benefit from collaborating NPD project management (strategic partnership). From the viewpoint of U.S. firms, strategic partnership with Korean firms can enhance the capabilities of both upstream and downstream portions of their supply chain. For example, US firms have successfully cultivated R&D joint ventures and strategic partnerships with Korean firms. The success of these R&D joint ventures and strategic

partnerships could be attributed to their knowledge of local project management practices and careful selection of projects. Similarly, from the viewpoint of Korean firms, partnership with US firms can enhance both upstream and downstream portions of their supply chain.

US and Korean firms continue to improve their global NPD project management practices (Park and Krishnan, 2002). As a result, understanding NPD project management practices of US and Korean small firms is of increasing importance in the competitive landscape. In 2008, for example, US small firm (Pittsburgh-based Plextronics) started its NPD project management collaboration (e.g., establishing R&D center and building a production line) with Korean small firm (Korea Parts & Fasteners Co.) to develop new organic photovoltaic panels (i.e., solar panels). Korean small firm's role is to develop advanced process technology using Plextronics' technology (Plextronics News, 2008). It is very evident that better understanding of partner's project management practice will lead to successful NPD project management process and outcomes.

One of the major contributions of this study is that NPD project management practices vary between US and Korean small firms. While previous studies have examined the impact of cultural differences on project management practices in Japan and China (Asanuma, 1989; Pearson, Carter, and Peng, 1998), very few studies have examined these practices in Korean small firms (Kim and Choi, 1994).

Finally, the results of this study and comparison with other research suggest the importance of understanding new product development project management practices in multiple regions of the world and different countries. For example, there may be need for a

Hofstede-like study on strategic orientations of project selection practices. This research represents an early step in the process toward better understanding new product development project management practices.

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Table 1

**Moderated Regression Analysis for the Combined US and Korean
Samples with Country as a Moderator**

Model	R ²	^R ²	F
Restricted	.26		
Full	.33	.07	27.02**

** p<.01

Table 2

Comparison of Regression Models for US and Korean Small Business Managers

Decision Criteria	Standardized Regression Coefficients ¹	
	US	Korean
Clearly defined project goals/mission	.27*	.31*
Top management support	.25*	.35**
Competent project manager	.20*	.17
Competent project team	.18	.25*
Sufficient resources	.32*	.14
Client/customer involvement	.13	.27*
Good communication	.11	.23*
Responsiveness to clients	.09	.10
Proper monitoring and feedback	.07	.08
Appropriate technology	.05	.04
Risk analysis and management	.37**	.11
Time management	.42**	.28*
Contribution to profitability	.29*	.39**
Safety management	.20*	.12
Synergy potential	.10	.22*
	$R^2=.25, F=50.17^{**}$	$R^2=.19, F=42.21^{**}$

* $p < .05$

** $p < .01$

1. The regression coefficients for each criterion were tested to see if they were statistically different using the Chow test. The results showed that the differences in the regression coefficients for all 15 criteria between US and Korean groups were statistically significant at $p < .05$.

Small Business Entrepreneurs (SBEs) - A study of some critical factors that affect them when they trade internationally.

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SBEs are a new generation of international traders. However, there is little discussion in literature on theory and framework to explain the internationalisation experiences of SBEs. This qualitative study which involves an extensive literature search and in-depth interviews with some SBEs is an attempt to report on available literature and some critical factors that affect SBEs when they trade internationally. Findings indicate i) a general lack of any theoretical framework to explain the internationalising behaviour of SBEs and ii) while some SBEs have new opportunities to do business overseas, many face challenges in finding reliable business partners, marketing products, obtaining prompt payments and overcoming difficulties arising from differences in culture, language and business practices. An exploratory research of this nature is one of first and it has practical implications that include i) need for training and advice for SBEs ii) policy decisions to address the issues and challenges SBEs face and iii) more research needed to develop a theoretical framework that will readily explain the internationalising behaviour of SBEs.

Track: 7. International Entrepreneurship

Assisting Invention and Innovation as Needed: Analysis of Student's Entrepreneurial Criteria – An International Comparison

by Walter Ruda, Thomas A. Martin, Rubén Ascúa, and Benjamin Danko

This paper comes along with the empirical project “Invention and Innovation in an International Context – Foundation and Entrepreneurship of Students” (GEST-study). It presents findings of a cross-national survey of entrepreneurial criteria of students in industrialized and developing countries within the pre-foundation process. According to a procedural reference framework and the Foundation ambition types-model the investigation aims to identify how to develop applicable entrepreneurship support programs that consider target group differentiated the situational requirements of students in Argentina and Germany as representative countries and are appropriate to assist students as well as alumni in launching and commercializing their inventions.

Introduction

The business environment has been pressurized noticeably and globally by the economic and financial crisis in the last months. Similarly to prior recessions the labor market condition is deteriorating remarkably (Krugman 2009). This circumstance traditionally leads to more necessity driven business start-ups (Weber 2009). By reason that the labor shortage affects especially young people processing or just having completed their education and seeking work, self-employment as vocational alternative has to be imparted particularly to this aim group (Ofstad 2008).

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In this connection, entrepreneurial education and assistance focus primarily students and academics, due to their superior generating of (fundamental) inventions and innovations—mainly in the fields of business administration, engineering, and informatics—that finally result in the creation of stable as well as qualified employment (Braukmann 2003; Koch 2002; Martin, and Ruda 2001; Uebelacker 2005). However, high potential firms—with its structure changing effects that develop new markets via product, process and service inventions and thus boost the innovative capacity—cover the least start-up fraction. Therefore, a solely effort toward heightening the start-up quantity is not able to solve this problem (Reinemann 2007).

Consequently, it is necessary to upgrade entrepreneurial education and assistance at colleges/universities so that students are capable of maturing to potential entrepreneurs and finally quest for and dare becoming self-employed. In order to accomplish this aim, it is required gaining information about the student desideratum regarding firm creation, because the students themselves are the deciders concerning their potential start-up activity.

However, the pre-foundation process as individual developing and deciding process of potential entrepreneurs (Ruda, Martin, and Danko 2008b) with its fundamental economic momentousness (Ruda, and Martin 2000; Mellewigt, and Witt 2002) is largely unexplored (Mellewigt, Schmidt, and Weller 2006). Nevertheless, the pre-foundation process usually represents the firm's decisive level of development (Ofstad 2008). According to that, gathering empirical data regarding entrepreneurial criteria of students and academics is essential in order to grasp how to enhance entrepreneurial education and support programs (Volery, and Müller 2006). Although multiple empirical results lead to the conclusion that entrepreneurial decision-making and responsibility is teach- and learnable, no accordance exists concerning the basic conception of entrepreneurship education (Gibb 2002; Volery, and Müller 2006). Educating a general entrepreneurial competence is postulated and demands a subject-oriented analysis of student requirements during the pre-foundation process. Furthermore, the design of entrepreneurial support programs—that, so far, primary are geared only towards foundation resolute students and academics—has to follow a target group differentiated transfer of entrepreneurial competencies (Braukmann 2003). Only a personally-oriented analysis about conducive and obstructive procedures within the pre-foundation process will identify how to raise foundation quantity as well as quality based on adequate entrepreneurial education and assistance.

Developed nations normally show lower foundation quotas than developing countries (Bosma, Jones, Autio, and Levie 2008). Because of exceptions lower foundation activities are not simply due to economic wealth. Necessarily otherwise existing causes can only be researched through international comparisons of entrepreneurial criteria. The paper aims highlighting, if students also show these differences and discusses implications regarding the implementation of a holistic or an individualistic conception of entrepreneurship education and assistance. This comparison focuses Germany as industrialized nation and Argentina as developing country, especially because they seem being representative in an international context (Bosma, and Harding 2007) and are categorized at least as potential technology leaders (Fukada-Parr et al. 2001). Further points (jobless rates, educational levels, researchers in R&D) also predict that students and academics in these countries—that are both categorized as high human developed—should originate above-average innovations (Watkins et al. 2007). Especially the comparatively to the other high human developed nations superior unemployment rates in Argentina and Germany anticipate upper necessity driven business foundations in these analyzed two countries.

Hence, the starting point of an international comparison of developing and developed nations regarding student entrepreneurial criteria within the pre-start-up process within these two countries can be categorized as expedient and aims the upgrading of entrepreneurial education and assistance not solely in Argentina and Germany.

Research Design

Based on existing literature and empirical studies the influencing factors within the pre-foundation process have been identified in order to develop a standardized questionnaire. The survey's methodology is related to the theoretical reference framework of Ruda, Martin, and Danko (2008a; 2009) which illustrates the basic factors that impact students' and academics' dispositions towards foundation and entrepreneurship.

The paper presents results of a large scale survey. More than 2,100 under- and postgraduated students—primarily of business administration, engineering, and informatics—at four German and four Argentine universities were questioned between 2007 and/or 2008 within lectures. Therefore, the sample includes also students with (long-time) work, managerial, and foundation experience.

Descriptive Results

In both countries students of business administration represent the biggest fraction, followed by engineering and informatics. Students between the first and third semester as well as postgraduated students are underrepresented in the Argentine sample. Whereas almost a third of the students in Germany are female, this is case for more than the half of the students in Argentina. Each samples consist mostly of students between 20 and 25 years, but altogether, the German students are older.

In reference to the *Foundation ambition types-model* of Ruda, Martin, Ascúa, and Danko (2008), in each country the *Foundation Layman* (has dealt with foundation not at all) represents circa half of the sample. The *Foundation Sensitized* (has considered foundation not yet) is included 12 percent in Germany and 18 percent in Argentina. Remarkable divergencies exist concerning the *Foundation Interested* (has already considered foundation but has not started to prepare foundation) as well as the *Foundation Preparer* (is already engaged in the foundation process). Former exist a three tenths in Germany and only about one tenth in Argentina, latter is with 13 percent typified more than two times stronger in Argentina. The *Founder* (has already founded) is represented in both samples with round five percent. Overall, students in Germany seem to show a higher foundation propensity than students in Argentina (Figure 1).

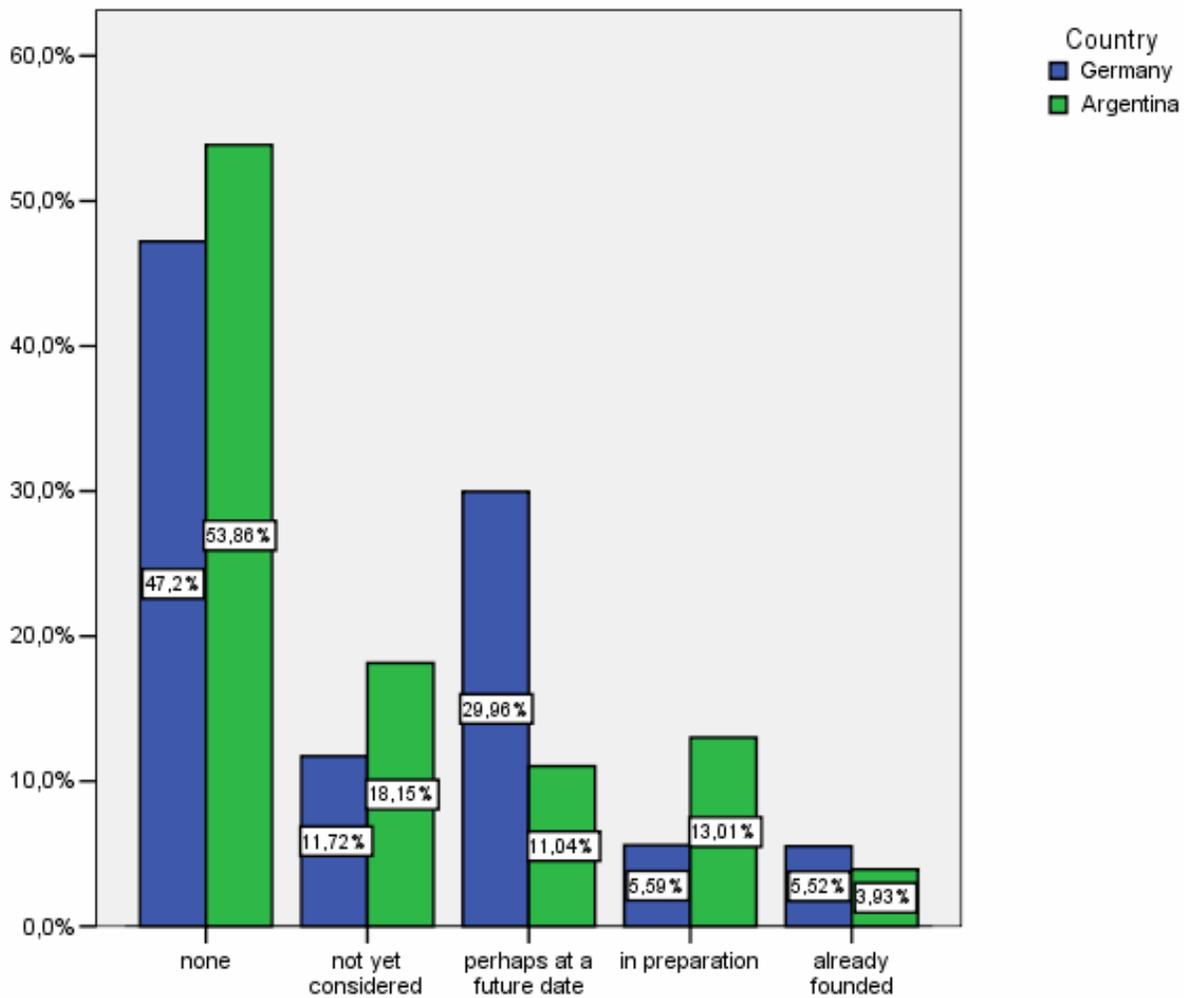
According to this, the foundation climate in the country of studying is evaluated by the students in Argentina 12 percent points worse than by the students in Germany. Argentine students show a little risk aversion, whereas German students usually are more willing to take risks. In contrast, more Argentine students have a foundation idea in mind (36 percent) than their German counterparts (32 percent). Furthermore, of the former 53 percent estimate to found in future (on average in four years), in Germany only 39 percent (averaged with four and a half years).

Concerning foundation motives, in Argentina *self-actualization* as well as *miscellaneous* tend being very relevant, in Germany only relevant to the students. *Realizing own ideas* as most important motive in Germany also is more fundamental to Argentine students. In both countries *higher income* is a relevant foundation motive, but to the students in Germany generating a *high income* is more aspired. *Autonomy*, *prestige* and *having power* are more important in Germany, whereas *flexible hours of work* are more vitally in Argentina. The *foundation motivation from economic necessity* is more relevant to German students (Figure 2).

Students in Germany usually have dealt longer with entrepreneurship than their Argentine fellow students and have used more sources of entrepreneurial information, although they are surrounded less frequently by self-employed persons in their private environment. Moreover, they have more experience in personnel management than students in Argentina so that of the latter three quarter strive for team foundations, compared to six tenths in Germany. More than a third of the Argentine students

prefer a sideline based self-employment, opposite to three tenths of their German counterparts. In Germany the students estimate needing 4.8 years of self-employed activity to be established on the market and approximately 190,000 euros as seed capital, whereas the Argentine students expect needing almost one year longer and only about 75,000 euros to start up their business. With three quarter the latter are more willing to pay for business start-up consultation, in opposite to 64 percent of the German students.

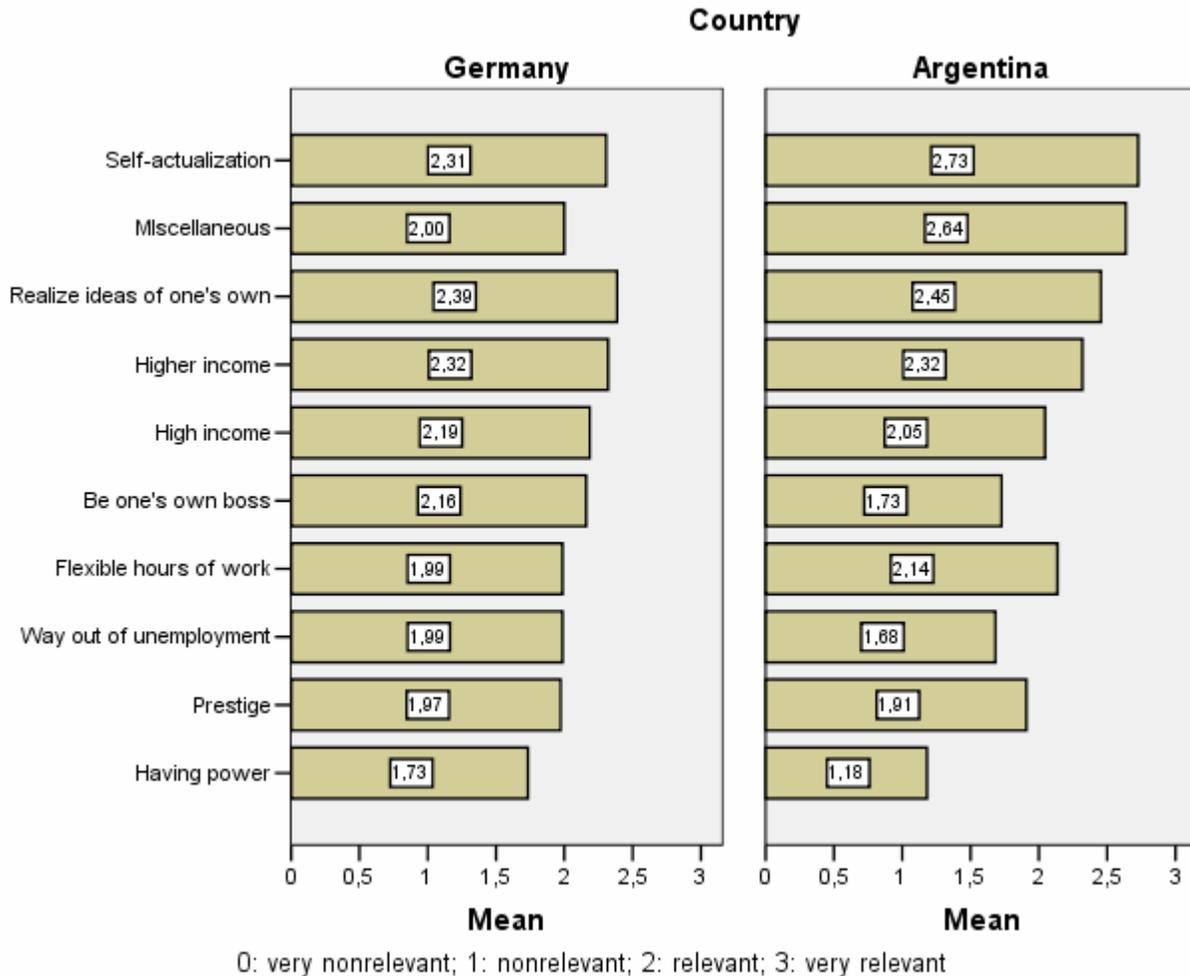
Figure 1
Extent of having dealt with foundation



Regarding foundation difficulties, in both countries *missing equity* is evaluated as most foundation obstructive. In Argentina the *politico-economic environment* and *extensive official channels* typify being higher start-up barriers than in Germany, where in return *own financial risk* as well as *missing outside capital* and *missing customer contacts* seem to be more hindering concerning firm creation. The *cyclical state*, *low profit* and *low turnover* represent being higher foundation difficulties to the Argentine students than to their German counterparts. But in Germany students show stronger hurdles in respect of having discovered the *adequate business idea* and the *right foundation partner* than in Argentina. Furthermore, German students anticipate *fear of failure*, *missing courage* as well as *support of family and friends* as more foundation impedimental, contrary to Argentine students to whom *know-*

how deficit, missing entrepreneurial qualification and missing available time are more foundation obstructive (Figure 3).

Figure 2
Foundation motives



With respect to desired university support, students in Argentine constantly show stronger requirements. In both countries *courses* as well as *contact bourses with enterprises* are subject to the most relevant support measures, whereas *business games* and *miscellaneous* solely are more important in Argentina. German students are interested mostly in *coaching and consulting* and also in *specific contact points* that likewise are relevant to Argentine students (Figure 4).

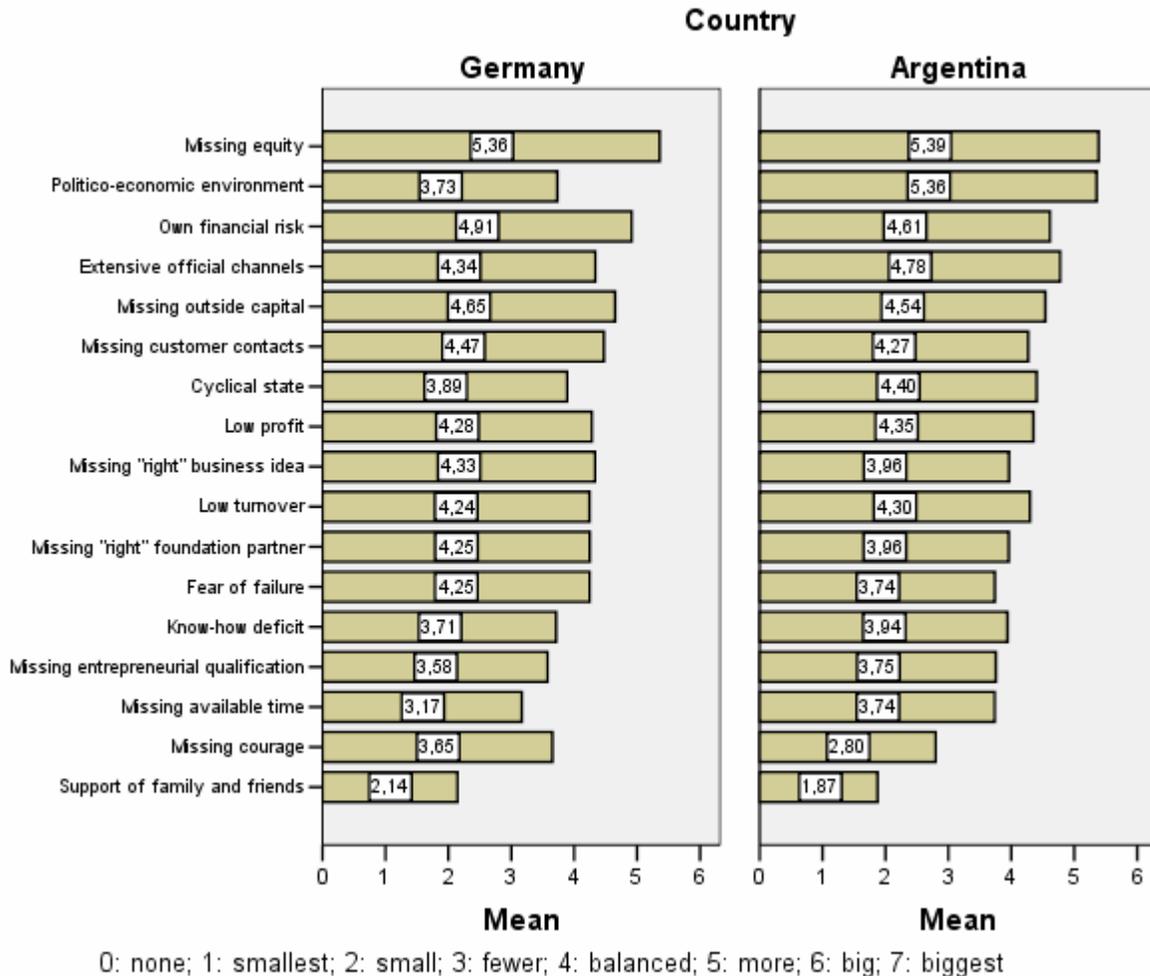
Hypotheses

Referring to the Global Entrepreneurship Monitor, Argentina presents higher Early-Stage Entrepreneurial Activity Rates than Germany not only in the population between 18 and 64 years but also in the—with the samples mostly corresponding—age group between 18 and 34 years (Bosma, Jones, Autio, and Levie 2008).

Regarding the Human Development Report, Argentina shows with 10.6 percent a higher unemployment rate than Germany with 8.4 percent (Watkins et al. 2007).

In reference to Hofstede’s cultural dimensions, Argentina tends to be more collectivistic and possesses a higher uncertainty avoidance (Hofstede 2006).

**Figure 3
Foundation Barriers**



Thus, the following hypotheses are derived:

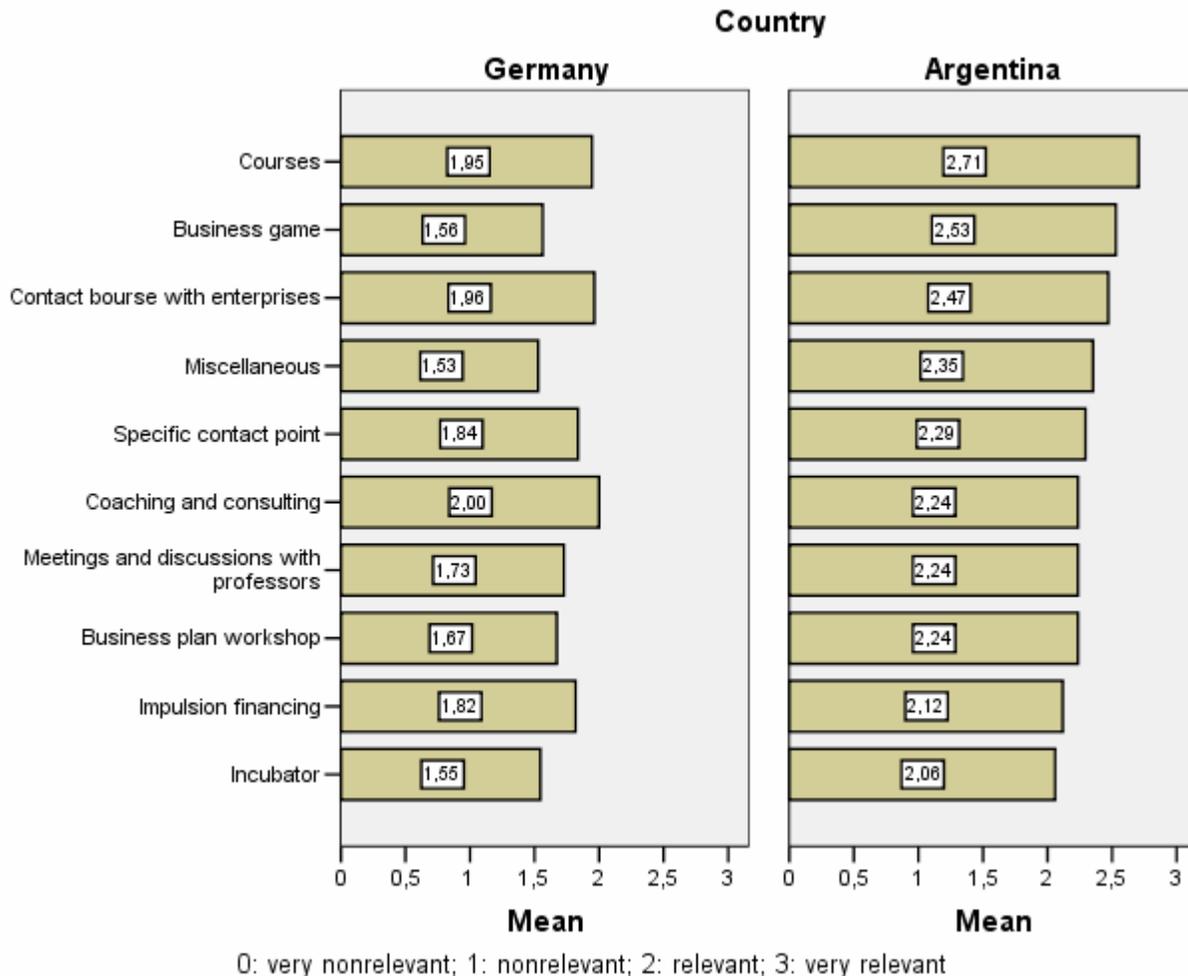
- H1: The student foundation probability differs in the analyzed countries.*
- H2: The student foundation propensity differs in the analyzed countries.*
- H3: The foundation motivation from economic necessity differs in the analyzed countries.*
- H4: The preference for team foundations differs in the analyzed countries.*
- H5: The risk propensity differs in the analyzed countries.*

Table 1 illustrates the following results of the hypotheses tests:

On the one hand students in Argentina show most significantly a stronger foundation probability than students in Germany (approving the first hypothesis), but on the other hand students in Germany represent very significantly a stronger foundation propensity than students in Argentina (confirming the second hypothesis). However, the direction of the interdependency is opposed to the expectance.

Argentine students indicate most significantly a higher foundation motivation from economic necessity than German students, affirming the third hypothesis. Because students in Argentina exhibit most significantly a stronger preference for team foundations than students in Germany, the fourth hypothesis is supported. Like assumed, German students present most significantly a higher risk propensity so that the fifth hypothesis is accepted.

Figure 4
Desired University Support



International Comparison of Foundation Barriers and Assistance Requirements

This chapter analyzes significant differences between students in Argentina and students in Germany concerning foundation barriers as well as foundation assistance requirements to generate indications for the suitability for a holistic or individualistic approach regarding the target group differentiated analysis of the respective entrepreneurial criteria in order to draw conclusions in terms of an appropriate design of entrepreneurial support programs at universities.

Table 2 highlights the international comparison of foundation barriers. Referring to *missing entrepreneurial qualification, missing customer contacts, missing equity, missing outside capital, own financial risk, low turnover and low profit* no significant differences between German and Argentine students exist so that the target group differentiated analysis of these foundation barriers should be done

in a cross-national procedure. Students in Germany consider *missing “right” business ideas, missing courage, support of family and friends and fear of failure* most significantly and *missing “right” foundation partners* significantly as stronger foundation difficulties than their counterparts in Argentina. Hence, these foundation hurdles should be taken up in the target group oriented analysis in the context of the German sample. Argentine students estimate *missing available time, the politico-economic environment, the cyclical state and extensive official channels* most significantly and *know-how deficit* significantly as higher foundation restrictive. Thus, these foundation barriers are included within the aim group differentiated analysis of the Argentine sample.

Table 1
Hypotheses Tests

Hypothesis	Spearman Correlation	Significance Level p
H1: The student foundation probability differs in the analyzed countries	.279	.000 (***)
H2: The student foundation propensity differs in the analyzed countries	-.066	.003 (**)
H3: The foundation motivation from economic necessity differs in the analyzed countries	.082	.000 (***)
H4: The preference for team foundations differs in the analyzed countries	.166	.000 (***)
H5: The risk propensity differs in the analyzed countries	-.109	.000 (***)

**Significant at $p \leq .01$ (very significant).

***Significant at $p \leq .001$ (most significant).

Table 2
International Comparison of Foundation Barriers

Foundation Barrier	Spearman Correlation	Significance Level p
Missing “right” business idea	-.107	.000 (***)
Missing “right” foundation partner	-.058	.011 (*)
Missing entrepreneurial qualification	.005	.819 (ns)
Missing courage	-.186	.000 (***)
Missing available time	.086	.000 (***)
Missing customer contacts	-.014	.528 (ns)
Missing equity	.025	.271 (ns)
Missing outside capital	-.020	.390 (ns)
Know-how deficit	.048	.039 (*)
Own financial risk	-.027	.240 (ns)
Low turnover	.031	.177 (ns)
Low profit	.036	.115 (ns)
Support of family and friends	-.122	.000 (***)
Politico-economic environment	.384	.000 (***)
Cyclical state	.105	.000 (***)
Fear of failure	-.095	.000 (***)
Extensive official channels	.082	.000 (***)

ns: not significant at $p > .05$ (not significant).

*Significant at $p \leq .05$ (very significant).

**Significant at $p \leq .01$ (very significant).

***Significant at $p \leq .001$ (most significant).

Table 3 contains the international comparison of foundation assistance requirements. In respect of

business plan workshops, contact bourses with enterprises and meetings and discussions with professors no significant divergencies exist, for which reason the aim group oriented analysis of these support provision follows a cross-national approach. To students in Germany *coaching and consulting* are most significantly and *specific contact points* are significantly more important than to students in Argentina. Both encouragement methods will be picked up in the aim group oriented analysis of the German sample. Argentine students demand *Courses, business games, impulsion financing and incubators* most significantly and *miscellaneous* very significantly stronger than German students. Hence, these foundation assistance are considered in the target group oriented analysis of the Argentine sample.

Table 3
International Comparison of Foundation Assistance Requirements

Foundation Assistance Requirement	Spearman Correlation	Significance Level <i>p</i>
Courses	.431	.000 (***)
Business game	.289	.000 (***)
Business plan workshop	.028	.207 (ns)
Contact bourse with enterprises	.034	.130 (ns)
Meetings and discussions with professors	-.023	.308 (ns)
Coaching and consulting	-.089	.000 (***)
Impulsion financing	.126	.000 (***)
Specific contact point	-.044	.049 (*)
Incubator	.080	.001 (***)
Miscellaneous	.336	.002 (**)

ns: not significant at $p > .05$ (not significant).

*Significant at $p \leq .05$ (very significant).

**Significant at $p \leq .01$ (very significant).

***Significant at $p \leq .001$ (most significant).

Foundation Ambition Types Differentiated Holistic Proposals

Corresponding to business creation, entrepreneurship education should follow a procedural and progressive character and presupposes a continuous entrepreneurial learning process of the students (Koch 2006) that satisfies the immense personal momentousness of the foundation decision. Also the development of a concrete foundation intention follows a processual character like shown in the *Foundation ambition types-model* of Ruda, Martin, Ascúa, and Danko (2008). Due to these existant diverse foundation ambition types, entrepreneurial education has to consider a necessary foundation didactical target group differentiation (Braukmann 2003).

Figure 5 highlights the foundation barriers that are investigated foundation ambition group-oriented in a cross-national approach. Both *missing entrepreneurial qualification* and *own financial risk* decline with an expanding foundation propensity, presumably because with higher entrepreneurial qualification the risk value is perceived lower. Hence, to boost student start-up activity (Argentine and German) universities are requested to impart constantly and manifoldly entrepreneurial qualification. To be enabled to create a firm equity as well as credit capital are required. With stronger foundation intention *missing equity* represents a smaller foundation hurdle. However, the relevance of *Missing outside capital* as foundation barrier rises until a concrete start-up interest exists and afterwards drops—like *missing equity*—conspicuously. With higher foundation tendency the nascent entrepreneurs seem to feel up more intensely to save or to borrow money. At this, universities could act as loan brokers. With higher developed foundation propensities the foundation difficulties regarding *missing customer*

contacts, low turnover as well as low profit decline almost constantly, that is networking support by universities could be a appropriate to encourage student entrepreneurial activity.

Figure 5
Holistic Foundation Barriers concerning Foundation Ambition Types

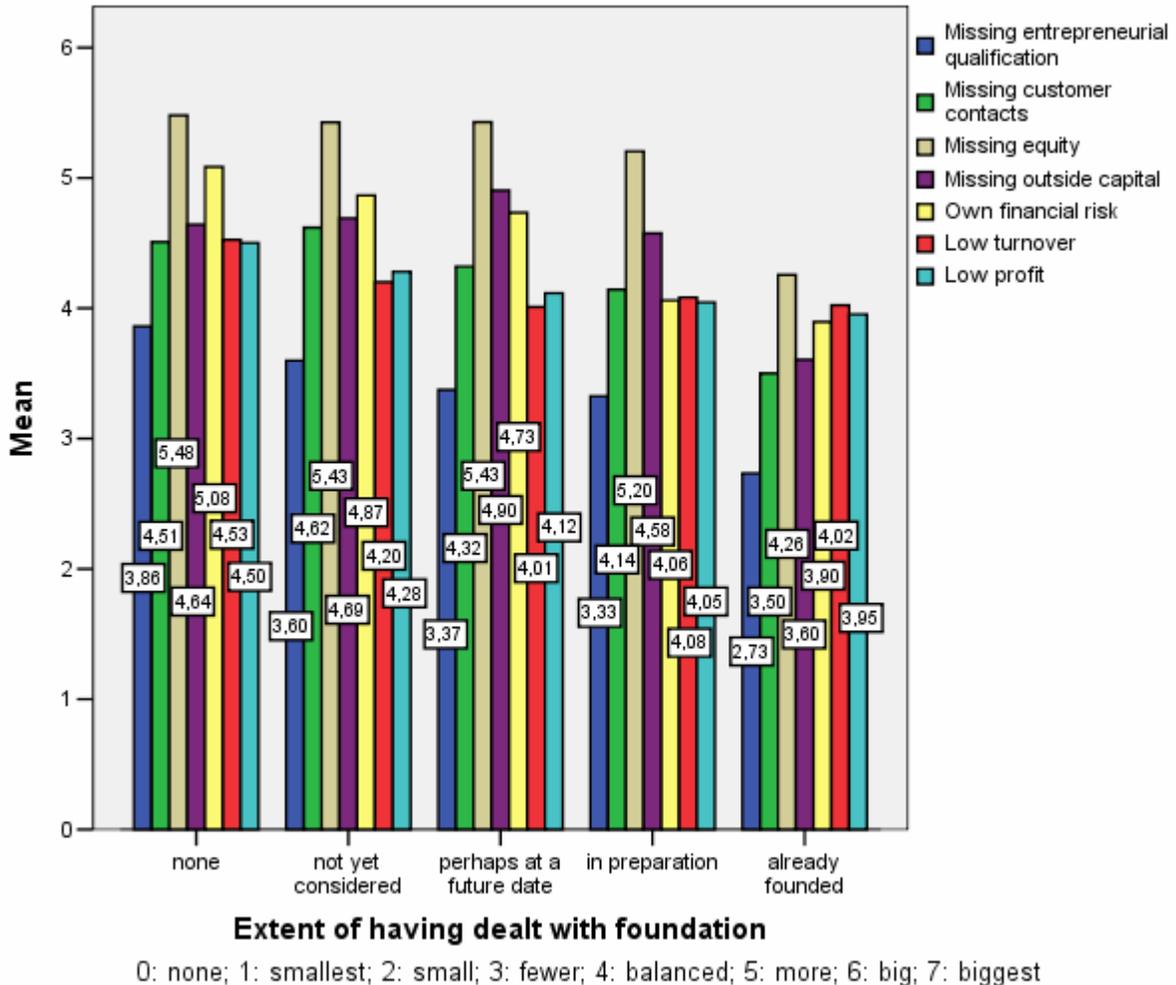
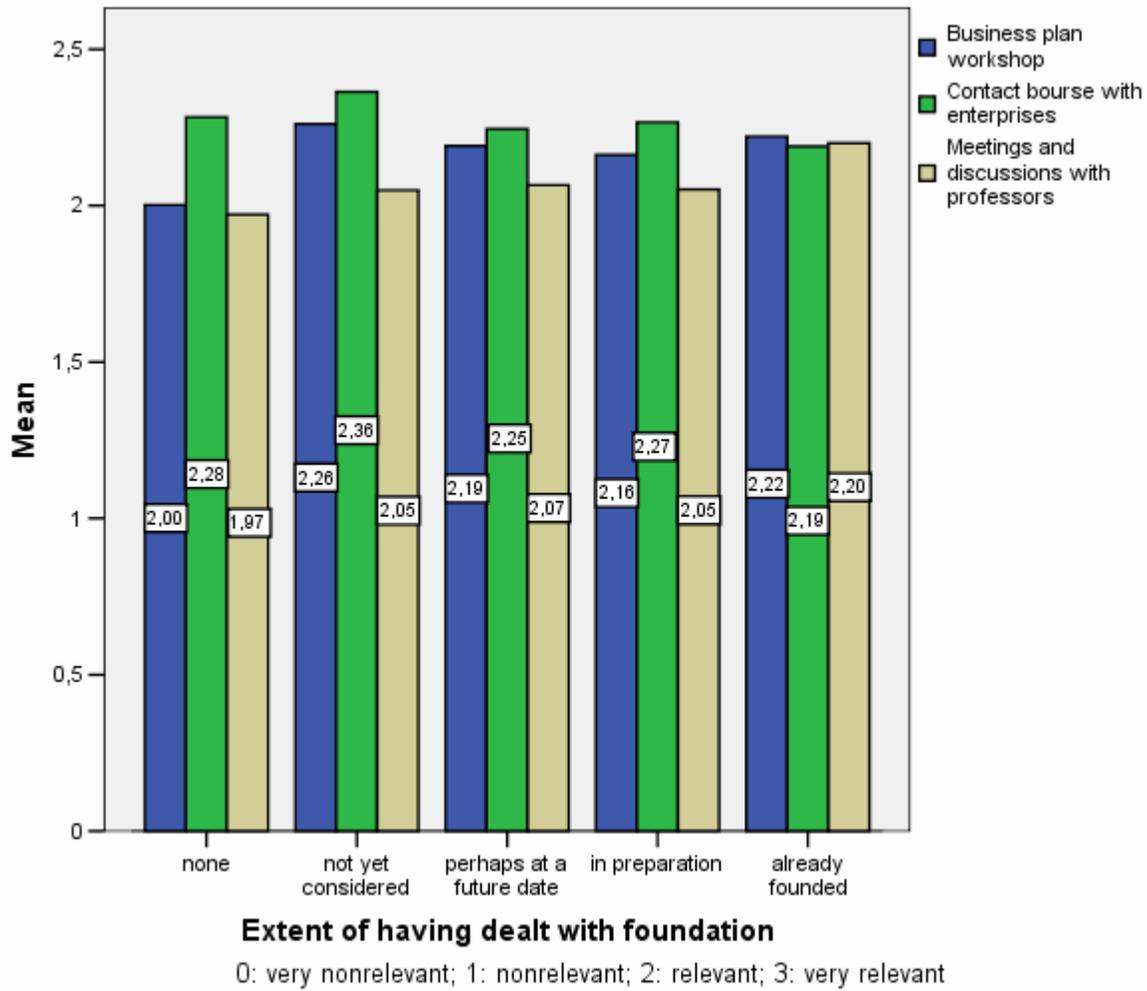


Figure 6 depicts foundation assistancies which are analyzed holistically referring to the foundation ambition types. Foundation laymen and especially foundation sensitized students attach above-average importance to *Contact bourses with enterprises*. Therefore, they should be a starting point within entrepreneurial education, in order to overview some special issues of innovative young firms. *Business plan workshops* should be implemented as integrated universitary support. Because of the lower relevancy to foundation laymen, it seems that to this aim group the high impact of this pivotal foundation instrument is so far unknown so that it has to be communicated to them by the Argentine as well as German universities. With higher foundation ambition the students prefer more *meetings and discussions with professors* regarding entrepreneurship. In this connection not only potential founders, but also founders as well as (foundation disposed) alumni with work experience could benefit from such an encouragement.

Figure 6
Holistic Desired University Support concerning Foundation Ambition Types



Foundation Ambition Types Differentiated Country-specific Proposals

This chapter examines foundation propensity-oriented and country-specific those foundation barriers and assistance requirements that seem to be more relevant in the corresponding country than in the counterpart.

Figure 7 points out foundation ambition type differentiated the—to students in Germany—relevant foundation barriers within the German sample. Foundation laymen and even more to foundation sensitized anticipate *missing “right” business ideas* as more foundation hindering than the other foundation intention groups. Altogether, the importance of this foundation difficulty declines with advanced foundation propensity. This is also the case for *missing courage* as well as *fear of failure*. Over the years of studying students occupy themselves more intensely with their specific field so that they become more qualified to make inventions. The resulting stronger self-confidence regarding the adequacy of their generated foundation ideas causes a decrease of the estimation of *missing courage* and *fear of failure* as foundation hurdles. Hence, particularly German universities should assist student foundation creativity through a permanent confrontation with entrepreneurship in order that more inventions result in innovations. Opposite to the founder to all other foundation ambition types *missing “right” foundation partners* are constantly a much stronger foundation difficulty. So, German

universities are required to provide networking support in order to enhance team foundations. *Support of family and friends* as the lowest foundation hurdle is more relevant to the foundation interested and most important to the foundation preparers—that is in the phase in which this support is needed mostly.

Figure 7
Foundation Barriers concerning Foundation Ambition Types in Germany

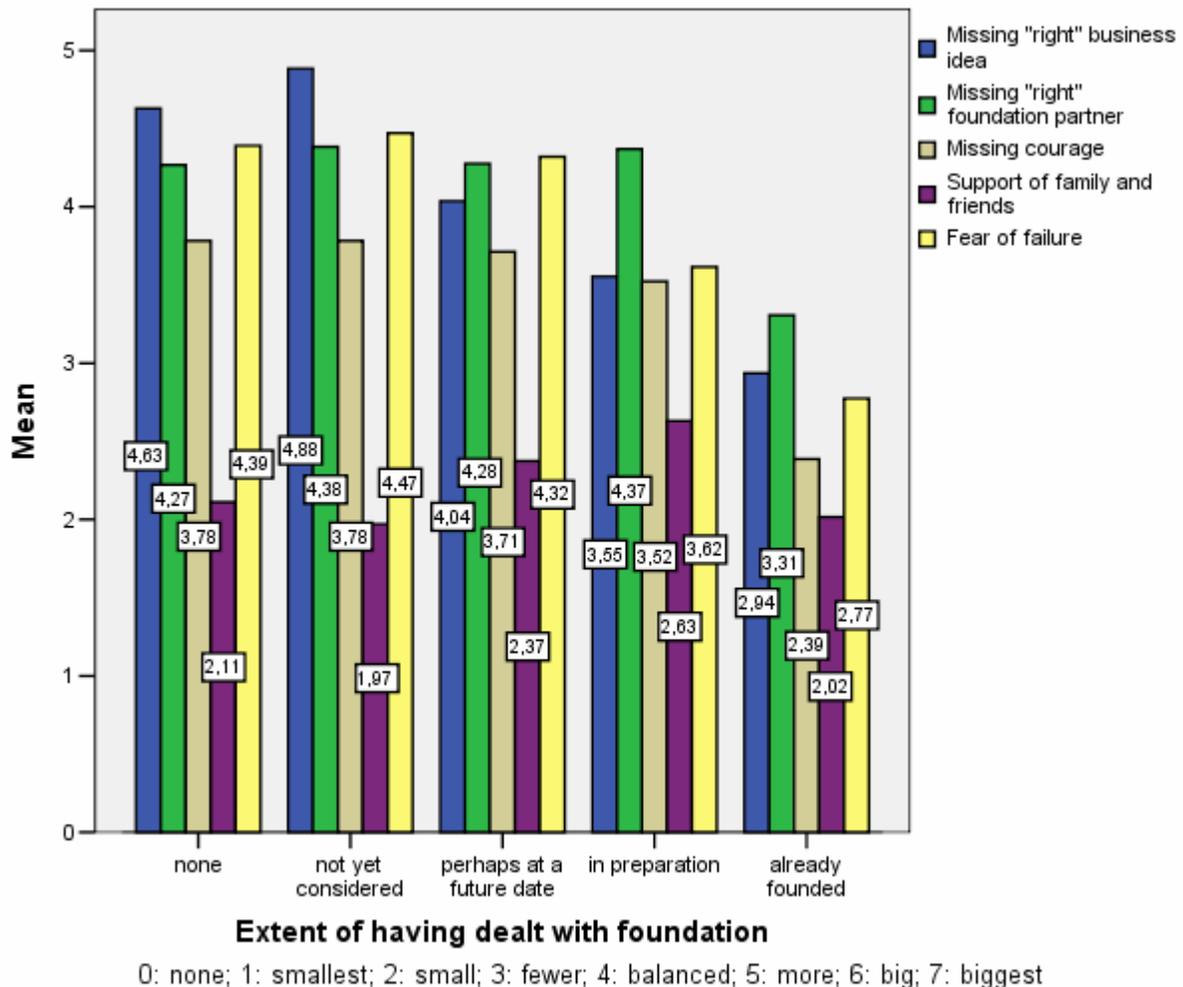


Figure 8 depicts foundation propensity grouped the—to students in Germany—decisive foundation assistance requirements within the scope of the German sample. *Coaching and consulting* as well as *specific contact points* are demanded stronger by the German students until a concrete foundation interest has been developed. However, the relevancy of these both support measures declines while preparing foundation and increases again in the foundation phase and after foundation respectively. *Specific contact points* represent particularly to founders the highest demand. Apparently, also in the foundation phase concrete open questions occur to the young entrepreneurs that should be clarified through university support in the realms of *coaching and consulting* as well as *contact points* concerning entrepreneurial issues—without neglecting alumnis whose concrete foundation intentions emerge also after several years of work experience.

Figure 8
Desired University Support concerning Foundation Ambition Types in Germany

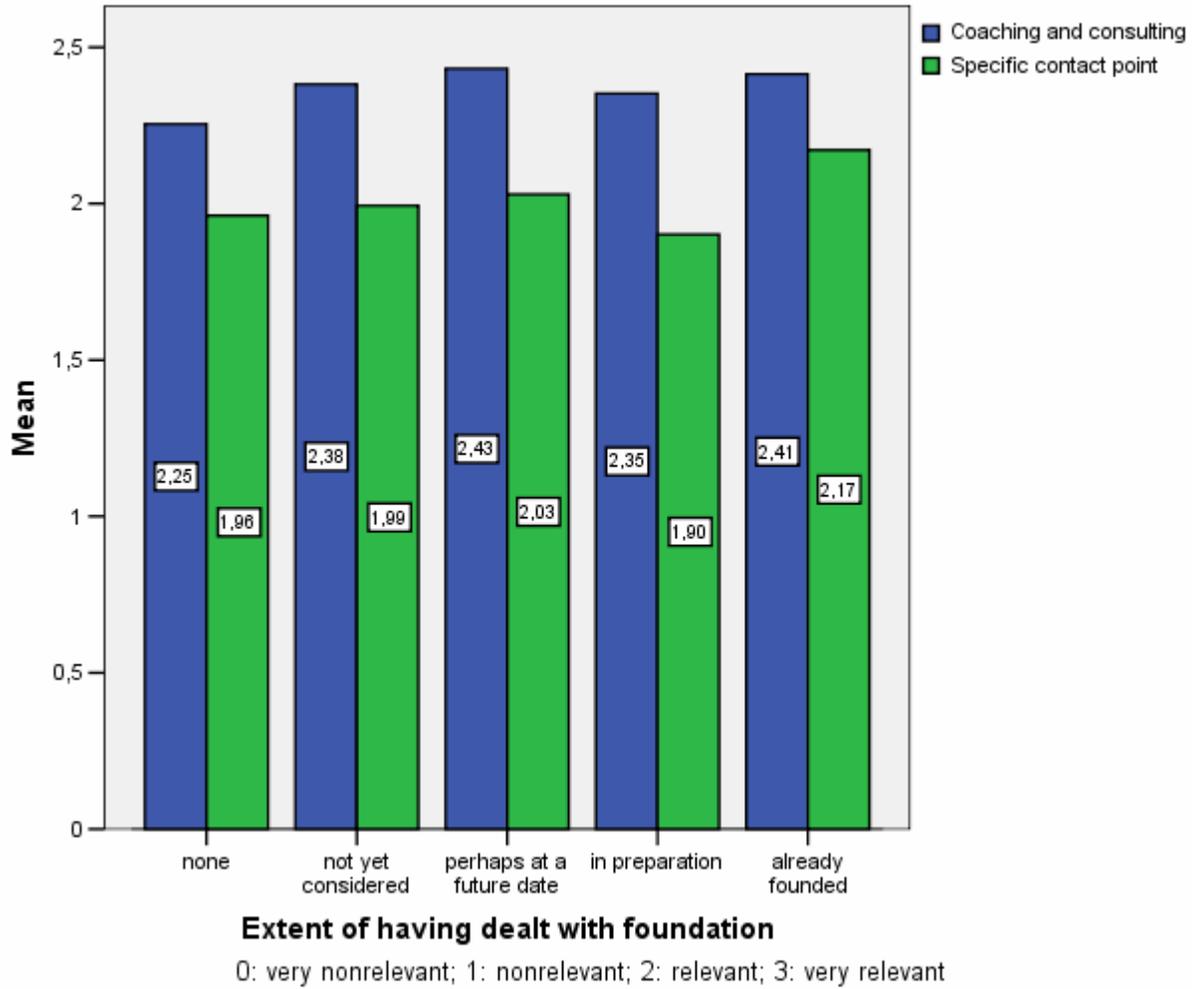
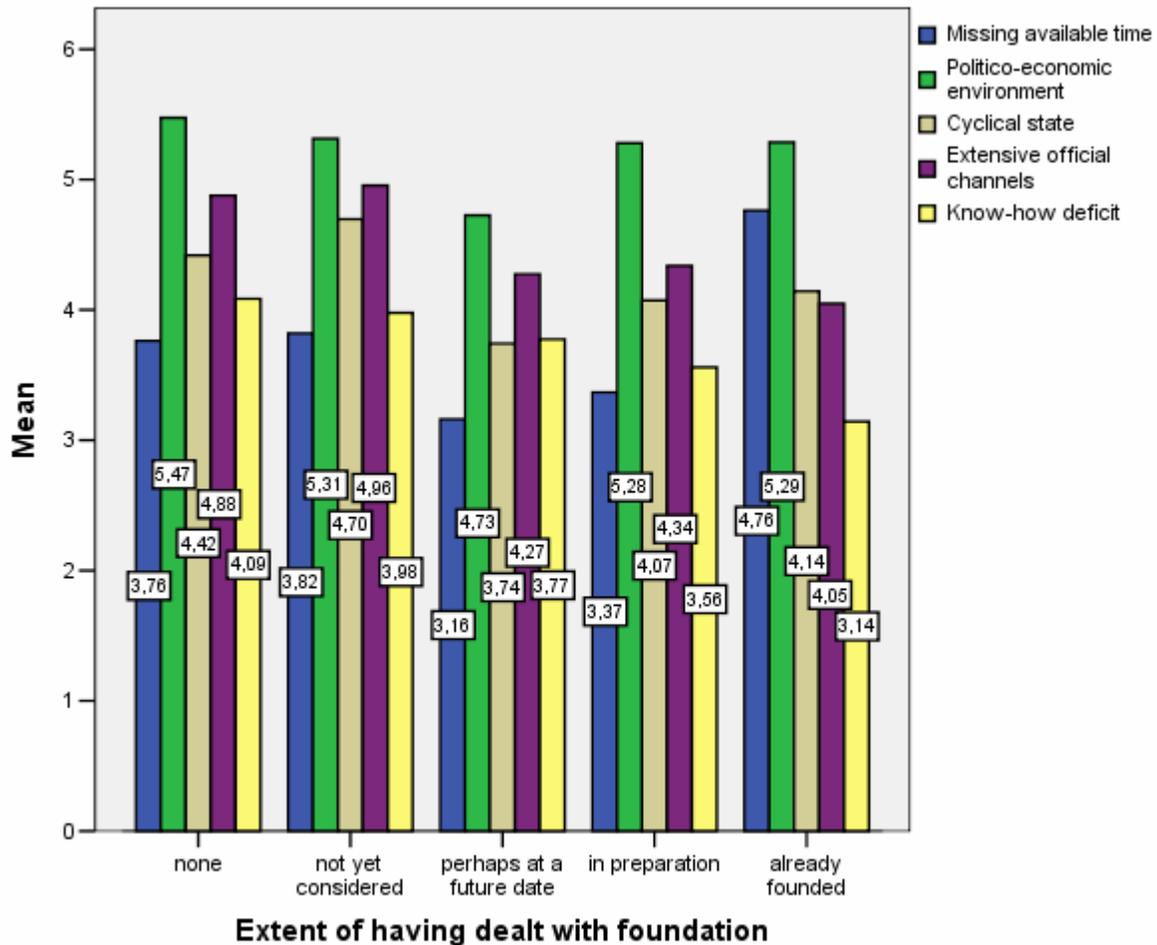


Figure 9 shows foundation tendency-oriented the—to students in Argentina—relevant foundation barriers within the Argentine sample. *Missing available time* as foundation difficulty is less important to the Argentine foundation interested and preparers, presumably because they take their time for occupying themselves with their potential entrepreneurial activity. However, to the founders this foundation hurdle is far above average, due to the fact that they also have to deal with their business activity. Along with generating a foundation interest the *politico-economic environment*, the *cyclical state* as well as *extensive official channels* become lower foundation barriers in Argentina, but in case of starting to prepare foundation these constraints climb up again. However, the estimation of *extensive official channels* as a foundation barrier declines again after foundation, by reason that the bigger part has been handled by the young entrepreneurs. In respect of the *politico-economic environment* and the *cyclical state* the Argentine economic policy is requested to take foundation beneficial actions. With a lower anticipation of *know-how deficit* as foundation difficulty Argentine students show a higher foundation ambition so that (especially commercial) knowledge transfer should be provided continuously to students by (Argentine) universities in order to assist student innovations.

Figure 9
Foundation Barriers concerning Foundation Ambition Types in Argentina



0: none; 1: smallest; 2: small; 3: fewer; 4: balanced; 5: more; 6: big; 7: biggest

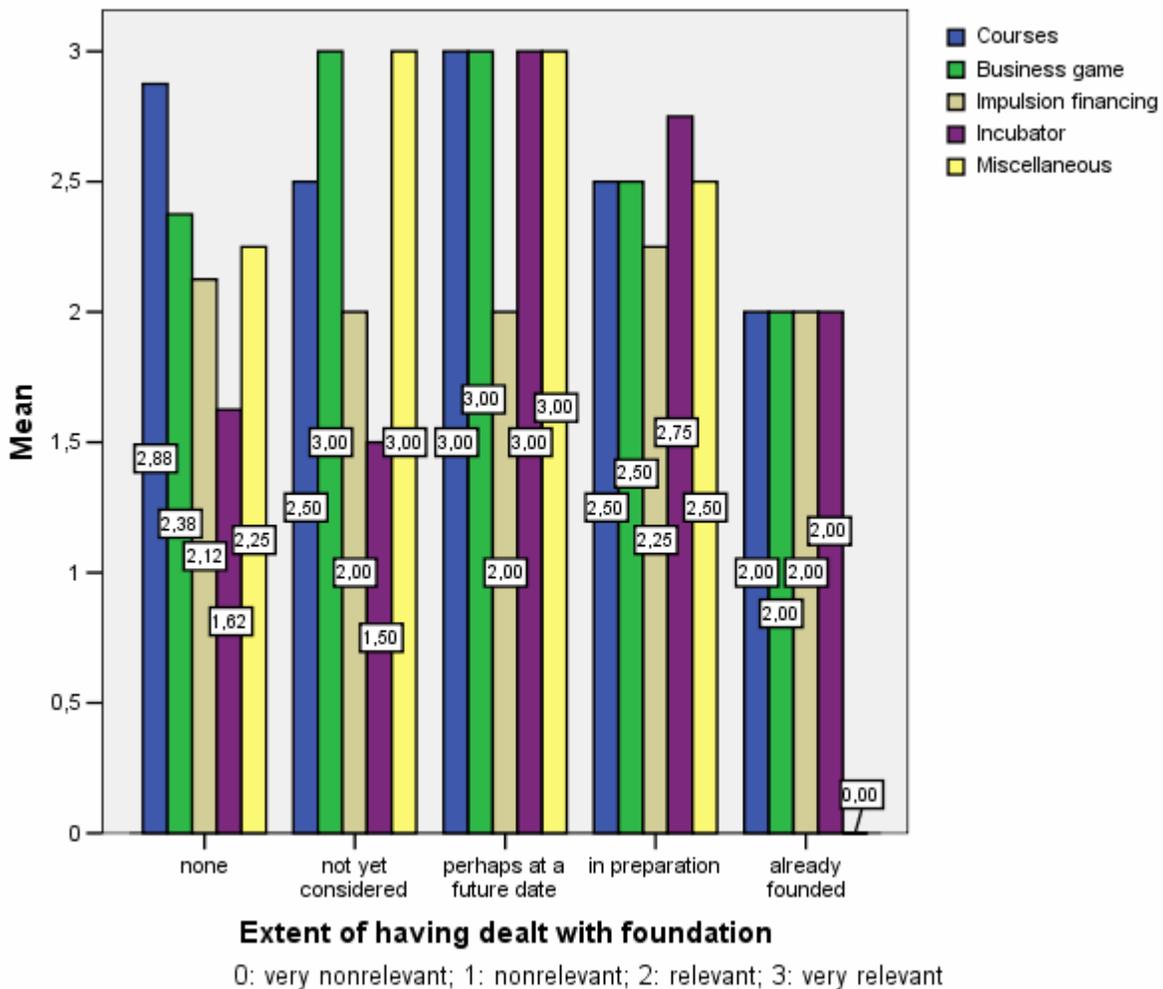
Figure 10 illustrates foundation ambition grouped the—to students in Argentina—relevant foundation assistance requirements in respect of the Argentine sample. *Courses* as entrepreneurial assistance at universities can be categorized as being essential to the Argentine students right from the start of their studying. The foundation laymen prefer this fundamental support, but it is also to the founders still relevant. *Business games* and *miscellaneous* foundation assistance should focus primarily on foundation sensitized and interested without neglecting the other foundation ambition types. As expected, an university *impulsion financing* is mainly requested by the foundation preparers to whom this supportive measure often could be pivotal in order to realize a business start-up. With an existent foundation interested students in Argentina increasingly demand *incubators* as entrepreneurial assistance which should accompany potential founders whilst their development to young entrepreneurs.

Implications and Further Research Demand

Upgrading of entrepreneurship education and foundation assistance at universities presupposes a target group oriented requirements analysis of students. Not only foundation willing students and nascent entrepreneurs but also foundation laymen and young entrepreneurs—that is students with all foundation ambition values—have to be respected by entrepreneurial support programs. In this regard,

a simple differentiation between foundation interested and uninterested students and a solely or mainly focussing on the former group is not satisfactory, considering that also foundation unsensitized students are potential entrepreneurs—possibly with seminal business ideas. Universities are requested to encourage all of their undergraduated and postgraduated students—without neglecting alumni—to entrepreneurial activity on the basis of a demand-oriented assistance that has to consider students’ entrepreneurial criteria in the context of the pre-foundation process. Students and academics as possibly founders of high potential firms need a positive entrepreneurial climate, foundation-specific basic knowledge and entrepreneurial skills as well as an appropriate infrastructure at their universities in order to lauch and commercialize their inventions. Adequate entrepreneurial education and assistance has to be offered target group appropriately without neglecting alumni who often develop a concrete foundation intention after several years of work and leadership experience. Students should consider their universites—the place where they are prepared for professionalism—as competence centers and contact points regarding dependent work as well as self-employment.

Figure 10
Desired University Support concerning Foundation Ambition Types in Argentina



Due to usually diverse entrepreneurial activities in developing and developed countries, the international comparison of Argentina and Germany regarding students’ entrepreneurial criteria

analyzes on the one hand whether also students present these different foundation quotes. On the other hand, such an empirical study seems to enable knowledge and references how to develop adequate and innovating entrepreneurship support programs both in a cross-national and country-specific approach—according to cultural and environmental situations as well as general and specific requirements.

Further continuous empirical research also in other developing as well as industrial nations is postulated in order to generate in-depth knowledge how to assist appropriately students' business creation within the scope of a global economic and financial crisis that shifts unemployed to self-employed work—a fundamental reason to establish purposive prerequisites so that students are able to develop integrated entrepreneurial competencies.

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Pho24 in Vietnam: A case study of a newly emerging Asian franchise

Lorelle Frazer and Bill Merrilees

Pho24 is Vietnam's largest and most rapidly growing franchise system. In this research a case study approach is used to study the franchising strategy employed by the organisation to achieve rapid growth in Vietnam and internationally. Key people in the organisation were interviewed, including the founder/franchisor, franchisees and company employees. Data were collected over a 12 month period from the organisation's operations in three countries: Vietnam, Australia and Singapore. The findings indicate that cultural and legal contexts heavily influence the franchisor's philosophy. Traditional explanations of franchising, such as resource constraints theory and agency theory, only partially explain the motivations for franchising. An alternative hybrid model of franchising is adopted to improve control and collaboration between the franchisor and franchisees.

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Pho24 in Vietnam: A case study of a newly emerging Asian franchise

Background to the research

Much of the franchising literature emphasises Western-based franchise systems. The original phase of this Western research centred on North America and especially the United States of America. More recent Western franchising research has extended in Europe and Australia. The main current gap appears to be Asia. Much needs to be learnt about franchising in this region. It seems that the penetration of franchising is more limited in Asia, though the reasons for this are unclear. Additionally, little is known about the extent to which Western franchise systems have been adapted to suit the Asian context. Almost nothing is known about *home-grown Asian franchising systems*.

The objective of the current paper is to tackle the last question, despite it being the most difficult. That is, the paper investigates Vietnam's largest franchise system, Pho24, the first major domestic franchising system developed and grown in Vietnam. Vietnam is touted as a potential next wave Asian tiger, adding to the intrigue to find out the state of the art franchising currently in that country.

Essentially a case method approach is used around the Pho 24 organization. Special attention was given to the founder and entrepreneur, Dr Ly Qui Trung.

Methodology and data collection method

A qualitative approach was used in this research because of the complexity of the study (involving franchise operations across several countries) and the length of time needed to gather the data (Gummesson 2006). Flexibility was essential as the study adopted a recursive approach (Veal 2005), collecting and analysing data concurrently as the research evolved. A single case study of Pho24 was undertaken in order to conduct an in-depth investigation of the organisation, its formation,

development and expansion internationally. This organisation was chosen because it provided an opportunity to study a unique form of franchising (Stake 2000). A distinct advantage of using a single case study is the ability to study the organisation holistically (Zikmund and Babin 2007). Our objective was to gain a comprehensive understanding of the franchising strategy of Pho24 (Punch 1998). We were particularly fortunate in having access to, and the full cooperation of, the founder of the organisation who held specialised knowledge due to his high profile as a leading Vietnamese businessman, entrepreneur and scholar (Ritchie and Lewis 2003). Whilst the research referred to prior theory as a starting point, the case study was used for the purpose of inductive theory building (Perry 1998). Explanatory case studies attempt to provide an explanation for how and why particular events occur (Yin 2003) and, as such, are very powerful forms of research.

Data were collected over a 12 month period in Australia, Vietnam and Singapore and comprised a series of interviews, store visits, observations and review of company documents. *Interviews* were used to gather empirical data about the organisation by asking people to talk about their experiences and interactions (Holstein and Gubrium 2004). The founder of Pho24, Dr Ly Qui Trung, was interviewed personally on three occasions by the researchers, twice when he visited Australia and once at his corporate office in Ho Chi Minh City (HCMC) in Vietnam. Key employees in the organisation, including the Human Resources Manager and Business Development Manager, were interviewed in Vietnam. Six franchisees were also personally interviewed, each by one of the researchers. Two were single unit franchisees in Vietnam. A third held multiple units in Vietnam and was also the master franchisee for Korea. The fourth person was a franchisee operating in Australia. The fifth and sixth people were partners in a franchise in Singapore and,

although one of the researchers travelled to Singapore for the interview, ultimately it needed to be conducted by telephone due to a change of arrangements on the day. Finally, a Senior Trade Commissioner attached to the Australian Embassy in Hanoi was also personally interviewed, providing an ‘outsider’ perspective. All but three of the participants communicated fluently in English; in these cases (one corporate office employee and two franchisees) an interpreter was present to translate from Vietnamese. In most cases the interviews were tape recorded and transcribed and were analysed manually by each of the researchers. Where it was not feasible to record the interview, detailed notes were maintained. Mindful of differences in language and culture, we used Whyte’s hierarchy of interviewer responses to encourage reflection and to probe participants’ responses (Whyte 1982).

In addition to these interviews, several Pho24 outlets were visited in order to inspect the operations and *observe* interactions with customers. These were the corporate head office pilot operation (HCMC); a corporate store, corporate kiosk and a franchised outlet in HCMC; and franchisee stores in Singapore and Sydney, Australia. During the store visits we were able to note the interactions between employees and customers and observe and compare the physical condition of the outlets. Participant observation and fieldwork are hallmarks of rigorous qualitative research (Delamont 2004), enabling the researcher to test and revisit initial insights. For instance, we noticed a marked difference in the standard of the store showcased at corporate headquarters with that of the franchised outlets causing us to seek further information from the franchisor about quality control.

Finally, an assortment of *documents* about the organisation was scrutinised. These included internal company documents, such as organisational charts, as well as publicly available documents, including the Mission and Vision statement and

promotional materials. The use of a combination of data sources - interviews, observations and document analysis - enabled us to validate and cross check our findings as the research progressed (Patton 2002). Indeed, using a combination of data types contributed to the validity of the research (Silverman 2006).

The very subjective nature of qualitative research demands checks and balances to be put in place to ensure rigour and to avoid the intrinsic bias that accompanies a single approach. Hence, several forms of triangulation were used in this research. By having two researchers involved in the project, investigator triangulation was achieved, enabling alternative perspectives to be explored (Patton 2002). Triangulation of data sources was used to improve the depth and quality of data collection and analyses (Silverman 2006). This technique involved, for example, comparing interviews with observations and contrasting the perspectives of different people. Finally, triangulation of theory occurred as the research incorporated two major (rival) theoretical perspectives – resource constraints theory and agency theory - in order to interpret the findings (Neuman 2006).

Pho24 – the founder and the company

Pho 24 is a major of the Nam An Group, which overall comprises more than a dozen different brands, including Maxim's and Terrace café. The first Pho24 store opened in June 2003 and by 2009 there were 62 stores in Vietnam and 10 stores overseas in Korea, Cambodia, Philippines, Singapore, Australia and Indonesia. Clearly the franchise was a born global firm (Rennie 1993, Deshpande 1983), consistent with the initial mission of the company to be “a worldwide brand”. It is the largest franchise system in Vietnam.

The founder of the franchise, Dr Ly Qui Trung, is a pioneer in every respect, not simply developing a new concept, but doing so in a national context where there are few home-grown brands. The brand concept is based on the Vietnamese pho (phôû) noodle which is national dish in Vietnam. However, rather than a simple street food presentation as is common, the dish is packaged in a modern day style.

The traditional franchising model

Most literature about franchising is drawn from western societies where the sectors are mature, such as the United States of America, United Kingdom, France and Australia (for example, see Lafontaine (1992), Dant, Paswan and Kaufmann (1996) in the USA, Watson and Stanworth (2006) in the UK, Dant, Perrigot and Cliquet (2008) in France and Brazil, and Weaven and Frazer (2003) in Australia). The literature on franchising in Asia is less developed, reflecting the relative infancy of the franchising sectors in Asian nations. Recent work exploring Asian franchising includes that of Wang, Zhu and Terry (2008) who have written about franchising in China, Terry (2008) on Vietnam, and Paswan (2008) who has explored the growth of franchising in India. Yet, this developing body of work is mostly descriptive, filling a gap in our knowledge about Asian franchising practice, but hardly venturing towards comparisons of western and Asian franchising or analysing the different models. Moreover, Dant (2008) urges researchers to apply existing theories cross-culturally and to “look beyond the North American contexts for data and original theoretical development” (p. 1). Hence, this current research contributes significantly to our understanding of franchising in Asia by exploring in depth a home-grown Vietnamese system that has expanded both domestically and internationally.

The *traditional* franchising model, that is, one that is common in developed nations such as the United States or Australia, typically views franchising as an

efficient method of distribution of goods and services due to its reliance on the human capital contributed by franchisee owner managers (Birkeland 2002). Moreover, it is the ability of the franchisee and franchisor to specialise and contribute in different ways to the business relationship that provides a comparative advantage over alternative organisational structures (Blair and Lafontaine 2005). The early literature viewed franchising as a *temporary* strategy to be used by small start-up companies in order to achieve rapid growth despite the reluctance of capital markets to back their investments (Oxenfeldt and Kelly 1969). This capital acquisition explanation argued that organisations were forced to resort to franchising because it allowed them to expand quickly without having to source scarce external financial resources or to relinquish control as in a joint venture or stock market operation (Caves and Murphy 1976). Thus, over time it was expected that franchisors would repurchase or take over the (best) franchised units in the system and eventually become fully company owned (Oxenfeldt and Kelly 1969).

However, research into this phenomenon has produced mixed results in the United States (for example, Hunt 1973, Brickley and Dark 1987, Lafontaine 1992). Moreover, it has been found that where ownership redirection occurs it is “more strategy driven than opportunistic” (Dant, Kauffman and Robicheaux 1998, p. i). Indeed, Blair and Lafontaine (2005) comment that “most franchise chains are hybrids: partially vertically integrated and partially franchised” (p. 107). In contrast, whilst some large fast food chains (such as McDonald’s) strategically ensure a mix of franchised and company owned units, most franchise systems in Australia are almost fully franchised (Frazer, Weaven and Wright 2008). Hence, different franchising models are employed around the world and there is no ‘one size fits all’ approach.

An alternative explanation of franchising, first put forward by Rubin (1978), focuses on creating a contractual relationship that provides efficiencies and *incentives* for both parties to achieve maximum benefits. It is based on the premise that, in order to expand, some outlets will be located at a geographical distance from the franchisor, thus making it difficult to fully observe and monitor their operations. Employee managers may be motivated to act in their own self interest rather than the firm's. For instance, in the absence of any additional rewards and where their actions are difficult to observe, employee managers will not be specifically motivated to work harder than necessary or to maximise efficiency of operations. Hence, franchising provides a workable solution to the problem encountered in agency relationships by focusing on the substance, rather than the economics, of the relationship (Brickley and Dark 1987). Franchising becomes an efficient distribution channel due to “increased owner commitment and reduced control and monitoring costs” (Hoy and Stanworth 2003, p. 60).

For the past several decades scholars around the world have sought evidence to support these alternative, but not exclusive, theories of franchising. Findings have been somewhat mixed, with most commentators now concurring that a combination of both resource constraints and agency theories serves to explain why franchising occurs. For example, Australian research has found support that franchisors initially use franchising as a means of expansion when the franchisor is financially constrained, whilst at the same time choosing franchising in order to minimise franchisor risk (Frazer and Stokes 1997). Research in the United States confirms the role of the franchisor in controlling the use and value of the brand and that of franchisees to control ongoing operations (Birkeland 2002). These different approaches are also evident at the operational level. The traditional concept of a

franchisee is the so-called ‘mom and pop’ model whereby the franchisee operates a single unit (Grunhagen and Mittelstaedt 2002). Research in Australia reveals that this model is pervasive with the majority of franchises operating as husband/wife single unit partnerships (Frazer, Weaven and Wright 2008). However, in the more mature franchising sector in the United States, most franchises are owned by multiple unit operators: “Single-unit franchisees are the exception, not the rule.” (Kaufmann 1996, p.5). It is clear that different variations of franchising exist around the world and so now we turn to the model adopted by Pho24 in Vietnam.

The Pho24 franchising model

Most of the Pho24 franchisees are established successful businessmen. There are no ‘mom and pop’ examples in existence as this would be inconsistent with Vietnamese culture. The franchisees are owner investors, rather than owner operators. The franchise may be one of many business interests which they oversee and therefore only a portion of the franchisee’s time is devoted to the franchise. A store manager takes care of the day-to-day operations under the direction of the franchisee but with a minimum of contact. For example, the Korean master franchisee who also held five outlets in Vietnam, visits only one or two stores a week to take a look around and speak to the manager. This level of involvement is very different to Australian multiple unit franchisees who tend to dedicate their time fully to the management of the unit holdings (Weaven and Frazer 2003).

The franchising relationship also differs. In western cultures the franchisor-franchisee relationship is personal and involved and has been compared to marriage or a parent-child relationship (Nathan 2008). Similarly, franchisees normally associate either formally or informally in order to network and share ideas. However, the

behaviour of franchisor and franchisees in Pho24 is less personal. The franchisees do not normally interact, unless they are attending a seminar or a formal meeting. The founder keeps in regular contact with the franchisees but with bounded parameters. For instance, although the franchisees mostly interact with corporate office management, Dr Trung likes to make an effort to contact them personally:

I ask my secretary to remind me to call them sometimes personally, even though I have the account manager or business development manager to look after all the franchisees, but sometimes I do like to call them and say hello and they feel important.

However, when asked whether he knew anything about the families of the franchisees he indicated that it would be detrimental to the business relationship to develop personal relationships with franchisees:

In Vietnam it is quite sensitive. If you go too much into the relationship then you cannot manage. You can't be good friends or they don't listen to you. Work relationship but not friends; if it becomes like friends then I cannot work.

This emphasis on the business relationship permeates the model used in Pho24. Like many other franchise systems, there is a mix of company owned and franchised outlets. The franchisor indicated that company owned stores were more profitable than franchisee operations because franchisees tended to control costs:

The negative thing about franchised stores is the quality of the food. I am concerned most of the complaints from the customers are with the franchised stores.

This statement is somewhat contrary to the literature (and anecdotal evidence¹) which predicts that franchisees will outperform managers due to greater personal incentives to perform (Bradach 1998), but the situation in Pho24 is different because the franchisees are not hands-on operators. The attempt to reduce costs results in lower quality products and service, ultimately leading to diminishing revenues and profits.

¹ For instance, Hungry Jack's in Australia actively recruits franchisees from within its own employees, and delays charging an initial franchise fee, if they take over an underperforming company store. In most cases the employee becomes motivated to perform at a superior level when given the opportunity to become a franchisee.

Given the superior performance of the company stores one would expect that the company would maximise its ownership of outlets unless it faced resource constraints.

In the case of Pho24, the constraint is on human, rather than financial, resources as noted by Dr Trung:

I make more profit and earn more money if I open a company store, but of course they have to balance with the capacity of management. If all 60 stores belonged to the company then I don't think I could maintain the system.

The main hindrance to system expansion is due to managerial capacity to service the operations. Franchising provides a partial solution for the organisation by devolving responsibility for management to franchisee investors. Capital could be sourced from franchisees but a venture capitalist has invested in the organisation, thus alleviating the need to raise capital for expansion via franchising. Hence, resource constraints theory is applicable to this case only to the extent of the shortage of human capital.

The normal (Western) franchising model relies on franchisees as owner operators to overcome agency problems, such as shirking or free riding on the brand, and to align franchisor-franchisee goals (Brickley and Dark 1987). However, in the Pho24 (Asian) model the franchisees are owner investors and are not involved in either hands-on operation or close supervision of the business. Such a model is at risk of suffering a loss of consistency and reduction of quality of product and service offerings. To minimise the risk, the franchisor invests in each franchise unit and becomes a part owner. Being in partnership with each franchisee allows the franchisor to maintain control:

I adjusted (the system) quite a lot to match the Vietnam context. For example, when I started to franchise I didn't want to just sell the franchise but (I wanted) to sell the franchise plus my shares as a shareholder. The concept was at least 30 percent of investment from Pho24 to any franchisee store.....that way I feel safer, I feel I have better control of the franchisee.

This level of control is beneficial because of the unique nature of the franchisees. As they are successful businessmen with diverse business interests, they are unlike novice first-time business owners who will accept advice and guidance from the franchisor. By becoming a partner in their businesses, the franchisor is able to exert more control and direction over the business activities, thus reducing the potential for conflict in the relationship. Legal, as well as, cultural issues may influence this choice of model as businesses in Vietnam cannot rely on the regulatory system for protection (Terry 2008). Dr Trung commented “I have no choice but to joint venture with them under a franchise contract”. The Human Resources Manager provided a similar explanation:

We need control and so that is why we have the voice of the franchisee and the voice of the partner. That is why (Trung) wants to control the company.

This model is unique to the franchise operations in Vietnam. In other countries where the company has expanded, such as Singapore, Korea, Indonesia and the Philippines, master franchising arrangements are used, with no capital investment by the franchisor. The exception is the first outlet opened in Australia, which is a joint venture arrangement, but future development in Australia will be via master franchising. The fact that the partnership model is essentially used only in Vietnam lends support to the notion that the franchisor, who is a pioneer of franchising in that country, has had to adapt the franchising model to make it work under unique circumstances.

Conclusions

This research has examined a single case study in depth to study how an emerging organisation has faced the cultural and legal environment in which it operates in order to flourish. Access to Pho24, its founder, franchisees and employees

has enabled us to analyse the company's unique franchising model. The dominant theories of franchising – resource constraints and agency theories – have been applied to the case and we conclude that they provide partial explanation for the franchising model adopted. Like most organisations, Pho24 requires human and financial capital in order to expand. Company operated outlets are more profitable than franchised outlets because of the tendency of franchisees to cut costs, but the resultant loss of quality reduces income and profits. However, the organisation does not have the managerial capacity to continue to expand via company ownership and therefore requires franchisees to share the responsibility. Rather than use franchising as a means of raising scarce capital, the organisation has obtained finance from a venture capitalist. Hence, resource constraints theory only partially contributes to the understanding of why Pho24 operates as a hybrid franchising model. The rival agency theory of franchising is similarly unable to offer a full explanation for Pho24's strategy. Although the franchise agreement provides incentives for both parties to achieve mutual goals, the franchisees who are recruited into Pho24 are business investors rather than operators and hence, the franchise brand is of greater importance to them than the franchising relationship.

Therefore, in order to adapt to the cultural and legal environment the franchisor has modified the franchising model in order to achieve greater control within the system. Rather than exerting authority and highlighting the power differential between franchisor and franchisee, the Vietnamese culture requires a persuasive and more patient approach that stresses equity in the relationship. This is truly more of a 'partnership' approach than demonstrated in the Western style of franchising and we refer to this as the *collaborative theory* of franchising.

Because Pho24 is a pioneering home-grown franchise in Vietnam, we are not able to test the robustness of the collaborative theory on other franchise systems in that country. However, there are similarities amongst various Asian cultures and it is possible that this model of franchising will be one that is suitable for adoption in other nations. It may also be worthwhile for entrepreneurs in Western nations to consider the operation of the model as a means of attracting experienced business investors into their systems. The increasing professionalism of the franchising sector is presenting greater opportunities for institutional investors and the collaborative model may be more attractive for mature, as well as emerging, franchise systems.

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A Multi-national Comparison of Founding-Intention Factors - a Comparison of Germany, Argentina, United Kingdom and Latvia

by Christian Scheiner , Andreas Wassmus, Ted Sarmiento, Kai-Ingo Voigt, Tobias Richling,

Within this paper the perception of hindering factor of 1682 students from Germany, UK, Latvia and Argentina are analysed. Overall it can be concluded that Argentinean students perceive hindering factors less problematic than their German, English and Latvian counterparts. German and UK students are neither too optimistic nor too pessimistic in the perception of those factors and resemble each other, even if German students tend to be less negative in their evaluation. Latvian students have the most pessimistic perception of hindering factors that are related to a business foundation

Introduction

In general entrepreneurship education has the basic assumption that the competencies of an entrepreneur can be learned (Kulicke, 2006). Ronstadt (1987) points out that “strong indications exist that ‘entrepreneurship education’ will produce more and better entrepreneurs” (p. 37). The positive effect of entrepreneurship education on entrepreneurial behaviour and activity was found by researchers such as Lee (2003), Webb et al. (1982) and Voigt et al. (2006).

While university entrepreneurship education has attracted a great deal of attention in scientific research (e.g. Peterman/Kennedy, 2003; Young, 1997; Klandt, 2004), there is clearly more than just one successful concept of entrepreneurship education, in particular within universities (Matlay, 2006). The study of six entrepreneurship programmes of Garavan and O’Cinneide (1994) emphasise that the most important factor is that the entrepreneurship programme should be specifically orientated towards the target population.

Furthermore, existing studies have generally taken a single-country approach to analyse the intention or the determinants of student entrepreneurial activity and the effect of entrepreneurial education (e.g. Wang & Wong, 2004; Singh & DeNoble, 2003; Dolton & Makepeace, 1990; Tkachev & Kolvereid, 1999; Voigt et al., 2006). An exception to this is illustrated by Hytti and Gorman (2004) who compared entrepreneurship education methods in four countries.

In this paper the entrepreneurial programme of the German Friedrich-Alexander-University of Erlangen-Nuremberg, Leeds Metropolitan University; the Universidad de Buenos Aires and the University of Latvia will be compared by means of a survey.

Entrepreneurship Education in Germany, the United Kingdom, Latvia and Argentina

Entrepreneurship Education at the University of Erlangen-Nuremberg

The Faculty of Economics and Social Sciences is the biggest institution within the Friedrich-Alexander-University Erlangen-Nuremberg. With approximately 5,000 students and 35 chairs the faculty is one of the largest in southern Germany. The wide range of teaching consists of over 50 courses of study and is strongly influenced by the inter-disciplinary cooperation with other faculties and external institutions.

In 2000, the Faculty of Business Administration and Economics decided to offer a study programme with emphasis on entrepreneurship and starting a business. After comparisons of possible models a study cooperation concept was chosen which was named "Unternehmensgründung & Entrepreneurship" ("Business Start-up and Entrepreneurship"). Hence, the competence of the existing 35 chairs could be pooled for the entrepreneurship education by integrating their specific knowledge in a variety of lectures, seminars and events. It is also essential that the scope for the development of students' own business ideas within the programme.

The study cooperation concept is composed of three columns. The first column represents the lectures and seminars offered. Students can major in entrepreneurship, in which every student has to attend a core programme consisting of seven lectures and seminars (Theory and Process of Entrepreneurship, Business Plan Seminar, Start-Up Financing, Quantitative Management Techniques, Legal Identity and Taxation, Foundation and Development of Technology Companies). The key course is the business plan seminar in which students work in teams to write a business plan for a business proposal of their choice.

In addition, students have to choose from disciplines dealing with e-business, logistics, marketing, national and international accounting, cost calculation and accounting, controlling, law, business management, organisational and social psychology, auditing, mobile engineering as well as management and international management. It can be seen that dependent on the specific interest and needs of the student, diverse combinations are possible from over 35 lectures or seminars. Furthermore, excellent students have the chance to apply for an international entrepreneurship camp which is held once a year at locations such as Boston University and the Tongji University in Shanghai. At the end of the programme, each student must submit a master thesis with a clear focus on start-up, entrepreneurship and/or innovation management.

The study cooperation furthermore integrates, as second column, practitioners, entrepreneurs and experts in entrepreneurship education to enable the students to gain from their practical knowledge and experience. Hopkins and Feldman (1989) argue that this approach can improve the entrepreneurship education substantially. The seminar "Start-Up Financing" for example is held by an external professional expert from a bank, who is responsible for the department "New Venture Foundation and Seed Financing"

and an entrepreneur gives the lecture “Foundation and Development of Technology Companies”. They also support business ideas from students in the realisation process and whilst on the business plan seminar, successful entrepreneurs are invited to teach students how to write a ‘real’ business plan.

The third and final column exists to create an effective networking platform to forge links between students with business ideas and incubators or other supporting organisations. Students are, for example, encouraged to take part in an interdisciplinary business plan competition which is organised by the organisation “Netzwerk Nordbayern” [Network Northern Bavaria] and in order to further create a useful network between the entrepreneurship students an online alumni forum was established to offer students job vacancies, internships and field reports. Finally, in a parallel effort to bring the idea of starting a business and entrepreneurship into schools, there is an initiative called ‘Entrepreneur of Tomorrow’ which focuses on pupils in their last school year before taking A-level examinations.

Summer 2001 saw the first cohort of students offered the choice of the new study cooperative. The first intake was about 20 participating students, which has since risen to approximately 70 students currently studying entrepreneurship.

Entrepreneurship Education at Leeds Metropolitan University

Leeds Metropolitan University has been at the forefront of entrepreneurship education in the UK for a number of years with initiatives such as Business Start-Up and, more recently, The Institute for Enterprise. ‘Enterprise’, in the context of generic skills development, has been adopted as a core learning theme across undergraduate provision in each of the Faculties of the University. Leeds Business School was the original focus of enterprise teaching, having run small business modules at Level 2 from 1985 and entrepreneurial studies modules at Level 3 from 1988. Since then, enterprise modules have been developed and delivered across a wide range of ‘non-business’ areas. For example such modules have been included in degrees in Events Management, Hospitality and Retail Management, Sport and Leisure, Computing, Multi-Media and Music and Health Sciences. The most recent addition, to be offered from September 2009 is a Master award in Sport and Business in which entrepreneurship is a key theme, for which students seeking to pursue an interest in sport related businesses are the focus.

Enterprise modules are now offered on both Further and Higher Education programmes and currently there are over 1,500 students across the University each year studying modules which encourage innovation, creativity and enterprise. Taster sessions and personal development programmes are run within other degrees as diverse as Graphic Art and Design, Fine Art, Business Studies and the Built Environment.

In recognition of these factors Leeds Metropolitan University, through the Business Start-Up programme, provides a variety of business support offerings which are on the whole, extra-curricular. These include workshops, access to a resident business advisor, annual business concept competition, an entrepreneurial summer school, proof of concept funding, networking events and pre-start incubation space. The University also provides a ‘Business Incubator’ which offers managed office space and intensive support for businesses less than three years old.

Building on the success of this programme, the University was awarded funding to establish The Institute for Enterprise, as a Centre for Excellence in 2005 to facilitate curriculum development, assessment, learning and teaching, and enterprise education across the whole University building on established practice. For the Business School, who participated in the survey carried out for this research paper, this has meant the establishment of two new awards. The first is Business Creation and Enterprise, a one-year programme at Level 3 offering students the opportunity to both theorise and practice business start-up, drawing together the resources of the Business School, Business Incubator and Business Start-Up. The award includes modules such as Business Strategy, SMEs Environmental Context, Business Enterprise Operations, Growth & Strategic Planning, Sales & Customer Relationship Management, Consultancy Project and Personal, Academic and Career Effectiveness. Finally this course also includes a semester within the Leeds Met Incubator, with full access to office facilities and the programme of business support, during which students gain academic credit for and while pursuing their business and social enterprise ideas. The second new award is a Masters programme in International Enterprise to enhance students' careers in business growth and development by focussing on small, medium and/or family owned businesses with aspirations for international development. In this course students undertake four core modules of Entrepreneurship, Strategic Management of International Enterprises, International Marketing and International Finance culminating in the enterprise project that requires students to undertake a substantive piece of individual work based upon entrepreneurial aspects with potential for international application.

Other examples of enterprise education exist within the various faculties of the University, notably the Leslie Silver International Faculty offering courses in Tourism, Hospitality & Events where similar thinking has brought about courses that are both 'for' and 'about' entrepreneurship and enterprise education in general. These and other similar initiatives have increased the overall enterprise and entrepreneurship content on offer within the University, and especially the Business School, both intra- and extra-curricular, and it is the purpose of this research study to determine whether these initiatives are having the desired impact on the student cohort.

Entrepreneurship Education at the University of Latvia

The University of Latvia is with 23,000 students the biggest university of Latvia. At the business administration faculty 7,100 students are registered. To foster entrepreneurship education and entrepreneurial behaviour among students specific lectures and seminars are offered. An emphasis is laid on seminars dealing with the preparation of a business plan and the exchange of experience. Therein, attention towards entrepreneurial matters shall be raised and entrepreneurial behaviour fostered.

Entrepreneurship Education at the Universidad de Buenos Aires

Approximately 293,000 students study at the Universidad de Buenos Aires (UBA). The study programme offers degrees on bachelor and master level in business administration. Within the bachelor level, the "Carrera de grado", students can choose between the five different programmes "Contador Publico" (controlling), "Licenciado en Administración" (business administration), "Licenciado en Economía" (economics), "Licenciado en

Sistemas de Información de las Organizaciones” (information management) and Actuario (statistics). Entrepreneurship-related lectures and seminars are only offered within the study programme “Licenciado en Administration” as optional courses. Therein, a course can be selected that focus on the management of small and medium companies as well as the course “Creatividad y Innovación en las Organizaciones” which gives attention to creativity and innovation in organizations. Within master level, „Carrera de posgrade“, a specialisation on entrepreneurship can be chosen which is called „Carrera de especialización en Gestión de las Pequeñas y Medianas Empresas (PYMES)“ or “specilasion career in the growth of small and meduim sized enterprises (SMEs)”.

Overall it can be concluded that the Universidad de Buenos Aires has no pronounced entrepreneurship education programme. A sensitistaion for entrepreneurial matters is not apparent in the curriculum. However, within the study programme, „Carrera de especialización en Gestión de las Pequeñas y Medianas Empresas (PYMES)“ those wishing to start a business can improve existing skills and can deepen their knowledge.

Methodology

Questionnaire

The research process consisted of a four step procedure which is orientated on an approach suggested by Kinnear and Taylor (1991). First, the identification of the research objectives with the hypotheses were established. Second, a written standardised questionnaire was compiled in German and translated into English, Spain and Latvian. Hence, all participants had the same questions in the same order and with the same wording, in both languages (Schnell et al., 1995). Closed-ended questions were chosen, so that the respondents had to choose between reply alternatives given (Schnell et al., 1995). Therein, a verbal scale rating to answers was used. Furthermore, the questionnaire was designed in a manner to fulfil requirements such as clarity, clearness and simplicity of the questions. A special focus was on the multi-level proof-reading by native speakers of both languages at all development stages of the questionnaire to ensure clarity and comparability. Therefore, the questions were firstly translated from German into English, and then the questionnaire was revised by native speakers, as well as the appropriate German version. Finally, test interviews were conducted to improve the questionnaire. Test persons were students from the business faculty as well as senior research assistants from the Marketing and Statistical departments at the University of Erlangen-Nuremberg and Leeds Metropolitan University. The surveys in Germany and UK were conducted in between November 2006 and March 2007, in Argentina between April and June 2006 and in Lativa in between October and December 2007.

Operationalisation

To measure the perception of inhibiting factors a scale of Moeller (1998) was applied. The inhibiting factors were analysed with the question “Please indicate which statement would best describe your feeling about NOT starting a business”. Answer alternatives ranged from (=totally agree), 2 (=slightly agree), 3 (=neither...nor), 4 (=slightly disagree) to 5 (totally disagree). Within the questionnaire 18 inhibiting factors were included (see Table 1).

Table 1: Inhibiting factors

Missing business knowledge	Spouse or partner disapproves idea
Missing concrete business idea	High financial risk
Missing seed capital	Low income
Insufficient practical experience	Too much work for too less money
General missing interest	Too much work and too less spare-time
Missing founding partner /team	Bad economic climate
Missing business network	Bound to the own company
Missing market knowledge	Risk of failure
Missing market transparency	Missing social appreciation

A scale by Moeller (1998) was applied to measure the founding intentions among students. The question used was “Have you personally ever thought about founding your own business?”. Possible answers varied on a range from 1 (=no, not yet), 2 (=yes, occasionally), 3 (=yes, relatively concrete) to 4 (=yes, I have made the decision to become self-employed).

Research Questions

According to the GEM-country report 2007 (Sternberg et al., 2007; Bosma et al., 2007) the percentage of entrepreneurial activity is highest in Argentina, followed by the United Kingdom, Latvia and Germany. While the total of early entrepreneurial activity was in Argentina in 2007 approximately 12 percent (Bosma et al., 2007), 5.8 percent in the UK in 2006, the percentage in Germany was 4.2 percent (Harding, 2007), in Latvia 4.4 percent in 2007 (Rastrigina, 2007). Even the general attitude towards starting a business is more positive in the UK than in Germany. In the UK 7.8 percent stated that they expect to start a business in the next three years while in Germany only 6.7 percent agreed with this statement. The entrepreneurial intention among Latvian students was in 2007 4 percent and 20 percent in Argentina (Bosma et al. 2007). Hence, it is interesting to analyse whether this entrepreneurial difference and gap between the four countries can be identified at an earlier point of time, in this case while attending University. The results could offer an explanation whether the difference already exists or if it is developed during the period of higher education or at the commencement of the working life. Therefore, following research question was proposed:

Research question 1: Do students differ in their intention to start a business between Argentina, the United Kingdom, German and Latvia

The origins of the suggested hypotheses emanates from the research focus on students within four separate universities and in relation to the numerous studies concerning the analysis of the perception of fostering and inhibiting factors of students (Möller, 1998; Görisch et al., 2002; Voigt et al., 2006). Möller (1998) for example found that the important founding reservations were the “lack of start-up finance” and the “high degree of risk”. In particular, students with a low intention to start an own business saw those reasons as hindering factors. Furthermore, “too much work and too little spare time” was

named as an important hindering factor. The main distinction between students with a low interest in starting their own business and those who showed a medium to high interest was the lack of a suitable business idea. The fostering factors, “independence” and a better “opportunity for self-realisation” were named as reasons to start a business. As regards the financial motives, the “opportunity for profit” was not as important as the “financial reward” for using ones own initiative. In contrast to the inhibiting factors, however, it was not mentioned in this study any difference between students according to their founding intention. Hence, it can be assumed, more often than not that inhibiting factors influence the intention to start a business The study results of Voigt et al. (2006) confirmed that in particular inhibiting factors seem to have the main impact on this intention.

Such studies are becoming an increasingly important area of the study of entrepreneurial intentions because they offer an insight and deeper understanding into the perceptions of students with regards to founding a business. Lüthje and Franke (2003) claim that entrepreneurial intent is directly affected by perceived fostering and inhibiting factors in the entrepreneurship-related context. Fostering factors might encourage, promote and influence or inspire students to want to start a business. Inhibiting factors likewise might discourage, dissuade or oppose them to want to start a business.

Therefore, in light of the four country samples comparative results will be provided to examine whether students in the Germany, the United Kingdom, Latvia and Argentina perceive inhibiting factors differently.

Therefore following research questions are proposed:

Hypothesis 2: Do students in the UK and Germany perceive inhibiting factors differently?

Hypothesis question 3: Do students in the UK and Argentina perceive inhibiting factors differently?

Hypothesis question 4 Do students in the UK and Latvia perceive inhibiting factors differently?

Hypothesis question 5: Do students in the Germany and Argentina perceive inhibiting factors differently?

Hypothesis question 6: Do students in the Germany and Latvia perceive inhibiting factors differently?

Hypothesis question 7: Do students in the Argentina and Latvia perceive inhibiting factors differently?

Empirical Results

Research question 1: Do students differ in their intention to start a business between Argentina, the United Kingdom, German and Latvia

In this section some descriptive findings of our samples from Argentina, Germany, Latvia and the UK will be presented. Overall 1682 students participated in the study. 580 questionnaires could be reached in the Argentinean sample, 544 in the German, 363 in the Latvian and 195 in the UK. Participants are mainly on bachelor-level in business science. Within the German sample undergraduate and graduate students participated. The proportion regarding sex is nearly equal (47 percent male, 53 female).

Within the sample the founding intention is very strong pronounced with only 16.7 percent of the participants do not wish to start their own business. 71.4 percent have a general tendency or higher intention to founding a business, with 4.2 percent already have precise plans and 3.1 percent are running their own business.

Between each country several differences in the founding intention could be identified.

Table 1: Founding intentions in sub-samples

ARG	GER	Founding intention	LAT	UK
Valid Percent	Valid Percent		Valid Percent	Valid Percent
12.6	21.7	No, never	8.6	29.9
55.0	51.7	Yes, I do but not yet have a specific idea ^o	56.1	54.1
21.9	11.1	Yes, I do and I have a strong idea	24.2	10.3
2.9	3.7	Yes, I did but I abandoned it at the idea stage ^o	3.1	1.5
3.3	6.5	Yes, I do and I already have precise plans	3.6	1.5
4.0	1.9	Yes, I currently run my own business	4.2	2.1
0.3	3.5	Yes, I have run my own business in the past, but not anymore	0.3	0.5

Within the German and UK sub-samples the percentages of student which have no founding intention are essentially higher than in the samples of Argentina and Latvia. In particular students from Argentina show a higher founding intention. The percentage of students who already have precise plans is exceptionally high in the German sub-sample.

All the hypotheses were tested on a 5 percent significance level. In addition, a Levene-test was conducted to examine sample variance. In case of a same variance, a T-test for independent samples with a same variance was used for the analysis. Below the hypotheses regarding the perception of inhibiting factors will be described. Therein, the hypotheses will be tested for all students by comparing the countries with each other.

Thus, it can be assumed that students differ in their intention to start a business between Argentina, the United Kingdom, German and Latvia.

Hypothesis 2: Students from UK and Germany perceive inhibiting factors differently.

The T-test (95 percent) showed for 5 out of the 18 factors significant differences in the perception of inhibiting factors. The Levene-test for variance was significant on a 5 percent level at all variables. Therefore, a T-test for independent samples with same variance was conducted. Students from UK and Germany differed in the factors

- „Lack of business knowledge/know-how”: The mean of UK students is 2.40 (SD 1.180) and for German students 3.01 (SD 1.366).
- „Lack of start-up finance”: The mean of UK students is 1.90 (SD 0,970) and for German students 2.14 (SD 1.157).
- „My spouse/partner/family disapproves of it”: For this factor the UK and German sample posses the same variance. The mean of UK students is 4.19 (SD 0.989) and for German students 3.62 (SD 1.437).
- „High financial risk”: The mean of UK students is 2.55 (SD 1.273) and for German students 2.10 (SD 1.065).
- „Bad economic climate”: The mean of UK students is 2.96 (SD 0.977) and for German students 2.71 (SD 1.140).

Thus, the hypothesis 1 can be partially supported.

Hypothesis 3: Students from UK and Argentina perceive inhibiting factors differently.

The T-test (95 percent) showed for 10 out of the 18 factors significant differences in the perception of inhibiting factors. Students from UK and Argentina differed in the factors

- „Lack of concrete business idea”: For this factor the UK and Argentinean sample posses the same variance. The Levene-test for variance similarity was

significant on a 5 percent level. The mean of UK students is 2.12 (SD 1.063) and for Argentinean students 2.48 (SD 1.207).

- „Insufficient practical experience”: The mean of UK students is 2.24 (SD 0.977) and for Argentinean students 2.41 (SD 1.041).
- „General lack of interest”: For this factor the UK and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of UK students is 3.24 (SD 1.417) and for Argentinean students 3.71 (SD 1.063).
- „Lack of market transparency”: The mean of UK students is 2.59 (SD 1.041) and for Argentinean students 2.91 (SD 1.044).
- „Insufficient income”: The mean of UK students is 2.60 (SD 1.115) and for Argentinean students 3.14 (SD 1.127).
- „Too much work and too little money”: The mean of UK students is 2.97 (SD 1.129) and for Argentinean students 3.36 (SD 1.133).
- „Too much work for too little spare time”: The mean of UK students is 2.79 (SD 1.161) and for Argentinean students 3.25 (SD 1.172).
- „Bad economic climate”: For this factor the UK and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of UK students is 2.96 (SD 0.977) and for Argentinean students 3.16 (SD 1.036).
- „Risk of failure”: For this factor the UK and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5% level. The mean of UK students is 2.28 (SD 1.094) and for Argentinean students 2.89 (SD 1.234).
- „Lack of social recognition/status”: The mean of UK students is 3.36 (SD 1.051) and for Argentinean students 3.68 (SD 0.990).

Hence, the hypothesis 2 can be partially supported.

Hypothesis 4: Students from UK and Latvia perceive inhibiting factors differently.

The T-test (95 percent) showed for 8 out of the 18 factors significant differences in the perception of inhibiting factors. Students from UK and Latvia differed in the factors

- „Lack of start-up finance”: For this factor the UK and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of UK students is 1.90 (SD 0.970) and for Latvian students 2.08 (SD 1.234).
- „General lack of interest”: For this factor the UK and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of UK students is 3.24 (SD 1.417) and for Latvian students 2.43 (SD 1.229).

- „My spouse/partner/family disapproves of it”: For this factor the UK and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of UK students is 4.19 (SD 0.989) and for Latvian students 3.28 (SD 1.263).
- „Insufficient Income”: The mean of UK students is 2.60 (SD 1.115) and for Latvian students 2.28 (SD 0.997).
- „Too much work for too little money”: For this factor the UK and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of UK students is 2.79 (SD 1.129) and for Latvian students 2.56 (SD 1.308).
- „Bad economic climate”: For this factor the UK and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5% level. The mean of UK students is 2.96 (SD 0.977) and for Latvian students 2.43 (SD 1.107).
- „Difficult to leave own business”: The mean of UK students is 3.20 (SD 2.85) and for Latvian students 2.85 (SD 1.186).
- „Lack of social recognition/status”: The mean of UK students is 3.36 (SD 1.051) and for Latvian students 2.90 (SD 1.102).

Hence, hypothesis 3 can be partly confirmed.

Hypothesis 5: Students from Germany and Argentina perceive inhibiting factors differently.

The T-test (95 percent) showed for 17 out of the 18 factors significant differences in the perception of inhibiting factors. Students from Germany and Argentina differed in the factors

- „Lack of business knowledge/know-how”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.01 (SD 1.366) and for Argentinean students 2.54 (SD 1.189).
- „Lack of concrete business idea”: The mean of German students is 2.23 (SD 1.299) and for Argentinean students 2.48 (SD 1.207).
- „Lack of start-up finance”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.14 (SD 1.157) and for Argentinean students 1.93 (SD 0.994).
- „Insufficient practical experience”: The mean of German students is 2.24 (SD 1.109) and for Argentinean students 2.41 (SD 1.041).
- „General lack of interest”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was

significant on a 5 percent level. The mean of German students is 3.08 (SD 1.532) and for Argentinean students 3.71 (SD 1.063).

- „No founding team/partner”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.88 (SD 1.253) and for Argentinean students 3.14 (SD 1.077).
- „Lack of business relationships”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.49 (SD 1.204) and for Argentinean students 2.75 (SD 1.097).
- „Lack of business knowledge/know-how”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.48 (SD 1.171) and for Argentinean students 2.72 (SD 1.024).
- „Lack of concrete business idea”: The mean of German students is 2.64 (SD 1.044) and for Argentinean students 2.91 (SD 1.088).
- „My spouse/partner/family disapproves of it”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.62 (SD 1.437) and for Argentinean students 4.25 (SD 0.906).
- „High financial risk”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.10 (SD 1.065) and for Argentinean students 2.60 (SD 1.122).
- „Insufficient income”: The mean of German students is 2.85 (SD 1.170) and for Argentinean students 3.14 (SD 1.127).
- „Too much work for too little money”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.86 (SD 1.237) and for Argentinean students 3.36 (SD 1.133).
- „Too much work and too little spare time”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.67 (SD 1.230) and for Argentinean students 3.25 (SD 1.172).
- „Bad economic climate”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.71 (SD 1.140) and for Argentinean students 3.16 (SD 1.036).
- „Risk of failure”: The mean of German students is 2.36 (SD 1.230) and for Argentinean students 2.89 (SD 1.234).

- „Lack of social recognition/status”: For this factor the German and Argentinean sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.50 (SD 1.244) and for Argentinean students 3.68 (SD 0.990).

Hence, hypothesis 4 can be confirmed.

Hypothesis 6: Students from Germany and Latvia perceive inhibiting factors differently.

The T-test (95 percent) showed for 12 out of the 18 factors significant differences in the perception of inhibiting factors. Students from Germany and Argentina differed in the factors

- „Lack of business knowledge/know-how”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.01 (SD 1.366) and for Latvian students 2.23 (SD 1.099).
- „Lack of concrete business idea”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.23 (SD 1.299) and for Latvian students 1.95 (SD 1.009).
- „General lack of interest”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.08 (SD 1.532) and for Latvian students 2.43 (SD 1.229).
- „Lack of market knowledge”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.48 (SD 1.171) and for Latvian students 2.31 (SD 1.014).
- „My spouse/partner/family disapproves of it”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.62 (SD 1.437) and for Latvian students 3.28 (SD 1.263).
- „High financial risk”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 2.10 (SD 1.065) and for Latvian students 2.26 (SD 1.161).
- „Insufficient income”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a

5 percent level. The mean of German students is 2.85 (SD 1.170) and for Latvian students 2.28 (SD 0.997).

- „Too much work for too little money”: The mean of German students is 2.86 (SD 1.237) and for Latvian students 2.56 (SD 1.308).
- „Too much work and too little spare time”: The mean of German students is 2.67 (SD 1.230) and for Latvian students 2.73 (SD 1.227).
- „Bad economic climate”: The mean of German students is 2.71 (SD 1.140) and for Latvian students 2.43 (SD 1.107).
- „Difficult to leave own business”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.22 (SD 1.313) and for Latvian students 2.85 (SD 1.186).
- „Lack of recognition/status”: For this factor the German and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of German students is 3.50 (SD 1.244) and for Latvian students 2.90 (SD 1.102).

Thus, hypothesis 5 can be confirmed.

Hypothesis 7: Students from Argentina and Latvia perceive inhibiting factors differently.

The T-test (95 percent) showed for 15 out of the 18 factors significant differences in the perception of inhibiting factors. Students from Germany and Argentina differed in the factors

- „Lack of business knowledge/know-how”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 2.54 (SD 1.189) and for Latvian students 2.23 (SD 1.099).
- „Lack of concrete business idea”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 2.48 (SD 1.207) and for Latvian students 1.95 (SD 1.009).
- „General lack of interest”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 3.71 (SD 1.063) and for Latvian students 2.43 (SD 1.229).
- „Lack of business relationship”: The mean of Argentinean students is 2.75 (SD 1.097) and for Latvian students 2.53 (SD 1.051).
- „Lack of market knowledge”: The mean of Argentinean students is 2.72 (SD 1.024) and for Latvian students 2.31 (SD 1.014).

- „Lack of market transparency”: The mean of Argentinean students is 2.91 (SD 1.044) and for Latvian students 2.54 (SD 0.953).
- „My spouse/partner/family disapproves of it”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 4.25 (SD 0.906) and for Latvian students 3.28 (SD 1.263).
- „High financial risk”: The mean of Argentinean students is 2.60 (SD 1.122) and for Latvian students 2.26 (SD 1.161).
- „Insufficient income”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 3.14 (SD 1.127) and for Latvian students 2.28 (SD 0.997).
- „Too much work for too little money”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5% level. The mean of Argentinean students is 3.36 (SD 1.133) and for Latvian students 2.56 (SD 1.308).
- „Too much work and too little spare time”: The mean of Argentinean students is 3.25 (SD 1.172) and for Latvian students 2.73 (SD 1.227).
- „Bad economic climate”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 3.16 (SD 1.036) and for Latvian students 2.43 (SD 1.107).
- „Difficult to leave own business”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 3.31 (SD 0.976) and for Latvian students 2.85 (SD 1.186).
- „Risk of failure”: For this factor the Argentinean and Latvian sample possess the same variance. The Levene-test for variance similarity was significant on a 5 percent level. The mean of Argentinean students is 2.89 (SD 1.234) and for Latvian students 2.46 (SD 1.120).
- „Lack of social recognition/status”: The mean of Argentinean students is 3.68 (SD 0.990) and for Latvian students 2.90 (SD 1.102).

Thus, hypothesis 5 can be confirmed.

Discussion and Conclusion

The study shows that hindering factors are perceived differently in the four surveyed countries. Overall it can be concluded that Argentinean students perceive hindering factors less problematic than their German, English and Latvian counterparts. Latvian students, however, have a more negative impression of hindering factors that are related to a business foundation. German and UK students are neither too optimistic nor too pessimistic in the perception of those factors and resemble each other, even if German students tend to be less negative in their evaluation.

In the analysis on single items it was found that German students tend to evaluate their business knowledge and know-how better than their counterparts. An explanation for this result could be based in the different entrepreneurship education approach. In contrast to the Universidad de Buenos Aires and the University of Latvia, the University of Erlangen-Nuremberg has established entrepreneurship education as important section within the regular curriculum. Entrepreneurship education was included in the other universities mainly as optional lecture or seminar or could only be chosen on master level. In the item “insufficient practical knowledge” German students saw a significantly higher burden than their Argentinean counterparts. German students tended to agree with this to a higher extent. In four items a common gradual order could be identified in which Argentinean students were the less pessimistic than German and English and Latvian students. Between German and English students no significant differences could be found, but between this group and Argentinean and Latvian students as well as between Argentina and Latvia itself. Those factors were “lack of market transparency”, “insufficient income”, “and lack of social recognition” and “general lack of interest”. The item „general lack of interest“ is in concordance with the results from the GEM-report (Bosman et al., 2007). In particular Latvian students tended to agree with the statement, that this factor illustrates a hindering factor for a business foundation. Regarding the item “risk of failure” no significant differences were found between Latvian, German and English students. All three subsamples perceived this factor as problematic. Argentinean students on the other side showed significant differences to all others in this survey, by having a more neutral opinion. Hence, it can be assumed that failure illustrates to a higher degree among Argentinean students as a common problem in the business foundation context and combined with the evaluation of “insufficient practical knowledge” it could be assumed that existing practical knowledge and experience reduces the negative perception of this factor.

Limitations

There are several limitations within the research that it seems appropriate to draw attention in producing this chapter. Firstly, it should be noted that there is a difference in the timescales when data was collected, from the German, UK, Argentina and Latvia perspective. The UK data has been collected over the course of one academic year (2006-7), while the German data has been in 2007, in Argentina in 2006 und in Latvia in 2007-8. This means that the UK and Latvia data will be more subject to the perceptions of the current cohort of students, in terms of the courses attended, the current economic climate and other factors. Further, this has also meant that the German data includes a larger sample size than the UK data.

At the universities different entrepreneurship education programmes were implemented. The influence of each programme was analysed within this chapter in a way that just the overall effect of these activities on the intention and fundamental determinants was measured. Hence, it is not possible to identify specific parts of the programme (e.g. lectures) that could be mainly responsible for the observable results. Therefore, future research could analyse each component of the programme to find the critical success factors.

The study did not use any secondary data on numbers of graduate start-ups (foundations) to substantiate the intentions of students, which would of course have their own limitations, for example, graduates may start businesses in different locations and countries and those that can be measured, may not be alumni, or exclusively alumni from the study universities.

As a cross-sectional study and not a longitudinal study has been conducted, no statements and conclusions can be drawn as to whether the differences exists already before the study or whether they were developed during the study.

Only four universities were included into the survey. The results could therefore be biased due to regional ramifications and future research could include several universities in England, Germany, Argentina and Latvia to increase the representativeness of the results.

Finally, no gender-specific analysis was conducted. Future studies could examine whether gender-specific differences between the UK and Germany exist.

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Role of Informal Social Networks in International Business

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The impact of informal social networks in internationalizing of small businesses (SB) is rarely discussed and the potential role of social networks has not yet been fully recognized as a supportive mechanism for internationalization of SBs. Therefore, the aim of this research is to identify the role of social networks in internationalization of SBs.

Informal networks have become the bridges that opened doors to international markets. Such networks impacted not only generating and sharing partner specific knowledge but also advancing the business knowledge. Social networks have been viewed as a source of valuable connections among members that influence changing businesses and life styles enabling them to act together more effectively to pursue shared business goals.

Track: 12. Networking, Alliance and Outsourcing

An Empirical and Comparative Study of Modeling the Relationship between Networking and Perceived Firm Performance of SME of Korea and China

by Dae-Yong Chung and Jun-Hwan Yang

Network theory suggests that the ability of owners to gain access to resources not under their control in a cost effective way through networking can influence the success of SME. To date, however, there has been little empirical support for this proposition, particularly for newly founded firms and growing firms. This study focuses on the effects of entrepreneurial networking by SME owners on firm performance in between new and growing firm as well as strong ties and weak ties. We also examine whether excessive networking activity may bring reverse effects on firm performance through testing the relationship of performance of narrow network size versus broad network size, and also low network frequency versus high network frequency. Finally, we test the effect of network trust on firm performance. The feature of this study is to expand the research scope to Chinese SME to observe the difference of networking effects by owners of Korea and China respectively. This enabled us to make comparative analyses for the test results that were obtained separately out of the two countries, specifically as to how networking effects work differently on firm performance.

Major findings of this study indicate 1) networking activity of new firm exhibited better performance than that of growing firm in China, while networking activity of growing firm might exhibit better for performance in Korea, 2) reliance on weak ties of SME owners gave more positive effects on the firm performance than reliance on strong ties in both countries, 3) narrow network size is more positively associated with firm performance than broad network size in both countries. However, 4) low network frequency affects more positively to firm performance in Chinese SME, while high network frequency appears to affects more positively to firm performance of Korean SME. Finally, 5) network trust gives a significant influence to firm performance on both countries. The findings of this study could provide SME owners of both countries with conceptual idea as well as a primary insight as to how to gain better performance based on networking activity, when they extend their efforts searching for new business opportunities cross the border. Currently, SMEs in both countries face unprecedented promising future, as the volume of economic trade has increased rapidly year over year, since the diplomatic tie took effective in 1992 between the two countries.

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Introduction

Rapidly changing business environments and sophisticated developing organization has made problem solving capability at individual level face a limit. This environmental change has also brought severe competition to SME that forces them placed under getting inflated pressure, thus, owners are required to interact vigorously with internal as well as external members for survival and success. A SME must have some advantageous upsides against a larger company from the perspective of organizational flexibility and speedy process for decision making, whereas they still have lack of accumulated internal resources and relatively smaller size to compete with by alone. Firm performance of SME, accordingly, might be maximized by the result of interaction among internal and external members as well as the strong relationships built within them through entrepreneurial networking activities of SME owners.

Lots of start-up attempts have been pursued by many people and some of them succeeded in achieving their goal, while some other people failed. Since business failure causes serious impacts to both financial and human cost, the variables associated with success of start-up and firm performance have been drawn interests by researchers. Network has been highlighted as a key factor influencing the success of start-ups and firm performance, because utilizing network reduces firm's risk of failure and increase of its chance of success.

Recent network studies suggest that successful business ownership can depend on the ability of owners to gain access to resources not under their control in a cost effective way through networking(Watson, 2006), as networks provide value to its members by allowing them to gain access to the social resources that are embedded within the network(Seibert, Kraimer, Liden, 2001). Networking also can be viewed as critical strategies for survival of SMEs under harsh business environment, as Julien (1993) argued that this form of cooperation can facilitate the achievement of economies of scale in small firms

without producing the diseconomies caused by large size.

In social capital theory, we can identify a strategy for operationalizing the network approach to entrepreneurship. This approach highlights general characteristics of the personal network that entrepreneurs are embedded in, and explores effects of these on business performance. Such characteristics are network size, network density, network diversity, the preponderance of strong or weak ties, and the network redundancy (Aldrich, Zimmer 1986). It was viewed these general properties of social networks pertain to the ability and potential of a personal network to provide resources to entrepreneurs.

Sequeira and Rasheed (2006) also explain the amount of social capital in a network is a function of three characteristics of the network: the size of the network (the number of people in the network), the degree of inter-connection among the individuals in the network and the frequency of their mutual communications. From the views of prior empirical literatures on networking that emphasize the benefits acquired through building relationship with other organizations, both network size and network frequency might have a significant meaning to firm performance. In the discussion of the relational dimension of social capital, trust and trustworthiness are referred to assets that are rooted in these relationships (Tsai and Ghoshal, 1996). Uzzi(1996) argued trust can act as a governance mechanism for embedded relationships. Trust is also an attribute of a relationship (Barney and Hansen, 1994).

Despite of the interests on the network benefits, there has been lack of advanced studies to support this proposition. In this study, we extended an exploratory research focused on four aspects related to networking effects on firm performance using both Korean and Chinese SME population; Firstly, we examine the effects of networking activities of SME owners on firm performance between new firm and growing firm to identify to which phase of firm gets more influenced by the result of owner's networking activity. Secondly, we test which affects more

positively to firm performance between strong ties and weak ties. Thirdly, we also seek whether excessive networking activity might bring reverse effects on firm performance; narrow versus broad network size, high versus low network frequency. Lastly, we want to see whether network trust would be positively associated with firm performance.

The feature of this study is to expand the research scope to Chinese SME to observe the difference of networking effects by SME owners of Korea and China. This will enable us to approach comparative analyses for the test results that were obtained separately from the two countries. Accordingly, we hope that the findings and the discussions in this study will help us better understanding as to how networking works differently by the SME owners of each country. As a result, it could provide SME owners of both countries with conceptual idea as well as primary insight as to how to attain better performance based on networking, under the circumstances that the volume of economic trade has increased drastically between the two countries, since their diplomatic tie took effective in 1992.

Following the most of the previous studies on networking, this study focuses on the personal networks of the SME owners, rather than the firm's networks (Brüderl and Preisendörfer, 1998; Watson, 2006). The remainder of this paper consists of six sections. Section 2 presents the theoretical framework concerned with the relations between networking and firm performance of start-up and growing firms, strong ties and weak ties, and network size, network frequency, network trust. In this section, we also incorporate the development of six research hypotheses. Section 3 deals with methodology including research design, data source, measures of variables. Section 4 presents results of analysis and on section 5, we discuss the findings and implications. Section 6 covers limitations, and suggestions for future study.

Theoretical Framework and Hypotheses

A network is defined as "the set of social relations or social ties among a set of actors (and the actors themselves thus linked)"(Emirbayer and Goodwin, 1994) that we follow this definition in this paper. We also use 'networking', throughout this paper, to mean the action by which an owner-manager develops and maintains contacts for transacting and business development purpose. Such action is a basic economic behavior and in this sense normal business practice involves 'networking'. Networking comprises social process beyond the normal economic transacting relationship. In this paper, we are concerned with SME owners' links and networking activities with other business owners and with the many organizations proffering support and services to them.

Proposed benefits of entrepreneurial networking have included the reduction of innovation uncertainty (Dees and Starr, 1992), legitimacy (Starr and MacMillan, 1990), information exchange and coordination (Larson, 1991), increasing the speed of know-how and technology transfer (Jarillo, 1988; Powell, 1990). In the light of the significance of the effects, the role of networks in advancing organizational and individual goals is becoming more widely accepted (Adler and Kwon, 2002).

According to Hoang and Antoncic (2003), as the result of process-oriented network research focuses on the development and evolution of networks over the venture formation process, a model has been developed to explore the role of networks. That is, the networks activated for a new venture formation follow a three-stage sequence of development (Starr 1990; Starr, MacMillan 1990; Larson, Starr 1993). Each stage in the network development process is characterized by distinctive changes in the content of relationship and the governance mechanisms used to manage the relationship. Consequently, the importance of networking may also vary by stage.

Networking Benefit of New Firm and Growing Firm

There were arguments that many obstacles confront young companies. The existing networking literature may be grouped into two major schools of thoughts. The first stream of research emphasizes 'failure of start-up' business, due to lack of full support from diverse social networks at the initial stage of founding business. With regards to why new firms are highly vulnerable to environmental selection and face high probability of dissolution, Stinchcombe (1965) explains that new organizations often lack the commitment of their employees, knowledge of business environments, and working relationships with customers and suppliers. That is, lack of adequate network within and beyond the organization to the owners of newly founded firm can be an obstacle to survive. Bates (1994) argues that heavy use of social networks typifies the less profitable and more failure-prone businesses, explaining networking activities and network support may not be beneficial to newly founded firms.

On the contrary, another stream of prior research shows that the support from network is highly relevant to the survival of new firm from the founding process. Brüderl and Schüssler (1990) explain the reason why newly founded firm will not be abandoned by at least minimally rational actors, like founders, clients, and creditors, until they gain a basis for judging performance, arguing why the highest risk of disbandment should not be found at the very beginning of an organizational life. Yoon (1991) observed that Korean immigrants in Chicago profits only during the start-up phase from ethnic networks. That is, network becomes more irrelevant and factors like a human capital gain more importance, later on. As to the central regional factors in the establishment and development of new firms, D'Arcy and Giussani (1993) observed that those are local entrepreneurship, social networks, and innovation environment, and flexibility of production factors and institutional factors. Ostgaard and Birley (1994) explains personal

networks and competitive strategy for entrepreneurial firms as the personal network of the owner-managers is the most important resources upon which they can draw in the early days of the firm's development. Similarly, Littunen (2000) also points out the importance of management capabilities, in terms of internal and external networks, connect to the importance of strategies for the survival of new firms. Networks as part of the management capabilities of a new entrepreneur are important resources that show that a firm has, at least to some extent, been able to meet the expectations of all of its interest groups, which usually ensures its survival.

Therefore, seeking advice from professionals on a regular basis might be critical to firm survival in the early years of a new firm, but the relative importance of various networks might change over time as the SME owner gains knowledge and experience (Watson, 2006). These foregoing discussions suggest that newly founded firm relatively better benefit from belonging to networks than growing firm. Therefore, we argue;

H1: Networking activity of new firm will exhibit better performance than that of growing firm.

Strong ties and Weak ties

Strong social interactions and ties are beneficial and productive resources for entrepreneurs in terms of exchanging information, recognizing business opportunities, and sharing and exchanging resources. (Liao, Welsch 2005). According to Low and MacMillan (1988), entrepreneurial networks can be categorized into two types derived from different sources: Informal and formal (Birley 1985; Johannisson 1985). Informal networks consist of personal relationships, families, and business contacts. Formal networks consist of venture capitalists, banks, accountants, creditors, lawyers, and trade associations. Similarly, Sequeira and Rasheed (2006) explain that network is made up of both formal/professional (business contacts, banks,

lawyers, local government, organizations and associations) and informal/personal (family, personal friends, acquaintances) connections. These two networks are also classified as strong and weak ties, in the view of Ibarra. He explains networks are made up of strong and weak ties. Strong ties refer to relationships that are close, stable and binding, while weak ties tend to be more superficial and lacking in emotional investment (Ibarra 1993). In this paper, we use 'strong ties' referring to informal network, while 'weak ties' referring to formal networks.

The founding in existing networking literature may be classified into two groups. The thoughts of first group focuses their arguments on the helps from strong ties should be important for the success of start-up phase. As network contacts give access to customers and suppliers, finding customers as many as possible determines the success of new firm. Families, relatives, friends and acquaintances could be valuable networks as the first customers who may spread information on the new firm by way of their own network (Bögenhold 1989). Additionally, a focus on strong ties might be more relevant during the founding phase and early growth phase of new venture when such ties are likely to be most valuable as ready, low cost-links to critical resources (Starr, MacMillan 1990). For example, informal credit received from strong ties including unpaid family work must also be very helpful in new firms, given the financial restrictions of new firms are confronted with. Besides, receiving emotional support could increase success of new firm. Specially, frustrating events that force down overly optimistic initial expectations during the start-up phase, emotional support from the spouse might be very helpful to sustain emotional stability (Sanders, Nee 1996). As such, the presence of strong ties appears to influence the persistence of nascent entrepreneurs to continue in their formation activities, in the early start-up stage (Honig, Davidsson 2000). People linked by strong ties trust each other. On the contrary, they are likely to share contracts and information, so reliance on strong ties militates against the

generation of new information and fresh perspectives to seize and exploit business opportunities for growth and development.

On the other hand, Granovetter (1973) observed that weak ties are more likely to link members of different groups than are strong ones, which tend to be concentrated within particular groups. Granovetter (1985) also argues through empirical support that weak ties in a social system help new ideas to spread more quickly, promote scientific endeavors, and create greater integration of subgroups by race, ethnicity, and geography. We can also find the discussion of weak ties from social capital theory. Bridging social capital assists new firms by linking different organizations through weak ties. Informal networks may facilitate the establishment of new firms through the use of multiple ownerships and the ensuring the relationships they bring (Teach, Tarpley, Schwartz, 1986). It is argued that 'information in general flows through weak ties more often than through strong ties' (Jenssen, Koenig 2002) and weak tie are more conducive to the receipt of non-redundant information, which tends to be greater value, than the information received through strong ties (Butler, Brown, Chamornmarn 2003). Davidsson and Honig (2003) also found that the loosely coupled networks serve as conduits of information about innovation, the availability and character of markets, products and resources.

Small firm networking research tends to embrace Granovetter's (1985) account of the role of concrete personal relations that include 'strong ties' to family and close friends as well as 'weak ties' to individuals' acquaintances (Shaw 1997). The strength of weak ties (Granovetter 1973, 1985) is that they enable the individual to reach actively and purposively outside of his or her immediate close social circle and to draw upon information, advice and assistance from a large and diverse pool. Weak ties also play an important role in the overall cohesiveness of the society by creating bridges that connects closely knit groups of people.

Similarly, Singh et al. (1999) found that entrepreneurs in the information technology industry with ties – operationalized as contacts who were not known well – reported higher number of opportunities identified within 12-month period than those with fewer weak ties. Consequently, the use of internal networks as management capabilities will have a more positive effect on the firm's success than the use of external networks (Littunen 2000). Watson (2006) found that a firms' survival and growth is more strongly associated with an owner's involvement in formal (weak ties) rather than informal networks (strong ties). In the study of immigrant entrepreneur within an ethnic enclave, Sequeira and Rasheed (2006) claims it is imperative that growth-oriented owners comprehend the value of creating larger networks and weak ties if they desire growth outside the immigrant enclave. These benefits obtainable from weak ties (informal networks) can be also found from the studies of Korean SMEs. Park and Bae (1998) found that as a tool for pursuing an opportunity, SME owner's utilizing external resources proactively was giving positive influence to firm performance, regardless of the resources that is under controllable or not. Chung and Oh (2006) also claims that weak ties give helps in generating creativity, accessible to new information without overlapping, and promoting autonomies.

The major arguments in the networking literature suggest that weak ties will be better beneficial to firm performance than strong ties. Information flows through weak ties are more often than through strong ties and weak tie are more conducive to the receipt of non-redundant information, which tends to be greater value, than the information received through strong ties. Eventually the use of weak ties will increase the chance of success. Therefore, we will look into the assumption of weak ties relatively better influencing to firm performance than strong ties.

H2: Reliance on weak ties of SME owners will give more positive effects on the firm performance than reliance on strong ties.

Network Size and Network Frequency

The nature and scope of resources available through networking are dependent upon the types of network members with which a SME owner interacts. Drawn from the network analysis literature, a variety of measures have been utilized to identify pattern within the social structure that can be then used to characterized the differential positions of SME owners in the network. The most intuitive network measure is size, defined as the number of direct and indirect links between a focal actor and other actors (Hoang, Antoncic 2003). Network size has also referred to range of which definition is the degree of diversity contained in a network (Burt 1982), referring to various types of contact of members within network. In addition to the dimension of breadth (network size), entrepreneurial network might also be characterized by a dimension of depth (network intensity) (Zhao, Aram 1995). Johns and Demarche (1951) used network intensity referring to a degree of link strength between interacting organizations. Intensity was viewed to the extent of the interacting organization's resources committed to the relationship, in terms of the frequency of contact and the amount of resource exchanged (Aldrich 1975; Shulman 1976). In this paper, we use network size referring to network range and network frequency referring to network intensity.

The entrepreneurial network literature suggests that network size is positively associated with the founding of new organizations and initial performance (Burt 1992; DiMaggio 1992; Nohria 1992). Thus, having a broad range of network relationships provides greater success to instrumental resources than drawing contracts from a restricted group (Aldrich 1989; Burt 1982, 1992). Broad range of network, however, requires more time and effort to develop and maintain than those drawn from a more limited group (Zhao, Aram 1995). This argument was also tested and proved by using 'growth' and

‘survival’ variables (Watson 2006). From empirical study, Watson (2006) argues that growth of SMEs is positively associated with a broad range of network, so is survival associated with developing closer ties with a smaller range of networks. In either case, he argues SME owners should carefully monitor the time and cost associated with networking because the results indicated that very high levels of network density can be counter-productive.

This can raise an issue that SME owners pursuing the broad network size can be associated with more effective on firm performance. However, maintaining with multiple contacts may require overly time and cost spending. Thus, the excessive networking activities may bring reverse effects on firm performance. This leads to the hypothesis that;

H3. Narrow network size will be positively associated with firm performance than broad network size.

H4. Low network frequency will be positively associated with firm performance than high network frequency.

Network Trust

Trust refers to the level of confidence which people have that others will act as they say or are expected to act, or that what they say is reliable (Yoon 2006). Bradach and Eccles (1989) argue that trust is a type of expectation that alleviates the fear that one’s exchange partner will act opportunistically. When two parties begin to trust each other, they become more willing to share their resources without worrying that they will be taken advantage of by the other party. Thus, cooperative behavior, which implies the exchange or combination of resources, may emerge when trust exist (Tsai, Ghoshal 1998). Researchers who have explored the distinctive governance mechanisms that are thought to support and coordinate network exchange, trust between partners is often cited as a critical element of network exchange that in return

enhances the quality of the resource flow (Larson, 1992; Lorenzoni, Lipparini, 1999; Hoang, Antonic 2003). Mutual trust as a governance mechanism is based on the belief in the other partner’s reliability in terms of fulfillment of obligation in an exchange (Pruitt 1981). Therefore, trust allows both parties to assume that each will take actions that are predictable and mutually acceptable (Powell 1990; Uzzi 1997; Das, Teng 1998). The expectations formed among them reduce transaction cost (Jones, Hesterly, Borgatti 1997). Trust also affects the depth and richness of exchange relation, particularly with respect to the exchange of information (Saxenian 1991; Lorenzoni, Lipparini 1999; Hite 2000).

While trust can relate to individuals, it can also relate to groups and institutions within a society, including government. It is reasonable to expect that trust in network is more likely to be related to the success of the network participants’ business. Thus, we argue that trust shared among SME owners in the network will be positively associated with firm performance;

H5. Network trust will be positively associated with firm performance

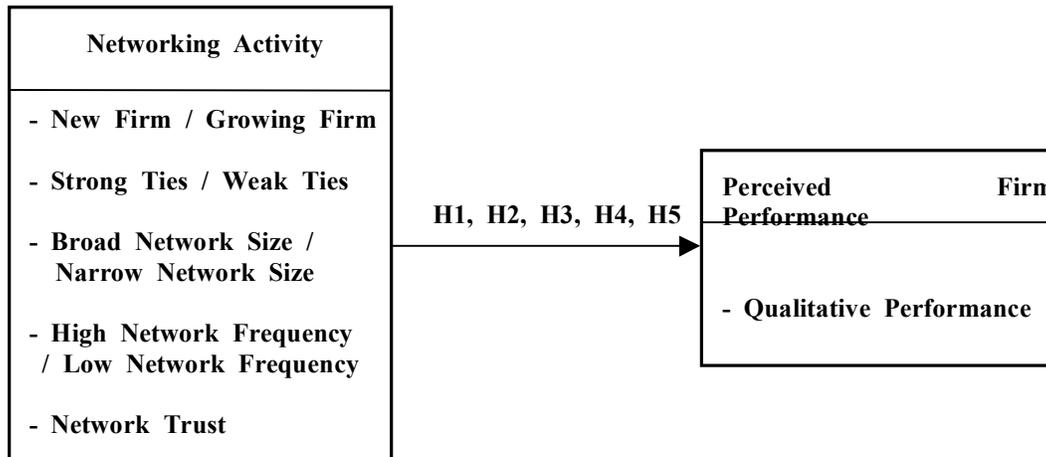
Methodology

Research Design

Using presented five hypotheses, we examine Korean SME owner’s networking effects on firm performance first. Following the same way applied to Korean SME, we examine Chinese SME so that we attempt to approach comparison analyses with the test results obtained separately from the both countries. We put the hypotheses named H -1 for Korea and H -2 for China respectively in the Table for the results of hypotheses examined. The relations described above can be presented in terms of simple conceptual model as shown in Figure 1. The proposed relationship between performance and different variables of entrepreneurial networking

activity are expected to vary across Korean SME owners and Chinese SME owners.

Figure1. The effect of networking activity on perceived firm performance



Data Source

We drew our sample from the population of Korea SMEs across the country, who should be the beneficiaries of financial and technical support from Kibo¹, while Chinese sample was drawn from the population of Chinese SMEs based in Guangdong province and Shanghai at random with a support from ‘Guangdong Council for the Development and Promotion of Small and Medium Enterprises’ as well as personal networks in the respective area. To keep a consistence and uniformity in sampling from the two countries, we strictly applied sampling

¹ Kibo was founded in 1989 by the Korean Government as a non-profit guarantee institution under the special enactment. “Financial Assistance to New Technology Businesses Act” which went through a full scale revision and was newly titled “Kibo Technology Fund Act.” In 2002. The Mission of Kibo is to contribute to the national economy by providing credit guarantee to facilitate financing for new technology-based enterprises while promoting the growth of technologically strong small and medium enterprises (SMEs) and venture business (<http://eng.kibo.or.kr>).

selection to Chinese SMEs, by excluding any sample deviating from the criteria of Korean SME law. Survey questionnaire including a letters describing the purpose of this study with a request to respond were sent out to 1,000 SME owners/top managers to both two countries, using email and Fax. Usable questionnaires were obtained from 215 (21.5 percent) Korean respondents and 191 (19.1 percent) Chinese respondents respectively. Refusal and unreliability of the responded questionnaires were main reasons for firms dropping out of the sample.

Questionnaire and Measures

The questionnaire consisted of four modules with pre-tested five-point Likert scales except network size, which was measured by whether the respondents contacted 12 individual network sources during past one year, following prior studies. Several items on the questionnaire were also added and modified to fit in with the study purpose. Respondents were asked to check: (1) the average contact rate per year from the 12 network sources that include each 6 formal

networks and informal networks; (2) The degree of trust with individual network resources; (3) the qualitative and quantitative performances consisted of each 6 questions; (4) The social demographic questions included gender, age, education, owner's age of at the time of start-up, prior experience of owner's firm establishment, duration of the business, number of employees and business area. The survey questionnaire in Chinese version was pre-tested to ensure the homogeneity with Korean questionnaire through three steps translation process; Korean version

was translated into Chinese language first with supports from two Chinese-Korean students under Ph. D. courses in Korea. The next step was to retranslate it in Korean by another two Chinese students who are also under Ph. D. courses. This way every question items were confirmed to be identical to both SME owners of China and Korea. The final translation into Chinese version was used Chinese questionnaire. Table1 shows the definition of each variable.

Table1. Definition of variables

variable	Classification		Definition	Prior studies	Number of question
Networking activity	Network size	Weak ties	Government institutes(SBC, Kibo, tax office), Industrial association, Business partner(suppliers, subcontractor), University & Venture support center, CPA & lawyer, Bank	Watson(2006), Hasen(1995), Brown & Butler(1995), Potts(1977), Park, Bae (1998)	12
		Strong ties	Owner's family, relatives and friend, Executive's family, relatives and friend		
	Net. frequency		Contact times during past one year		12
	Network trust		The degree of trust to individual network sources		12
Firm performance	Quantitative performance		Perceived quantitative performance as the result of networking activity	Covin, Slevin (1990)	6
	Qualitative performance		Perceived qualitative performance as the result of networking activity	Mazzarol (1998), Chell, Baines (2000)	6

New firm and Growing firm

According to Statistics Finland (1995), approximately 13% of the new firms established in Europe closed during their first year of business, while 55% remained survival for five years. Another study by Bruderl et. al. (1992) claims that 76% of new firms continued in business for two years and 62% to five years after start-up in German SMEs. Many past studies have found that average failure rates ranging from a high of 71% to a low of 31% in

the first five years of a new firms' life (Phillips, Kirchoff 1989; Baldwin, Gorecki 1991; Williams 1993). In the discussion as to the relations between network and new firm's survival, Littunen (2000) argues that at start-up and during the critical operational phase, networks influence the survival of firms of which are 4-6 years old. Based on these discussions, in this study we grouped new firms of which duration of business less than 5 years since their start-up, and the rest of samples to be grouped as growing firms.

Strong ties and Weak ties

Entrepreneurial networks can be categorized into two types derived from different sources, according to Low and MacMillan (1988), that is, informal and formal (Birley 1985; Johansson 1985). Informal networks consist of personal relationships, families, and business contacts. Formal networks consist of venture capitalists, banks, accountants, creditors, lawyers, and trade associations. Similarly, Sequeira and Rasheed (2006) explain that network is made up of both formal/professional (business contacts, banks, lawyers, local government, organizations and associations) and informal/personal (family, personal friends, acquaintances) connections. These two networks are also classified as strong and weak ties, in the view of Granovetter (1973) and Ibarra (1993). They explain networks are made up of strong and weak ties. Strong ties refer to relationships that are close, stable and binding, while weak ties tend to be more superficial and lacking in emotional investment. In this paper, we use 'strong ties' referring to informal networks include six network sources such as family, relatives, friends of owners, and family, relatives, friends of firm executives. While 'weak ties' referring to formal networks that include another six network sources, Government institutes such as Small Business Corporation (SBC), Kibo and tax authority, and industrial associations, business partners such as suppliers and subcontractors, universities or venture support centers (technological assisting center), CPAs and lawyers, banks.

Network size, Network frequency, and Network trust

Network size has also referred to network range of which definition is the degree of diversity contained in a network (Burt 1982), referring to various types of contact of members within network. The most intuitive network measure is size, defined as the number of direct and indirect links between a focal actor and other actors (Hoang, Antoncic 2003). In addition to the dimension of breadth (network size),

entrepreneurial network might also be characterized by a dimension of depth (network intensity) (Zhao, Aram 1995). Johns and Demarche (1951) used network intensity referring to a degree of link strength between interacting organizations. Intensity was viewed to the extent of the interacting organization's resources committed to the relationship, in terms of the frequency of contact and the amount of resource exchanged (Aldrich 1975; Shulman 1976). In this paper, we use network size referring to network range, and network frequency referring to network intensity with confined views. We measured network size by asking to select the individual network source that the respondent contacted more than one time during past one year among 12 network sources presented, regardless of contact frequency. In case of no contact at all with 12 network sources in the past one year, '0' was coded, while coded '12' when contacted with all 12 network sources for the given period. Network frequency was measured by asking to choose one of 5 classified frequency range: (1) no contact at all, (2) one or two times yearly, (3) one or two times quarterly, (4) one or two times monthly, (5) more than one time weekly. And then we divide the samples into two groups categorized; narrow and broad network size as well as high and low network frequency, using mean value of descriptive statistical data. Finally, network trust was measured by asking to select out of five-point Likert scale with individual network sources: no trust at all= 1, very strongly trust= 5.

Firm performance

As Watson (2006) noted, a difficulty in studying the performance of unlisted firms which are mostly SMEs is the lack of a reliable data source. Using conventional measuring methodology for financial performance might not be reasonable in the study of SMEs, especially for start-up phase, because there is no data fully available either the reliability of the data obtained. Because of this lack of the data, many prior studies have been used cross-sectional data. Considering the result by networking activity

should appear at a later point in time than their causes (Havnes, Senneseth 2001), using cross-sectional data only also makes it difficult to properly examine the cause and effects particularly in the impact of networking on firm performance (Low, MacMillan 1988; Reese, Aldrich 1995). Chell and Baines (2000) also suggest that a variety of self-report measures including employment growth, turnover growth or sales can be used to indicate business performance and no single measure is ideal, when assessing on how levels of networking activity related to business performance. Given the suggestions on assessing performance in the past studies (Mazzarol 1998), this study adopted two categories of measure, quantitative and

qualitative performance consisted of 12 independent variables as indicators for performance measurements: (1) increase in total sales, (2) attain sales target, (3) increase net profit, (4) attain net profit target, (5) overall business performance getting better, (6) increase in number of employees as a quantitative performance, and for a qualitative performance, (7) owns superior capability for market development, (8) owns new product development competence, (9) funding capability, (10) maintain high degree of customer satisfaction, (11) satisfy on current job, (12) affirmative belief on firm growth.

Table2. Demographic Characteristics of Respondents

Variables		Classification	Korean SME(n=215)		Chinese SME(n=191)	
			Frequency	Ratio (%)	Frequency	Ratio (%)
Duration of business	New firm	Less than 1yr	5	2.3	27	14.1
		Less than 3yr	32	14.9	76	39.8
		Less than 5yr	53	24.7	51	26.7
	Growing firm	5-10 yrs	60	27.9	30	15.7
More than 10yr		65	30.2	7	3.7	
Number of employee	Less than10		50	23.3	27	14.1
	11-50		92	42.8	116	60.7
	51-100		50	23.3	22	11.5
	101-300		23	10.7	26	13.6
Business area	Electric/Electronic		38	17.7	19	9.9
	Metal/Metal processing		26	12.1	30	15.7
	Fabrication		39	18.1	22	11.5
	Chemicals		17	7.9	13	6.8
	Manufacturing		55	25.6	38	19.9
	Others		40	18.6	69	36.1
Start-up Experience	Yes		115	53.5	76	39.8
	No		100	46.5	115	60.2
Gender	Male		197	91.6	151	79.1
	Female		18	8.4	40	20.9
Age at start-up	Younger than 30		8	3.7	100	52.4
	30-34		26	12.1	44	23.0
	35-39		69	32.1	25	13.1
	40-44		59	27.4	14	7.3
	45-50		40	18.6	8	4.2
	Older than 50		13	6.0	-	-

Education	High school	23	10.7	17	8.9
	College	49	22.8	43	22.5
	Beyond University	143	66.5	131	68.6

Results

Demographic characteristics of respondents are reported in Table 2. In the item for duration of business, more than 10 years in Korean respondents accounts for 30.2 percent, while 39.8 percent of less than three years are shown in Chinese respondents. Also, 32.3 percent of Korean respondents replied with the range of age 35 – 39 in the age of start-up, but it appears more than 52 percent of Chinese respondents replied are younger than 30. These results imply that Chinese SMEs have strong characteristics of new firm's propensity, whereas Korean SMEs are much likely to be classified into growing firms. Another big difference between two countries was also shown up in the item of start-up experience where 53.5 percent of Korean

respondents replied with having experience, while 60.2 percent of Chinese respondents have no experience of business founding.

As indicated in Table 3, SME owners in two countries tend to keep in contact with network sources. It is also noticeable that both countries' respondents give high level of trust to network sources (mean value= 3.498 and 3.502 each). Table 3 also presents the result of correlation among the variables for verifying hypotheses. Dependent variable is significantly correlated with all independent variables. The correlation squared value between network size and network frequency in China appeared greater than 0.8. However, no statistical problem was revealed through multicollinearity test. From the result, verifying the hypotheses with the variables is well supported and so is the adequacy of the model.

Table3. Descriptive Statistics and Correlation of Variables

Country	Variable	Mean	S.D.	1	2	3	4
Korea	1. Network frequency	2.775	0.626	1			
	2. Network size	4.293	0.849	0.596***	1		
	3. Network trust	3.498	0.585	0.487***	0.399***	1	
	4. Performance	3.374	0.922	0.322***	0.323***	0.339***	1
China	1. Network frequency	2.971	0.571	1			
	2. Network size	4.178	0.911	0.806***	1		
	3. Network trust	3.502	0.402	0.150**	0.241***	1	
	4. Performance	3.720	0.796	0.196***	0.393***	0.707***	1

Table 4 reports the result of the regression analysis for hypothesis 1, networking activity of new firm would exhibit better performance than that of growing firm. Hypothesis 1 is rejected in Korea (H1-1) but accepted in China (H1-2). The

standardized coefficient ($p < 0.01$) in Korean growing firm is higher than that of new firm. Contrary to this, the coefficient ($p < 0.01$) of new firm in China is higher than growing firm. From this result, we can see that the effect of

networking activity of new firm might be more important to firm performance than that of growing firms in China, while networking effects

could be working better for growing firms in Korea.

Table4. Result of Regression Analysis – Hypothesis 1

		Model 1		Unstandard coefficient	Standard coefficient	t	F	p	R ²	
<i>H 1</i>	Kor	Growing firm	Constant	1.209		3.577				<i>H 1-1 Rejected</i>
			Networking	0.648	0.527***	6.874	47.259	0.000	0.278	
		New firm	Constant	1.864		3.419				
			Networking	0.436	0.289***	2.829	8.004	0.006	0.083	
	Dependent variable: firm performance									
	Chi	Growing firm	Constant	1.275		3.577				<i>H 1-2 Accepted</i>
			Networking	0.391	0.426***	4.363	13.039	0.000	0.181	
		New firm	Constant	1.275		4.471				
			Networking	0.713	0.665***	8.893	79.889	0.000	0.442	
	Dependent variable: firm performance									

*** $p < 0.01$

The result of multi-regression analysis for the hypothesis 2 is reported in Table 5. Hypothesis 2 is both supported in Korea (*H2-1*) and China (*H2-2*). There is a positive relationship between firm performance ($p < 0.01$) and supports from weak ties ($p < 0.01$) in both Korea and China, rather than strong ties. From the results, it is

concluded that reliance on weak ties of SME owners would give more positive effects on the firm performance than reliance on strong ties in both countries. This result is consistent with our expectation.

Table5. Result of Multi-Regression Analysis – Hypothesis 2

	Model 2	Unstandardized Coefficient	Standard Coefficient	t	F	p	R ²	Collinearity Statistics		
								tolerance	VIF	
<i>H 2</i>	Kor	Constant	2.094	.	9.017	.	0.157	.	.	<i>H 2-1 Accepted</i>
		Weak ties	0.442	0.390***	6.097	0.000		0.973	1.028	
		Strong ties	0.25	0.033	0.514	0.607		0.973	1.028	
	Dependent Variable: Firm Performance									
Chi	Constant	2.253	.	10.530	32.738	.	0.258	.	.	<i>H 2-2</i>

	Weak ties	0.431	0.482***	7.635		0.000		0.991	1.009	<i>Accepted</i>
	Strong ties	-0.061	-0.123*	-1.945		0.053		0.991	1.009	
Dependent Variable: Firm Performance										

*** $p < 0.01$

Table 6 and Table 7 present the results each for hypothesis 3 and 4. Hypothesis 3 is both supported in Korea (*H3-1, H4-1*) and China (*H3-2, H4-2*). There is more positive relationship between narrow network size ($p < 0.01$) and firm performance ($p < 0.01$) than broad network size in both countries. From this result, we conclude that narrow network size has more significant impact to firm performance than broad network size in both countries. As the result presented in Table 7, hypothesis 4 is rejected in Korea but accepted in

China. There is less positive relationship between low network frequency and firm performance in Korea. However, the relationship between low network frequency and firm performance is much stronger than high network frequency in China. From the fact, we also can see that low network frequency is positively associated with firm performance in Chinese SME, while in Korean SME, high network frequency is more positively associated with firm performance.

Table6. Result of Regression Analysis – Hypothesis 3

		Model 3		Unstandardized Coefficient	Standardized Coefficient	<i>t</i>	<i>F</i>	<i>p</i>	<i>R</i> ²	
<i>H 3</i>	Korea	Broad Network Size	Constant	1.441		1.481				<i>H 3-1 Accepted</i>
			Networking	0.575	0.220***	2.325	5.404	0.022	0.049	
		Narrow Network Size	Constant	1.787		4.394				
			Networking	0.457	0.327***	3.547	12.578	0.001	0.107	
	Dependent Variable: Firm Performance									
	China	Broad Network Size	Constant	3.167		2.333				<i>H 3-2 Accepted</i>
			Networking	0.112	0.037	0.326	0.107	0.745	0.001	
		Narrow Network Size	Constant	0.287		1.015				
Networking			1.014	0.748***	11.765	138.410	0.000	0.559		
Dependent Variable: Firm Performance										

*** $p < 0.01$

Table7. Result of Regression Analysis – Hypothesis 4

		Model 4		Unstandardized Coefficient	Standardized Coefficient	<i>t</i>	<i>F</i>	<i>p</i>	<i>R</i> ²	
<i>H 4</i>	Korea	High Network Frequency	Constant	1.496		2.103				<i>H 4-1 Rejected</i>
			Networking	0.554	0.297***	3.059	9.360	0.003	0.088	
		Low Network Frequency	Constant	1.481		3.129				
			Networking	0.564	0.147***	3.847	14.797	0.000	0.115	
	Dependent Variable: Firm Performance									
		High Network	Constant	5.927		6.292				

China	Frequency	Networking	-0.577	-0.236***	-2.384	5.685	0.019	0.056	<i>H 4-2 Accepted</i>
	Low Network Frequency	Constant	0.434		1.399				
		Networking	0.962	0.720***	9.904	98.093	0.000	0.519	
Dependent Variable: Firm Performance									

*** $p < 0.01$

Finally, the result of multi-regression analysis for the hypothesis 5 is reported in Table 8. Hypothesis 5 is both accepted in Korea (*H5-1*) and China (*H5-2*). There is a positive relationship between firm performance ($p < 0.01$) and network trust ($p < 0.01$) in both Korea and China.

From the results, we conclude that network trust gives a significant influence to firm performance on both countries. This result for hypothesis 5 is consistent with our expectation.

Table 8. Result of Regression Analysis – Hypothesis 5

		Model 5	Unstandardized Coefficient	Standardized Coefficient	<i>t</i>	<i>F</i>	<i>p</i>	<i>R</i> ²	
<i>H 5</i>	Korea	Constant	1.890		6.262				<i>H 5-1 Accepted</i>
		Network Trust	0.448	0.339***	5.263	27.696	0.000	0.115	
		Dependent Variable: Firm Performance							
	China	Constant	0.088		0.343				<i>H 5-2 Accepted</i>
		Network Trust	0.992	0.707***	13.735	188.662	0.000	0.500	
		Dependent Variable: Firm Performance							

*** $p < 0.01$

Discussion and Implication

Network theory suggests that the ability of owners to gain access to resources not under their control in a cost effective way through networking can influence the success of SME. In this study, we drew insight from networking literature to propose such a theory, using samples of SME owners in Korea and China.

We have found that H1 was not supported in Korea but it was in China. This finding from China supports the argument that management capability of internal and external network connects to the importance of strategies for the survival of new firms (Littunen 2000). Meanwhile, the result from Korea indicates that the networking effect in growing firm might be stronger than that of new firm to performance. The main cause of this result might be found from the demographic characteristics of which samples of Chinese SME have a propensity of new firms, while the Korean SMEs are much likely to be growing firms. Another reason could be inferred from the fact most Korean new ventures can get full supports from the sponsors such as SBC, Kibo and other investors at the

beginning of formation and start-up. Under this favorable environment, the new venture owner may not feel a strong necessity for expanding connection to internal and external networks to gain resources not under their control. Rather, when they remained survival from the liabilities of newness (Brüderl, Schüssler 1990), and the more the business is getting into growth phase, the more supports from the networks might be needed desperately. Thus, this finding led our conclusion that the networking effect in Korea SME mostly consists of growing firms might better exhibit performance than new firm.

Hypothesis H2 has been supported in both Korean and China. Reliance on weak ties of SME owners gives more positive effects on the firm performance than strong ties in both countries. This finding supports the argument that a firm's survival and growth is more strongly associated with an owner's involvement in formal rather than informal networks (Watson 2006). This result is also consistent with the argument that weak ties are likely to be more important in the dissemination of information than strong ties (Granovetter 1983). Related to

this finding in China, we can additionally refer to the claims of Zhao and Aram (1995) that cooperation across society in China relies upon social networking for the construction of dependable personal relations. According to Redding (1991), this reliance is a natural development of the personal tendencies inherited and reproduced in the culture over a long period in Chinese history. Customers prefer doing business with a long-established firm based on the good relationship and therefore, strong networks would secure supplies and sales easily.

Hypothesis 3 and 4 were designed to test possible negative sides of excessive networking activity that might work against performance. H3 has been supported in both countries. Narrow network size is positively associated with firm performance than broad network size. However, we have found no support for H4 in Korea, while China supported H4. Low network frequency is positively associated with performance than high network frequency in China, but we could find opposite result from Korea. This finding from China supports the arguments of prior studies and Korea supports them partly. Zhao and Aram (1995) argued that broad range of network requires more time and effort to develop and maintain than those drawn from a more limited group. Watson (2006) claimed that excessive networking might be counter-productive. One possible clue might account for the result H4 in Korea from the perspectives of cultural and geographical aspect. Given the business context that has small size of land and low population in Korea, it might be much beneficial for Korea SME owners to develop proper size of network adequate to their business scales throughout formation to growth, and keep maintaining close relationship with them. Implementing this may require high frequency of contact within narrow network size.

We have found that hypothesis H5 has been supported in both Korea and China. Network trust is positively associated with performance. This finding is in line with our expectation and supports the arguments of researchers. Tsai and Ghoshal (1998) argue that cooperative behavior

implying the exchange or combination of resources may emerge when trust exist. For the distinctive governance mechanisms that support and coordinate network exchange, trust between partners is regarded as a critical element of network exchange that in return enhances the quality of the resource flow (Larson 1992; Lorenzoni, Lipparini, 1999; Hoang, Antonic 2003).

The findings of this study could provide SME owners of Korea and China with conceptual idea as well as a primary insight as to how to gain better performance based on networking activity, when they extend their efforts searching for new business opportunities cross the border. Currently, SME in both countries, the backbone of a nation's economic development, face unprecedented promising future, as the volume of economic trade has increased rapidly year over year, since the diplomatic tie took effective in 1992 between the two countries.

Limitation and Suggestion for Future Study

We have following limitations with this study. Firstly, the difficulty was to construct reliable base for direct comparison of the results, due to lack of prior research as well as short knowledge as to Chinese SME, especially on 'Guanxi', a very typical attribute of Chinese networking approach. Because of these limited resources, we could not take into account the possible differences enough in ethnical aspects between the two countries. Secondly, sampling from both countries could raise an issue. Under confined channels, Chinese samples were concentrated only in two big cities, Guangdong and Shanghai, at random base, while Korean samples mainly obtained from Kibo, which were highly venture-oriented. This can be an issue of asymmetry of sampling that might be inappropriate for comparison test purpose. Thirdly, in statistical analyzing process, we did not take steps to put all variables into one model. As a result, we could not see the independent role of each variable at one glance.

For future studies, we would suggest that Chinese samples need to be more venture-oriented and bigger in terms of size to the extent of newly developing industrial cities across the continent of China. The analyzing methodology also needs to adopt cross-cultural effects to observe the practical difference among variables between the two countries. Also, it is recommendable to develop a model to identify the relationship between performance and individual network sources including whole strong and weak ties. In this way, we may be able to provide more critical implications to both Korea and China SME owners on how to develop individual network sources optimally to attain better performance.

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Models and strategies for managing knowledge in networked environments: The viewpoint of small business*

by Ettore Bolisani and Enrico Scarso

In the current economic crisis, the capability to rapidly innovate is increasingly essential. Since the single company can't take all the risks of huge in-house R&D efforts, shared research activities, co-operation, and alliances in a context of "open innovation" tend to diffuse. Actually, the capability to network and share knowledge with others is becoming a key element of any business. The idea of networked inter-organizational models is not new, but what is essentially new is the global extension of these networks, the use of ICT applications, and especially the focus on knowledge as the crucial factor. The capability of networking regards not only the large corporations, but also the smaller units, that can't rely on their traditional points of strength any more. The paper illustrates the findings of a large research project on the new inter-organizational networks. In particular it analyses and discusses the issues of managing knowledge as a key factor for small firms in networked environments.

Introduction

The current economic crisis is leading to new models of production and consumption, where the capability to innovate and rapidly change will be even more essential for the future competitiveness of the companies than it was in the last decades. Developing such capability is not a simple task, as testified by the big difficulties that many firms, also of old date, are currently facing.

Things are even more complicated since it is unlikely that the single company can assume all the risks of huge investments in in-house activities whose returns may be highly uncertain. Furthermore, it is as much unlikely that the individual firm possess all the knowledge needed to manage the business and, especially, to introduce innovations on its own. This is the reason why shared activities, co-operation, and alliances involving not only private corporations but even universities, public laboratories, governments tend to be increasingly important. Also, other complementary elements (e.g. specific applications, new processes, unexplored organizational and market knowledge, and so on) become essential. In these open models of innovation and economy, it is crucial to grasp pieces of knowledge whatever and wherever they are, and to quickly combine, exploit, and transform them into business opportunities.

The capability to network and share knowledge with others is therefore becoming a core element of any business. The idea of networked inter-organizational models is not new; what is essentially new is the global extension of these networks, the intense use of ICT applications to manage them, and the focus on knowledge as the key asset. As a consequence, it becomes essential, for the companies, to implement new strategies and management tools, which require innovative ingredients, such as: proper approaches to identify and select right partners which can provide valuable knowledge; enhancing and protecting the company's competitive cognitive resources; managing knowledge exchanges on an international level, and so on.

It is worth noting that the capability of networking regards not only the large multinational corporations, but is even more critical for the smaller enterprises. In fact, to survive in the current economic climate, it is not sufficient to exploit the traditional points of strength of the small scale (e.g.: entrepreneurial

creativity, dynamism, flexibility). What really matters is to be included in networks of knowledge that extend well beyond the specific technical domains or the local markets. This requires new awareness by entrepreneurs and managers, and the capability to implement appropriate strategies aimed at widening the pool of available knowledge.

Despite the great efforts recently made in the emerging field of knowledge management (KM), the managerial aspects mentioned before have not been developed in a consistent way. The literature proposes a range of solutions for the management of knowledge developed in specific cases of small businesses, but general and agreed approaches are still lacking. Hence, there is the need for a more thorough analysis of practices and approaches to the management of knowledge in networked environments involving small companies.

The paper proposes the illustration of the results obtained in a large research project on the emerging new forms of inter-organizational networks and associated approaches to the management of inter-firms knowledge flows. In particular, the aims of the study are as follows:

- to define the problem of managing knowledge in networks involving small companies, by delineating and connecting the new emerging aspects in contrast to the classic managerial issues; here, a short review of the literature is proposed;
- to identify the possible issues of managing knowledge in networked environments, and the implications for smaller units;
- to describe and classify the current models of knowledge management involving small companies in different situations, based on a survey of selected international business networks.

Open innovation and knowledge networks

It is becoming more and more difficult, both for the large and the small firms, to formulate renewal strategies autonomously. A global vision and presence are required, as well as the capability to elaborate, integrate and exploit multiple knowledge sources, which are heterogeneous and generally difficult to access for single players that operate on a local level. This is well pointed out by the open innovation model (Chesbrough 2003), that encourages the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. The open innovation paradigm assumes that firms can and should use external ideas (and knowledge) as well as internal ideas (and knowledge).

According to such perspective, companies must have the capability to interconnect with all the actors that, both in the local and in the international context, can allow the integration of knowledge resources that are scattered in different geographical areas and economic sectors. In order to achieve that, particularly important is the inclusion in large international networks, where players can integrate and co-ordinate innovations developed by different actors (either public or private), and can exploit these opportunities in any way and form they occur. In these networks, firms having complementary competencies and strategies can interact, conduct transactions, and more generally implement knowledge exchanges, which enables them to conduct business projects and process innovations that are produced collectively but can also be appropriated at a local level.

The development of large multinational business networks, where firms can cooperate, is not a recent phenomenon (Jarillo 1988; Easton 1992; Miles and Snow 1992). Today, however, it is increasingly essential, especially for the smaller companies, to interact and exchange knowledge with networked partners operating well outside the local context. This requires the capability to implement appropriate conducts and management practices in connection with the other network players. The term business network (Todeva 2006) includes different specific models (e.g. extended enterprise, virtual enterprise,

global business network, knowledge network, extended supply chain, etc.) that are all characterized as follows:

- (i) companies need to interconnect with other companies, very often on a regular base;
- (ii) there is a subdivision of tasks and activities among firms, but also a shared goal – e.g. a product, a project, a marketing effort – whose success influences the success of the single company in the system;
- (iii) companies are scattered on a global scale, and make intense use of ICT applications to communicate;
- (iv) the different companies are willing to be embedded in a network of relationships with many other players, because they are not able to manage all the knowledge needed to pursue their strategies and to have success in a global and turbulent environment.

A network represents an alternative model to the classic “hierarchy/market” dichotomy, because it consists of both extending the economic activities beyond the boundaries of the single firms, and setting strict relationships among autonomous organizations based on long-term trustworthy interactions that facilitate co-operation and integration and the achievement of success (or survival) (Browne and Zhang 1999; Jagdev and Thoben 2001). This appears essential in the current highly innovative and hyper-competitive business climate. Networking models have been studied from different perspectives. They have often been seen as a reaction to the necessity of integrating manufacturing and logistic processes with partners and outsourcers (Browne, Sackett and Wortmann 1995), to achieve benefits in terms of innovative capability, quality, or cost (Jagdev and Thoben 2001). In other academic areas (e.g. Industrial Economics, Organization Studies, etc.) the network models have been considered as general approaches that go beyond the classic supply chain management view and include the entire range of relationships along the whole value chain (Dyer and Singh 1998). As said, there are also analogies between the “new” notions of business network and the “old” models of network enterprises proposed in the 80’s. A distinctive characteristic of the new networks is the intense use of ICT applications, but associated to this, some observers noted that the economic transactions have an increasingly immaterial (information/knowledge) content, and can therefore be (at least in part) executed electronically (Lefebvre and Lefebvre 2002). In other words, the focus shifts to the way knowledge is exchanged among independent partners

In business networks the various companies do not play the same role. In particular, a “principal” firm, capable of coordinating the other trading partners, is almost always recognizable (Childe 1998, Lefebvre and Lefebvre 2002). The role of this leading (or focal) firm can be linked to several characteristics (for instance: a recognized brand, the control over the distribution channels, a leading edge R&D capability, etc.), but is often associated to its economic scale. Then there are many other companies, of different size, whose role is to provide the complementary (knowledge) assets and capability needed to carry out the business activity on a global scale successfully. Hence the network gives room also to small and medium enterprises provided that they are contributors of valuable capability and assets, and are especially able to share those assets with the other partners. The inclusion in a global business network increasingly represents an essential condition for the success or survival of small companies, but it requires new ways of managing the business relationships, and particularly, of the associated knowledge exchanges.

Managing knowledge in networks

As previously said, in the last two decades, many studies have been conducted on the governance of networked structures. A quite common assumption of those studies is that the governance of such networks is mainly a question of managing the various knowledge flows that occur among the different nodes of the network: hence it is a problem of Knowledge Management. On this point, it must be reminded that the studies of KM, that date back to little more than ten years ago, originally focused on the management of internal knowledge assets (Nonaka and Tagueuchi 1995). The first question KM dealt with, in fact, was how knowledge can be generated, disseminated, and used within the individual organization (generally the big and geographically dispersed ones) in an efficient and effective way. A few years later, some scholars have begun to move to the analysis of inter-firm knowledge exchanges and knowledge networking. Today, the cognitive nature of inter-firm relationships is widely recognized, as well as the need to develop relevant managerial tools, practices, and models for that. However, the efforts to elaborate definitions, theories, and interpretative or normative models have not been sufficient yet. It is necessary to find proper answers to questions such as: what are precisely the characteristics of knowledge as an economic asset? How can its value be measured? How can appropriate strategies of knowledge management in networks be defined, for generating value and enabling a sustainable competitive position? What are the implications for local systems of small businesses?

The notion of knowledge networks has been used by some scholars (Millar, Demaid and Quintas 1997; Pyka 1997, 2002; Warkentin, Sugumaran, and Bapna 2001; Peña 2002) to denote formal or informal inter-organizational relationships established with suppliers, customers, retailers, business partners, institutions, and even competitors to share knowledge, explore innovations, and exploit new ideas. The use of that term underscores the intrinsic cognitive nature of any kind of inter-organizational partnership, whose effective functioning requires continuous exchanges of information and knowledge among the different actors. For the company, the benefit of participating in a knowledge network consists of the exploitation of cognitive synergies and the access to knowledge and competencies wherever located within the network itself. All the above mentioned authors underline that managing knowledge across organizational borders raises more problematic issues than managing knowledge within a single firm. Attempts to communicate meaningful contents may be difficult due to the lack of common goals, languages, values, and mental schemes. Usually, a cognitive distance or gap separates the different partners, thus making the sharing of useful knowledge difficult. In general, a high degree of reciprocal trust is needed, because a knowledge exchange may be easily exposed to the risk of opportunistic behaviors. Also, the effective functioning of a knowledge network involves a proper subdivision of “cognitive” tasks, competencies and processes among the participants. Finally, an adequate technological infrastructure may be required, especially when large amounts of contents scattered in a wide context has to be handled.

The recent literature that considers networked KM might be roughly subdivided into two streams. A first stream (Spring 2003; Moffat and Archer 2004; Abraham and Leon 2006; He *et al.* 2006; Priestley 2006) tackles the issue of identifying and discussing the factors affecting the successful sharing of knowledge among the various business partners; an associated field of study is that of social capital (Inkpen and Tsang 2005) and its relevance for the sharing of knowledge in networks. Based on this literature, the main factors affecting the character and the dynamics of knowledge management processes inside a network are these:

- (i) the nature of the involved knowledge, and the type of the joint task;
- (ii) the knowledge gap that separate the various partner firms, i.e. their cognitive proximity;
- (iii) the absorptive capacity of the different partners;

- (iv) the nature of the social relationship and the degree of trust existing between the involved firms, i.e. their social proximity;
- (v) the existence of a prior common business experience;
- (vi) the willingness of members to actively participate in such networks;
- (vii) the form of the network (e.g. more or less hierarchical; with a one or more centers), i.e. the organizational proximity of the partners.

A second stream of study of networked KM classifies the different kinds of knowledge network to identify the most suitable KM approaches (Mentzas *et al.* 2006, Möller and Svahn 2006; Grimaldi and Cricelli 2007). Although in these studies the role of knowledge is somewhat implicit, there is general agreement that the configuration of a network is a decisive factor for the way knowledge is managed. This is the reason why the efforts are oriented towards the development of knowledge-oriented classifications of business network. Beyond the different typologies (and terminology) developed by the various researchers, there exists a general agreement in literature that each kind of network, aiming to particular business goals, calls for specific KM approaches, applications, practices, roles, and tools. This explains why networked KM is very complex and can not be just the extension of KM practices implemented in a single organization.

A final mention deserves the use of information technology. Its role is, indeed, controversial. Some authors (Gunasekaran and Ngai 2007) suggest that the available technological tools (CAD, rapid and virtual prototyping, MRP, ERP, DSS, RFID, Internet, groupware, PDA, and many others) can, if correctly employed, facilitate the management and coordination of knowledge flows inside a supply network. Others argue that the technological tools alone are not sufficient, because (as testified by many studies and practical experience) KM is much more than technology. In any case computer-based technologies, as well affirmed by Holsapple (2005), are a component that can not be neglected.

KM in small businesses

Although the issue of KM is increasingly important for small businesses as well, studies are relatively scarce in the literature (Wong and Aspinwall 2004, 2005; Desouza and Awazu 2006; Edvardsson 2006) and have mostly centered on specific case studies. For several reasons, SMEs suffer from drawbacks when it comes to KM (McAdam and Reid 2001): a more mechanistic view and a limited vocabulary of knowledge, less systematic approaches for embodying and sharing knowledge, etc. Even when KM practices are explicitly developed, they are generally limited to some operational activities (Beijerse 2000). Also, SMEs appear to be less proactive (Matlay 2000) and do not often see a reason for a systematic strategy of KM. Indeed, there would be serious reasons to implement explicit KM practices in small companies (for instance, the risk of losing critical knowledge when key employees retire or leave the company is higher for a small company than large corporations - Desouza and Awazu 2006), but this does not necessarily lead to efforts for implementing KM practices. Also, it must be mentioned here what Chen *et al.* (2006) affirm, i.e. external knowledge is of prime importance to SMEs and, to acquire it, SMEs need to engage in some activities to interact with external organizations.

In summary, two important points can be drawn from the literature on KM in small business (Chen *et al.* 2006; Desouza and Awazu 2006; Edvardsson 2006):

- 1) small businesses generally lack a proper understanding of KM; and
- 2) small businesses have been slow in adopting systematic KM practices (knowledge is not perceived as an important element of business).

This does not mean that KM is impossible or not convenient in small companies. What should be done,

therefore, is to identify the main points of strength and weakness of small businesses in managing knowledge. First of all it is worth recalling that all the literature agrees on the fact that KM for SMEs is not (and can not be) a reduced version of KM for large enterprises. Following Wong and Aspinwall (2004) we can therefore identify these main points.

Ownership, management and structure. In a small company, decision-making is often centralized, and decisions are rapid. Also, entrepreneurs have a complete picture of their business, whose structure is generally lean. This can enable a better control over the cognitive capabilities of the firm (and quicker decisions on KM, if any). On the other hand, the lack of managerial skills and KM competencies, the scarce specialization of employees, and the difficulty for small entrepreneurs to recognize the necessity of managing knowledge, can limit the awareness of the cognitive problems of the firm and their implications.

Culture and behavior. It is generally easier to find a consistent corporate culture in a small company, due to the limited dimension and the strict entrepreneurial control. This can favor the management of the knowledge assets as well, and especially their tacit dimension (which is mainly embedded in people). On the other hand, since all depends on the personality of the company's head, this may hinder the development of practices to manage knowledge.

Systems and processes. Agile and simple processes generally characterize small companies, which enables the definition of KM elements easier. Conversely, the lack of formal procedures and the less formalized processes may resist the introduction of formal KM programmes.

Human resources. There are fewer employees, which favors interpersonal relationships and informal communication and, consequently, flexibility. On the other hand, the limited dimension implies fewer resources to devote to cognitive improvement, and lack of experts of KM issues.

In short, when it comes to managing knowledge resources, small businesses can exploit their typical points of strength based on flexibility, informality, and rapid response. However, the limited resources, the lack of specific KM skills, and the absence of formal structures can reduce the awareness of the cognitive role of the firm and can hinder the adoption of explicit practices. This can thus limit the role of small companies in the international networks as well.

Networked KM: issues and role of small businesses

Based on the previous literature, our attempt was to understand the possible role of small companies when they are included in a network of cognitive relationships with other firms. Fundamental questions of our analysis are: what are the possible roles that SMEs can play in the management of knowledge within networked relationships? What factors affect the successful inclusion of a small unit in an international "cognitive" network? What conducts do small companies have (or should have) to take advantage from their participation in the network?

In this section we refer to the findings of a case-study analysis of a large number of international business networks conducted in 2007-2009. The purpose of this study was to identify the main issues and problems of managing knowledge in networked environments. The unit of analysis was not the single company but, rather, the whole system of inter-firms relationships. To identify a network, we focused on the existence of a "common project" shared by a number of companies at the various levels: the production and sale of a new product, the delivery of a service, etc. Each network was then examined by analyzing a number of nodes (i.e. the companies) and by reconstructing their mutual relationships. Many of these nodes were small businesses (e.g. suppliers, sub-suppliers, dealers, small service providers, etc.). The inter-firm relationship and, especially, the cognitive implications of

business exchanges among network partners were examined.

Here, we will particularly focus on one of the issues analysed, i.e. the cognitive role of small companies in these networked environments. In particular, based on the literature mentioned above, the attempt here is to discuss the factors and elements that influence the way small firms manage their cognitive role in the network, the possible conducts, and the drawbacks. We particularly refer to the following networks:

- *Case New Holland supply network*, consisting of different levels of suppliers. In particular, the smaller units here are represented by the manufacturers of basic parts for agricultural equipment;
- *SAP ecosystem of resellers*, where small units are the companies that provide configuration and implementation services of ERP systems in the local markets;
- *Dior Homme production network*. Dior Homme is a leading fashion brand whose production network is based on a number of small suppliers localized in Italy and other countries;
- *Geox monobrand distribution network*, consisting of franchising individual shops and directly operated stores.

It is worth noting that these networks are just a part of the broader set of partnerships involved (there are other companies that constitute the system): here, we just focus on the portions that are more relevant to our purposes. Even if it is clearly difficult to generalize the findings of a limited number of cases, the network investigated seem to be paradigmatic examples of what happens in several industries. The analysis therefore allows to highlight some essential elements from a cognitive perspective.

It is first confirmed that, as mentioned, there is a substantial difference in the cognitive role of network members. In particular, there is a significant distinction between the *leading firm* (the company having a central role in the functioning of the whole system) and the other companies and, especially, the small or peripheral nodes of the network. This role is often associated to the *strategic size* of the company in terms of its direct access to the international markets and the capability to control the most “value adding” knowledge components. It is important to note that this role is frequently associated to the scale of the company as well: in other words, the leading firms are often the biggest in the network.

From a cognitive viewpoint, the leading company plays some special roles, such as: “mapping” the knowledge scattered among the dispersed organizations; managing transfers of relevant knowledge among nodes; setting common rules and language standards; and regulating exchanges with external environment. Related to this, another important issue is that of trust. The effective functioning of a cognitive network of firms requires limiting the risk of opportunistic behavior by the participating partners. One of the functions of the leading company is to set the rules and the “institutional” mechanisms (for instance: certification, sanctions and rewards, etc.) that enable the establishment of a trustworthy environment.

As regards the smaller units, their inclusion in international networks mainly implies a capability to interact and exchange knowledge with partners well beyond the local areas. In contrast to the typical inter-firm connections that occur in local areas - based on social relationships and the exchange of tacit knowledge by means of “natural” languages - interactions in international business networks require knowledge flows and communication languages of a completely different nature. In this scenery, new coordination mechanisms are required, both inside the local systems and in connection with the international networks.

Even regardless that knowledge is recognized and explicitly managed as an “economic asset”, we can thus say that the fruitful inclusion of small businesses in international networks has significant cognitive implications whose relevance to the business should not be neglected by managers and entrepreneurs. The awareness of these cognitive functions can thus provide food for thought for the

management of these companies. Based on our research, it was possible to identify some specific elements affecting the cognitive conduct of small companies in their networks. These elements depend on several factors (e.g. structural aspects, nature of knowledge treated, etc.): their investigation allowed to identify and distinguish the cognitive functions that the small firms investigated play in the different conditions.

Examples of cognitive functions of small businesses in networks

The Case New Holland (CNH) network

Case New Holland (CNH) is a leading OEM of agricultural and construction machinery, and has a network of highly reliable suppliers all around the world. The structure of the network is rather typical of the other OEMs in the industry (Caterpillar, Komatsu, etc.). Especially for the critical parts, the supply chain is organized in different layers (as happens in similar industries - chiefly, the automotive sector). The first layer includes the strategic suppliers of systems (for example, a complete steering system), which are critical for the assembly of the final product (e.g.: a tractor). The second layer consists of suppliers of components (for instance: gearing for a steering system): these suppliers can provide the OEM directly, but very often they provide the first level suppliers which, in turn, supply the OEM. Then there are 3rd tier suppliers that produce raw materials and basic elements. Thus, we have a progressive integration of components into subsystems and then final products. To serve a global market with innovative and quality products, CNH needs to establish and manage very efficient just-in-time production processes that rely on this network of strategic suppliers. Timely and precise communication flows are needed: the production plants of both CNH and its suppliers need to be connected strictly with one another and with the sales department as well. A very efficient IT system has been implemented, which required an intense effort of codification. Part codes, product specifications, and manufacturing requirements are explicit and well known from all the parties, and this “shared language” enables the direct connection among information systems.

When a new product has to be produced, the design activity has to be coordinated as well. Design departments, procurement offices, and sales units of all the companies need to interact in a way that allows combining the need for continuous technological innovations with the efficient functioning of just-in-time production processes, and with a reduction of purchasing costs. The entire network has to focus on this essential goal.

To join in the network, a small supplier must therefore have the capability to assimilate these fundamental mechanisms of functioning. When a new product is designed, the leading role activates its network of suppliers and sub-suppliers accordingly. Each node specializes in a specific part of the work, i.e. in a specific cognitive task. However, to work in co-ordination with the other companies, a firm needs to understand and use the “standard language” of the network (based on: standard product identifications, universal technical specifications, quality parameters, just-in-time fundamental rules, etc.). It is this “common” language that allows the leading firm to manage a continuous flow of innovative products and, at the same time, to pursue a multiple-sourcing strategy (so that the supplies are ensured). On the other hand, the use of this common language permits the suppliers to fully benefit from the inclusion in the network, and also to supply their products to different OEMs whose networks are based to similar concepts and languages (in other words, to participate in different networks at the same time).

The SAP ecosystem

SAP is a major software company specializing in ERP systems with a global sale organization covering over than 50 countries. Compared to other products and services, the sale of an ERP system has some peculiarities, whose cognitive implications are significant. It comprises the sale of “something” (a software license) but also the provision of services (process analysis, configuration, implementation, training, etc.); it has some standard components (namely, the core ERP modules), and on the other hand it implies much work of personalization and customization (each ERP implementation is different). From a cognitive viewpoint, there are different kinds of knowledge here. The “tangible” part of the product consists of knowledge embedded in an artifact (software), whose property is transferred to the client in the form of licenses; the intangible part consists of tacit forms (consulting and so on) that need a direct supplier-customer contact to be provided. Indeed, an ERP implementation is a combination of both kinds of knowledge, strictly intertwined to one another. It is thus clear that the sale of ERP implies a wide range of knowledge, from technical issues to applicative aspects, to sale. These distinct components have to be combined together for the success of the project. Since any implementation is different from the others, the appropriate chain of knowledge and competencies needs to be selected and activated.

Especially, there is a distinction from the knowledge used to develop the technical modules of an ERP, and the one that is needed to sell the product, especially in the local markets. This helps to understand the subdivision of cognitive tasks performed in the network. The leading firm keeps a strict control over the development of the applicative software, and of all the competencies that are needed for this (i.e. high level programming, but also analysis of business processes, market needs, etc.). To do that, proprietary technologies (including the proprietary programming language) have been developed, to avoid that others can have access to this core part of knowledge without permission.

As regards the sales competencies, there is a mixed strategy. On the one hand, SAP keeps the control over the sales to the large customers, which represent an important part of the business and are a source of business knowledge useful to develop new releases of the ERP. However, since the ERP market is highly fragmented but still requires a direct provider-customer interaction, it would be too risky for SAP to invest resources in a direct sale channel, especially in the case of small and medium sized customers which are an increasingly important market. It is for this reason that SAP developed its network of small resellers – the so-called ecosystem. Local sale partners can contribute to a new ERP implementation with their knowledge of the specific local markets and clients. This allows SAP to avoid the risk of developing specific knowledge for this. At the same time, the risk of opportunistic behavior by small resellers is reduced by preventing them from having direct access to the core technological components of the product.

The small resellers are independent companies with the license to resell the software and to provide certified implementation services. The resellers are not exclusivist (they can sell other services and software), and they bear the entire entrepreneurial risk of their activity. Their role in the network has important cognitive implications. We can say that the network functioning is based on an approach to “focalized variety”. On the one hand, the leading company develops and supplies a library of core modules of the system that are fully interoperable and based on the same development framework. This “standard set” of tools builds on the focalized knowledge of the R&D team. On the other hand, each reseller/licensee has a specialized knowledge in a particular market/client/geographic area. It is the combination of all these focalizations that makes the sale of a “global but personalized software” like and ERP possible. A first important aspect of the resellers’ activity is the capability to combine sufficient technical knowledge of the ERP system with knowledge of organization management, essential to sell business software. Also, they need to acquire a good knowledge of the “global standard” representing the SAP ERP system, and of its different optional modules as well, and to

combine it with a “local knowledge” of customers (i.e.: of their business processes, informatization requirements, organizational features, etc.) which is necessary to provide specialized services and implement customized solutions. Also, the local resellers play an essential role in making the knowledge of the final demand flow back to the leading firm. As a matter of fact, SAP needs a continuous flow of fresh knowledge from the final market: it is this knowledge that enables the development of new advanced releases of the software. The local resellers thus have the functions of “local antennas” that capture the emerging requirements of the final customers and report them to the leading firm in a form that is appropriate to be handled in terms of new product development.

The Dior Homme (DH) network

DH – the men’s fashion division of Dior - is an integration of different competencies (design, purchasing, manufacturing, and sales) that are coordinated based on a shared goal. The operational cycle requires the management of complex flows of knowledge. Sales orders are collected directly in Paris, and manufacturing is delegated to a DH site in Northern Italy which, in turn, manages a network of sub-suppliers that manufacture the product. It is the cognitive roles of these companies that are of interest here. These companies have a high specialization in the manufacture of fashion apparel. This precious knowledge (which is often associated to experience and manual skills, and is therefore assimilated to a tacit component of knowledge) would be not enough to compete in the global markets that are dominated by brands and their stylists. Thus, the specialized (and tacit) part of knowledge that the suppliers own, needs to be combined with the knowledge (of markets, fashion trends, consumer habits, distribution channels, etc.) that only the leading firm possesses. Thus, for the local suppliers, there is the need to understand the “stylistic messages” coming from the leading firm that summarize the characteristics of the products, and to interpret them into operative actions that allow to manufacture high quality and sellable products.

The Geox monobrand distribution network

Born in the 90s, the Geox Group operates in the footwear and garments sectors. Currently, with a turnover of about 800 million euros and more than 20 million pairs of shoes manufactured, Geox is the first footwear producer in Italy and one of the biggest in the world. Geox produces patented products, whose features are breathability and impermeability.

Today, Geox does business in 68 countries. Even if the traditional multi-brand channel (currently formed by about 10,000 points of sale) still represents the main distribution channel, the weight of Geox mono-brand shops (that are the flagships of the Geox name in the world’s main cities) is increasing: these are 669 stores, 534 of which in franchising and 135 directly operated. The franchisees are small independent companies, that need to fit the brand’s image and marketing policies.

This mixed (contractual and owned) sales network is directly and continuously controlled by the headquarter in order to achieve a good knowledge of the market, for making appropriate sales forecasts and, by this way, governing the whole operations. Likewise, the shops need to count on appropriate delivery plans. Indeed, a proper and timely replenishment is extremely important (customers are not very loyal). A specific ordering procedure has been implemented: nearly all the stores in franchising make their first order based on a proposal made by Geox based on sales forecasts. Especially for basic products (that are produced based on a make-to-stock approach) the franchisees have a fixed deadline to decide if to accept or modify that proposal. Instead, there is a larger freedom of order for fashion goods (but in that case Geox does not assure neither the re-assortment nor the return of unsold goods). Thus, the whole system can function properly if the shop and the leading can acquire good knowledge of the market, and share and combine such knowledge for the efficiency of the whole process.

Also, Geox proposes some pre-arranged options about the compositions of deliveries to shops (in terms

of number of shoes and sizes in a same parcel). Retailers can only decide which composition to accept. Although this may be perceived as an element of rigidity, the solution allows Geox to reduce the managerial complexity, and to compose the parcels directly at the plants, thus reducing distribution costs and times notably. This effective flow of structured knowledge also enables an automatic replenishment system (now under test).

The acquisition of these flows of structured knowledge is substantially performed by means of a direct electronic connection: all the owned shops and the majority of franchisees send sales data to the firm's server directly, so that every morning the corporate executives can achieve updated knowledge of the relevant sell-out. In this way, Geox can rapidly and usefully exploit the vast amount of data coming from the stores, which are the real point of contact with the market.

Beside these activities, that are more structured and can be based on coded knowledge contents, more complex and relevant knowledge about customers flows in other ways. For instance, an important element is represented by the feelings of sales manager: the directors of some representative shops are generally requested to actively attend the presentation workshop of a new collection. This activity also involves an increasing portion of the franchisees.

To sum up, the network of monobrand stores is denoted by bi-directional knowledge communication flows that make use both computer-based and traditional (phone, face-to-face, etc.) communication channels. On the contrary, for the rest of multi-brand traditional distribution channel the relationships are substantially based on market-like transaction. Therefore, to join the network a retailer must have not only the capability of selling shoes, but also that of assimilating and meeting the knowledge requirements of the whole systems.

Discussion and conclusions

This study moves from a central assumption: in the current competitive environment the capability of networking is increasingly vital. This can be seen in cognitive terms: to succeed in markets that have a global extension, it is necessary to combine the specialized competence that a firm possesses with the cognitive elements that are present in the network. Thus, when we talk about networks we are talking about knowledge networks. Even though the current management practice rarely considers the cognitive implications of networking in an explicit way, knowledge is an essential ingredient of business that needs to be dealt with properly.

With regard to this, this study highlights that the cognitive functions of companies in networks can be extremely different. Especially, the leading company (which is, very often, a large enterprise) sets and manages the cognitive framework that characterizes the functioning of the network: in other words, the leading firm establishes the conditions and rules that influence the specialization of the other companies (and, especially, the smaller units) and for the exchange of knowledge between them.

Completely different is the role of small companies. For these, the inclusion in international networks is crucial, because they do not have the capability to manage the knowledge assets that are needed to succeed with a business project in the global arena; nor the local flexible relationships (which were their main point of strength) are enough any more. For the small businesses, the awareness of their cognitive role in networks is even lower than the larger corporations: however, our analysis shows that this cognitive role, despite implicit, is important to succeed in a network.

A small company has a very limited role in setting the "general conditions" that regulate the cognitive functioning of a network; on the contrary, it has to assimilate the elements settled by the leader and to interpret them in the proper way. In other words, understanding the cognitive functioning of the network and learning how to use it is an essential ingredient of a small company's business.

We showed that networks are different from one another, also in cognitive terms. It is however possible to identify some essential dimensions that characterize their cognitive features and influence the way a small firm can fruitfully operate in them.

Language. To share knowledge means the use of a communication language. While the leading company has generally the power to set this language, the smaller units have to learn it in a proper way. The capability to code and de-code knowledge becomes necessary: on the one hand, there is the need to communicate with global firms based on standard technical or managerial languages (and, often, by means of ICT systems); on the other hand, the firms need to exploit their specialization and combine it with the rest of the network.

Kinds of knowledge. As the literature of KM shows, different kinds of knowledge call for different management approaches. For small companies, it becomes essential to combine their local (and often tacit) knowledge – based on operational experience and even manual skills – with the “general one” that circulates in the network. The tacit component of this knowledge represents the one that can be appropriated by the company, and is the base of its competitive advantage. However, to be used and combined with the cognitive elements owned by the other partners, the firm has to code this local tacit knowledge so that it can be shared in the network and combined to the others’ specializations. A proper balance of the two components of knowledge (the local/tacit one that represents the company’s competitive specialization, and the general one that has to circulate in the network by means of shared languages and codes) has to be found. This is an activity that small businesses should learn to do in order to enhance their role in the system.

Knowledge exchanges. In the end, a business network is always finalized to design, produce and deliver products or services to the market; to do that, the members perform several exchanges that have an economic value: for instance, suppliers produce components and deliver them to other companies that can assemble them, etc. Consequently, in a network, a firm produces value thanks to the transactions that occur with the other partners. A transaction between two companies implies several flows that are distinct but connected. As a matter of fact, there are flows of physical goods (e.g. components sold to assemblers by suppliers) and monetary flows (i.e.: the payments). In addition, companies also have an intense transfer of knowledge as part of their relationship. For instance, in the development of a new product, there is often a complex exchange of knowledge among designers, assemblers, suppliers, and all the other partners that are involved in the definition of the various components of that product. Also, in the negotiation of a new supply, there is the need for a complex exchange of knowledge before the partners start to trade. We can thus argue that two companies need to exchange a lot of knowledge well before the physical or monetary transfers occurs. This is particularly important in a network where, for instance, companies co-designing a product exchange knowledge to perform such activity. Knowledge flows also occur even regardless that a product is finally sold: suppose, for instance, that in an OEM and a supplier cooperate to design a new product (for instance, a core component of a new tractor), but the project eventually fails. In that case, there will be no physical or monetary exchanges (no component will be produced and sold; no payment will be made) but the two companies have exchanged knowledge, and such knowledge has a value for both parties, because it becomes useful experience that can be exploited in future projects. Thus, valuable knowledge is exchanged even when the trade of physical goods is not complete. In a network, this mechanism becomes particularly important: managing the flows of valuable knowledge becomes a way to manage the relationships in a network. This has important implications for small businesses: the understanding of the way knowledge is exchanged before, during, and after physical transactions can be essential to find new ways to run the business. For instance, methods and tools to collect the knowledge produced, acquired or delivered during a project, to store it, and to re-use in new future projects can improve the innovative contribution of the company and to help the firm succeed in the network. Recognition of the kind of

knowledge that is exchanged with the other companies and the way it can be handled is therefore essential here.

Based on the elements examined here, it may be possible to define and classify different conducts and strategies of knowledge networking for small businesses, and the implications for their management more generally. To some extent, the analysis presented here (which is, essentially, explorative) can be the starting point for new studies. A future research agenda can thus include the classification of cognitive strategies in networks and their empirical validation. This can help to define guidelines for management or, at least, to underline the problematic issues of small business management in the global environments.

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Cooperative marketing for company founders – Opportunities of a regional cluster brand

by Kaminski, Sandra and Zanger, Cornelia

When evaluating the success of company foundations and their ability to survive, a great importance is attached to marketing. This paper deals with the question if, apart from or in addition to the establishment of an own (individual) brand, the company foundations might also have some opportunities they should take to cooperate within brand policy. The regional cluster could be identified as a productive field for the implementation of cooperations in brand policy. By bundling resources and developing an “umbrella”, such coordinated and cooperative approach in branding can make it easier for the start-ups to enter the market and thus to influence the success of the business start-up to a decisive extent. The subject matter of this paper will be the connection of advantages for business start-ups of a cooperation within a regional cluster in the form of a regional cluster brand with individual brand strategies. Due to the reference to identity and strengths of the regional cluster as a whole, the regional cluster brand supplements the individual brand concepts of business start-ups without constraining them. This paper focuses on the question to which extent the strategy of a regional cluster brand ensures a bigger success for start-ups on the market and in which way it makes sense and is reasonably practicable.

Keywords: Regional Cluster, Regional Cluster Brand, Brand Concepts

Problem statement and objective

In the course of many discussions led on importance and definition of marketing, the term of entrepreneurial marketing has established in the field of entrepreneurship research over the past few years. This paper follows the narrow conceptualisation of entrepreneurial marketing, understood as marketing in new high-growth companies (for discussions on such

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conceptualisation, e.g. Rößl/Kraus and Fink 2007; Gruber 2005; Bjerke and Hultman, 2002).

When evaluating the success of company foundations and their ability to survive, a great importance is attached to marketing (Freiling and Kollmann 2008; Gruber 2004). For instance, empirical studies show that venture capital providers attach a greater importance to the field of marketing, regarding the success of company foundations, than to other operational areas. Furthermore, empirical studies show that professional marketing is reducing the failure rate of business start-ups to a significant extent (Gruber 2004).

In general, new companies have to meet very specific challenges regarding their marketing activities (Gruber 2004). The founding team generally consists of new economic actors. They do not have any knowledge or data from the past offering indicators for necessary marketing activities. Furthermore, start-ups are influenced by uncertainty and turbulences in their environment (Gruber 2005, Bjerke and Hultman 2002). The limited size of new companies also involves restricted financial and human resources. Although, business start-ups must seize opportunities quickly, open up new business opportunities and establish relationships to external actors such as customers and suppliers. However, one must keep in mind that business start-ups are still unknown on the market and have no or only low reputation (Gruber 2005; Bjerke and Hultman 2002). It is usually an own brand as a “door opener” to success that business start-ups are still missing (Freiling and Kollmann 2008). The lack of financial resources, limited skills as well as limited expert knowledge in marketing restrict the possibilities of pursuable marketing and brand strategies considerably (Gruber 2004).

Some of the problems companies are currently confronted with are, for instance, the increasing inflation of products and brands due to an increasing market segmentation, the globalisation, the permanent entrance of new competitors, the shortening of product life cycles, the increasing inflation of communicative measures, information overload and quick information seeking behaviour of the consumers, the necessity to offer an additional benefit, increasing brand erosion, decreasing confidence in brands as well as the increasing power of trade (Esch, Wicke and Rempel 2005). Business start-ups are, however, particularly concerned by such problems due to the above mentioned disadvantages.

Establishing an own brand poses, thus, a particular challenge to new companies against the background of the difficulties of entrepreneurial management specified, on the one hand, and with regard to the current market and communication conditions, on the other hand. The scarcity of resources requires effective and efficient marketing. Cooperations, for instance, make it possible to compensate such scarcity of resources (Gruber 2004).

From the scientific point of view as well as in view of the company foundation practice, it raises the question if, apart from or in addition to the establishment of an own (individual) brand, the company foundations might also have some opportunities they should take to cooperate within brand policy. Cooperation strategies between small and medium-sized enterprises create potentials to compete with other companies by turning core competencies into synergies. This applies in particular to cooperative marketing, as shown in different studies (Zanger 2002; Zanger 2000). Now the question has arisen whether this may be also applied to cooperative brand strategies, as the individual brands of business start-ups – provided that they are even strategically developed – are exposed to a high competitive pressure by the strong brands of large enterprises and hardly protected against imitations.

The regional cluster could be identified as a productive field for the development and implementation of cooperations in brand policy (Kaminski, Forthcoming). Integrating the individual brand concepts of the actors of a regional cluster allows to support the development and maintenance of competitive advantages in the form of cost, differentiation and time advantages for the cluster actors. Such integration of individual brand concepts of the cluster actors results in a collective brand – the regional cluster brand. By bundling resources and developing an “umbrella”, such coordinated and cooperative approach in branding can make it easier for the start-up to enter the market and thus to influence the success of the business

start-up to a decisive extent.

The subject matter of this paper will be the advantages for business start-ups of a cooperation within a regional cluster in the form of a regional cluster brand. First subject is the conceptual definition of the terms regional cluster and regional cluster brand. It is followed by a discussion on chances and risks of such a joint brand strategy for business start-ups. Finally, the paper shows a case study example as well as a conclusion and an outlook.

The regional cluster

Different specialist areas have made a scientific approach to the cluster phenomenon (Moulaert and Sekia 2003). Until now, it has not been successful to combine the different perspectives in an interdisciplinary theoretic model. It rather turned out to be advantageous to consider the cluster phenomenon as a multi-perspective concept of different scientific areas, for instance from the viewpoint of the economic sciences, regional economics and economic geography, but also of the social / political sciences (e. g. Dümmler 2005; Schramm-Klein 2005; Benneworth and Henry 2004; Sternberg and Litzberger 2004; Newlands 2003; Gordon and McCann 2000; Porter 1999a). These different areas make their own contributions, but do not put the perspectives of other areas into question. Only this interdisciplinarity makes it possible to understand complexity and dynamics of existing clusters (Zanger et al. 2006).

Since the first contributions of Porter at the beginning of the 1990s, the cluster concept has awoken great interest. However, Porter's original concept was criticised for being too vague (Martin and Sunley 2003). This unclear definition resulted in many different cluster interpretations (for overviews of definitions from the viewpoint of strategic management, e. g. Dümmler 2005; Enright 2003; Martin and Sunley 2003; Belleflamme, Picard and Thisse 2000).

Nearly all cluster definitions include the following features (Dümmler 2005; Schramm-Klein 2005; Sautter 2004):

- relation of the actors to a main sector – sectoral limitation of a common value-added chain
- low distance between the actors – geographic proximity as well as social proximity resulting therefrom
- interaction between the actors – relationships ranging from simple input-output relations to close cooperations
- implementation of positive external effects – such as spillovers, economies of Scale

In this context, a regional cluster means a regional above-average concentration of companies, especially SMEs and institutions of a main sector as well as further related supporting sectors, which are acting together using value-added chains or diagonal interaction to achieve competitive advantages in the national and international context (cf. Kaminski Forthcoming).

The core of the regional cluster is thus the potential of the cooperation between regionally and functionally adjacent companies, public authorities and administrations, research facilities, universities, organisations, collective institutions and associations. The cluster stands between business competition and cooperation. Cluster actors compete for consumers, on the one hand, and cooperate in several areas, on the other hand. The cooperation in certain areas (such as technology) might facilitate competitive successes in other areas (such as marketing) (Porter 1999).

The cluster may be understood as an element of a region, which allows the transfer of distinguishing features of a region in form and content (e.g. Blotevogel 1996). On the one hand, it formally concerns a medium-sized region above the local/communal and below the state/national level, where social communication is not only realised through the media, but

also implemented using direct face-to-face communication. On the other hand, a regional cluster may be understood as a functional area, which is formed by individual or institutional action and which is subject of economic, political and administrative activities. The functional relation of the regional cluster arises from the core sector and the value chain related thereto. Furthermore, the regional cluster can be taken as an area of perception or identity (for regional identity in general, Blotevogel 1996; Weichhart 1996), which is of special interest with regard to a common brand identity (in detail Kaminski Forthcoming).

The regional cluster brand

Cooperation in form of a *regional cluster brand* means a formal, multilateral and diagonal type of cooperation of the cluster actors in the field of marketing. The regional cluster brand as a *collective marketing strategy* provides an adjustment and strategic orientation of the cluster actors' behaviour towards each other and is a knowingly planned and systematic approach of several organisations to achieve competitive advantages. A *common marking* of the cluster actors' performance bundle is pushed forward by the individual brand *and* the regional cluster brand. Existing concepts established by the cluster actors, particularly in the field of communication, may be supported (cf. in detail Kaminski Forthcoming).

The development of a cluster brand is an *active process initiated from inside*. The partners of this type of cooperation can be all regional cluster actors. On that note, the *regional cluster brand* can be understood as a concept of corporate brand management in terms of a supra-institutional external brand combination strategy. The focus of the regional cluster brand is on the support and supplementation of the individual brand concepts of the cluster actors (cf. Kaminski, Forthcoming).

The constitutive condition is, however, that the regional cluster brand obtains an own distinctive marking and will be placed on the market by means of a systematic communication concept. The cluster brand gives the promise to stand for long-lasting, valuable and profitable effects for the customer as the connecting link between all cluster actors (represented by their individual brands). The regional cluster brand arises from the synergetic alliance of competence, image and identity of the individual actors, their activities in the industrial sector and their affiliation to the region. The use of the regional cluster brand thus enables business start-ups to strengthen the own individual brand, to become generally known and to enter new markets quickly and flexibly. The regional cluster brand can serve as a "door opener" for start-up companies and their individual brand concepts. In this way, the regional cluster brand gives business start-ups the opportunity to compensate weaknesses, to develop strengths further and to adapt to customer requirements.

Approach to the development of a regional cluster brand

The development of a regional cluster brand orientates strategically towards the approach of identity-oriented branding, which assumes a permanent exchange between the brand identity as a self-image from the viewpoint of the brand generator and the brand image as the public image from the viewpoint of external target groups (Burmam and Meffert 2005; Esch, Langner and Rempel 2005).

The *self-image* of the cluster brand includes factual, emotional and source-related elements. These elements arise, on the one hand, from the largest common denominator of the individual performances and brand concepts of the cluster actors. On the other hand, the profile of the regional cluster as a whole defines its contents. The *factual components* arise from the common objective features of the services offered as well as of the core competencies of the cluster actors. The success of the regional cluster brand is further defined by *emotional components* concerning the relation between brands and consumers. On the emotional level, the brand personality, on the one hand, is significant. This makes it necessary

to work out similarities between the emotional components of the individual brand concepts. On the other hand, the cluster brand provides potential to strengthen the brand-consumer relationship through authenticity and confidence. *Authenticity* may be achieved by regional, local and historical attachment, competence, professionalism and originality of the brand performances and the stories communicated with them (Lewis and Bridger 2001). In this way, the regional and historical attachment of the cluster actors gives the opportunity to let the regional cluster brand appear particularly authentic. Cooperation and interaction between the cluster actors provide opportunities of a particularly authentic and original orientation. The source-related elements of the brand self-image guarantee the link to the region of the cluster brand in terms of a designation of origin for the individual brand concepts. From this entire structure of the brand, unique and profitable features are chosen and a vision of the regional cluster brand is developed, taking into account the consumer needs, competitive brand concepts and current trends. In the next step, such unique and profitable features are established as the central features of the cluster brand on the market. The result is the stable brand essence, which makes the central value proposition towards the reference groups. These contents of the brand self-image define the content structure of the systematic communication concept of the regional cluster brand. This self-image is realised through positioning, that means, it is “translated” for the consumers. When doing so, relevant market and communication conditions are to be taken into account. The public image of the regional cluster brand depends on how the consumers evaluate the signals sent by the cluster brand. Self-image and public image of the brand concepts have to be harmonised in order that the individual brand concepts as well as the concept of the regional cluster brand can be successful (cf. in detail Kaminski Forthcoming).

Chances and risks of the regional cluster brand strategy for business start-ups

Choosing a company location within a regional cluster enables business start-ups to use the opportunity of marketing cooperations in form of a regional cluster brand and thus to meet the challenges of developing own brand concepts in an effective and efficient way. Scarcities of resources may be compensated and the development of an own brand may be supported.

The regional cluster brand focuses on the support and completion of the cluster actors’ individual brand concepts. On the one hand, the business start-ups are able to participate in the *transfer of competencies and immaterial resources* between the cluster actors. Thus, the individual skills of the cluster actors’ staff members, particularly in marketing and branding, are of special interest for the transfer between the actors. Such knowledge may concern, for instance, competitors and consumers, distribution systems, current trends and also marketing-relevant data from the past. In addition, internal knowledge on the organisation of communication policy with regard to communication contents and the use of communication instruments may be exchanged. Furthermore, the common use of communication instruments can result in a reduction of communication costs for business start-ups (e. g. joint stand at trade shows, joint events for consumers or suppliers) (cf. Kaminski, Forthcoming). These transfer effects give business start-ups the opportunity to compensate their lack in human and financial resources.

On the other hand, the *synergy* of core competencies and resources of the cluster actors can be used for purposes of content structuring and positioning of the regional cluster brand. For this purpose, immaterial resources in the field of technology as well as material resources and core competencies defining the essential benefit for the consumers are particularly suitable. However, only such resources and competencies that the majority of the participating cluster actors dispose of are suitable for the regional cluster brand and the external *joint communication*.

In terms of regional identity, the cluster brand can also serve as a designation of origin. The findings in the country-of-origin research show that the origin of products or companies can produce positive associations, sympathy and confidence (e.g. Russell and Russell 2006; Liu and Johnson 2005; Papadopoulos and Heslop 2003; Kaynak et al. 2000; Verlegh and Steenkamp 1999; Lampert and Jaffe 1998; Ahmed and d'Astous 1993). These positive effects of the origin may be used as well for establishing successful brand concepts for business start-up. In terms of a designation of origin having a positive connotation, the regional cluster brand can achieve positive transfer effects for start-up brands and lead to sympathy and confidence towards the business start-ups. In order that the denotation of origin can take effect, the regional cluster brand must symbolise common values of active regional SMEs in the sector, these values based again upon the common cluster identity. The common identity can be strengthened and developed further by means of communication. The development of the regional cluster brand is to be understood as a communication process and is thus able to strengthen and develop further the common cluster identity by means of *feedback effects* (cf. Kaminski, Forthcoming).

The findings on *brand transfer* are important to explain and understand the *external effects* of the regional cluster brand on the individual brand concepts of business start-ups. The positive knowledge structures, which are formed in terms of the public image of the regional cluster brand on the consumers' part, shall have a positive effect on the knowledge structures of the individual brand concepts of the cluster actors. In this context, one strives for a transfer of brand knowledge (brand image and brand publicity) from the cluster brand to the individual brand concepts in a functional, regional and emotional regard. This brand transfer can be effective in three directions (cf. Kaminski Forthcoming, for effects of brand transfers Drengner 2006; Günther 2002):

- *stabilising of individual brand concepts*
- *repositioning of individual brand concepts*
- *development of a new individual brand*

Regarding the development of individual brand concepts of business start-ups, the permanent presentation together with the regional cluster brand gives the possibility to make the individual brand concept known and to achieve certain image associations. When creating a new image, new denotations and/or connotations are associated with the new individual brand concept of the start-up company. This transfer allows to improve the mental processing and storage of the new brand as well as to reduce the learning effort on the *consumers'* part. Furthermore, the popularity and confidence advantage of the regional cluster brand may lead to a reduced risk for the individual brand of the start-up company. This makes it possible to reduce information and research costs of the consumers and to increase the consumer acceptance of the individual brand of the start-up. Such consumer-related effects can also increase the acceptance of the individual brand of the start-up with regard to the *retail market*. This is reflected in an increased motivation on the retail market and can thus reduce acquisition efforts and guarantee PoS presence and a place in the shelf. This allows start-ups, on the other hand, to reduce investments in the brand development. The higher brand awareness and consumer confidence allow to amortise the capital expenditures more quickly. To reduce *costs*, the expenses necessary for the profiling of the individual brand concepts *are borne*, to some extent, *jointly* by the cluster actors – for instance, communication resources are bundled and costs are thus reduced (cf. Kaminski, Forthcoming).

However, transfer successes may be only achieved if the regional cluster brand is *well-known* and calls up *strong, positive* and *unique* associations. Then, there must be a *credible link* between the regional cluster brand and the individual brand concepts. Such similarity may be produced, for instance, by emphasising a common range of use or common worlds of experience. Additionally, it is important that the associations to be transferred by the cluster

brand are *relevant and unique* to the consumers to achieve a differentiation from competitive offers. However, one must keep in mind that this transfer can run in both directions and negative transfer effects may occur as well (Kaminski Forthcoming, for influencing factors on the success of brand transfers in general, e. g. Caspar and Burmann 2005; Keller 2005; Park, Milberg and Lawson 200; Zatloukal 2002).

However, the *options* of the start-up to *shape* the new brand are limited, as the success of such a cooperative brand strategy makes it necessary to follow the image of the regional cluster brand to a large extent (Kaminski, Forthcoming, for risks of brand transfers in general Caspar and Burmann 2005; Zatloukal 2002).

We have to take into account as well that the actors of a regional cluster must face each other as competitors on the market in different areas. The overcoming of mental barriers between the entrepreneurs plays a decisive role for the success of the cooperative brand strategy and for supporting the building of a new brand of the start-up company. In spite of positive relations between the brand concepts, so called *cannibalisation effects* might occur between the providers. This effect, however, can be accepted in order to prevent customers from drifting away to competitors outside the regional cluster (for cannibalisation effects in general Caspar and Burmann 2005; Aaker 2004; Zatloukal 2002.). To reach this understanding of “acceptance“, the participation and trustful communication between the cluster actors is decisive for success. The actors must cooperate as equal partners. From the beginning, the start-up companies must integrate into existing structures of the regional cluster. All in all, the objective is to strengthen the idea of cooperation between all actors and to reduce competitive thoughts. Keeping the implementation of positive effects of the common brand strategy in mind, individual interests have to be reconciled with common interests of the cluster actors.

One can see that the cooperation in a regional cluster brand gives a lot of opportunities to compensate weaknesses, to further develop strengths and to adapt to new customer needs. For a more detailed definition of the regional cluster brand concept, the following sections show the results of a research case study.

The case study – A cluster of the manufacturers of musical instruments in Germany’s Vogtland region

The regional cluster of the manufacturers of musical instruments in Germany’s Vogtland region

The Vogtland region in the south-west of Saxony is home to a concentration of companies active in the manufacturing of musical instruments. This region can be characterised as a regional cluster due to the following features (Kaminski Forthcoming):

- Sectoral delimitation of the value-added chain: The manufacturing of musical instruments is the main sector. Nearly all orchestra instruments are manufactured in approx. 120 companies. The value chain related to the main sector also includes companies of the timber industry, accessories manufacturing, downstream sectors and special infrastructure, standardisation institutes, public authorities (e.g. Institute for the manufacturing of musical instruments), education and research providers (e.g. location of the West Saxon University of Zwickau [University of Applied Sciences] in Markneukirchen) and financial institutions. Organisations and associations such as heritage societies, guilds, the Chamber of Trade as well as the Chamber of Industry and Commerce (IHK) are also of importance.
- Geographical and social proximity of the actors: The geographical proximity of the actors relates to the region of Markneukirchen and Klingenthal. Since the foundation of the first violin maker guild in 1677, the region can be considered to be a historically

grown area, which is strongly rooted in the inhabitants' imagination and which has created regional identity as well as social proximity.

- Indicator for a critical mass of actors: The manufacturing of musical instruments currently accounts for 60-65% of the economic infrastructure around the towns of Markneukirchen and Klingenthal. This mass of similar or supplementary partners with their specialised personnel, skills and knowledge allows to influence the surrounding economy to a significant extent and to indirectly pass on growth impulses to other sectors of the region.
- Existing interaction of the actors: Particularly with the help of the project "Musicon Valley" supported by the BMBF (Federal Ministry of Education and research) initiative InnoRegio, different networks could be implemented between cluster actors as well as between external partners. An important central partner in this context is the branch office of Musicon Valley e. V.
- Implementation of positive external effects and cluster-specific competitive advantages: The interaction between the actors resulted in an exchange of knowledge in terms of collective learning processes. These processes allowed to gain new insight, for instance, into the use of modified and renewable timber products. This stimulates the specialisation of the cluster and leads to the development of spatially limited resources and skills, which are only accessible to the cluster actors.

The cluster of the musical instruments manufacturers in the Vogtland region as a regional cluster is a suitable subject matter of a case study on the concept of a regional cluster brand. In the context of a study of the InnoRegio project "Musicon Valley" supported by the BMBF, the developed theoretical approach to the regional cluster brand could be examined in a real environment from November 2004 until August 2006. To do so, the research field of the regional cluster brand was *explored* using qualitative, multi-methodical, empirical methods. For this purpose, various data collection methods, ranging from participating observation, interviews and group discussions as primary research methods to the analysis of reports, presentations and documentations as secondary research methods, were used (for collection methods of a case study in general Robers 1999; Lamnek 1992; Tomczak 1992).

The starting point of the research paper on the case study was a two-stage situation analysis. The focus of the exterior analysis was on the central competitors in Germany, Eastern and Western Europe, North America and Asia as well as the essential target markets and target groups. The interior analysis explored both the Vogtland cluster as a whole and the cluster actors. Based on interviews given by local experts on the speciality of the musical instruments cluster in the Vogtland region, a partly standardised interview guide was developed to interview the company representatives of the manufacturers of musical instruments in the Vogtland region. The possibility to freely combine certain batteries of questions allowed a conversation adapted to the respective interview situation. However, the partial standardisation provided a comparability of the research results.

The *samples* of qualitative research processes are not representatively (in statistical terms) chosen from the population, but on the basis of "their possible contribution to certain theoretical assumptions" (Zanger and Sistenich 1996). Regarding this theoretical sampling in the course of the research process, the sample was taken depending on what contribution to the concept development it can make (Zanger and Sistenich 1996). Well-established companies with or without individual brand concepts as well as start-up companies were interviewed in this context. The *sample* consists of 36 manufacturing companies of musical instruments in the Vogtland region. Subsequently, the data collected were summarised, structured and categorised. Using methods of the *qualitative content analysis* as an evaluation instrument, the sampling showed indications on strengths and weaknesses of the companies as well as of the whole cluster.

At this point, the paper looks at the quality criteria of qualitative market research. On principle, a transfer of quality criteria of quantitative research processes on the qualitative research without any discussion needs to be viewed critically (e.g. Roll 2003; Kepper 1994). In particular, the quality criterion of validity is often discussed in papers on qualitative research (e.g. Roll 2003; Kepper 1994)

The qualitative research process is a communication process, whose essential elements are the communication and interaction between researcher and test persons. Such communication and interaction are of importance for both the collection stage and the evaluation stage, as the feedback to the test person may increase the validity of the whole research process (e.g. Roll 2003; Kepper 1994) The communicative validation assumes that a renewed discussion of results and interpretations with the interviewees increases the quality of the results (Mayring 2000) In a more extended understanding of the term of communicative validity, researchers of other scientific communities, too, are accepted as consultants for the interpretation (Kvale 1995.) Consensual validation (in terms of a verification of the consensus between several interpreters) as well as criteria validity (in terms of a validation of conclusions by means of external criteria) are additionally discussed (Zanger and Sistenich 1996; Kepper 1994). Furthermore, numerous considerations on process description, argumentative interpretation guarantee, proximity to the subject, triangulation or usefulness have been made in the relevant literature (Roll 2003). Ensuring a high transparency of data collection and evaluation steps relates to the classic quality criterion of reliability. This classic criterion of reliability can be replaced by transparency by revealing the whole procedure (Kepper 1994).

However, these above-mentioned quality criteria of qualitative research are an informative basis only, which needs to be adapted to the respective research process (Roll 2003). From the beginning, special attention has been paid to the permanent interaction and feedback with the actors of the musical instruments cluster of the Vogtland region in the context of this case study. On the one hand, this increased the acceptance of the entire research process within the musical instruments cluster in the Vogtland region. On the other hand, the feedback given to the actors allowed a more profound understanding of the whole situation and thus improved the validity of the entire research process. Furthermore, the results and interpretations of the interviews were regularly discussed with other researchers of the scientific community, for instance in discussion rounds of all scientists participating in the interviews. The step-by-step progression and documentation of the evaluation method of the qualitative content analysis made the entire research process transparent (cf. Kaminski Forthcoming).

Three researchers conducted the interview. The duration of the interviews ranged from 45 minutes to 150 minutes. The participation of several researchers allowed exchange processes already during the collection stage. In addition, the discussion processes during content analysis and evaluation had a positive effect on the validation of the implemented qualitative research process. In the course of workshops and cooperation talks in the forefront of the interviews, the research team developed sensitivity and openness for the interview project on part of the cluster actors. As a result, the project as well as the participating scientists have been already known to them, allowing a positive progression of the interview. The interview partners included managing directors, proprietors and marketing responsables. During the evaluation stage, too, feedback rounds with the cluster actors involved were organised on site to discuss the results of the analysis. In such discussion rounds, the research results were made transparent using both schemes and texts (cf. Kaminski Forthcoming).

The regional cluster for the manufacturing of musical instruments in Germany's Vogtland region in its current economic environment

Musical instruments are *durable consumer goods*, which have to meet high “technical” requirements (e.g. material, workmanship, long-life cycle, easy playability). But it is also emotional aspects such as the tradition of the instrument or a warm sound, which influence the purchase.

The long tradition of the manufacturing of musical instruments in the region of Markneukirchen and Klingenthal ensures an excellent manufacturing know-how as well as qualitative and productive advantages of the musical instruments manufacturers. By the beginning of the 20th century, the region was well-known and a global market leader with numerous premium brands in various fields of instruments. In the period that followed, economic and political changes showed, however, that the manufacturers of musical instruments in the Vogtland region have been isolated from the international (western) market for decades. The popularity of the brands of the musical instruments making suffered from this. Currently, we state a low international recognition. Export sales with a quota amounting to more than 50 % are, however, still of high importance for the manufacturers of musical instruments in the Vogtland region, underlining the particular relevance of increasing the international recognition of musical instruments made in the Vogtland. On the market, they are confronted with well-established, strong and emotionally conditioned competitive brands from Western Europe (esp. Italy and France), competitors from other German regions (esp. Bavaria) as well as substitution competitors from Eastern Europe and Asia counting on price-quantity strategies. However, the majority of the manufacturers of musical instruments in the Vogtland region are currently not able to compete with others in this competitive environment in the long term.

The success of business start-ups in the sector of musical instruments manufacturing depends on the establishment of brand concepts to a vital extent. The start-up companies have to meet the challenges of an increasingly fierce competition on the international markets while having only limited human and financial resources. In this regard, a common cooperative brand strategy offers significant potential for success to establish on the international market.

We already observe several “grassroots activities“, that means that various companies are trying to cooperate for joint marketing and distribution activities. This concerns four companies belonging to the string instruments sector. One of these companies is a business start-up. This company benefits from the cooperation in the field of marketing with the other already well-established companies. This cooperation can be seen in distribution as well as in corporate communication (e.g. joint stand at trade shows, joint website). The further development of both communication and distribution policy follows the previous successes of the companies being already well-established. Thus, it was much easier for the start-up company to access the international markets and to open up new customer groups.

Chances of a regional cluster brand for start-up companies inside the cluster for manufacturing of musical instruments in the Vogtland region

Based on the results of the situation analysis, they developed the self-image of the cluster brand for the manufacturing of musical instruments in the Vogtland region. At this point, it is the brand core which is presented, such core making the central value proposition to external target groups. The core of the regional cluster brand may be described by four elements:

- long tradition
- craftsmanship
- individuality
- made in Germany, made in Vogtland

This brand core includes functional, emotional and source-related aspects. The functional components represent the high quality standard of the brand and guarantee high quality of material and manufacturing of the musical instruments. The emotional focus concerns the individual, direct and cooperative customer relations, the personal touch and the unique charisma of the musical instruments as well as the long tradition and craftsmanship, ensuring the extraordinary and excellent sound experience of the instrument. The source-related components relate to the origin from the Vogtland region and Germany in the sense of high manufacturing quality, reliability, precision, calm and security of manufacturing (Kaminski Forthcoming).

The regional cluster brand is intended to deliver the central message that the *legend² of the traditional manufacturing of musical instruments in the Vogtland is alive*. This knowledge formed on the consumers' part needs to be transferred to the individual brand concepts of the manufacturers of musical instruments in terms of a brand transfer and thus contribute to the differentiation from competitors outside the cluster. However, one must keep in mind that all measures taken with regard to this legend have to be authentic. The communication must respect the criteria of local and historical attachment and credibility by transferring an authentic message. The self-image developed for the regional cluster brand needs to be translated using a suitable positioning strategy. Significant chances for success are shown in an experience-driven positioning. The objective is to create an experience-driven framework in order to transform events and situations into a unique experience in connection with the manufacturing of musical instruments in the Vogtland region, using subjective interpretations. The result is a retention of the cluster brand – in connection with the individual brands of the cluster actors – in the world of emotions and experience of customers and potential demanders (for effects of experience-driven basic conditions in the field of marketing e.g. Klaus 2007.).

With regard to the brand transfer effects shown in Section 4, that means to start-up companies that, thanks to the joint use, the regional cluster brand with its contents and its core message is to help the own new individual brand to become more popular as well as the image components tradition, craftsmanship, individuality, Made in Germany, Made in Vogtland.

The contents of the self-image and the experience-driven positioning strategies of the regional cluster brand form the basis for design and use of a systematic experience-driven communication concept for the regional cluster brand. During the development of such systematic *communication concept*, special attention was paid to the cooperative development of an authentic, experience-driven framework. Six different cooperative experience modules have been developed to showcase the overall experience of the regional cluster brand for the manufacturing of musical instruments in the Vogtland (handicraft-tradition-sound, visit in the Vogtland region, adventure trail, participation in trade shows, wholesale trader events and virtual cluster of manufacturing of musical instruments). These experience modules reflect five types of experiences (sensory, affective, cognitive, behaviour-related, social), which are intended to create special value and quality of experience for the customers in connection with musical instruments made in the Vogtland region. Thus, the cluster brand can be experienced in a multi-sensual way, as it is not only presented in a function-oriented manner, but may be also positioned in the regional identity. Thus, the cooperation of the cluster actors in the field of marketing allows specific promises of experience, going beyond the promises specific to individual brands. To achieve an overall success of such experience modules, it is necessary, however, that *all* cluster actors together are contributing their know-how and their

² The legend in this context is to be considered as the unique emotional aspect, which may not be explained by rationality and represents the particularity of a subject or an object for marketing.

skills. In this context, it would be advisable to cooperate with hotels and spa facilities in the region to an increased extent in order to adjust and coordinate the module “Visit in the Vogtland“ the best possible way and thus to enthruse the customers (Kaminski Forthcoming). Another challenge to be met is to efficiently communicate the contents of the communication concept to external target groups. To do so, all communicative measures of the regional cluster brand need to be developed in accordance with the basic principles of *integrated communication* (integration in form, time and content). That means particularly to business start-ups that the communication policy of the own new individual brand needs to be adjusted to the communication policy of the regional cluster brand at a very early stage. Positive transfer effects may be only achieved if the business start-ups succeed in adjusting the own communication strategy to the communication strategy of the regional cluster brand with regard to time, content and visual appearance.

Furthermore, it must be noted that the empirical study showed the fundamental importance for the success of a regional cluster brand that all actors assume responsibility for the management process of the cluster brand as well as the *supervision* of this process relating to an *active integration, participation and sensitisation*. An active integration of all participating cluster actors from the beginning enables them to overcome mental barriers with regard to the cooperation with direct competitors. Beyond this, there are questions concerning the protection of the ownership and the regulation of use of the cluster brand. Consequently, it is necessary to institutionalise the ownership of the regional cluster brand. In this context, it must be paid special attention to the internal acceptance of the institution or person assuming this function (Kaminski Forthcoming).

All in all, it shows that business start-ups within the cluster for manufacturing of musical instruments have the following opportunities in the field of branding when benefiting from the regional cluster brand and the cooperative approach: Thanks to the functional, regional and experience-driven relation to the regional cluster brand, start-up companies situated in the dynamic and international competitive environment of the musical instruments manufacturing can benefit from differentiation and positioning advantages as well as from cost saving effects, which could not be implemented in this way or only including high expenditures in terms of financial and human resources, if they had a sole brand strategy or a company location outside the cluster for manufacturing of musical instruments in the Vogtland region.

Conclusion and outlook

The results of the case study have fundamental importance for companies and business start-ups being mainly specialised in the sector of high-quality consumer goods. However, there are possibilities of transfer regarding other types of products and services (for instance transfer to biotechnology cluster). These cases, however, require an adaption to the development of brand strategies in the field of business-to-business.

A conclusion could be to say that, up to now, it has been only in exceptional cases or rather by chance that, in practice, the choice of the business location of start-ups within a regional cluster including its cooperation potential was considered or used as a chance to optimise marketing of new companies. However, it can be seen that the regional cluster brand concept gives business start-ups the opportunity to overcome difficulties with regard to financial shortage or staff shortage occurring by the development of a professional brand strategy. In addition, this type of cooperation shows ways to start-ups how to face the current market and communication conditions in a successful and efficient manner as well as how to establish unique individual brand concepts.

The cooperative strategy of the regional cluster brand makes it possible to achieve brand transfer effects for the development of new individual brand concepts of start-up companies. The regional cluster brand results from the synergetic combination of competence, image and identity of the individual actors as well as their activities in the sector and their affiliation to

the region. Taking into account the conflict area between preserving individuality and using chances of collectivity, the regional cluster brand opens up new ways how to generate strategic competitive advantages in the international environment for business start-ups. Thanks to the functional, regional and experience-driven relation to the regional cluster brand, start-up companies can benefit from differentiation advantages towards competitors in a dynamic competitive environment, which competitors outside the regional cluster could not achieve in this way or only including high expenditures in terms of financial and human resources, being otherwise only available to large enterprises.

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Management buy-in of small businesses: a typological study of intentions to buyout viable vs distressed firms in France

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Abstract

Management buy-ins are not a common theme in small business research, as SME takeovers are usually studied as part of external growth strategies for existing firms (Salvato et al., 2007). Ucbasaran et al. (2001) argue that more research attention should be directed towards understanding the behavior of different types of entrepreneur and the different organizational forms selected (corporate venturing, management buy-outs and buy-ins, franchising). In order to understand and describe small firm management buy-in, we conduct a comparative study between intentions to buy-in a viable SME and intentions to buy-in a distressed SME (in financial difficulty or in administration).

The research method is exploratory and descriptive. It is based on 44 questionnaires with entrepreneurs who have a project of management buy-in. The results show that according to the types of firms targeted by entrepreneurs some significant correlations may appear. Three types of entrepreneurs are identified: the adventurous, cautious and indifferent manager.

The organizational forms used by entrepreneurial ventures represent an important area for entrepreneurship and small business research (Ucbasaran et al., 2001). This article deals with management buy-ins, takeovers by an individual, an external manager or a management team.

Management buy-ins are not a common theme in small business research, as SME takeovers are usually studied as part of external growth strategies for existing firms (Salvato et al., 2007). Ucbasaran et al. (2001) argue that more research attention should be directed towards understanding the behavior of different types of entrepreneur and the different organizational forms selected (corporate venturing, management buy-outs and buy-ins, franchising).

Researches usually define management buy-in as the repurchase of a firm in order to own it: the manager alone or with his family, or his allies, acquires the absolute majority of the

capital (Deschamps, 2002). Management buy-in realized by individuals (in opposition to management buy-in done by existing firms) presents some specific dimensions in the field of entrepreneurship (Deschamps, 2002), due to the ignorance of the manager about the firm he targets. Forming part of a functioning structure, of different culture and having its own history, the manager also has to manage employees he did not recruit. If the researches on the subject are developing more and more, they are oriented on several dimensions: evaluation, targeting and value creation potentialities of the firm (Bruton *et al.*, 1994; Barbot, 2002; Salvato *et al.*, 2007) ; processes and stages *ex ante*, but also the risks inherent to management buy-in (Vatteville, 1994) ; the problematic of integration of the new manager and strategy implementation (Haddadj & D'Andria, 1998; Picard & Thévenard-Puthod, 2004; Boussaguet, 2008). Last, some researchers work on the “repreneur”, e.g. the buyer and his characteristics (Bienaymé, 1981; Trigano & Lafougère, 1986; Siegel, 1989; Deschamps, 2002). The purpose of this research is to study management buy-in of viable and distressed small firms. Who are these managers for each category? Does it exist a link between the type of manager and the health of the firm targeted? In order to understand and describe small firm management buy-in, we conduct a comparative study between intentions to buy-in a viable SME and intentions to buy-in a distressed SME (in financial difficulty or in recovery proceedings). Management buy-in of financially distressed firms seems to occur regularly (Bruton *et al.*, 1994), but no systematic empirical research exists on the link between the entrepreneur's intentions and the characteristics of such acquisitions. Are the entrepreneur's intentions similar between those who acquire a viable firm and those who buy a distressed one?

The research method is exploratory and descriptive. It is based on 44 questionnaires with entrepreneurs who have a project of management buy-in. Data analysis is conducted through

correlations matrix, χ^2 tests, and multiple comparison tests. The results show that according to the types of firms targeted by entrepreneurs some significant correlations may appear. Based on a typological analysis, the results show that three groups of “repreneurs”, (called also “managers” in this paper), appear: the *cautious managers*, who look only for viable firms and refuse to buyout a distressed one; the *adventurous managers*, risk-takers and looking uppermost for distressed firms (e.g. showing a deficit balance for more than two years or in administration); and the *indifferent managers*, who do not express a particular interest for one category or the other.

1. Conceptual background

1.1. Profiles and motivations of the “repreneur” entrepreneur

French researches in entrepreneurship consider the so called “repreneurship” as a form of “entrepreneurship” (Verstraete & Fayolle, 2005). If the entrepreneur has been of growing interest since 1960, the frontiers of this concept remain unclear. Academics agree on the fact that the entrepreneur is an individual at the origin of either an organization (not only firm creation), or detection-construction-exploitation of an opportunity, or value creation, or an innovation (Verstraete & Fayolle, 2005). Since the end of the 1990’s, the “repreneur” has been accepted in France as a category of entrepreneurs (Verstraete, 1999), and appeared in the first typologies in 1997 (Filion, 1997).

Moreover, according to a study led by the Institute Sage and IPSOS in 2008, out of 301 management buy-in of all sectors and any size firms, the “repreneur” is an entrepreneur. Management buy-in is lived as an occasion of changes. According to the results of this investigation, principal necessary qualities to operate a management buy-in are working capacity (66%), stress resistance (58%) and risk taking (45%). However, beyond these data,

there exist only few researches interested specifically in the management buy-in, except for some authors proposing typologies of entrepreneurs (Deschamps, 2002 ; Abdesselam *et al.*, 2004).

Author(s)	Typology	Main axis
Shapero (1975)	Manager <i>push</i> Manager <i>pull</i>	Motivations concerning management buy-in
Bienaymé (1981)	Manager replacing an inefficient dean Manager restructuring the firm by a substantial modification of its business portfolio Manager dismantling the company	Modifications inflicted on the substance of the company
Trigano & Lafougère (1986)	Heir, Firm employee, Third person	Nature
Siegel (1989)	<i>Reactive</i> managers reacting to a situation more than causing it (fear for unemployment, obligation to succeed the father...) <i>Proactive</i> managers characterized by an entrepreneurial spirit <i>Creators</i> who buyout to implement a new idea of output <i>Bounty hunters</i>	Strategy
Daigne (1995)	Commercial, Financial, Technician	Formation
L'Entreprise (1995)	Manager wishing to control alone the game rules Manager wishing to avoid the "syndrome of the chopper" (45 year-executive frightened to be laid off) Manager defending a team and a product Manager carrying out an appreciation Manager laid off	Motivations of the individual
L'Usine Nouvelle (1995)	Investor Manager Professional Unemployed Tourist Collaborator	Professional background
Deschamps (2002)	Former employee Former commercial partner Family member of the previous dean Minority shareholder Repreneur without link with the target	Link between the repreneur and the target
Abdesselam, Bonnet & Le Pape (2004)	Non constrained manager Manager constrained but embedded Non informed manager Manager not experimented and isolated	Nature of the constraints and evolution of generated job creations

Table 1. Typologies of "repreneurs" (adapted and completed from Deschamps, 2002)

According to the literature, the passage to the act of management buy-in is the result of a combination of four main elements:

- **Motivations** of the manager (entrepreneurial spirit, wish of independence, new idea);
- A set of **constraints** (access to the financial, informational or technical resources). Thus, Abdesselam *et al.* (2004) note that the predisposition with entrepreneurial action is

explained not only by psychological characteristics (the feeling to be able to act) but also by trajectories of life (social characteristics concerning events of professional, personal or cultural rupture);

- **Environment** of the manager, in particular the existence of an entrepreneurial entourage and the access to the essential resources with the implementation of the project. Recent researches also underline that this environment is partly determined by the geographical location of the manager (Abdesselam *et al.*, 2004).
- The **background** of the entrepreneurs who want to buyout and manage a new company (MacMillan, 1986; Ronstadt, 1988; Westhead & Wright, 1998; Westhead *et al.*, 2005). The results of this last research suggest that the individuals who have managed multiple companies develop a real entrepreneurial spirit and the capacity to solve problems. According to Shane (2000) and Ucbasaran *et al.* (2003), this background allows them to increase their capacity to be identified and to exploit new possibilities. More recently, Politis (2008) studied the role of the entrepreneurial background (in particular related to start-up creation) as a source of improvement of the capacity to successfully organize and manage new companies. The results of its study, led on a sample of 231 Swedish managers having launched a new company, suggest that the “novice” behavior differs from the “habitual” ones on three fundamental points: (a) competences to face the innovation, (b) preference for an effective decision making during the creation of the company, and (c) attitudes towards the failure in the creative process of company (failure is considered as a rich source of training which can lead to positive tests on the long term). According to Politis (2008), this gained experience, these preferences and these attitudes can appreciably improve the performance of the companies and their probability of survival.

On another side, Deschamps (2002) identifies the characteristics of the repreneur when he has no link with the target: preference for a company in good health, formalized project, intervention of advisers and/or personal relations to detect the target, bigger problems involved in integration in the structure compared to previous employees (resistance to change). The literature review conduct us to summarize that (a) 60% of management buy-in are realized by third persons; (b) it is necessary to take into account at the same time the motivations, constraints and environment to understand the phenomenon of repreneurship as a whole; and (c) that the comparison between management buy-in of distressed or viable firms is rarely studied in research on small business.

1.2. Management buy-in of small distressed firms

According to Ferry-Maccario *et al.* (2006), the concept of distressed firms is relatively recent. The first legislative text in France devoted to the prevention of the difficulties of the companies was created in 1984. According to this law, the collective procedures (recovery proceedings and bankruptcy) could be avoided by an *ex ante* treatment of the financial situation of the firm. According to the Commercial law, article L. 631-1, a company is considered as being distressed if it “justifies difficulties that it is not able to surmount, which conduct it to the suspension of all payments”. The law defines the suspension of payment as “the process by which a company cannot face any more current liabilities with its available assets”.

In order to avoid this situation, it is necessary to sufficiently early detect the possible difficulties the company could encounter. Consequently, a new law was adopted in France in 2005 “relating to the safeguard of the companies”. This new law insists on the fact that the purpose of the legal procedures is to safeguard the firms. The objective is to treat in a

preventive and faster way the firms which could become distressed. According to the article L. 611-2 of the Commercial law, the concept of distressed firm can be summarized by “difficulties conducting to compromise exploitation continuity”. This idea of “continuity” is found in particular in the definition of the management buy-in. Indeed, Boussaguet (2008), starting from researches of Siegel (1989) and Deschamps (2002), proposes to define management buy-in as “a repurchase operation that leads to the continuation of the life of a firm, distressed or not, and of all that it contains (structure, employees, financial, technical and commercial resources...)”. According to this definition, management buy-in of distressed firms seems to pose problem insofar as the idea of “continuity” is seriously brought into question. Consequently, why does an entrepreneur want to buyout a distressed firm?

One of the main motivations explaining management buy-in by a third person is the willingness to be independent. Indeed, the manager rests on an existent organization with the ambition to develop it, without having to devote time to the creation and launching of a new business. Also, entrepreneurs can prefer management buy-in as they do not necessarily have a new idea around which they could create a venture. Moreover, management buy-in, even in the case of distressed firms, seems less risky than creation. Indeed, the results of a recent study (OSEO, 2008) show that 6 years after being transmitted, 4 companies out of 5 are still in activity, against 2 out of 3 organizations resulting from a creation ex nihilo. But in the specific case of distressed firms, the aim of this buyout operation is not to preserve the continuity of the company in danger but to ensure its survival. Barbot & Deschamps (2005) notice that the choice to buyout a distressed firm can represent an opportunity for the future manager. Indeed, the results of their study show that the management buy-in of a distressed firm can be motivated by facility and cost. In spite of the risks of such an operation, the

buyout of distressed firms enables the repreneurs to buy an existing company in advantageous conditions.

If these specificities conduct to a better understanding of the needs and motivations of the managers, the knowledge of characteristics of distressed firm managers remains restricted. This research aims to identify these characteristics and to put into light a typology according to the health of the targeted firms.

2. Research method

This study has been implemented with repreneurs who have a declared intention to buyout a small firm in south of France. A questionnaire was sent to managers whose project is known or succeeded, directly and via supporting institutions. 44 questionnaires were exploitable. This investigation applies to all sectors and all sizes of companies. The variables and their items are presented in Table 2. We retained three measurements of the health condition of the firm: the company in good health, showing a deficit balance for more than two years (in difficulty) and the company which is subjected to recovery proceedings. The data analysis was carried out in several stages. Initially, we carried out a hierarchical and nonhierarchical typological analysis thanks to the dynamic clouds and K-means (Bouroche & Saporta, 1980; Evrard et al., 2003). We thus could determine three profiles of repreneurs (the cautious manager, the adventurous manager and the indifferent manager) according to the variable state of health of the targeted company (RECH_SANTE, RECH_DIF and RECH_REDRES). In a second time, we built a correlation matrix in order to study the connections between the items. This descriptive analysis enabled us to identify the strenghts and connection power between items.

Variables	Items	Encoding
Current situation of managers	Unemployed	SIT_CHO
	Engineer or manager	SIT_ING
	CEO or director	SIT_DIR
Financing modalities	By myself	FI_FP
	By the help of family or friends	FI_AF
	By banks or others financing institutions	FI_EE
Professional background	Independent	JOB_INDEP
	Small-size enterprise	JOB_TPE
	Medium-size enterprise	JOB_PME
	Big-size enterprise	JOB_GE
Targeted Sector	In a similar sector in which the manager has already worked	MEME_SECTEUR
	Primary sector	PRIM_SECT
	Industrial sector	INDUS_SECT
	Commercial sector	COM_SECT
	Building sector	BTP_SECT
	Transports sector	TRANS_SECT
	Other services sector	SERV_SECT
Size of the firm	No employee	RECH_AUCUN
	0-4 employees	RECH_4
	5-9 employees	RECH_9
	10-19 employees	RECH_19
	20-40 employees	RECH_40
Health of the firm	Viable	RECH_SANTE
	Financial difficulties	RECH_DIF
	Recovery proceedings	RECH_REDRES
Geographic distance	Close from home	LIEU_RES
	In a 300 km perimeter	LIEU_300
	Wherever In France	LIEU_FRANCE
	Abroad	LIEU_ETRAN
Correspondence between education and activity	Education/activity	CORRESP_PRO
Education	CAP	FORM_CAP
	BEP	FORM_BEP
	BAC	FORM_BAC
	Undergraduate	FORM_BTS
	Graduate	FORM_PLUSBAC
Age	20 to 30	AG_30
	30 to 40	AG_40
	40 to 50	AG_50
	More than 50	AG_PLUS50
Gender	Men	SEXE_HOM
	Women	SEXE_FEM

Table 2. Variables and items

3. Results

First of all, the results characterize the typical respondent of our questionnaire: it is a man, 40 to 50 year-old, usually graduate. He finances his project by self-financing and has a background in SME or large companies. He wishes to find a firm quite close from its place of

residence. If this is the general description of the sample, the typological analysis highlighted the coexistence of three types of managers according to the state of health of the targeted company. This taxonomy is resulting from the k-means analysis. After having identified the profiles, the description of these groups are refined via the analysis of the inter-item relations for each profile of manager.

The cautious manager

The cautious manager tends to prefer to buyout healthy companies. He refuses to repurchase distressed firms because it presents too many risks for them. The typological analysis showed that cautious managers are usually unemployed individuals, who seek a financing through banks and indebtedness, in order to target industrial companies or services. The study of inter-item correlations revealed five significant correlations:

- The wish to buyout a microfirm (0-9 employees) is positively correlated with the experience gained as CEO or director (0.652**)¹. On the contrary, it is negatively correlated with unemployed individuals (-0,435*);
- When the individual has few diploma, he prefers to buyout a microfirm (0.522**) whereas a more graduate individual is not interested by this size of firm (-0.531**);
- For a company of intermediate size (10-40 employees), the potential repreneur is ready to move anywhere in France (0.692**);
- When the individual is unemployed, he is ready to buy a company which is not close to its place of residence (-0.525**) and even a company distant of more than 300 km (0,406*);
- Within the framework of a professional reconversion, when the managers seek a company in the building sector, they do not estimate necessary that they have experience in this sector (-0,408*).

¹ Significant levels: * < 5 % ; ** < 1% ; *** < 0,1%.

The adventurous manager

On the contrary, the adventurous managers tend to target companies in financial difficulty and/or in recovery proceedings. They like to take risk and like to take up the entrepreneurial challenges. The adventurers are ready to take certain risks under certain conditions: they seek in priority 0 to 20 employee companies, in an industry they've already known. They are ready to move until 300 km around their main home. They call for banks and external financings to subsidize their project. The inter-item correlations did not give significant results in this category.

The indifferent manager

The category of indifferent managers corresponds to the managers for whom the health of the purchased company did not appear as significant. The indifferent managers were previous leaders (CEO or directors), favour the buyout via owner's equity and self-financing and seek to purchase companies in all sectors (industrialist, services, etc). In this category, three inter-item correlations were significant:

- It exists a correlation between the fact that the repreneur previously worked in a small company and that he seeks a company in the same sector (0,677*). Moreover, having worked in a small business encourages him to seek a company between 0 and 4 employees (0,673*);
- The correlation highlights that the women of this category seek 0-4 employee companies (0,680*) contrarily to the men (-0,589*);
- Within the framework of a professional reconversion, the indifferent managers seek mainly a company in commercial sector, even if they do not have any experience in this sector (-0,640*).

4. Discussion

The results of this research can be connected to previous researches on entrepreneurs (Deschamps, 2002). Cautious managers prefer to purchase a healthy small business. They are not inclined to take an entrepreneurial risk because of their situation (unemployed, external financing). However, they are ready to move anywhere in France to buyout a company of intermediate size. This situation of unemployment is associated with a need for external financing and debt. In other words, they cannot proceed by self-financing and consequently must precisely measure their project before engaging themselves. The risk-taking is quite important in this case because a failure could conduct them to precariousness.

In the same way, our contribution corroborates the results of Ronstadt, (1988), MacMillan (1986) and Westhead & Wright (1998) who insist on the importance of the entrepreneurial background in the management buy-in. This background is of particular importance in the case of cautious and indifferent managers having already run small businesses or previously been independent. Nevertheless, the results do not show this element in the case of the adventurous managers, who have more a large-company or managerial profile.

There exist also several differences in terms of gender. The women of the category indifferent rather seek microfirms, contrarily to the men. This joins the results of Cliff (1998) for whom “businesses headed by women tend to be smaller than those headed by men (...)”. Moreover, the means of financing constitute another gender difference. The cautious men favor self-financing rather than family support, whereas no preference appears for women in terms of financing.

From a managerial point of view, this research contributes to a better comprehension of management buy-in by improving the knowledge of intentions and characteristics of “repreneurs”. This work can be also useful for institutions to identify the characteristics of the potential entrepreneurs according to their risk-taking or risk-aversion propensity and the state of health of the companies. For instance, in the case of purchasing a small business in difficulty or in recovery proceedings, the adventurous managers are the most relevant potential entrepreneur category. Indeed, they are ready to call for banks to finance the project, but provided that the firm is a 0 to 20 employee-business in a sector they have a thorough knowledge of. This logic based on previous expertise in a sector is opposed to the more versatile logic of the indifferent managers. They do not have preference on the company state of health and mainly seek a firm in commercial sector, even if they do not have experience in this activity. In other words, there is no research of “sectorial proximity”. This is explained by the great versatility of these potential entrepreneurs who are mainly previous CEOs or directors. Indeed, the experience is also a factor which enables a better understanding of the entrepreneur behaviors.

Conclusion

Researches on entrepreneur typologies were primarily interested in actors’ profiles according to their personality or their motivation. Thus, a lack exists in literature on the link with the purchased company characteristics, whereas they are a strategic factor of buyout decision. To fill this theoretical gap, our contribution proposed to consider the managers according to their buyout intentions depending on the company state of health. Thanks to a typological analysis, results showed three profiles of managers. First of all, cautious managers seek only companies in good health and refuse to consider the purchase of distressed firm. Currently unemployed, they are characterized by a preference for external financing and profit from previous

experiences as independent entrepreneur or director. The adventurous managers are risk-takers and tend to purchase small size companies, located in sectors already known and rather close (less than 300 km). They also privilege external financings. Finally the indifferent ones do not express interest for one category or the other. Previously leaders, they tend to prefer self-financing and do not consider previous experience in the sector as an important buyout criterion.

If this research contributes to a better comprehension of the management buy-in by improving knowledge of the intentions and the characteristics of the managers, it is important to precise here that this work is exploratory. The limits are primarily of a statistical nature. Indeed, the sample of 44 managers restricts the realization of purely explanatory statistics. This is why the reflection needs to be affined about the contingent character of the fair repreneur (if he exists): necessary qualities and characteristics are not obviously the same according to the type of purchased companies. A research in progress enables us to think that this exploratory research will be confirmed on a more consequent sample.

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HRM strategies and very small firm development: French cases studies

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Abstract

Recent research shows that the development of small firms may be enhanced by the adoption of HRM practices. Indeed, the implementation of formalized tools or processes may help very small enterprises (VSEs) to restructure their organization and ensure their development. The purpose of this communication is to identify the impact of VSEs organizational characteristics on HRM practices and to show what processes may conduct to a revitalization of firms allowing development or growth.

Based on five case studies, the results identify the impact of VSEs organizational characteristics on HRM practices: informal structure, compression of time, irrationality and the important role of affect in the decision-making process. Then we propose some processes that could be implemented by VSEs to improve their development.

Introduction

Recent research shows that the success and survival of small firms may be enhanced by the adoption of Human Resource Management (HRM) practices (Kaman *et al.*, 2001; Bacon & Hoque, 2005; Pearson *et al.*, 2006). Indeed, the implementation of formalized tools or processes may help VSEs (e.g. less than 20 employees according to European Union criteria) to restructure their organization and ensure their development. The purpose of this communication is to identify the impact of VSEs organizational characteristics on HRM practices and to show what processes may conduct to a revitalizing restructuration of firms, allowing development or growth. Specifically we argue that several internal and external variables impact on recruitment, appraisal, compensation and benefits.

This research starts from an empirical observation. On the one hand, 90% of French firms are VSEs. On the other hand, 87% of VSE owners declare that their management skills are "incomplete" or "non-existent" (Rivalis Survey, 2007). But as in large or medium-sized firms, these entrepreneurs have to recruit, train, motivate, but also lay off staff. Previous research shows the relative lack of formalized HRM tools, mainly due to ignorance of their existence and/or their use (Hornsby & Kuratko, 1990; Deshpande & Golhar, 1994, Hill & Stewart, 1999). This study aims to identify some additional factors that explain this lack, the core variables that impact HRM practices in VSEs and the processes that may conduct to a positive restructuring of firms.

This research is based on case study method and thematic discourse analysis (Eisenhardt, 1989; Yin, 1994). We analyzed five cases of French VSEs in industry, training, services and communication. Data collection was realized via semi-structured interviews with entrepreneurs and some of their employees with additional data from documentation supplied by the firms. The results are divided into two parts. The first part identifies the impact of VSE organizational characteristics on HRM practices: informal structure, compression of time, irrationality and the important role of affect in the decision-making process. Indeed, the objectivity of decisions is distorted by the preponderance of affect, personal relationships, personal desires of the entrepreneur, cognitive biases and lack of information. Moreover, restricted temporal and financial resources restrain opportunities to acquire tools or to outsource some functions (e.g. recruitment). The second part shows what processes may conduct to a revitalizing restructuration of firms, enabling firms to develop. It appears that the firms that developed tools for recruitment, appraisal and training increased employee loyalty and facilitated the creation of a common organizational culture.

1. Theoretical background

1.1. Enlargement effect, decision-making process and management of VSEs

The small size implies a process that has been put forward by Mahe de Boislandelle (1996), and deepened by Torres (2003) called enlargement effect. This indicates that a problem increases while decreases the size of the firm. Consequently, a decision which could be operational for a large firm rapidly becomes strategic in VSE. The concept is divided in four

components: number effect, microcosm effect, proportion effect (Mahe de Boislandelle, 1996), and egotrophy effect (Torrès, 2003).

- The number effect implies that because of the cognitive limitations of individuals, the more an individual's relationship is weak, the greater the knowledge of each by the leader will be, and vice versa. Therefore, the importance of each member in the firm will be greater in smaller structures, where the number of relationships is low.
- The microcosm effect underlies that a leader will generally focus on short term, in terms of time but also space (physically and psychologically). Management of small business is often defined as a *proximity management* (Torrès, 2003): hierarchical proximity, spatial or physical proximity, proximity of information system and temporal proximity. Indeed, VSE owner often focuses on quickly effective decisions, sometimes at the expense of ways whose effects could be better but less immediate. Torrès (2003) underlines the "overestimation of the present against the future" (p. 126).
- The proportion effect implies that the more the staff taken into consideration is reduced, the more a problem affecting a member is proportionately high. For example, absenteeism of one employee in a four-person team induces an absenteeism rate of 25%. This proportion effect can be applied to many other phenomena: loss of a significant customer, resignation of an employee, change of supplier.
- The egotrophy effect means that VSE management tends to be focused on the owner: histories of both the firm and the owner are merged, decisions are closely related to personal aspirations, assets and patrimony are often confused. The egotrophy effect reinforces the perception for the leader that he is indispensable, and increases its involvement.

Moreover, VSEs face constraints to access and use information. These constraints are not only due to technical reasons (cost, difficulties to find relevant information), but also to cognitive ones (Chapus, Lesca & Raymond, 1999). Indeed, decision is directly linked to the ability of the owner to process and use the information available. In 1947, Simon stressed that the rationality of decision-maker is reduced by his judgments, his value system, but also by the information available, the inability to foresee all the consequences of possible choices or simply his cognitive limitations.

It is also necessary to take into account the influence of cognitive biases (errors or anomalies) associated with human analysis on the decisions. The owner tends to foster information or market signals confirming those that have already been registered, while in other cases, he has

a certain tendency to ignore them. Indeed, Tyler & Steensma (1995) showed that decision makers use the information that fall within their frame of reference, and are based on their past experiences to evaluate the choices to be made, which induces significant cognitive limitations that affect the power of the decision. The entrepreneur is not economically rational but follows an "extended" rationality (Marchesnay, 2003), based on subjective choices and aiming primarily its own satisfaction, pushing the financial performance into the background. Thus the firm's performance is not analyzed according financial criteria but by observing the connection between the personal goals of the owner and the results obtained. Finally, in VSEs, both strategic, organizational and managerial decisions are rarely the result of a deliberate and objective reflection. On the contrary, intuition, affect and irrationality hold a critical position in decision-making processes. Indeed, the human resource management practices are impregnated of these factors: enlargement effect, irrationality and affect.

1.2. HRM practices in small firms: a review of literature

Researchers admit that HRM practices used in large companies are not necessarily the most suitable for small ones which have their own specific characteristics (Hornsby & Kuratko, 1990; Deshpande & Golhar, 1994; Wagar 1998, Wilkinson, 1999). Fabi & Lacoursière (2008) explain that HR practices are differentiated because of contingency factors such as internal factors: personality of the owner, leadership style, level of training of employees, characteristics of the firms and organizational structure; and external factors such as labor market, legal and cultural level of technology.

VSE owners usually operate with informal methods. Indeed, the size of business impacts the sophistication of HRM tools and practices (Koch & McGrath, 1996). HRM seems then limited to certain visible and formalized practices and correspond to the current administration: wages or contributions to training funds (Mahe de Boislandelle, 1993). However there are no formalized tools concerning recruitment, assessment and career management, training, etc. Pearson *et al.* (2006) also agree on the fact that small businesses implement the most common HR practices and stress the existence of different HRM practices between VSEs (from 0 to 20 employees) and SMEs (20 to 250 employees). More specifically, standardization of procedures and practices is related to the increasing number of employees in an organization; in VSEs individuals are more accustomed to individual practices depending on the situation and individual needs. De Kok & Uhlaner (2001) analyze

the relationships between contextual variables (size of the company, existence of collective agreements, networks with large companies) and HR practices in small businesses. Their sample includes 10 to 40 employee-firms. They maintain that the size of the company is associated with the degree of formalization of HR practices: the more the company size is large, the greater the HR practices about training and performance appraisal are formalized. They also indicate that small businesses may have various HR practices. Studies highlight that, contrary to what might be expected in a small business, some HR practices are formalized or sophisticated (Hornsby & Kuratko, 1990; Deshpande & Golhar, 1994; Hill & Stewart, 1999).

Mintzberg (1979) identifies five organizational configurations and their characteristics. Among them, the simple structure refers to the "entrepreneurial" firm, often small-sized: management is centralized, hierarchy is reduced and the control only depends on the owner. The formalization is low and the degree of control and planning are also limited. Centralization of power is very important in entrepreneurial structures. Consequently, we can identify some characteristics about HR practices in the simple structure. According to Mintzberg (1979, 1980) the horizontal specialization of jobs is very low and the division of labor is almost non-existent. Thus, there is little formalization of behaviors; the practices of planning and training are not developed. The communication in the simple structure is informal and mainly direct between the owner and employees. Decision-making process also appears to be informal specifically because each decision has to be taken rapidly. But also *“inside the structure all revolves around the entrepreneur. Its goals are his goals, its strategy his vision of its place in the world”* (Mintzberg, 1980, p.332).

However, Mintzberg (1979) does not stress HRM specificities in simple structure. Pichault and Nizet (2000) identify distinct practices of HRM (recruitment, remuneration, appraisal, communication, working time ...) according to organizational design. This perspective highlights the specificities of each model in terms of culture, training, appraisal, recruitment, remuneration and communication. Among the five models proposed by the authors, the "arbitrary" model corresponds to the VSE. Indeed, previous analysis demonstrates the predominance direct communication, family culture, low planning (dependent on economic perspectives), and limited promotions, due to a low number of hierarchical levels.

HR Dimensions	Arbitrary Model
Managing Staff (Recruitment)	Few planning, importance of informal feedback and recommendations inside knowledge networks
Managing Staff (Layoff / retirement)	Arbitrary Dismissing
Culture/Professional Identity	Loyalty, mind-house, professional cultures are significant
Training	Focused on knowledge and know-how, low institutionalization, transmission on the job importance in payroll, focusing on short-term
Appraisal	Imprecise, informal, intervention in private life, implicit criteria, little discernible effects
Career and promotion	Arbitrary, few opportunities
Remuneration	Piecework or task wages, random time wages
Managing work time	Overtime compensated by informal arrangements, flexibility between work and leisure time
Communication	Informal, ascending and descending through direct contact, centralized network
Employees Participation	Low (instruction execution)
Professional Relationships	Inexistent

Table 1. HR Characteristics of the arbitrary model (Pichault & Nizet, 2000)

We choose to use the arbitrary model as a descriptive analytical grid in the second part of our work: on the one hand it is rather exhaustive because it allows resuming all HRM variables (appraisal, recruitment, communication etc.); on the other hand the structure of the arbitrary model e.g. small company with the main actor the "strategic apex" corresponds to VSEs (see above).

2. Research method

2.1. A qualitative approach

The chosen research method is the case study. Five cases are analyzed in this research. The main interest of this method is the possibility to explore, to understand or to explain a composite reality with dense contents (Yin, 1994). Using case study method permits to study profoundly and in an intensive manner one or several situations in one or several organizations (Evrard, Pras & Roux, 1997). Furthermore, case study allows, contrasting to other empirical research methods, experimental or action based researches, to discover new problems and to make phenomenon intelligible (Avenier, 1989). In fact, according to Yin (1994), a case study is an empirical survey which studies a phenomenon in its real-life context, where limits between the phenomenon and context are not clearly obvious, and in

which multiple source of information are used. Case studies are generally used to apprehend complex phenomenon. This method authorizes fine analyses in terms of processes, and permits to obtain theoretical models that are integrative, but also which results are seized easier (De La Ville, 2000).

The sample consists of five small firms in east and south-east of France. We aimed to select several activities in both industry and services sectors. Literature shows that industry has more sophisticated performance appraisal tools (Hornsby & Kuratko 1990). Another key criterion of the sample was the size of the firms. The aim is to analyze the level of sophistication of HRM practices. Some authors reveal that smaller firms have more sophisticated tools than the literature generally lead one to believe (Deshpande & Golhar 1994; Hill & Stewart 1999). Thus, in order to identify elements to compare and to underline some VSE specificities, we chose to also analyze a case of small firm with 40 employees. The characteristics of our sample are shown in table 2.

Firm	Case 1	Case 2	Case 3	Case 4	Case 5
Activity	Economic news and the legal announcement	Plastics and Manufacturing polyester products	Accessories for women (hats, scarves...)	Recycling systems for industrial fluids	Printing office for communication
Creation	2003	1990	2004	2003	1970
Size	7	15	13	3	40
Sample	Owner 2 employees	Owner 2 employees	Owner 2 employees	Owner 1 employee	Owner 2 employees

Table 2. Characteristics of the sample

The data was collected through semi-directive individual interviews; the purpose was to accumulate discursive data reflecting the conscious and/or unconscious mental universe of interviewed owners. To do so, we used a pre-structured interview guide. The themes were identified through the literature and were used as a framework for the construction of a semi-structured questionnaire: general information about the business, existence of a collective labor agreement, human resource management practices on recruitment process, on training, on performance appraisal, procedures for dismissals, management practices in communication and motivation. The interviews were recorded in order to make the collected data exhaustive and thus more reliable, permitting thinner content analyses. Finally, to avoid single source biased conclusions, we have interviewed both the owner and one or two employees, compared their speeches in order to reveal eventual discrepancies, and to make thematically discourse

analyses. A certain quantity of secondary data, like enterprise's internet sites, catalogues, etc. was also integrated in the study.

2.2. Presentation of case studies

Case 1

<i>Sector</i>	Services
<i>Activity</i>	Economic news and legal announcement
<i>Size</i>	7
<i>Collective Labor Agreement</i>	Yes
<i>Growth orientation</i>	Expand the current size
<i>Recruitment</i>	Personal network. Informal. Affective and urgency
<i>Selection</i>	Informal interview
<i>Performance Appraisal</i>	Nothing just in case of problems
<i>Compensation and benefits</i>	Only classical remuneration depending on the job (fix or "commissions") and the working time
<i>Job descriptions</i>	Inexistence
<i>Training</i>	Employees requests are often accepted but the employees have to manage it
<i>Communication</i>	Informal and direct. Upward communication relatively formal
<i>Dismissal</i>	Very hard and long to be acted
<i>Management style</i>	Participative. Seeks for the autonomy of collaborators

Case 2

<i>Sector</i>	Industry
<i>Activity</i>	Plastics and manufacturing polyester products
<i>Size</i>	15
<i>Collective Labor Agreement</i>	Yes
<i>Growth orientation</i>	Stable and durable activity with limited growth
<i>Recruitment</i>	Very hard. Both national agencies (but not satisfied) and word-of-mouth
<i>Selection</i>	No selection. Immediate testing
<i>Performance Appraisal</i>	No performance criteria. Only in case of mistakes but it's very informal
<i>Compensation and benefits</i>	Compensation fixed on the basis of 35 hours per week. Overtime based on volunteerism and paid on normal rate. No bonus or incentive. Wages satisfactory compared to the level of the training
<i>Job descriptions</i>	Inexistence
<i>Training</i>	Very limited training, on the job
<i>Communication</i>	Communication is downward, direct and oral
<i>Dismissal</i>	Avoidance of dismissal because the job is hard and physical and it's difficult to find someone
<i>Management style</i>	Authority because of the activity (job is hard and under qualified)

Case 3

<i>Sector</i>	Services
<i>Activity</i>	Accessories for women
<i>Size</i>	13
<i>Collective Labor Agreement</i>	Yes
<i>Growth orientation</i>	Expand activity but in certain limit
<i>Recruitment</i>	Both national agencies (but not always satisfied) and personal network. Also

	temporary employment agency. Often urgency
<i>Selection</i>	Criteria for jobs. Autonomy and independency are main skill
<i>Performance Appraisal</i>	An annual appraisal interview but no grid. Regular informal feedback
<i>Compensation and benefits</i>	Compensation fixed on the basis of 35 hours per week. Individual bonus and collective wages increase
<i>Job descriptions</i>	Nothing
<i>Training</i>	There are needs for training but lack of time
<i>Communication</i>	Open and direct. Employees feel free to suggest ideas
<i>Dismissal</i>	Hard and affective implication
<i>Management style</i>	Participative

Case 4

<i>Sector</i>	Industry
<i>Activity</i>	Commercial buy recycling systems for industrial fluids and sale it,
<i>Size</i>	3
<i>Collective Labor Agreement</i>	No
<i>Growth orientation</i>	Expand activity but in certain limit
<i>Recruitment</i>	Personal network and speculative application. Informal and affective
<i>Selection</i>	Low cost and specific knowledge of the activity
<i>Performance Appraisal</i>	A quarterly appraisal and reporting
<i>Compensation and benefits</i>	Compensation fixed. Profit sharing and firm reserves account since 2006
<i>Job descriptions</i>	Inexistence
<i>Training</i>	Initiatives used to be with employees, ever used, national agencies of training give a lot information for small firm
<i>Communication</i>	Direct and mail due to the job (mobile)
<i>Dismissal</i>	Avoidance of dismissal, affective implication
<i>Management style</i>	Authoritarian but communicative

Case 5

<i>Sector</i>	Industry
<i>Activity</i>	Printing office for communication
<i>Size</i>	40
<i>Collective Labor Agreement</i>	Yes
<i>Growth orientation</i>	First growth: a company buyout (1988) in another site, merger of both companies sites (1991), the last growth a company buyout (1996). But growth aim at limited size
<i>Recruitment</i>	Press and a lot of speculative application. For the commercials national agency
<i>Selection</i>	Specific skills in the sector and activity, professional skills
<i>Performance Appraisal</i>	No performance appraisal but regular informal feedback. Focus on the quality of the product. Self-evaluation and people who not perform leave the firm
<i>Compensation and benefits</i>	Level of compensation higher, a 13 th month paid. Collective salary increase. Bonus are collective
<i>Job descriptions</i>	Inexistence
<i>Training</i>	Very important and used. Not enough resources for training
<i>Communication</i>	Open. Informal meeting, and very good relationships between customers and employees
<i>Dismissal</i>	Unusual, no problem because good quality of skills
<i>Management style</i>	Authority, exigent, respectful

3. Results

The results are divided into three parts. We first develop the main HRM characteristics of each case, we then propose an explicative model to this situation and in the third part we identify practices which can have a positive impact on restructuration in order to survive or grow.

3.1. Data analysis

In Case 1 there are no job descriptions, no performance appraisal and the selection is an informal and fast interview. However, the owner seems to be sensible to HRM even if actually he could not apply sophisticated practices.

In addition recruitment is often in urgency, so I can't afford the time to stimulate competition among candidates and spend five interviews, I've never taken it (Owner).

Communication tends to be open, and the owner tries to develop the autonomy of the employees.

Case 2 is typically the stereotype of the small firm: the degree of formalization of HRM is inexistent. Personnel practices are informal; there is no performance appraisal except for problems. Training is not used and the management is authoritarian with a downward communication. According to the owner this lack of sophistication could be explained by the job which is hard and physical:

I cannot do differently. I work with under-qualified people, in a job which is hard and not very interesting. So people are not interested and communication is reduced. If I am not authoritarian it is unmanageable (Owner).

By contrast, Case 3 has highly developed personnel practices. The size is same as case 2, but the job is different due the sector (services) and activity (accessories for women). So it is less physical and it is a job of communication. Recruitment is based on specific criteria for job; there are annual performance appraisal interviews. Moreover, the owner pays attention to the motivation of the employees. Most of the employees are autonomous and the tasks evolved in order to develop responsibility. Communication is free and employees are encouraged to propose ideas.

Employees can submit ideas, my office is open, they come, they leave, there's no barrier. Often I ask them to give me ideas (Owner).

According to the owner, the activity is very traditional but not as easy as one could believe. This is a challenge to interest people and give them autonomy. However, the training is considered as important but it's not used due to the lack of time and the difficult to send two or three individuals missing the job to follow a course.

Surprisingly, in Case 4, the smallest firm of the sample with 3 employees, the HRM practices specifically in terms of compensation and benefits are the most sophisticated. The recruitment process is affective and the criterion is the knowledge of the activity. The decision relies also on the low cost of the employee. The strategy of the owner of Case 4 is to motivate employees at the lowest cost. Instead of increasing directly salary, the owner set up since 2006 a profit sharing and a firm reserve for the employees. The main advantage of this solution is to avoid high level of social charges that the owner must pay with wages.

Our small size doesn't allow me to raise wages but it is important to involve the employees beyond the minimum wage; this form of compensation and benefits is a good response to the fact that a company cannot pay their employees too much (Owner).

For me the profit sharing is very interesting because it's immediate and tangible (Employee 1).

Performance appraisal is also done quarterly due to the fact that activity is commercial. In addition, the training budget is used and often VSEs benefit more help and financial support from training agencies than the large firms.

I had the opportunity to follow courses to develop my employability. I have to organize the training and the training agency was very helpful. (Employee 2)

The size of the Case 5 is the bigger of our sample, in order to determine some comparison elements and to check VSE specificities in terms of HRM. Case 5 tends to have a fairly informal approach to HRM practices. For the recruitment several channels are used and the speculative applications are very frequent. This is due to the fact that this firm benefits from a very good reputation for the quality of work and the quality of human relationships.

Our activity relies on very specific skills, we have a good reputation: wages are good, the quality of our work is known and people want to work with us (Owner).

Level of compensation is higher compared to others competitors and the relationships with the customers are very important and often friendly. This is one of the main motivator factors for employees because they are challenged directly by the customers. Training is considered as

the most important formal HRM practice. It may be argued that the activity evolved rapidly due the digital technology. Passion for the job is another main motivator factor.

I started this job very young, I love it. I'm always here and I can see immediately what is wrong. There is an appreciation of what is a good job from the employees. People can self-manage, the guy who is not working autonomously, he leaves (Owner).

Our results are consistent with the literature review about the simple structure (Mintzberg, 1979) and the arbitrary model of Pichault & Nizet (2000). Indeed, the results reinforce the validity of the previous model. On the whole, all cases show a low formalization, decisions often arbitrary, direct communication both descending and ascending, implication of owner often affective, and close relationships between employees and owner.

But it exists some variation among the studied HRM practices. Although the general scheme of compensation and benefits is often a payment-by-result process, Case 3, 4 and 5 present various salary systems including bonus (either collective or individual), 13th month or more sophisticated tools as in Case 4 with profit sharing and firm reserves account. The purpose is to encourage performance and motivate collaborators. The strategies are different: in Case 3 the owner develops an individual bonus in order to reward the good performance, in Case 4 the purpose was to encourage performance with low social costs using collective tools.

We prefer this reward policy in order to become more attractive for the future; the other advantage is that both employees and I can build retirement savings with the firm reserves account (Owner, Case 4).

Managing staff includes both recruitment and dismissal. All cases have no formal job descriptions. Recruitment is often informal. The main differences are: the channels, the sector and activity that impact both the selection and the nature of the expected skills. Cases 1 and 4 refer to the urgency and the affective dimension in their decision making process. Dismissal is a difficult to the affective implication of the owner. Training is usually not used excepted in Case 5, but the activity evolves rapidly and employees have to suit very well the job. In Case 4 and Case 1 training is also used but with the objective of develop competencies. In Case 2 training is not a priority and the activity is stable and in Case 3, some needs are identified but training appears as non manageable due to the intensity of activity.

Appraisal is always informal. It could be either only if employees perform badly (Case 1, 2 and 5) or connected with the activity and the need for reporting (Case 4). The exception is Case 3 with an annual interview with a purpose of generate a discussion and encourage

communication between the owner and the employees. Finally, communication is consistent with the type of management and the type of activity. For example, in Case 2 the communication is limited and the type of management is authoritarian because the job is hard and physical. In case 3, the job is traditional but it is a commercial activity that favors communication and autonomy. Excepted in case 2, employees can propose ideas and the owner develops participation, and a self-evaluation of its own work.

3.2. Impact of VSEs organizational characteristics on HRM practices

If the results confirm the HRM characteristics of small firms proposed by literature, we also find some sophisticated HRM practices that lead us to avoid an absolute generalization of the HRM practices in VSEs. However, some difficulties are underlined by the owners and influence certain characteristics of the practices. Indeed, the analytical grid of Pichault & Nizet (2000) is descriptive and does not permit to understand the factors. This research also aims at explaining the processes influencing the practices by proposing a model of this phenomenon. Thus, the results crossed with the existing literature on the topic, lead us to draw a model of the factors influencing the HRM practices of VSEs as shown below.

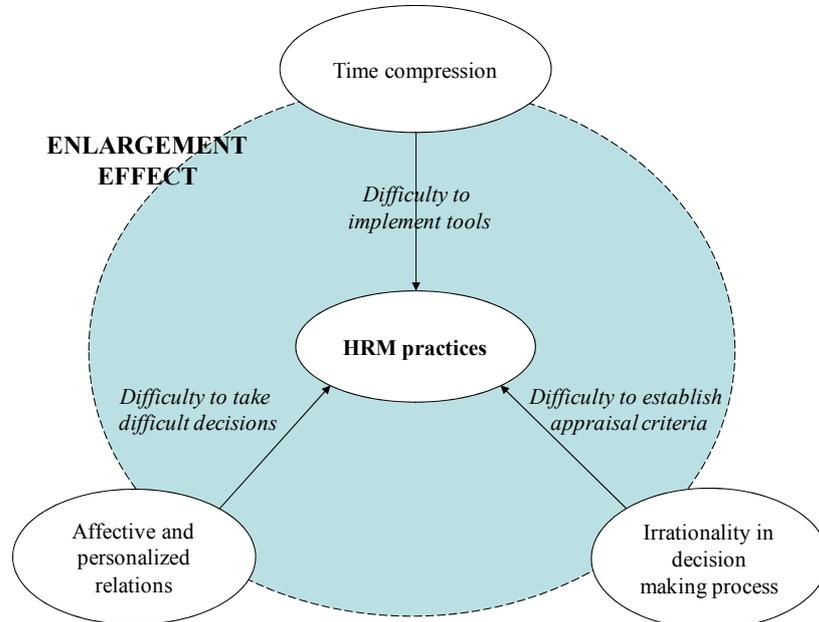


Fig 1. VSEs characteristics impacts on HRM practices

Figure 1 provides an overview and analysis of the factors that influence the HR practices of small firms. The results of our study confirm the validity of the arbitrary model (Pichault &

Nizet, 2000), and conduct us to propose some explicative arguments. Three major factors influencing the HR practices of the owner are suggested: a phenomenon of compression of time; irrationality in decision-making process; and the role of affect. These processes are also accentuated by the “enlargement effect” phenomenon.

First, compression of time consists in a feeling of constant urgency. This implies that the owner has little time to design or implement tools, to think on appraisal techniques or recruitment, or simply to seek corresponding information. For instance, the interviewed owners attest the lack of job descriptions, due to lack of time, but also the necessity for the workforce to be polyvalent. As emphasized by the owner of Case 1, the limited financial resources of the firm imply that it cannot afford a full time individual on a single activity. Often the needs are transverse, and a new employee can be asked to perform administrative tasks, telephone prospecting or customer relationship management. As a result, polyvalence, reactivity of staff, but also the complexity and diversity of the tasks imply a lack of formal job descriptions. If we add to this the rarity of the resource “time”, it becomes very difficult to design tools (recruitment, procedures...) and criteria (monitoring or evaluation).

Second, irrationality or intuitive decisions and vision of the firm reinforce the difficulties to establish objectives evaluation criteria and to justify the choices using logical arguments. This is even more visible that the owner is subjected to cognitive bias and a lack of information that reduce his ability to take “the right decision”. As underlined in the literature review, strategic goals are not formalized, financial performance is not the only priority and the strategy is often intuitive and opportunistic, linked to the personal goals of the entrepreneur. Moreover, in many cases, he will have a tendency to develop a mimetic behavior when recruiting, as he looks for individuals “who are like him” rather than seeking complementary skills. All of these elements strengthen the difficulty of establishing objective or measurable criteria of evaluation. This is particularly significant when the owners do not have clear goals for the company (e.g. Case 2).

Third, the affect is dominant in social relations. Subjectivity is omnipresent, which provides a friendly climate but can also be a problem when there is a delicate decision to take (for example a layoff). Torres (2008) has recently talked about the “trauma” of the owner who dismisses. Indeed, they are in direct, emotional and personal contact with employees, thus dismissal is very difficult to bear because it is perceived as a betrayal of a collaborator.

Moreover, beyond that, it may be seen as a denial of its own choices: he hired a person that he must now discharge. Therefore accepting the dismissal corresponds to admitting the consequences of it e.g. deception and mistakes. So the proximity of relationships is a bias for managerial decisions.

Finally, these three factors are part of a phenomenon of emphasis, the effect of enlargement, which means that the more the size of the company is reduced, the more these issues are important: absenteeism, dismissal, retirement, motivation. These difficulties, which may explain the HRM arbitrary model of the very small firms, are reinforced by the existence of limited resources, both financial and temporal, which constitute a major constraint to solve these problems.

3.3. The role of HRM practices for VSE development

Research evidence exists supporting the relationship between HRM practices and business outcomes both in larger firms (Pfeffer 1998) and in small firms (Kotey & Meredith 1997; Heneman & Berkley 1999). Bacon & Hoque (1999) assert that the productivity and survival of small firms may be enhanced if they adopt HRM practices. Kaman *et al.* (2001) support and demonstrate that performance and survival of small companies can be improved with the HRM practices despite the lack of high formalization. According to these authors some personnel practices such as encourage employees active participation; take more control of performance; engage communication generate a positive impact on the survival of small firms particularly in today's difficult labor market. In Case 3, the type of management values and trusts its workers and the main positive outcome is that employees feel more responsible for his/her own job and satisfied.

The opportunity to discuss about my work and the relationship based on loyalty and trust with M. (the owner) give me the opportunity to have more responsibilities and to feel better in the company (Employee 2, Case 3).

In Case 5, the firm growth is mainly due to the men and their quality of work according to the owner. The relationship is based on trust: each employee can appreciate the good work and the quality of the product. Each is able to evaluate if the work is well-done. This form of management and communication improve the retention and motivation.

The good work and the good people will attract the good people. We are famous for the high-quality of work and the good working environment. (Owner, Case 5)

Consistent with Bacon & Hoque (1990), our research reveals that the adoption of HRM practices within VSEs is predicted by the skill-mix of the workers. A high proportion of low-skilled workers implies that the firm is less likely to adopt HRM practices, such as in Case 2. By contrast, in Case 3, Case 4 and Case 5 the high proportion of skilled workers, or workers with scarce skills, generates more HRM practices because they are not easily replaceable. Another factor related to the influence of adaptation of sophisticated HRM tools is the presence of a HR specialist. On this point the results of Bacon & Hoque (1990) were not very significant. However, Case 4 and Case 3 confirm that a better knowledge of HRM is associated with the adoption of more sophisticated HRM practices. In all cases the owners agree on the fact that it would be very useful in some situations to have HRM knowledge.

In terms of HR we could be better. For example at Christmas, I decided to distribute a collective bonus for the employees to thank them for their work and motivation. The bonus was paid with the monthly pay. But I didn't get a word of thanks. A friend expert in HRM explained that my mistake was to trivialize this bonus. I should have given the bonus during and individual interview (Owner).

The results conduct us to propose some practices that could quite easily be implemented by VSEs and enable them to face the problems underlined previously: difficulty to formalize, to take difficult decisions, to implement tools. Table 3 underlines some successful practices in order to restructure their management methods and to grow or develop their activity.

HR main problems of VSEs	Positive processes linked to these practices	Successful practices to enable firm development
Difficulty to find competent staff	Recruitment realized via personal network of the owner	Externalize recruiting to reduce the irrational part of the process
Lack of formalization	Personalized human contact, direct communication	Develop regular meetings to improve participative management of employees
Restrained salaries and benefits	Flexible schedule, flexibility in work time organization	Develop profit-sharing and non financial benefits (time flexibility)
Low training and career possibilities, bad job description, unclear functions	Transferable expertise acquisition Polyvalence development	Develop motivation by promoting transferable competence acquisition and a good employability of employees Develop self-job description to formalize the structure

Table 3. HRM Practices facilitating firm development

Conclusion

The purpose of this research was to improve the knowledge of VSEs and their particular their problems in human resource management. The results showed several practices implemented by VSEs, but always marked by informal and affect. HR practices of VSE owners are characterized by several factors: time is subject to a compression phenomenon, decisions are

quite irrational, and the role of affect in decision-making is very significant. It is the combination of these three dimensions which makes the practices arbitrary according to Mintzberg (1979) and Pichalut & Nizet (2000). Time and lack of financial resources restrain opportunities to acquire tools or to outsource some functions (e.g. recruitment). In addition, the objectivity of decisions is greatly distorted by a large number of factors: the preponderance of affect, personal relationships, and personal desires of the owner, cognitive biases, and finally a lack of information that makes decision-making difficult (evaluation, dismissal).

As a consequence, practical issues are difficult to suggest to VSEs because there are various elements that restrain the choices: the lack of time, the scarcity of financial resources, and the subjectivity of the owner. Nevertheless we proposed some practices that could be implemented by VSEs, according to their resources and time possibilities, and that could facilitate their development. Externalization of recruitment may reduce the irrational part of the process when the owner recruits, thus reducing the risks. Moreover, the development of regular meetings can both improve participation and motivation of employees and keep an oral-based relationship and low formalization. Concerning salaries VSEs which develop profit-sharing and non financial benefits (time flexibility) may improve employee loyalty and satisfaction. This last point can also be developed by promoting transferable competence acquisition and a good employability. Finally, the development of self-job description may be a relevant alternative to a formal description by the owner.

The improvement of efficiency and quality of HRM practices is a real issue for VSEs, because they are both numerous and important job suppliers. Indeed, VSEs could find in the development of HRM tools a way to reduce bias in decision-making processes, or to externalize some functions such as recruiting to transcend their managerial or organizational weaknesses.

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Entrepreneurial Structuring in Complex Industries

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This paper is an examination of the dynamic role that individual entrepreneurs play in the creation of structure and complexity in newly emerging industries. Drawing from the perspectives of institutional theory, complexity theory, and the strategic management literature, we develop a new model that explains how the actions of individual entrepreneurs pursuing opportunity in a new industry form a sufficient basis for the spontaneous creation of order and structure in that industry. Our model supports the autopoiesis of a new industry through five distinct coordination mechanisms (direct, stigmergy, reinforcement, cooperation, and generic architecture) in which entrepreneurs behave as autonomous agents within a complex and path-dependent environment. For each mechanism, we show that the socially networked learning and rent-seeking behaviours of entrepreneurs combine to create an asymmetric transition mechanism that locks-in local creation of order and results in the spread of greater order and complexity throughout the new industry. Our results suggest a novel perspective for entrepreneurs and practitioners seeking opportunities as early movers in new industries, one in which significant additional value can be captured through the creation and lock-in of advantageous structures for the entire industry. For policy-makers, our results indicate an alternative approach for effecting industrial policy objectives, one in which large economics effects can be achieved by focussing on the critical entrepreneurial conditions when industries are new and still small. For researchers, we develop three new testable propositions, and recommend specific follow-on research.

The technological innovation or market discontinuity that gives birth to a new industry is highly dependent on initial conditions to set its evolution on a path towards high growth and significant social and economic benefit. At the time of industry germination, these initial conditions are created largely by entrepreneurs who recognize the latent opportunities and take disruptive actions to nurture their growth (David & Bunn, 1942). In this article we investigate the actions of entrepreneurs and their effects upon the emerging structure of newly sprouting industries. Although entrepreneurship research has been largely focused on emergence at the firm level (Busenitz, 2003; Lichtenstein, Dooley, & Lumpkin, 2006; Venkataraman, 1997), emergence can be viewed as a multi-level phenomenon where the actions of individuals also matter (Phan, 2003). Our goal is to propose a framework, based on complexity perspectives, that examines emergence and organization at the industry level to highlight the critical role that individual entrepreneurs play in the initial conditions and path dependency of industry emergence.

The effect of industry structures and their relationships to firms and individuals is often examined from the perspective of institutional theory. This theory suggests that social and political context can influence the decisions of individual actors. This influence arises because the behaviour of individuals is governed by institutions and social conventions, not just economic utility maximization (Veblen, 1898). Institutions can be thought of in several ways: as shared mental models (North, 1981), as “rules of the game” (DiMaggio & Powell, 1983; Shepsle, 1989), as a set of taken-for-granted understandings (Berger & Luckmann, 1966), as systems of social relations (Granovetter, 1985), or as coordinating mechanisms for rational political choice (Commons, 1934). All of these perspectives share the view that institutions can influence

individual decisions taken by actors. In the context of a mature industry, institutional theory can help explain the great degree of isomorphism and similarity among the behaviours and strategies of firms. Three types of forces act to cause firms to become similar within an industry (DiMaggio et al., 1983):

- Coercive isomorphism – Social sanctions or laws effect an exogenous imposition of structure and order.
- Mimetic isomorphism – Firms observe the structure and performance of each other (e.g., benchmarking). Successful structures are copied.
- Normative isomorphism – Values are socialized through extra-firm organizations (e.g., professionals). These values encourage the adoption of selected structural features.

Much of the recent strategy literature on change and evolution in industry structures has drawn from the perspective of path dependency. This “historical institutionalism” branch of institutional theory argues that institutions are the culminating result of specific historical processes that have occurred. These historical processes can involve actions that initiate feedback mechanisms that make going back politically impractical, and as a result, paths that were once viable options become lost (Pierson & Skocpol, 2002). Path dependency suggests that institutional effects can be bi-directional, that individual decisions taken by actors can also influence the formation and evolution of the institutions themselves. In the early stages of a new industry, collaboration and structuration by individual actors can form the basis for “proto-institutions” that subsequently develop the facticity to become enduring institutional forces (Lawrence, Hardy, & Phillips, 2002).

As David and Bunn (1987: 4) describe it, path dependence is a dynamic property of the allocative process within industries. As such, it may be viewed as a property of the whole industry viewed as a single system. The evolutionary process of the industry system displays path dependence due to punctuations or discontinuities of radical innovation and creative destruction by entrepreneurs (Schumpeter, 1934). These changes destroy the competencies of existing firms in the industry and increase munificence for others (Tushman & Anderson, 1986). Discontinuities are initiated by new firms acting entrepreneurially and, because these changes tend to destroy significant competencies of existing players, they can have large consequences even when the changes are apparently small (Henderson & Clark, 1990). This sensitivity to small effects makes the path-dependent evolution of industries a non-ergodic process (David & Bunn, 1987), one where individual agents can abruptly and irreversibly alter the probability distribution of possible future states. As a result, a deeper understanding of these dynamics can be had by adopting a perspective that crosses levels, that attempts to explain industry-level system behaviours by examining the actions of individual entrepreneurs as agents in the system.

The creative destruction potential of entrepreneurs in emerging industries has great impact on society (Baumol, 1990). So it is important to well understand the establishment of initial conditions and how these initial conditions influence the evolutionary path and resulting impact of industries. Complexity theory provides a useful perspective to understand the importance of initial conditions and the potential “butterfly effects” of individual early agents. To that end, we aim to show that significant economic effects of the mature industry as a whole can result from very small actions taken in early days by entrepreneurs as individuals. The

macro-scale economic phenomenon of a mature industry has its roots in the micro-scale of early individual entrepreneurs.

Entrepreneurs who are able to spot latent opportunities, commercialize them, and direct the growth of a new industry are well-positioned to capture very large economic gains for their firms. But they are also positioned to create large benefit for the surrounding society, both directly through the satisfaction of market needs with new products and the creation of employment, and indirectly through knowledge spillovers and other multiplier effects (Acs & Varga, 2005; Baumol, 2002). Yet, as institutional theory would predict, this is a very risky time for early entrepreneurs; the liabilities of newness are especially prominent, and innovative agents typically lack both the cognitive and socio-political legitimacy needed to effect significant changes (Aldrich & Fiol, 1994). Moreover, the potential for increasing returns to entrepreneurial innovators can result in situations highly sensitive to random chance or small initial advantages (Arthur, 1989).

Yet despite these constraints and limitations, entrepreneurs persevere in their explorations and discoveries. They act as autonomous agents seeking independent goals and objectives, Yet through their collective actions, the early industry begins to take shape without any imposition of exogenous power or structure. The new industry organizes itself in a process sometimes referred to as “autopoiesis” – the self-organization of a stable self-maintaining structure. Autopoiesis is an example of an emergent holistic behaviour that becomes possible in sufficiently complex systems.

COMPLEXITY AND SELF-ORGANIZATION

Complex systems are systems having both many components and many constraining interactions among these components. It is the interplay of these two defining characteristics that makes complex systems interesting – a system with few components and much constraint will behave very simply, and a system with many components and little constraint will behave chaotically. Complex systems exist at the balance point between these extremes, where simple order begins to break down but has not yet completely dissolved into chaos. Such systems typically exhibit nonlinearity, irreducibility, and a surprising range of emergent behaviours. It is the range of these emergent behaviours that accounts for the increasing use of complexity perspectives to understand very many interesting socio-technical systems and problems. Theories of complexity have been used successfully to better understand biological and physical sciences (Grassberger, 1986; Weng, Bhalla, & Iyengar, 1999), information processing (Radner, 1993; Trevisan & Vadhan, 2007), sociology (Brewer, 2002; Byrne, 1998), market economics (Durlauf, 2005; Rosser, 1999), strategic management (Brown & Eisenhardt, 1997; Houchin & MacLean, 2006), and individual firms and organizations (Anderson, 1999; Fuller & Moran, 2001), as well as the generalized adaptive cycles of innovation and structuration in entire hierarchies of interrelated systems (Holling, 2001). Even Hayek's catallaxy (a self-organizing system of voluntary cooperation among economic agents) can be viewed as a powerful example of complexity principles of self-organization applied to explain capitalist market formation (Hayek, 1973; von Mises, 1949).

Following this progression, complexity is now starting to be recognized as a powerful tool in the study of entrepreneurship (Bygrave, 1989; Johnes, Kalinoglou, & Manasova, 2005; Vogel, 1989). It is important to study complexity in context of entrepreneurial research because complexity science deals with the creation of order during the initial creative phases of a new organization, rather than the subsequent evolution of a well-established organization towards a stable equilibrium condition (McKelvey, 2004). This mirrors an important difference between the study of entrepreneurship and the traditional realms of strategic management.

In the case of entrepreneurs, the system agents demonstrate an interplay of equilibrating and disequilibrating forces acting in the economy; they enable the creation and destruction of local pockets of order that approximate economic equilibrium conditions (Baumol, 1990; Kirzner, 1997; Schumpeter, 1942). In particular, entrepreneurs act to cause the recognition or creation of new opportunities, the formation of new individual firms, and the structuration of new industries and economic processes around these new opportunities (Fuller & Moran, 2001). Entrepreneurs and society co-produce via the rules of social order in a process of structuration (Downing, 2005), by which the social context of entrepreneurs is dynamically enacted through the interplay of the duality between individual actions of entrepreneurs as knowledgeable agents and the constraining rules and forces of social systems and structures (Giddens, 1984). There is no exogenous organizing force – it is self-organized through an autopoietic process in which the constituent firms of the new industry act independently, yet they collectively achieve the formation and maintenance of the emerging industry structure.

Complex systems often arise through a process of self-organization among a variety of relatively simple autonomous agents. Such self-organization is a process by which the internal organization of a system changes without being guided or managed by an outside source (Di Marzo Serugendo, Gleizes, & Karageorgos, 2005). Self-organizing systems typically display emergent properties – holistic properties that cannot be simply predicted through superposition of the properties of the various constituent elements of the system. While this change should not be assumed to have positive normative value (i.e., movement to a point of increased fitness on some state-space landscape) without some explicit external specification of the fitness measure (Ashby, 1962), the changed system usually results in increased complexity and useful emergent properties. This process of self-organization and emergent properties has been repeatedly observed at the firm level, since firms are complex systems comprising the individuals and teams within the firm (Coleman, 1999). Our goal is to examine the possibility of self-organization at the industry level, a complex system comprising many individual firms.

Self-organization can occur when variations due to actions of individual agents result in local pockets of order and constraint. But to persevere, it requires some manner of *asymmetric transition mechanism* to allow for the retention of this local order, a mechanism such that these local pockets of order can be sustained and can eventually become interconnected. With an asymmetric mechanism, the system transitions into a more ordered state that becomes the new baseline condition. The system can thereby evolve to a more complex and interdependent overall structure – even if the individual transitions were solely directed to the goals of the individual agent (or indeed were completely random). The presence of an asymmetric transition mechanism

forms a “ratchet” that lifts the system into a more organized whole, without need for any exogenous control.

Learning and Self-organization

A fundamental problem faced by components in a complex system is the rapid adaption to changing environmental circumstances. Effective adaptation requires knowledge of the new state of the system. Complete knowledge of this change is difficult because social knowledge is typically dispersed idiosyncratically and not available to a single agent. There is therefore a corresponding need for emergent methods of organization to bring all this knowledge to bear on the problem – to enable agents to discover the nature of the change and to adapt appropriately (Hayek, 1945). By discovering and learning about environmental change, the individual agents can devise appropriate responses and thereby change the overall system behaviours; the system as a whole changes due to the learning by constituent components.

The foregoing suggests that *learning* on the part of individual agents can be a strong candidate for the asymmetric transition mechanism of the system. The asymmetry of this mechanism is provided by the irreversibility of knowledge transfer – something once learned cannot be unlearned. For example, a honeybee colony, as a complex system, is forever changed once a scout brings back news of a nearby nectar supply and dances to communicate the details to the entire hive. Similarly, the structure, scope and roles within the mid-1990s nascent e-commerce retail industry were forever changed once Amazon.com demonstrated both the astute choice of products to sell online and a sustainable business model. With each such change, a new baseline condition is established and exploited and, in turn, used as a jumping off point for the

next transition – the ratchet mechanism begins operating. Guerin and Kunkle’s example of statistical thermodynamic measures of the explorations of ant colonies (Guerin & Kunkle, 2004) provides another example of asymmetric transition due to learning from the domain of natural history. But more importantly, they use their observations to suggest a general four-step model by which a ratchet effect can be obtained from the combination of random explorations and asymmetric transitions. The mechanism bears similarity to Prigogine’s theory of dissipative structures (Nicholis & Prigogine, 1989; Prigogine & Lefever, 1972). Figure 1 illustrates the behaviour of this model by showing the average distance covered by an individual ant sojourn away from the colony during each of these four steps. In this model, (1) a newly discovered food source is thoroughly explored (the new system state is exploited), (2) a consolidation of knowledge occurs about where food is and is not found (the new systems structures are formed), (3) the food resources are mined in an efficient manner (the structures are maintained for so long as they are useful), and (4) the exhaustion of the food supply forces new explorations of increasingly wide range (the process renews with re-exploration from the evolved system state). This force of re-exploration echoes McKelvey’s concept of “adaptive tension” driving the system to change into configurations of better fit (McKelvey, 2004a).

Insert Figure 1 about here

This model illustrates how learning, on the part of individual agents, can lead to asymmetric transitions on the part of the system as a whole. For the model to operate effectively, it is necessary for knowledge gained by an individual agent to lead to changes in the behaviours

of many other agents. Studies of this influence among agents, in the context of “multi-agent systems”, have led to the proposal of five possible mechanisms for self-organization (Di Marzo Serugendo, Gleizes, & Karageorgos, 2006):

1. **Direct.** Interactions between agents use basic principles such as broadcast and localization, and employ local computations of individuals, to provide a final coherent global state. This occurs, for example, in the grassroots organization of political groups in society, as individuals with political objectives communicate directly and thereby discover common purposes. In the context of institutional theory, this mechanism can be recognized as a case of mimetic isomorphism.
2. **Stigmergy.** A mechanism of spontaneous indirect coordination between agents, where the trace that is left in the environment by an action of one individual stimulates the performance of subsequent actions by the same or a different agent. In Guerin and Kunkle’s ant colony this would be seen in the formation of ant trails, wherein each ant leaves chemical traces on the ground and later ants are influenced by these trace chemicals to follow a similar path. At the human scale, similar behaviour can be seen the gradual wearing of pathways in the grassy lawns of a new public park. In the context of institutional theory, this mechanism can also be recognized as another case of mimetic isomorphism.
3. **Reinforcement.** Agent behaviours are positively or negatively reinforced and the agents thereby adapt according to the state of the environment, the current individual state, and the probabilistic calculation of the expected payoff of different future behaviours. This mechanism can be observed in the formation and continuation of social fads and fashions.

In the context of institutional theory, this mechanism can be recognized as a case of normative isomorphism.

4. **Cooperation.** Agents can deliberately chose to become combined or decomposed in response to changes in environmental demands and communication overhead costs, in order to improve their collective response (both in efficiency and efficacy). For example, when traffic jams occur due to lane closures on a highway, individual drivers generally choose to combine into queue structures and follow cooperative rules for negotiating the bottleneck. In the context of institutional theory, this mechanism can be recognized as a case combining both normative and coercive isomorphism.
5. **Generic architecture.** Agents can chose to instantiate some form of extant architectural arrangement by which roles and interrelationships are predefined through a holonic organization of nested subsystems and metasystems (Koestler, 1967) and self-organization occurs through modification of the holonic hierarchy in response to environmental perturbations (Ulieru, 2002). A simple example can be seen in creation of a new recreational league for team sports, where participants organize themselves by adopting the pre-existing rules and roles of the chosen game. In the context of institutional theory, this mechanism can be recognized as a case of purely coercive isomorphism.

Table 1 connects the steps of learning exploration and consolidation of Guerin and Kunkle (2004) with the self-organization mechanisms of De Marzo Serugendo, et al (2005), and thereby provides the basis of our framework for analyzing the role of initial agents on the emergence of order and structure in a complex system.

Insert Table 1 about here

Clearly, social learning among networked agents can play a significant role in each of the self-organization mechanisms underlying the formation of complex systems. This observation leads to our first proposition.

Proposition 1: Learning in social networks is a sufficient mechanism for self-organization of systems comprising multiple autonomous agents.

SELF-ORGANIZATION OF INDUSTRIES

We now apply this perspective to the case of newly emergent industries. Although Kogut (2000) has argued that some form of structure is latent in the initial conditions of a new industry, currently the role of entrepreneurial agents in the expression of these initial conditions and path-dependent evolution of the growing industry is not well-understood. Examining some examples of recently emerged industries (e.g., personal computers, digital media, internet, nanotechnology, biotechnology, and alternative energy production) raises many common questions: What unique characteristics did each industry have? What process of organization was followed? What role did initial conditions and entrepreneurial agents play?

To address these questions we next consider the general case of entrepreneurs acting to exploit a new opportunity, such as a technological breakthrough. The framework of table 2 can

be adopted to the entrepreneurial context of new industry formation by examining how each step of the asymmetric learning occurs in each of the different mechanisms. Table 2 gives examples of the five mechanisms of self-organization, as seen in the exploitation of entrepreneurial opportunities and the formation of new industry structures.

Insert Table 2 about here

These examples illustrate a close correspondence between the knowledge discovery by entrepreneurs in new industries and the general social networked learning discussed above. This leads to our second proposition.

Proposition 2: Entrepreneurs acting as multiple autonomous agents engaged in social networked learning cause the self-organization of complex industry structures to exploit new opportunities.

We have argued that a new industry comprising many entrepreneurs is a complex system capable of self-organization, and that this organization may occur through the operation of an asymmetric transition mechanism based on social learning. But there may be other forces operating in the entrepreneurial realm that can create other asymmetric transition mechanisms. One such alternative candidate may be the entrepreneurial motive to create and appropriate economic rents, since one of the most important things entrepreneurs learn is which business models are most profitable in the new industry. The basic asymmetry of this mechanism lies in the observation that an entrepreneur will change strategies and business models if higher profits

can thereby be obtained, but will not make the reverse changes that knowingly lead to lower profits. As a result, random experimentation by pioneering entrepreneurs will eventually discover profitable models, and these models will be locked in to form the locally stable pockets of increased order on which the complexity of the industry system and the structuration of industry roles depend.

As an example, consider again the heady days of the early dot-com boom and the discovery of successful e-commerce retail by Amazon.com. Those times were marked by extensive media coverage and hype (Valliere & Peterson, 2004) providing ample opportunity for communication and social learning among pioneering entrepreneurs. But they were, to an even larger extent, times of rampant experimentation with business models. From web retailing of pet food to online market-making in petrochemicals, and by using business models developed through both deliberate experimentation and random accident, entrepreneurs thoroughly explored the profit potential of the new industry space, discovered and preserved the most successful approaches, and catalyzed the structuration of the online commerce industry. The primary mechanism of this progression and asymmetric lock-in appears to have been rent-seeking.

It might seem like this rent-seeking mechanism is implicit in the previously described learning mechanism. But the two should be considered separately since they are not necessarily concomitant. Sometimes the exploitation of the industry opportunity does not involve new learning (other than the initial discovery of the opportunity); the innovation might simply be the application of well-proven extant business models into the new industry context, with little novelty or learning being shared among the agents. In such a situation, ongoing social learning

cannot serve as the asymmetric transition mechanism underlying the self-organization of the industry structure. Instead, it is solely the rent-seeking actions of entrepreneurs that catalyze the self-organization of the industry. This leads to our third proposition.

Proposition 3: Entrepreneurs seeking the creation and appropriation of rents cause the self-organization of complex new industry structures to exploit new opportunities.

From propositions 2 and 3 a number of testable hypotheses for entrepreneurship scholars may flow. For example, industry self-organization would presumably occur more quickly and successfully in cases where:

1. Knowledge spillovers are rapid and widespread (Romer, 1990).
2. Entrepreneurial successes and failures are widely and transparently communicated.
3. Entrepreneurs are embedded in rich networks (Echols & Tsai, 2005; Yli-Renko & Autio, 1998).
4. Entrepreneurial networks are characterized by many weak ties (Granovetter, 1973).
5. There is a greater prevalence of entrepreneurs, with greater access to knowledge support infrastructures (Peterson & Valliere, 2009).
6. Formal mechanisms for entrepreneurial communications exist (e.g., industry associations and events).
7. Informal mechanisms for cooperation and coordination among entrepreneurs exist to support catallaxy (Hayek, 1973).
8. A culture of experimentation in business models is encouraged (e.g., through tax subsidies, bankruptcy laws).

9. Entrepreneurs are able to prevent the appropriation by third parties of rents obtained in the new industry (e.g., patent protection laws).
10. Significant similarities exist between the new industry and an existing industry, such that analogous business models may be easily transplanted.

CONCLUSIONS

Industry emergence and structuration follows a variety of autopoietic processes of self-organization. These processes are highly path-dependent and sensitive to initial conditions. We argue that entrepreneurs play a critically important role in establishing these conditions. Schumpeterian creative destruction can be viewed as an element of self-organization through the exploitation and structure-formation steps, while Kirznerian entrepreneurship represents the structure-maintenance and re-exploration steps. Together these two entrepreneurial actions constitute an asymmetric transition mechanism or ratchet that preserves the initial emergence of local order and thereby allows it to grow to industry-wide scales.

We further argue that social learning underpins this entrepreneurial ratchet through the five mechanisms of direct interaction, stigmergy, reinforcement, co-operation, and generic architecture. Entrepreneurs represent the nexus of learning within the emergent industry, the locus at which profitable and sustainable structures are discovered and promulgated. The individual actions of entrepreneurs can have irreversible consequences, either arising from knowledge transfer or flowing from the entrepreneurial profit motive. These consequences create

the small but significant initial conditions that drive the industry towards one set of future states and away from another set, in a non-ergodic manner.

These initial entrepreneurial conditions create a path dependency in the emergence and formalization of institutional influences in the new industry. This path-dependent relationship means that industry evolution cannot be fully understood at only the system level. The emergence of industry path dependency is a level-crossing phenomenon in which small actions of individual agents can have large effects on the overall system behaviours, and these system behaviours in turn enable or constrain further actions by the agents. In this paper we have attempted to propose a broad framework, based on complexity-theory perspectives, that integrates the critical role entrepreneurs play in the initial conditions and path dependency for the emergence and organization of new industries, and thereby suggest how this self-organization depends on level-crossing effects. Figure 2 summarizes this effect.

Insert Figure 2 about here

Implications

For entrepreneurs and practitioners, these results highlight the importance of individual actions in the early days of new industries and new business opportunities. Due to the ratchet mechanisms described above, small choices by entrepreneurs can have very large and lasting effects on the ultimate structure of the mature industry. These effects directly contribute to the creation of significant economic value and obtainment of entrepreneurial objectives.

Entrepreneurs and advisors who serve them should be aware of, and plan for, the high multiplier effects during early days, and the potential lock-in effects of path dependency.

For public policy-makers interested in fostering the development of economically significant new industries, we suggest that much more attention should be given to policy effects in nascent industries, areas of economic activity that are often mistakenly overlooked as too small and unproven to warrant public attention and support. These efforts should focus particularly the effects of policy on the actions of the initial entrepreneurs. The multiplier effects and path-dependent lock-in of emergent structures mean that patterns and structures that arise in the earliest days of the new industry can have very wide-reaching effects. These effects may become so entrenched that subsequent policy levers are rendered largely ineffective.

For educators, our model shows important linkages between somewhat separate domains of business and management education. Entrepreneurship is not an educational cul-de-sac, concerned solely with small-business management. Rather, it is an essential element of large-scale industrial development, and of the strategic management of large firms in mature industries. The level-crossing nature of entrepreneurial effects on entire industries highlights the importance of entrepreneurial education for business students of all types.

For researchers, the potential significance and influence of early entrepreneurial actions on the eventual growth and evolution of new industries underlines the importance of continued work in this area. The asymmetric transition mechanisms described in this paper have been proposed as sufficient but not necessary causes. On the one hand, their sufficiency is in need of empirical validation under reasonable operationalization. And on the other, the possible existence of other important asymmetric mechanisms should also be investigated. Each validated mechanism found will be significant in that it provides an important dimension for better

understanding the early dynamics of the industry system and the resulting future evolutions, and in that it also provides new insights into potential policy levers for the facilitation of industry growth and ongoing change.

Finally, the potential connection between the generic four-step transition model and the actions of Schumpeterian and Kirznerian entrepreneurs suggests the possibility that the entrepreneurship phenomenon as a whole may constitute an asymmetric transition mechanism that operates across multiple industries. Entrepreneurship may thereby form a ratchet mechanism in the entire economy, transitioning the rotation of the economy from one equilibrium attractor to another. Such investigation is well outside the scope of this current paper, but worthy of investigation by subsequent researchers.

TABLE 1

Asymmetric Learning and Self-organization

	Self-organization Mechanisms				
Phases of Learning	<i>Direct Interaction</i> (grassroots organizing)	<i>Stigmergy</i> (walkways in a park)	<i>Reinforcement</i> (social fads)	<i>Co-operation</i> (traffic lane blockage)	<i>Generic Architecture</i> (soccer league)
<i>Exploitation</i>	Individual experimentation towards goals, local identification of other interested activist parties.	Random walks among areas of interest, constrained by bounded rationality of agents.	Social benefit of being perceived leader, trendsetter, having fun or being cool.	Individual recognition of common objective – allowing <i>you</i> to proceed clears the lane for <i>me</i> .	Deliberate adoption of existing models and roles (e.g., which game, which league, which teams and positions).
<i>Structure Formation</i>	Communication of successes by pioneers, coordination of efforts among local groups, reduced agent ignorance of overall structure.	Influence of environmental traces (footprints and rough paths), widespread copying, and formal structuration (pave the paths).	Need for affiliation and social approval, jumping on the bandwagon.	Emergent identification of agents and roles (queues of cars form), locally negotiated or cultured rules (taking turns).	Adoption of rulebook, enactment of roles and processes (playing positions).
<i>Structure Maintenance</i>	Local rules govern exchanges for individual benefits, widespread interactions.	Homeostasis of structure regulates agents – “Keep off the grass” signs erected.	Herd behaviour and social costs of non-conformance, co-option by the mainstream society.	Local observation of efficacy (net throughput), recognition of switching costs to create alternative mechanisms	Public tracking of performance (statistics), rule enforcement by appointed referees.
<i>Re-exploration</i>	Mass communication, assessment of progress and new status quo.	Expanded boundaries through serendipity or noise (e.g., new point of interest discovered, or new shortcut by busier visitors).	Novelty seeking, boredom, desire to be different.	Environmental change (a lane reopens or another lane becomes blocked) triggers reevaluation of status quo.	Environmental change (winter comes, players change to ice hockey).

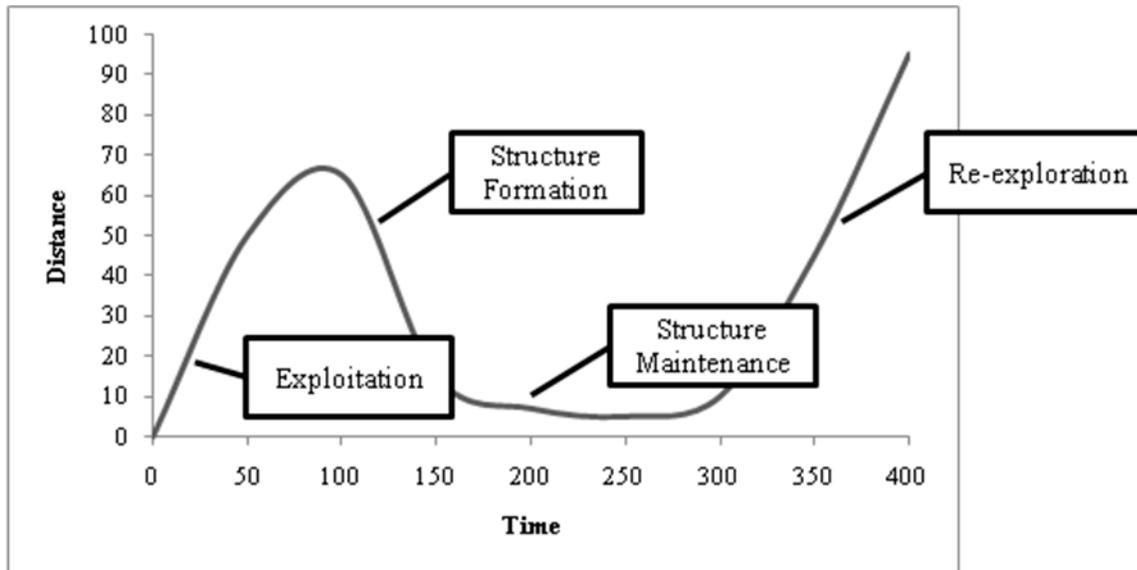
TABLE 2

Entrepreneurial Self-organization of New Industries

	Self-organization Mechanisms				
Phases of Learning	<i>Direct Interaction</i> (direct networking)	<i>Stigmergy</i> (indirect networking)	<i>Reinforcement</i> (cultural influences)	<i>Co-operation</i> (experimentation)	<i>Generic Architecture</i> (replication of models)
<i>Exploitation</i>	Small, innovative firms seeking access to large markets dominated by existing players	Serendipitous discovery of opportunity by innovative entrepreneurs	Pioneering entrepreneurs seeking first-mover advantage through new venture creation; effects of field frames (Lounsbury, Ventresca, & Hirsch, 2003)	Individual recognition of opportunities that require collaboration (complementary products, delivery of “whole product”, co-opetition), specialization and communication (Kogut & Zander, 1996)	Opening of a regulated industry opportunity
<i>Structure Formation</i>	Corporate venturing through strategic alliances with entrepreneurial firms	Strategic responses by entrenched players (e.g., copying new business models).	Recognition of first-mover successes. Copying their strategies, or spotting adjacent emergent opportunities (e.g., supplier, distributor)	Entrepreneurial action to facilitate shared objectives, such as open standards and product architectures, creation of industry associations, deliberate entry induction of new ventures (Kogut, Walker, & Kim, 1995)	Predefined industry participant roles adopted by new and existing firms as they enter the new regulated industry
<i>Structure Maintenance</i>	Contractual mechanisms established (e.g., hub-and-spoke structures)	Structuration of new norms and expectations of existing players, in light of new entrepreneurial actions.	Successful profit-generation by all industry participants	Network effects and increasing returns, exponential growth in switching costs	Enforcement by regulator
<i>Re-exploration</i>	Interaction and joint discovery through networking, brainstorming, scenario planning.	Declining margins through Kirznerian entrepreneurs, emergent opportunity for Schumpeterian creative destruction	Innovation and environmental change create opportunities for new pioneers	Environmental change (creating new collaborative opportunities)	Environmental change (especially changes in regulatory regime)

FIGURE 1

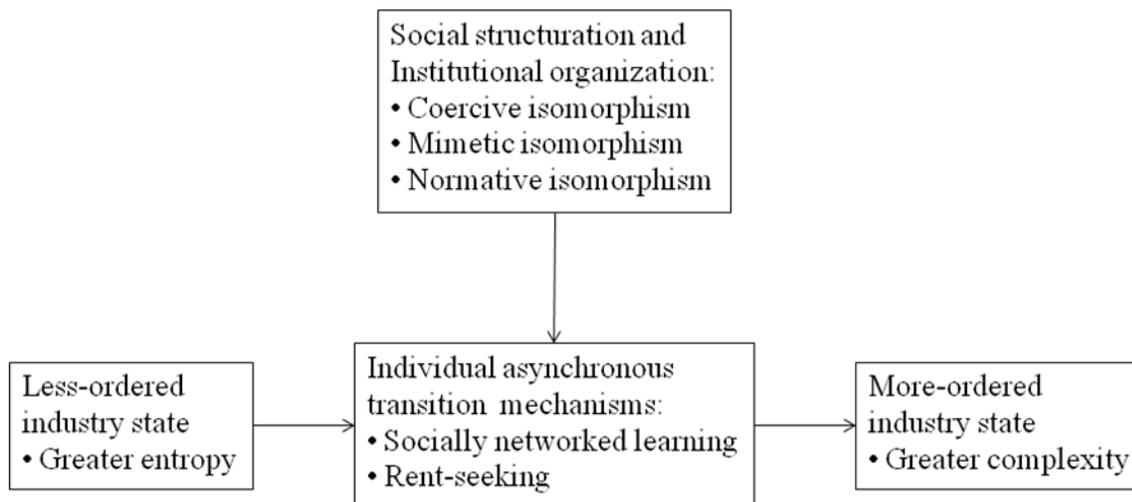
Exploration, Consolidation of Knowledge, and Institutional Structuration



(Based on Guerin et al., 2004)

FIGURE 2

Individual Moderation of Industry-level Effects



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A Consideration of SMEs' Reactions and Public Support after Toyota Shock

Through Analysis of Members of Toyota Cooperative Association of Iron Work

By Yuki USAMI, Nobutaka ODAKE, and Tetsumi HORIKOSHI

***Abstract:** Conventionally, at the time of economic slump, economic policies for local districts have been mainly decided by the government and uniform countermeasures have been taken locally. This is generally because local governments' budgets heavily have been supplied by the central government. However, it is important to implement the kind of economic measures that fit the circumstances of each local economy by taking advantage of the local government's characteristic to be able to know the local economy directly.*

1. Introduction

This paper analyzes the characteristics of regional economic activities through interviews with enterprises and also suggests industrial policies required for a local economy to avoid a regional economic slump. This paper's cover area is Western Mikawa District where Toyota Motor Corporation (TMC) and its many affiliated companies are located. Interviews of companies and local government policies were taken by the City of Toyota.

In November 2008, the so-called "Toyota Shock" occurred. TMC's slow business had a gigantic impact on the Japanese economy. The impact spread into not only the automotive industry but also into other industries.

In Toyota city where many of TMC's affiliated companies are located, enterprises have been reducing non-regular workers such as temporary and term workers because of smaller volume of works. While production adjustment of automobiles was advancing, SMEs that enjoyed economic boom had to face a review of management strategy.

As the economy is quickly receding, the national and local governments are required to set up prompt and effective economic stimulus measures. Toyota city's emergency economic measures for FY 2008 were the expansion of credit guarantee subsidy (budget: 100 million yen) for SMEs and the emergency job creation project (budget 40 million yen). The credit guarantee subsidy project started in October 2008 or in the middle of FY 2008, but into only two months from the start of the project, the expenditure already exceeded the annual budget of 100 million yen and the application total neared 300 million yen which is as three times the amount of the original budget.

As for the emergency economic measure, Toyota city implements its own independent measure

without waiting for the government countermeasures. The detail of the measure is that the city of the city-affiliated organizations would hire 100 people for the people who lost jobs on and after October 1, 2008, as temporary staffs. Toyota city started job recruitment in January, 2009. However, the applications were not many as the city had expected. Just about half of 100 job vacancy is filled.

The evaluation of Toyota city's emergent economic package under the economic depression is as follows;

1. As for support of SMEs, the budget is a big financial burden for a local government.
2. As for employment support, job offers and job seekers do not fit very well.

From the stated above, it is difficult to say Toyota city's emergent economic measures are appropriate. Local economic measures are necessary which are more appropriate for the actual situation of the local district especially for the manufacturing industry what contribute to the local district very much in terms of tax income.

Hence, this paper discusses the enterprise support measures local governments especially Toyota city should take based on the actual situation of SME through interviews with members of Toyota Cooperative Association of Iron Works, a representative SME group in Toyota city. This paper picked up SMEs from Toyota Cooperative Association of Iron Works because they hold monthly management study meetings, thus it enables time-series analysis.

2. National Level Countermeasures

In December, 2008, the Japanese government announced the second supplementary budget of the FY 2008 and the direction of the FY 2009 budget [1]. The details are the government projected economic recovery within three years from the FY 2008 focusing mainly on "employment measures", "tax system revision", and "financial market and financing measures". Affected by the acute deteriorating employment conditions especially at the end of the year, the measures that were planned and implemented focused mainly on the "Employment Measures" to support the livelihood of workers (budgeted 1.1 trillion yen). In addition, projects to create jobs are underway at local communities. The government allocated subsidy (budget 1 trillion yen) to local governments.

On the other hand, compared to the support for workers, the financial support to SMEs that hire workers is as small as 240 billion yen with national and local taxes combined and the actual expenditure was postponed until the 2009 FY. The detail of the SME support measure is a time-limited tax rate reduction and tax refund of loss carry back. Financially, in total 33 trillion yen are allocated. Thirty out of the 33 trillion yen are used to expand the compensation and loan limit. The remaining budget will be spent to prepare the appropriate climate so that the necessary funds will be supplied to needy SMEs by stabilizing financial institutions.

2.1 Employment Measures

Among the “Employment Measures”, the “Employment Adjustment Subsidy Program” which aims at “securing jobs” is available to SMEs. In this subsidy program, the government aid funds when SMEs face production volume decline and business suspension and plan to education and training of the employees. The subsidy rate and the eligibility were expanded to cope with the situation and in December, 2008, the program was revised as the “Immediate Employment Security Subsidy for SMEs”.

According to Aichi Labour Bureau, as of the end of December, 2008, the number of applicants in Aichi Prefecture was 9,424, which was the highest in Japan. After one month, that is, in the end of January, 2009, the number increased six-fold reaching as many as 60,000. [2]

2.2 Financial Measures

The detail of the tax rate reduction stated above is to lower the reduced tax rate from 22 to 18 percent for two years for the enterprises with annual income lower than eight million yen. As for the tax refund of loss carry back for SMEs, only when an enterprise with a surplus in the previous year falls into deficit the following FY, the corporate tax of previous FY is refund. Besides this measure, the government also plans to introduce the Investment Facilitation Tax System for SMEs that purchased energy saving tools. This enables SME to start immediate deprecation and the corporate tax is cut from the very first FY.

As for financial measure, from October, 2008, government started the immediate compensation of soaring oil and raw material prices and the safety net compensation system. The government announced to do countermeasures to support SMEs’ financing by expanding compensation limit. In addition, the Financial Serviced Agency and the Ministry of Economy, Trade and Industry work together to improve the credit crunch against SMEs.

These measures are thought to be the extension of the policy of “smooth adjustment to the rapidly change of the environment” stipulated in the Revised SME Basic Law (1999). However, this law changed its focus from the social policy style that relieves the socially vulnerable to competition facilitating policy style that support help support [3]. The government measures for this time are just a temporary bankruptcy evading pact. The government yet to introducing drastic policies that would speed up “reinforcement of managing base”.

3. Current Situation of Local Industries

The economic climate showed a hint of downward change in Toyota district in 2007 when the gradual increase of crude oil prices since around 2000 showed a sudden rise triggered by the US subprime loan crisis and unstable conditions in the Middle East in 2007. That is, as prices of crude oils and raw materials rose, SMEs’ profitability became worse and the SMEs’ business

climate also became worse. [4]

Under this severe economic climate, in July, 2008, TMC announced that it would shutdown three factories in the US for three months from August, 2008. After this announcement, SMEs in Toyota city showed the influence of the decreased production and export.

Moreover, in November 6, 2008, TMC announced the financial results for the second quarter. It reduced the consolidated operating profits projection of FY ending March, 2009 by one trillion yen from the initial prediction to 600 billion yen (73.6 percent down) [5]. Here, the so-called “Toyota Shock” occurred. This incident affected strongly the stock exchange. On the following day, the Nikkei Index plummeted. After that, the automotive industry including TMC announced decreased production volume plans one after another. The automotive industry started reducing non-regular workers.

Table 1. Progress of forecasts for FY 2009 by TMC

Date	Operating profits (billion)	Consolidated sales (Thousand of vehicles)	Automotive production (Toyota Lexus)
Initial prediction	1,600	9,060	8,873
FY2009 1Q August, 2008	1,600	8,740	8,443
FY2009 2Q November, 2008	600	8,240	7,920
Special notice	▲150	7,540	7,540
FY2009 3Q February, 2009	▲450	7,320	7,320

3.1 What “Toyota Shock” Means to the City of Toyota

Auto-parts manufacturers and production equipment manufacturers in Toyota city have been experiencing a sharp drop of production and sales due to the TMC’s decreased unit of sales.

In Toyota city there are nine TMC factories out of 12 TMC domestic factories. Because this area is an important production center of TMC, many auto-parts manufacturers are situated around these TMC factories. And due to the concentration of factories, there are numerous production equipment manufacturers in the City of Toyota. These factories supply manufacturing lines when TMC deploy factories at home and abroad. That is, if TMC suspends a large-scale investment, production equipment manufacturers in Toyota city are greatly affected. However, orders do not become zero because production facilities have replacement.

TMC's domestic output units per day in April, 2009, were around 8,000 units which is 60 percent down from the same month of the last year. According to estimation, due to inventory adjustment, daily output is thought to increase to more than 10,000 units in May. But the daily units will not recover to TMC's loss-and-profit line of 12,000 units until October. Even after this coming fall, the production will not be full-fledged. The number is estimated to be around 13,000 units per day. SMEs estimates that "to have profits, the daily production units have to recover to 80 percent of its peak that will be after 2010. [6]

3.2 SMEs Reactions to Toyota Shock

This section analyzes the impact of the Toyota Shock of SMEs' and its reactions to it through interviews with members of Toyota Cooperative Association of Iron Works. The details of interviews are the volume of work after the Toyota Shock, funding condition, human resource issues and each SME's countermeasure. Targets are varied; 5 industries and 4 manufacturers. These enterprises are "independent SMEs" stipulated in the above-mentioned Small and Medium Enterprise Basic Law. [7]

Case of Enterprise A (production facility business)

[Profile]

Founded: in 1946

Contents of business: transfer facility manufacturing

Capital: 24 million yen

Number of employees: 70

Sales: 7 billion yen

Business customers: TMC and the Toyota Group

[Summary of Interview]

Before November, 2008, enterprise A had an advance notification from TMC. The number of orders in 2008 and 2009 would be around the same number as FY 2004 on sales base. As there has been no change in the number of staffs since 2004, it is not difficult to cope with funding. It already knew that TMC did not plan a large-scale investment for 2009 from TMC's plan. So, it will be able to cope with funding for two years. For SMEs, it is not easy to recruit personnel, so it cannot layoff regular workers even though in the midst of stagnation. If possible, enterprise A hopes to recruit skillful workers. Assuming the future increase in production, it will continue to place orders with subcontractors.

Enterprise B (environmental business)

[Profile]

Founded: in 1960

Contents of business: metal and nonferrous metal resources working

Capital: 1.58 billion yen

Number of employees: 550

Sales: 38 billion yen

(Capital, the number of employees and sales are the total of its group companies)

Business customers: TMC and the Toyota Group

Others: Enterprise A has one group company in the City of Toyota and another in southern part of Japan, Kyusyu. Business contents of these group companies are transportation, rental of forklifts and others.

[Summary of Interview]

After the Toyota Shock, the volume of work nosedived. As of December, 2008, the work decreased to 50 percent and after February, 2009, the volume decreased to as little as 40 percent. The employees are all regular workers. Since Enterprise B has offered multi-skill trainings, B was able to shift smoothly to gather low operation facilities to make operation ratio of the remaining facilities high. Because B estimated the economic peak would be at the Beijing Olympic Games, B finished all of the additional investment during the economic boom. However, it introduced highly efficient facility to lessen overtime and this facility did not operate at all now.

During the economic boom, B tried to increase reserves. As of September, 2008, the amount is as high as 20 percent of the sales of the previous FY. Thus, if the company has a deficit of around 100 million yen per month, it can survive for two years. As of April of 2009, it survived without doing business suspension and it did not apply to Immediate Employment Security Subsidy for SMEs.

But operators in the distribution section have not received multi-skill trainings, so they have difficulties to gather low operation facilities to be more efficient. In the future, it will perform multi-skill trainings for those who wish in the distribution section.

Enterprise C (metal working business)

[Profile]

Founded: in 1969

Contents of business: precision mold building, jig making

Capital: 20 million yen

Number of employee: 35

Sales: 500 million yen

Business customers: TMC and Denso, Aisin Group and others

[Summary of Interview]

Before the Toyota Shock the volume of work had been gradually decreasing because TMC forayed into overseas, so Enterprise C already had a sense of crisis. After the Toyota Shock the

volume of work rapidly decreased. Enterprise C did not renew contracts with non-regular workers when they expired in the fall of 2008. But under this crisis time, an enterprise can recruit excellent employees. The company energetically visits high schools and professional training schools to try to recruit new graduates. As for funding, it enjoyed no-debt operation during the economic boom. Its work was approved as Management Innovative Business [8], and it was to receive loans to introduce new facility. But it extended the project. Instead it applied to loans for working funds in January, 2009. It also applied to Immediate Employment Security Subsidy for SMEs. In the future, they will apply to Career Making Facilitation Subsidy [9] to develop human resources in January, 2010. It also schedules to conduct human resource trainings to introduce new facilities that will happen after the economic recovery. In addition, it switches to in-house manufacturing to save outsourcing expenses.

Enterprise D (Prototype and auto parts making business)

[Profile]

Founded: in 1967

Contents of business: aluminum prototype parts, prototype mold, production of mass-production parts, quality inspection

Capital: 45.25 million yen

Number of employees: 200

Sales: 5.3 billion yen

Business customers: Taiho Kogyo, Toyota Group

[Summary of Interview]

Before the Toyota shock orders of prototypes showed the sign of decline. After the Toyota Shock the volume of work has been declining further. Capital investment is important to keep prototyping of critical parts to be competitive. During the economic boom, D aggressively invested into facilities. It did not renew contracts with auto-parts manufacturing non-regular workers in the fall, 2008. In January 2009, it applied for the Immediate Employment Security Subsidy for SMEs. Plus it has days offs on the same day of TMC's day offs. Although it started cost cutting with the easier ones like energy saving activities, it will make use of operating fund loan in May, 2009.

According to the stated above, SMEs' reaction to the Toyota Shocks is as follows;

- At the beginning, they coped with the Toyota Shock with slashing variable costs such as overtime expenses, management compensation, cutting non-regular employees, shifting from outside order to in-house manufacturing.
- However, the low production volume tendency did not cease. Early in 2009, they received Immediate Employment Security Subsidy for SMEs and suspended operation to secure jobs.
- Assuming future output increase after economic recovery, SMEs plan to perform human resource trainings that they could not do during the economic boom. Some SMEs tries to

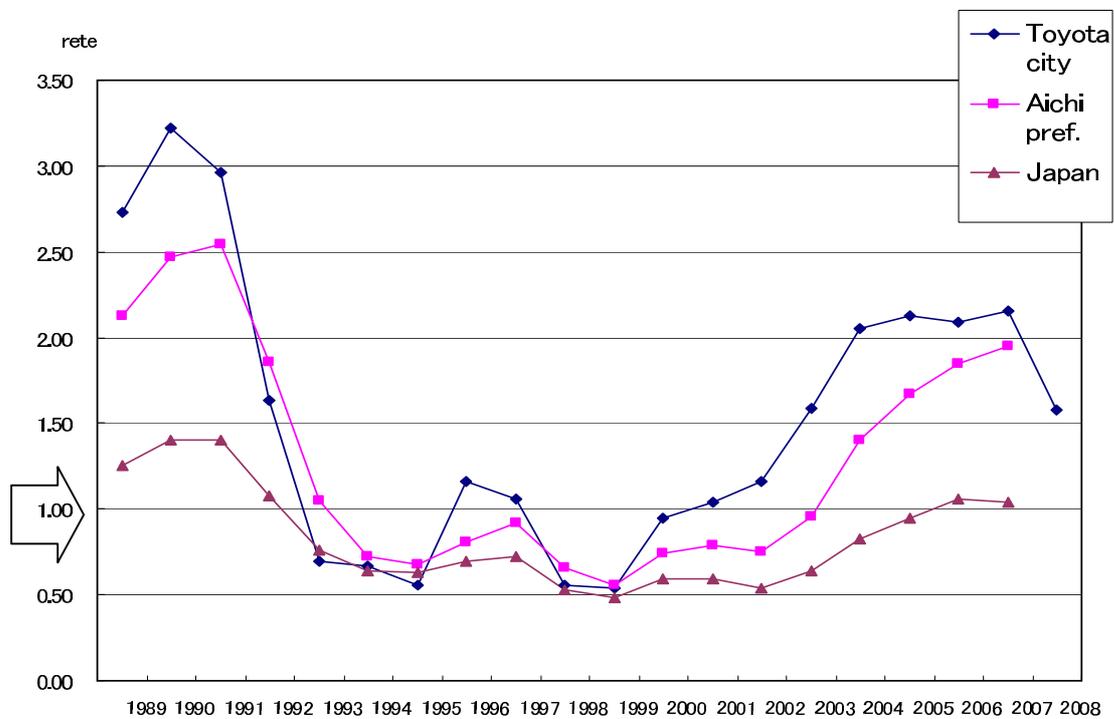
make use of a government subsidy of human resource development.

- Although they have ample amount of reserves, they keep investing to a minimum and they are interested in securing operating fund and various subsidies of R&D.

The reason why they try so hard to secure regular employment is that conventionally SMEs in the Toyota city have difficulties in recruiting workers and once they employed a worker, they will not fire the person easily. This explains the why the number of Immediate Employment Security Subsidy for SMEs are highest in Aichi Prefecture.

The job-offers-to-seekers ratio in the Toyota precinct (Figure 1) [10] has been as high as over two percent since 2004, so this explains that in Toyota city SMEs have been constantly suffering from human resource shortages.

Figure 1. Transition of the Job-Offers-to-Seekers Ratio in the Toyota Precinct



As is shown in the Change of the Number of Employers and Employees according to Small Industrial Classification (Figure 2), temporary staff service agencies supported to fill the shortage of manpower. [11]

Figure 2. Change of the Number of Employers and Employees

		2001	2006
Temporary staff service agencies	The number of Companies	14	74
	The number of Employees	1,564	7,289

The kind of SMEs that the government assumes to support is the ones on the verge of bankruptcy. This image is far from the image of SMEs in the City of Toyota which have abundant reserves.

During the “lost decade”, SMEs in the Toyota city accumulated reserves and enjoyed no-debt operation on the basis of thriving TMC. Until the early part of 2008, the job-offers-to-seekers ratio had been as high as over two percent. Under this situation, the issue of SMEs is how to garner excellent workers. On the other hand, they had been so busy to catch with the increasing amount of work, thus, they could not catch up with the need of human resource training.

Ironically, slow business due to the Toyota Shock gave them the time to solve the shortage of manpower and to nurture human resources. The industrial countermeasures in this district should not be the one to prevent bankruptcy but to be the one that looks at the future economic recovery. Therefore, the necessary policies should induce enterprises to train personal resources. It also should enable enterprises to shift from automotive-industry-dependent management to the new industry. In addition, the policies should help enterprises that are holding back investment to spend on capital investment actively.

4. Policy Implications

The investment to step up productivity is supposed to improve both human resources and production facilities. It can be expected that increasing the capital equipment causes labor productivity rise. As a result, potential rate of growth becomes better. It prevents local economy from being stagnant. From these ideas, we suggest the policies for the human resource development and capital investment.

4.1 Supporting policy for human resource development

Human resource development done by SMEs in Toyota city is mainly skill acquiring training. Most of them are on-the-job trainings. Additionally, few SMEs have classified training programs. Also some SMEs have lopsided employee structure without 40' s generation. This situation shows that alternation of generations would become difficult. [12]

Even if SMEs start human resource development in this condition, it is difficult to get the results what they expected. It is even more difficult to get the good results in this tough economic situation.

SMEs do not have enough human resources, so they expect employees to be conscious of own duty in each position for efficient business. Also SMEs in Toyota city should fulfill the expectations as suppliers of automobile components and manufacturing equipments by their technology and proposition.

In order to increase the rate of productivity, it is necessary to maintain the systems to make SMEs train their employees positively. For example, we suggest that a regional government package classified training programs that fit the situation of the regional district and show SMEs usability of programs.

We suggest the guided policies for SMEs. Then regional government should certify the some educational courses as the classified educational program and grant SMEs. Other local governments designate research institutions that offer training program for grant, but we confine the contents of programs. In this case, the number of applicants of educational courses is limited as well as the burden for the local governments is also controlled. So they are easy to estimate their budget. Also it is possible to design the system within local government budget.

At present, Toyota city has “promoting grant for SMEs’ human resource development” to support educational programs run by the Chamber of Commerce, the cooperative association and group of SMEs. In this system, Toyota city entrusts programs to administrative subject. Henceforth, Toyota city should cooperate with local companies and universities to develop the programs corresponding the situation of manufacturing SMEs and certify the program as the classified educational program.

In Toyota city area where SMEs accumulate toward the giant company, the technical relationship is vertical strongly symbolized by “Keiretu” which means the business hierarchy to guarantee long-term affiliate relationship. On the other hand, SMEs hardly make the horizontal network among them. Hence it becomes the most important problem to develop industrial cluster. However, new policies make the new network among the companies and universities by human resource development and also are expected to incubate new businesses.

4.2 Assistance to human investment

According to Miyagawa and Niigata (2006), when the replacement of facilities are delayed, the labor productivity drops. And they say that to facilitate replacement investment, although tax reduction is effective temporarily, in the long run, it is desirable to shorten the statutory useful lives of assets.

The capital investment-related support in Toyota City is “Toyota City Industrial Location Encouragement Ordinance” [13]. However, in this support system, an incentive applies only when an enterprise builds a new or an additional business establishment.

Although this support is an incentive to encourage new business entities in Toyota City or to prevent them from moving out of Toyota City, it does not serve as a direct incentive to facilitate capital investment. To promote capital investment, this paper suggests a system to grant incentives that is equivalent to 5-year fixed-asset tax.

5 Consideration

TMC had increased production until September 2008. Therefore some of SMEs had continued to invest into productive facilities just before “Toyota Shock”. SMEs that increased the number of

employees and productive facilities after the ‘lost decade’ and those that hit by the “Toyota Shock” just after capital investment, were supposed to meet the exacting conditions of management. However, SMEs in Toyota city seem to have retained earnings steadily even in the economic prosperity. “Toyota Shock” gave the great impact on SMEs in this area however does not bring them to serious financial problem. In this situation, if Toyota city only corresponds to prevent SMEs from going bankrupt as the Japanese government does, it would not fit for SMEs’ demand. SMEs in Toyota city should realize this economic slump as a good chance to get;

1. decline of the material price
2. negotiable to discount the price of equipment
3. better employees
4. time to train their employee

SMEs in Toyota city were too busy to train the employees and to review their management drastically in good economic condition. They should recognize this recession as the period to take measures for the next economic prosperity.

However, SMEs’ internal reserves will not last eternally. So that Toyota city should take actions on the early stage of this recession. Toyota city should execute policies to support SMEs for training their employees corresponding to SMEs’ demand. The critical consciousness makes SMEs orient toward human resources development and investment productive facilities. So that, it is important that Toyota city executes them promptly, while SMEs have a sense of crisis and their success experience bring SMEs to good circulation.

These industrial policies reflect local characteristic, therefore the local government has to execute by itself and also has to choose the measures because of financial limitation.

6 Conclusion

This paper proves that unified economic policies decided by the government are not always effective in local economic condition. By contrast, it proved that the local governments have the possibility to execute economic measures corresponding to local economic situation because they can grasp the local economic situation directly.

Also it suggests industrial promoting policies of professional training and investment capital corresponding to local economic characteristic. These policies are supposed to make regional network among companies and universities to contribute to make the cluster and play the important roles in next convalescence of economy.

Appendix

1. The cabinet meeting for economic measures (19 December, 2008) *Urgent Measures for Life Security*
2. Yomiuri newspaper, (3 February, 2009)
3. Economy and Industry committee in House of Councilors (October 2008) *Evolution and Recent Trend of Policy for SME's after Amendment of Small and Medium Enterprise Basic Law.*
4. Tokai Local Finance Bureau, (February, 2008) *The Effect on SME's after Sudden Rise in Crude Oil and Material Cost.*
5. Toyota Motor Corporation, *FY2009 Third Quarter Financial Results*
http://www.toyota.co.jp/jp/ir/financial_results/2009/index.html
6. Hearing survey to Toyota Cooperative Association of Iron Works
7. The third article of Small and Medium Enterprise Basic Law and its philosophy to define SMEs.
8. SME's can obtain low-interest rate loan, special credit guarantee and low tax rate, when they submit to local governor the business plan including business contents and goals.
9. This grant is designed to promote laborers to gain proper skills effectively and subsidizes employers who train employees gradually and systematically. Employment and Human Resource Development Organization of Japan implements this program.
10. The graph is made from the statistics by Toyota Hello Work (employment bureau). The number of Toyota City is consisted of Toyota City and Miyoshi town.
11. The table is made from *Companies in Toyota city 2006* and *Companies in Toyota city 2001*, The Department of the General Affair, Toyota city.
12. The Department of the Industrial Affair, *Report of Application Private Sector for the Promotion of Industrial Development*
13. Toyota City Industrial Location Encouragement Ordinance has the incentives amount equivalent to fixed tax, city planning tax and business office tax related to the business for 5 years.

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WORKSHOP: Women, Entrepreneurship, and Growth

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It is widely accepted that growth businesses play a key role in job creation and economic growth. Indeed, it is often assumed that there is a direct link between the two. Yet, there is increasing recognition that current understandings, definitions and measurements of growth may be overly simplistic and that growth is a complex construct which has much too often been reduced to a choice between growing and not growing a business.

Women, it has further been suggested are less likely to grow their business whereas men have stronger growth ambitions. The reason it has been suggested lies in the lack of human capital. Indeed, it has been the underlying assumption that if women had the ability as men they would want to grow their businesses exactly the same way as men. Research has, however, also shown that that contrary to common belief, female entrepreneurs tend to have strong growth aspirations, even though their businesses do not grow as fast as businesses owned by men. Indeed, although increasing numbers of women are starting new ventures, and have proved to be good survivors, a minority of these become high-growth ventures in the conventional sense and are therefore, seen as under-performers. Resultantly, they tend to be moved into the outskirts of the political agenda. Hence, it is critical to investigate how gender influences on choices in the entrepreneurial process.

This workshop wants to challenge the received view. It aims to explore what types of growth women choose, and the reasons underlying these choices. It seems that women tend to choose more dynamic and flexible models than the traditional options, but unfortunately these are also less transparent and more difficult to measure objectively. The workshop offers the idea that as society is transformed from an industrial to a knowledge economy, it may be necessary to change the dominant perception and understanding of growth, and that women are actually heading the development embracing the structural and normative barriers to growing their business and thus opting for the preferred alternative.

The workshop is open to anyone with a particular interest in discussing innovative models of growth, e.g. researchers who have come across alternative models, practitioners who have adopted different models, consultants who want to know about how to advise female entrepreneurs and politicians who want to know about what support measures may be necessary.

Small Business in Pakistan: Characteristics, Problems and Sources of Finance

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This paper examines small business characteristics in Pakistan. Much literature on small business development in developing world countries assumes informal sector activities as homogeneous in their characteristics (Morris and Pitt, 1995; Bewayo, 1995; Ekpenyong and Nyong, 1992). Thereby policy recommendations are blanket and not of great assistance. The lot of study has been conducted in developed countries but there is little research on characteristic of the SMEs in countries like Pakistan.

The paper investigates a sample of 300 manufacturers and Service organizations from Sukkur region, Pakistan. The objectives are to evaluate characteristics of small Business that make it difficult to be profitable and the problems faced which contribute to poor performance. Descriptive statistic is used to find out the frequency and percentage of SMEs owners having unique characteristics.

The results show that the characteristic, problems of SMES in Pakistan are quite different in Pakistan than developed countries due to difference in educational level of SME owners, Lack of SME support from government and Banking sector. In Pakistan majority of SME owners use informal source of finance rather than formal source.

Introduction:

Small and medium enterprises have been at the heart of Pakistan's economy for almost 60 years. According to independent research findings, in a total population of more than 160 million in Pakistan, according to economic census of 2005 there are approximately 3.2 million SMEs are economically active which generate 78 percentage of non-agri sector employment and contribute 30 percentage to GDP (Economic census, 2005). But the proportion of independent business owners in the population of Pakistan is significantly small at 3 percentage. This is well below the developing countries average (6-10 percentage).

In spite of the fact that Pakistan's economic base relies heavily on small and medium enterprises, the government of Pakistan has been slow to recognize the many differences; the focus on Micro, Small and medium enterprises have been limited to major cities. But there is limited information and understanding of the rural markets and economy has been one of the key impediments in penetration in SME development in the rural economies.

Increasing business competition, in particular against large and modern competitors, put SMEs in a vulnerable position. In Pakistan, most SMEs operate along traditional lines. It has been argued that the main problem for SMEs in developing countries is not their small size but their isolation, which hinders access to markets, as well as to information, finance and institutional support (Mead & Liedholm, 1998; Swierczek & Ha, 2003).

In Pakistan, despite the fact that some SMEs have been declined or stagnant, some others have been growing and successful. What characteristics affect business success among SMEs? The recent study aims to answer this main question.

OBJECTIVES OF THE STUDY:

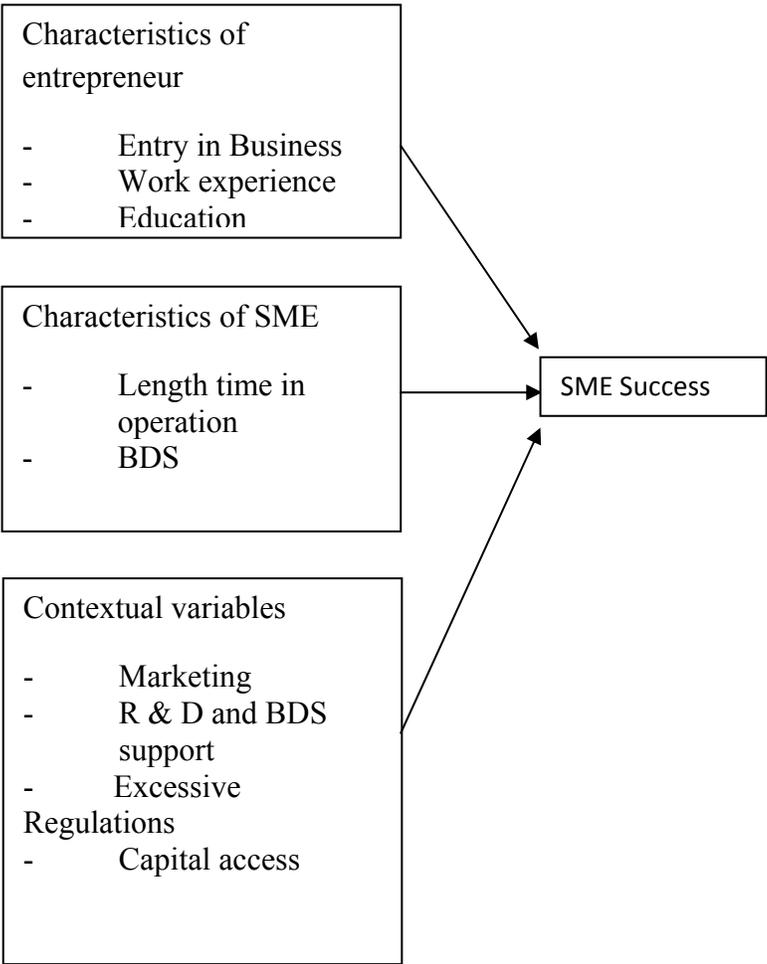
In order to examine these issues, the following research questions have been raised:

1. What are the characteristics of the SMEs with reference to age, work experience and educational background of the owner?
2. What are the problems of SMEs?
3. What are their sources of funds; (formal or informal institutions)?

The paper is organized into five sections. The theoretical framework is presented in section two, followed by description of research methodology in section three. The results of survey are expounded in section four and the followed by the discussion in subsequent section. The general conclusions and policy recommendations bring the paper to an end.

CONCEPTUAL FRAMEWORK:

Storey (1994) identified key characteristics to be important in analyzing the growth of SMEs: the characteristics of the entrepreneurs; the characteristics of the SMEs; and the type of strategy associated with growth. Instead of the last component, we explore contextual elements of SME development. The theoretical framework is developed in line with these adjusted three components as depicted in Figure 1. Justification for each variable included in the model is explained in subsequent section.



2.1 Characteristics of the entrepreneur:

Many research studies found that demographic characteristics, such as age and gender, and individual background, such as education and former work experience had significant impact on SMEs and entrepreneur (e.g. Kolvereid, 1996; Mazzarol et al., 1999. Sinha (1996) disclosed that successful SME owner were relatively younger in age. In their study on Internet café entrepreneurs in Indonesia, Kristiansen, Furuholt, & Wahid (2003) found a significant correlation between age of the SME owner and business success.

Work experience. Kolvereid (1996) found that individuals with prior experience had significantly higher intentions to start their own business than those without such experience. *Education.* A research by Charney and Libecap (2000) found that education produces self-sufficient enterprising individuals. Similarly, Sinha (1996) who analysed the educational background of the entrepreneur revealed that 72 percentage of the successful entrepreneurs who had a minimum of technical qualification, whereas most (67 percentage) of the unsuccessful entrepreneurs did not have any technical background. She summed up that entrepreneurs with business and technical educational background are in a better position to appreciate and analyze hard reality and deal with it intuitively, which seems to play a critical role in entrepreneurial effectiveness.

2.2 Characteristics of the SMEs :

Origin of enterprise. According to Smallbone, Leig, and North (1995), in small firms, where ownership and management were typically combined in one or more individuals, future goals for the business might be determined as much by personal lifestyle and family factors as by commercial considerations. Further, they concluded that one characteristic which did distinguish the best performing firms from other firms in the study was their commitment to growth. Also, they found another characteristic that did distinguish high growth firms from others was their propensity to acquire other businesses. *Length time in operation.* Length time in operation may be associated learning curve. Old players most probably have learned much from their experiences than

have done by new comers. Kristiansen, Furuholt, & Wahid (2003) found that length time in operation was significantly linked to business success. *Capital source*. In a study in Australia, McMahon (2001) discovered that greater dependence upon external finance associated with better business growth. In a more recent study, in Indonesia, Kristiansen, Furuholt, & Wahid (2003) found that financial flexibility was significantly correlated to business success. The SMEs that took advantage of family and third-party investment experienced higher level of success.

2.3 Contextual variables

Marketing. In Pakistan most SMEs operate along traditional lines in marketing. Stiffer competition in the market should be responded proactively by SMEs by doing market development. Access to market was of problems faced by SMEs (Mead & Liedholm, 1998; Swierczek & Ha, 2003). Market development is, therefore, crucial for preserving high growth in the business. Smallbone, Leig, and North (1995) in their study in UK found that the vast majority of the high growth SMEs had identified and responded to new market opportunities. New market opportunities included findings new products or services to offer existing customers and obtaining new customers for existing product or services. In a slightly different term, market stability (i.e. high proportion of regular customers) was found to be significant in determining business success (Kristiansen et al., 2003). Furthermore, market orientation defined as organization culture creates the necessary behavior for the creation of superior value to customers was found to be significantly correlated with company performance (Verhees & Meulenber, 2004). More specifically, they pointed out market orientation is helpful in selection of an attractive product assortment when the SMEs operate in markets with relatively homogenous product. *Capital access*. Access to capital is obviously one of the typical obstacles to the start-up of new businesses, not least in developing economies with weak credit and venture capital institutions. Several empirical studies have concluded that the lack of access to capital and credit schemes and the constraints of financial systems are regarded by potential entrepreneurs as main hindrances to business innovation and success in developing economies (Marsden, 1992; Meier & Pilgrim, 1994; Steel, 1994). Potential

sources of capital may be personal savings, extended family networks, community saving and credit systems, or financial institutions and banks. Robinson (1993) found that informal sources of credit, though with high interest rates, constitute very substantial contributions to business start-ups in developing countries, where the capital to labour ratio is normally low and small amounts of capital may be sufficient for a business start-up. In developed economies with efficient financial infrastructure, access to capital may represent similar restrictions to individuals' perception of entrepreneurial options because of the high entry barrier ensuing from high capital to labour ratios in most industries. As aforementioned, lack of capital is of problems faced by Indonesian SMEs (Kementerian KUKM & BPS, 2004). A more recent study among Vietnamese SMEs revealed that of internal limitations that hinder SMEs to succeed is capital shortage (Swierczek & Ha, 2003). Hence, capital flexibility as abovementioned is of factors determining business success (Kristiansen, Furuholt & Wahid, 2003). Government regulations are identified by Reynolds, Day, and Lancaster (2001) to be one of the top problems faced UK SMEs. In addition to lack of financial support as abovementioned, lack of institutional support was of hindrances of SME development (Mead & Liedholm, 1998; Swierczek & Ha, 2003).

Methodology

The paper investigates a sample of 300 manufacturers and Service organizations from Sukkur region, Pakistan. The survey questionnaire was initially designed by the State Bank of Pakistan Banking Services Corporation (Bank) Development Finance Support Department. After pilot testing certain modification made in the questionnaire, the final questionnaire comprised 122 questions grouped in 7 parts viz. general information about SME, ii) Manufacturing SME, iii) Trading Concerns, iv) Accounting & Record keeping v) Business Development Services (BDS) vi) Access to Finance and vii) Key Issues/Challenges.

Responses of 300 SME owners 150 from trading concern and 150 from Manufacturing concern, selected randomly from five Taluka of Sukkur district, were

collected and compiled. The survey provides a better understanding of the rural SMEs in Sukkur and provides some useful insights about the Trading and manufacturing SMEs in the rural areas of the district.

In analysis phase where necessary, outliers were excluded from the total number of observations to arrive at conclusive percentages and averages of the variables. The results of survey and data collected could be utilized for many research dimensions. The main objective of this research project is to highlight basic dynamics of the SME sector in Sukkur district. The data and results will be shared with other concerns for the sake of knowledge sharing without revealing the identity of respondents

Results and Discussion:

Characteristics of entrepreneur

Entry type of business:

A large number of traders self started their businesses whereas relatively small portion of SMEs owners inherited the business from their families as survey indicates that 67.3 percentage of SMEs owners self started their businesses, 29.3 percentage inherited and only 3.3 percentage purchased the existing businesses

Working experience:

The SMEs owners/managers surveyed in Sukkur district there are only 0.3 percentage doesn't have any experience. 26 percentage of respondents having working experience of about 6 to 10 years, 14 percentage have about (16-20) years, 11 percentage have work experience of 26 to 30 years whereas few about 2 percentage of the SME in the district have experience from 40 to 50 years.

Educational qualification:

SME owners/managers educational background in survey indicates about 33 percentage and 27 percentage having graduation and masters degree respectively. While 20 percentage are those some having educational qualification up to intermediate while only 13 percentage are matriculate and 7 percentage are having education less than metric with 5 percentage for middle and only 2 percentage with primary level of education whereas only 1 percentage having other kind of education including that of informal education

Characteristics of SME

Length of time in operation:

The data obtained from the survey shows that 28 percentage of SME started their business in Sukkur District during year 2002 to 2008, 25 percentage established and started during 1972 to 1981, 22 percentage SME established during 1992 to 2001 whereas 8 percentage of the sampled SME established their business before 1972.

Business development services (BDS):

The awareness of business development services in businesses at Sukkur region is not at satisfactory level as only 18.7 percentage of respondent traders are aware about BDS. Furthermore about 35 percentage times respondents indicate lack of awareness about Program/workshop/seminar etc. on BDS as reason for not participating in BDS programs. Also about 20 percentage times respondents indicated absence of such institute in Sukkur, 19.5 percentage times lack of time to attend such programs, 16.4 percentage times lack of faith in utility of such programs and about 9 percentage times cost of programs as reason of not participating in BDS programs. Although SMEDA and other

supporting NGOs launched some BDS programs at Sukkur region but need of time is to widen the scope of BDS activities at Sukkur

Contextual variables:

Marketing:

48 percentage SME owners found difficulties in marketing and selling their products. This is due to limited knowledge of the SMEs owner about the marketing activities & the marketing strategy developed by non professional people. Mostly SMEs were reluctant higher professional people for marketing activities.

R & D and BDS support:

48 percentage SMEs consider limited R&D and BDS as key issue . This support is no very promising because of limited infrastructure and lack of support from government agencies. Although government has created such institutions like SMEDA but lot of SMEs owner either unaware of such facilities or they were unsatisfied from their support and services.

Excessive Regulations:

56 percentage of SME owners (manufacturers and traders) who were surveyed consider excessive regulation as key hurdle in growth. The SMEs owner complained about the attitude and disturbance created by government official due to excessive regulations. The complaint were mainly from the attitude of income tax department and pathetic attitude of government agencies created to support SMEs in Pakistan

Capital access:

A large number of respondents from the sample about 83.9 percentage prefer friend and family to get finance for their businesses and only 11.4 percentage prefer banks for financing. The reasons for behind preferred source of financing were indicted by respondent traders such as easy access and immediate availability.

46 percentage of the SMEs owners surveyed consider the lack of capital and financial resources as a key hurdle in the growth of their firm. This problem arise because majority of SMEs owner were reluctant to borrow from the formal sources such as banks due to lengthy and cumbersome procedure or they could not arrange collateral .

Conclusion

The results suggest that 28 percentage of SMEs in Sukkur region has been established young educated entrepreneurs who started the SMEs from 2002 to 2008 this showed a very positive trend in the society which may help in generating employment and reducing poverty .

The analyses revealed that SMEs owners' awareness level for BDS is very limited this creates the need for enhancing the role of supporting agencies like SMEDA. Excess of government regulation create hindrances in startup and smooth working of SMEs if this trend continues this may have very negative effect on promoting and continuing entrepreneurship trend among the youth generation and growth of existing SMEs. Very few SME owners have access to the capital from the formal channels due to cumbersome procedure and delays; although many consider lack of capital and financial resources as a key hurdle in SME growth. This create the need for creating policy based on one window operation for providing loans to SMEs which can encourage the SME owner to get capital through formal source of finance .

TABLES WILL BE FURNISHED UPON REQUEST

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Key Factors for Success of the Polish Small- and Medium-Sized Enterprises

by Krystyna Poznańska and Adam Kalowski

This paper presents key factors for success of the small- and medium-sized enterprises in Poland that compete successfully both on the domestic market and the foreign one.

The research enabled the authors to identify the most important factors for success of the Polish SMEs in the period of 2005-2007. On the one hand the research results were in keeping with the assumed hypotheses about domination of the short-term competitive advantages such as the competitive labour costs. On the other hand the research also revealed that a significant group of enterprises from the sample were making use of alternative factors for success, namely special relations with clients, ability to absorb new technologies, high integration of marketing with production or supply, and top management's great importance attached to facilitating the learning process of employees.

Introduction

This paper shows main key factors for success of the small- and medium-sized enterprises (SMEs) in Poland which compete successfully both on the domestic market and the foreign one in period of 2005-2007. The identification of the factors for success of the Polish enterprises can serve as a lodestar to enterprises from developing countries and to public administration as showing in what direction the policy of stimulating growth of the SMEs sector in their countries ought to be pursued.

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The case of transformation of the Polish economy in the 1990s may be considered the standard for many developing countries as well as those in transition. One of the most important points of this transformation was the dynamic growth of the SMEs sector in Poland. There were operating ca. 1.7 million enterprises within this sector in 2007.

At present the SMEs sector is playing a key role in neutralizing the negative impact of the global crisis on Poland. It is the activity of this group of enterprises that is highly desirable from the perspective of the national economy since this activity stabilizes the economic processes and is, quite often, the driving force behind the economic development that is crucial under the present global downturn's conditions. One may therefore find the small- and medium-sized enterprises to be of special importance to an economy in the age of the global crisis since they: prevent the drastic changes in business cycles, rationalize allocation of resources, support economic changes in the economy, create the biggest number of new jobs, play a big role in creating and implementing innovation.

It is worth adding that the Polish SMEs proved their key role much earlier, i.e. in the period of the last recession in the country when they considerably made it easier to carry out the economic transformation in Poland at the beginning of the 1990s since they filled the gaps left in the economy by the bankrupting state-owned enterprises. It may be therefore concluded that they will be able to repeat that success under the present conditions. Hence we argue that at present the most important orientation of the research should be identifying and evaluating the factors for success of the Polish SMEs.

Importance of the SME Sector in the Polish Economy

Since the 1970s the issue of importance and role of the SMEs in strengthening efficiency of an economy has been constantly present in the economic discussion. Moreover, the SMEs have been given priority over other enterprises in the economic policy both at the European Union's level and at national level (that is in the policies of the European Union members countries) (Mikolajczyk 2007). In this section we are presenting some historical and statistical information in order to give a snapshot of significance of this group of enterprises.

Up until 1981, development of the small-scale entrepreneurship had been decidedly restricted by the then authorities. Every sign of an entrepreneurial initiative had been considered harmful to the communistic system in Poland in those times. However, the economic slump in 1981 had inclined the communistic authorities to change their attitude

towards the sector of SMEs. As a result of the slump, in the period 1981-1988 there were implemented reforms aimed at halting the economic and social crises. The reforms gave some limited possibility of running a small business. It led to an increase in the number of start-ups from 375,142 to 572,451 in the years 1981-1988 (Piasecki, Konieczny 1995). The available statistical data do not, however, allow to estimate how many of them were small-sized enterprises, and how many were micro enterprises. The collapse of the communistic system in Poland in 1989 was followed by the boom in entrepreneurship. In the period 1989-1991 the number of enterprises increased from 572,451 to 1,496,797¹. The further years (up to 2007) were the period of strong structural fluctuations and the profound economic transformation for both the SMEs and the whole Polish economy. The structural changes were, to some degree, brought about by the complex process of Poland's adaptation to the requirements of a membership in the European Union (EU). The Polish enterprises had, therefore, to adapt to constantly changing conditions of their existence in such a relatively short period of time (i.e. 1981-2004). On the one hand, from the perspective of enterprises, the integration of Poland into the EU created some new opportunities resulting from removing barriers and restrictions on the movement of wares and services, labor and capital as well as resulting from adding momentum to restructuring processes in many industries. On the other hand, however, Poland's European integration required enterprises to improve their competitiveness. At this stage of discussion in the paper one may raise a question whether the Polish SMEs have succeeded in adapting to the new conditions on the single European market?

At the end of the year 2007 (that is three years after Poland's entry into the UE) the number of SMEs registered in the system called REGON² totaled 3,560,422 units. The SMEs accounted for 99.88 per cent of all registered enterprises in Poland that year. Within the SMEs sector, there were 95.29 per cent enterprises classified as "micro" (the criterion: maximum nine persons employed). Comparison of the above numbers clearly shows that the micro enterprises accounted for 95.17 per cent of all registered enterprises in Poland by the end of 2007. The small-sized enterprises (10-49 persons employed) accounted for 4.01 per cent of the SMEs, and four per cent of all registered enterprises whereas the enterprises classified as "medium-sized" (that is 50-249 persons employed) accounted for ca. 0.7 per cent of both the SMEs and all the registered enterprises.

Data from the REGON base need to be adjusted, based on the information about the number of active enterprises, i.e. truly operating within the economy.

¹ Central Statistical Office - Poland

² Polish Statistic Bureau of Registering Economies Activities

The Polish Central Statistical Office (GUS) in 2008 presented figures for the year 2006 due to the large amount of pieces of information essential to be analyzed for statistical purposes. In the period mentioned above, there were 1,652,998 active “micro” enterprises and they accounted for 96.39 per cent of all operating enterprises. The number of the small-sized enterprises and the medium-sized enterprises totaled 44,228 and 14,708 respectively, and that accounted for 2.58 per cent and 0.86 per cent of all enterprises respectively³. The Table 1 shows the number of active SMEs within the period 1996-2006.

Table 1
The Number of Active SMEs in Poland in the Period 1996-2006

	1996	2000	2006
The Number of Active Enterprises within the SMEs Sector	1,340,269	1,748,775	1,701,284
The Percentage of All Enterprises	99.75%	99.83	99.82

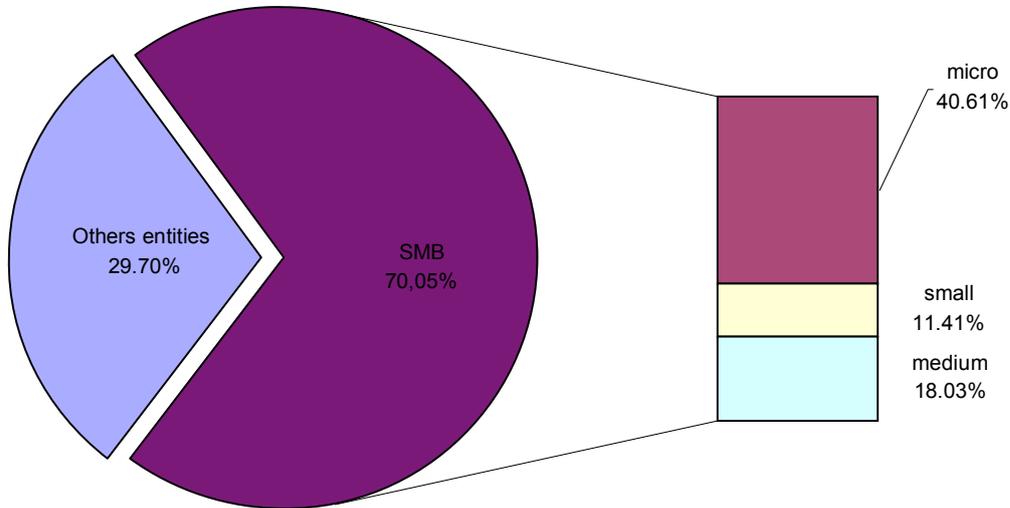
Source: The Department of Statistical-Economic Research, Central Statistical Office (GUS)

The fact that the SMEs represented the dominating sector of businesses in terms of numbers should be reflected in the amount of jobs created by these enterprises. At the end of 2006, of the total of 8,556,132 persons employed by all enterprises 5,993,411 persons were employed in the SMEs sector that accounted for nearly 70 per cent of the total. By contrast, this percentage in 1996 accounted for 60 per cent. Figure 1 gives an overview.

³ “Activities of non-financial enterprises in 2006” (in Polish), The Central Statistical Office, Warsaw 2008

Figure 1

The Percentage of Jobs Created by Category of the SMEs [as of December 31, 2006]



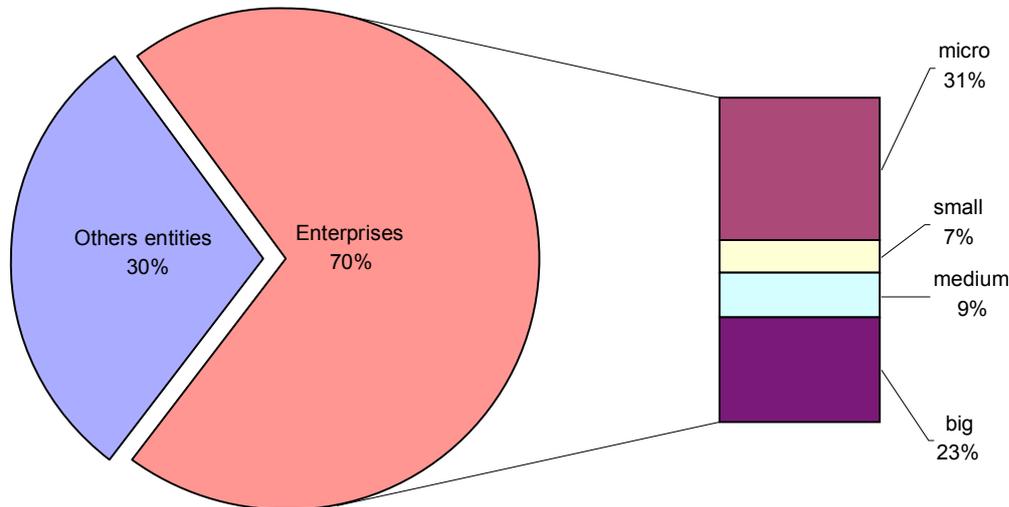
Source: Own calculations based on “Activities of non-financial enterprises in 2006” (in Polish), The Central Statistical Office, Warsaw 2008

Most jobs were created by the micro enterprises within the SMEs sector, i.e. 40.61 per cent (3,474,574 persons employed). It shows that although the SMEs have had the smaller share in jobs creation compared to their number within the total of enterprises, the SMEs have still represented the key factor of the level of employment in Poland.

The share of the SMEs in creating the country’s GDP is another aspect to be discussed. This share amounted to 47.7 per cent for all SMEs, of which - 7.4 per cent for the small-sized enterprises and 9.3 per cent for the medium-sized ones a in 2006. This calculation takes into account the value added of the employed and the SMEs operating in the black economy⁴. Figure 2 presents the above data.

⁴ “Report on the SMEs sector in Poland in 2006-2007” (in Polish), The Polish Agency for Enterprise Development (PARP), Warsaw 2008

Figure 2
The Percentage of GDP Generated by Categories of Enterprises in 2006



Source: Own calculations based on “Report on the SMEs sector in Poland in 2006-2007” (in Polish), The Polish Agency for Enterprise Development (PARP), Warsaw 2008

Many researchers suggest that the role of the SMEs cannot be narrowed down only to decreasing unemployment and generating income as they play the crucial role in stimulating an economy at local level, they are also a source of innovation as well as they may counterbalance the monopolistic moves of the large enterprises, and they eliminate the fluctuations of business cycles. Moreover, Skowronek-Mielczarek (2002) says the small-sized enterprises are considered to be the most flexible sector in an economy that means they are capable of responding to their environment’s changes and to their customer’s needs most quickly. As it is presented by example of Poland, the SMEs have contributed substantially to the fast economic changes during the period of the system transformation of the country as well as they have helped to alleviate the social problems resulting from unemployment that formally had not been existing during the previous, communistic, system in Poland. The SMEs may therefore be considered to be extremely important for development of an economy

because of their role in decreasing the unemployment rate, supplementing the market with produced wares and services offered, stimulating an economy at local level.

However, one cannot idealize the SMEs sector as these enterprises do not always support the directions of economic development of a country. Some of the groups of small enterprises within the SMEs sector, especially those operating in the black economy, can also adversely affect the basis of even a highly developed economy. Such enterprises tend to avoid running their businesses under officially accepted forms, they take advantage of their workers without giving a formal labor contract to them as well as they tend to avoid paying taxes and introduce wares into the market in violation of legal rules.

Nevertheless, the data presented above indicate the crucial role played by the economic agents classified within the SMEs, especially their role in alleviating the strong business cycle fluctuations. Thus, it is in the national economy's interest to support growth of the SMEs.

Success of an Enterprise – the Definition and the Success Function

The term “a success of an enterprise” is interpreted in different ways in the literature. Moreover, one may notice that this term is defined differently by an economist and a psychologist. Hence the interpretation of “a success of an enterprise” can be searched beyond economics. The probable wide interpretation of this term is of great importance when referred to the SMEs sector where there is a strong link between the owner and the organization of an enterprise.

In the economic literature there is a common view, taken into account while defining the above term, that the success of any enterprise is determined by its market position and its overall economic condition. For example, Kay (1996) argues that the essence of success may be most easily understood by juxtaposing it with failure on the one hand. On the other hand, however, he links the success of an enterprise with its performance. Furthermore, Kay (1996) expresses the link between a success and a company's strategy, albeit the strategy does not always lead to an economic success.

It is emphasized in the strategic management that the indicator of a success of a company can be as follows: achieving the competitive advantage within a given industry or in a given market and implementing the strategy leading to growth in value of an enterprise. These issues were of considerable research interest to, among others, Drucker (1974), Porter (1985), Chandler (1962). Achieving and strengthening the competitive advantage by an

enterprise results in outstanding financial performance within an industry in which this enterprise operates.

Psychologists define “a success of an enterprise” differently. They usually link the success of an enterprise with the success of the enterprise’s employees, including its leaders. They therefore put an emphasis on satisfaction of an enterprise’s managers (owners) connected with plans to improve their career paths and personal lives. Hence the success of any small- or medium-sized enterprise is not determined by economic factors only, but also by psychological predispositions that an entrepreneur has. Majewska-Opiełka (2003) in her study of success of enterprise states psychologists are of the opinion that the success means utilizing personal strengths to the limit provided that people abide by the universal moral code in order to fulfill their personal needs and desires that they are aware of. However, as this paper’s authors’ research has revealed, the entrepreneurs tend to link the success of their businesses with achieved economic benefits that are not only utilized within their enterprises, but also in their own households. This approach is typical of the SMEs and often turns into their weakness.

The factors for success of an enterprise are discussed in the similar way, i.e. from different perspectives. The search for these factors covers both search within an enterprise and search in the enterprise’s environment. The general typology of factors for success can be as follows:

- internal factors, consisting mainly of material resources (e.g. fixed assets) and immaterial resources (human, organizational, relations capital) and skills (at formulating an enterprise’s strategy, managerial and production skills),
- external factors, consisting of elements of the external environment of an enterprise (including: institutional, organizational and informative solutions constituting the widely defined system of innovation, the innovation policy of a country, the overall market conditions, infrastructure, and the education and training system).

Key (1996) counted architecture, reputation, innovations and strategic resources among the basic sources of factors for success.

Innovation within the factors for success is of great importance. It is emphasized in many theoretical papers, e.g. those of Kay (1996), Hamel and Prahalad (1990), Porter (1998). Innovations can be referred to a new product, technology or systems of organization and management. From the perspective of its originality, Kay (1996) proposes two categories of innovation: original innovations and imitative innovations. The first type of innovations are the source of the sustainable competitive advantage while the second type of innovations

enable an enterprise to gain a temporary advantage. Hamel and Prahalad (1990) also argue that innovations are playing a significant role. They underline that an enterprise may gain the long-term competitive advantage by generating key competencies. The innovative competencies in enterprises may initial development of new industries and markets. Generating key competencies starts 5-10 years ahead of the existing products and technologies. The source of key competencies are not new technologies as such, but new models of meeting the needs of customers. This concept was directed towards the future. It assumes that the pace of social changes is accelerating, thereby resulting in emerging new business areas, new needs and profound changes in the traditional industries. Hamel and Prahalad (1999) argue that keeping on the traditional rules of running a business cannot secure the success of an enterprise. It therefore requires an enterprise to seek to create new products and services.

The role of effectively operating organization seeking to achieve the success under the conditions of continuous strong business cycle fluctuations should also be taken into account as Peters and Waterman (1992) highlighted in their studies. This view was not, however, shared by other researchers of this aspect. Peters and Waterman (1992) adopted a different approach to the dependence between an organization's effectiveness and its market success when the idea of Chandler that the success of an organization is linked to the organization's structure came under strong criticism. Peters and Waterman (1992) proved that an organization's effectiveness, i.e. its ability to achieve a success, is more strongly correlated with the "soft" elements of management (managerial styles, motivation, attitudes of employees, competences, organizational culture) rather than with the "hard" elements (structure, strategy, systems). This approach is worth taking into account while classifying factors for success in the SMEs.

In this paper, a success of the small- and medium-sized enterprise is defined by a set of determinants such as: positive financial results, a considerable share of exports in an enterprise's sales, and the key competitive advantage differentiating the enterprise from its competitors according to the key competences theory.

In the attempt to indicate the sources of the Polish SMEs, authors singled out the following sources of the competitive advantage:

- competitive labor costs in Poland,
- production in the countries of low-paid labor force,
- originating competitive technology,
- non-originating competitive technology,

- imported patterns or components,
- application of orders inside the company,
- advantage of marketing skills,
- special human relations inside the company,
- outsourcing,
- integration of technological and marketing skills in management,
- competitive capabilities of communication within the company,
- competitive capabilities of collecting and processing information on customers and competitors,
- high integration of marketing with production, supply,
- attracting management's special attention to learn about board and employees,
- careful selection of market expansion fields and their flexible changes,
- capabilities to learn respondents' preferences and behaviors,
- capabilities to learn competitors' behaviors,
- capabilities to learn new technologies.

In the next chapter are presented the key factors for success of the Polish SMEs according to the opinions given by entrepreneurs.

Key Factors for Success of the Polish SMEs – Empirical Research Results

The researchers of Warsaw School of Economics (SGH) carried out the research that revealed changes in the approach of businesses from the SMEs sector to the issue of competitiveness, especially those which had already decided to sell their products and services on the European market. Moreover, the researchers decided to collect the material that would challenge the then dominating view in the Polish economic literature that the Polish SMEs were still basing their competitiveness upon mainly the easily imitable sources of the competitive advantage such as: relatively low labor costs and low prices of natural resources, the underestimated exchange rate of the Polish currency (Szymanski 1999).

The research process of assessing the competitiveness of the Polish SMEs was carried out by focusing on the target group of enterprises that reached a highly competitive market position not only on the domestic market, but also on the foreign one and they were owned by the Polish entrepreneurs.

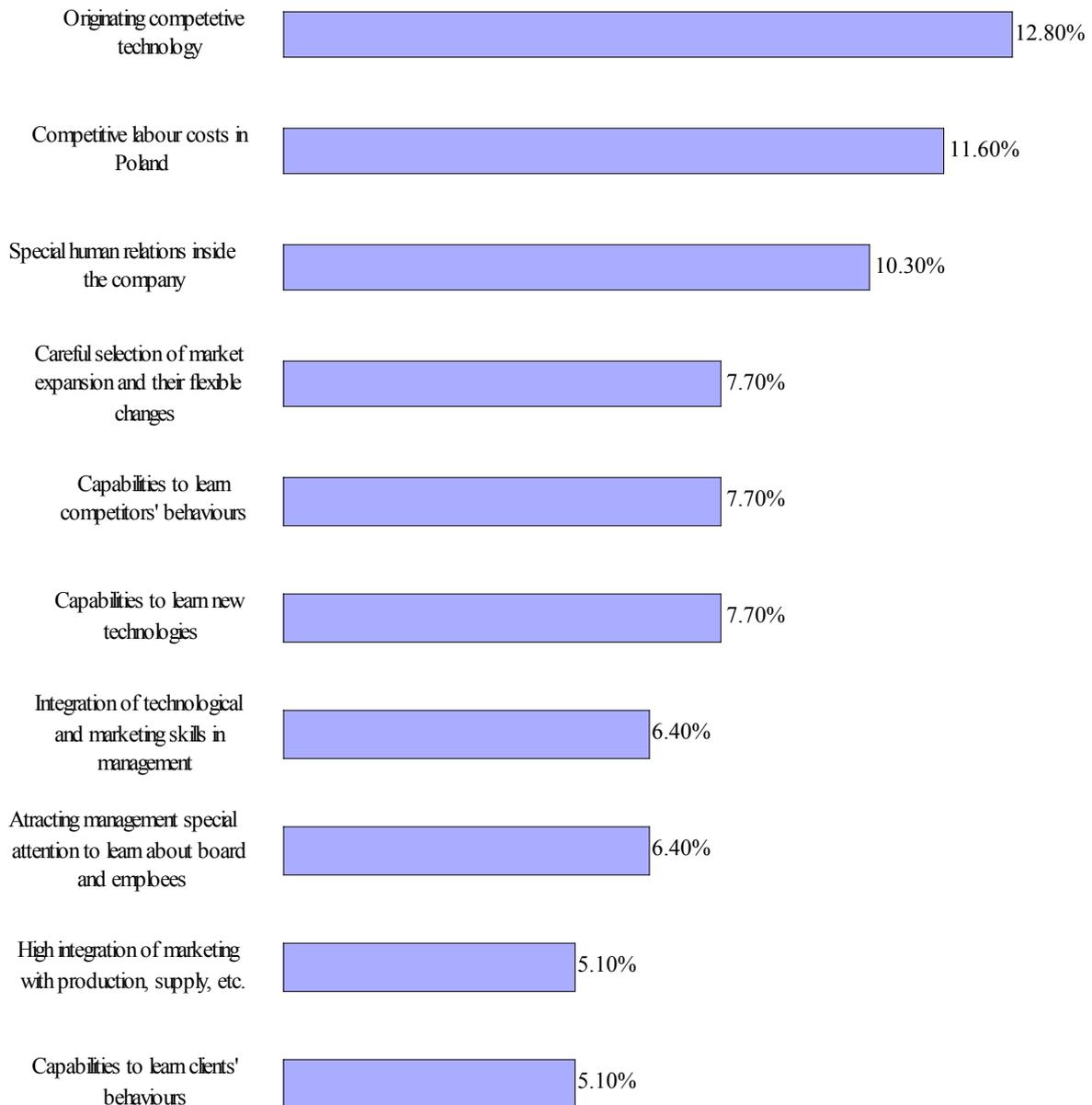
Based on the above mentioned criteria, there was identified and chosen the group of 247 enterprises, of which there were: 54 large businesses, 193 small- and medium-sized

businesses. The distinctive features of the SMEs were their diversity within the traditional and modern branches of the Polish economy. The small- and medium-sized businesses mostly represented productive, commercial, transport and building activities. Among them, there were: the manufacturers of automotive equipment, yachts, hulls, motorboats, gliders, clothing and special protective clothing, dressing materials, ceramics and porcelain, groceries, furniture, household appliances, chemical and stationery goods, cosmetics, plastic ware, heaters, aluminum products, glass ware, roof windows, vacuum furnaces, footwear, containers and metal containers.

Among the enterprises participating in the questionnaire survey, more than 44 per cent adopted the strategies based on the cost leadership, about 15 per cent – the strategies based on special relations with customers, 12 per cent – the strategies involving time-based advantage, 11 per cent of the enterprises were competing on the basis of products' brand and their reputation and only seven and half per cent of the enterprises built their competitiveness on the quality-based advantage. However, amongst all sources of the competitive advantage which were considered as an essential elements of competitiveness, the competitive cost of labor was indicated most frequently, i.e. confirmed by 70 per cent of the responding managers.

Passing on now to the respective groups of the SMEs sector, there were identified the following dependences: in the group of small-sized enterprises, amongst the sources of competitive advantage, as the first most important source - according to the frequency of ratings – managers indicated (nearly 13 per cent) originating competitive technology, as the second most important source, managers indicated (11.6 per cent) competitive labor costs in Poland, although special human relations inside the company were indicated as the third most important source by the responding entrepreneurs (10.3 per cent). Figure 3 shows the crucial sources of the competitive advantage within the group of small-sized enterprises.

Figure 3
The Main Competitive Advantage Sources on the Market within the Group of Small-Sized Enterprises by Incidence of Notes.



Source: Own calculations based on the questionnaire research carried out under the project: Factors of the Polish businesses' success on the EU markets, The Department of Strategic Management, Warsaw School of Economics, Warsaw 2005

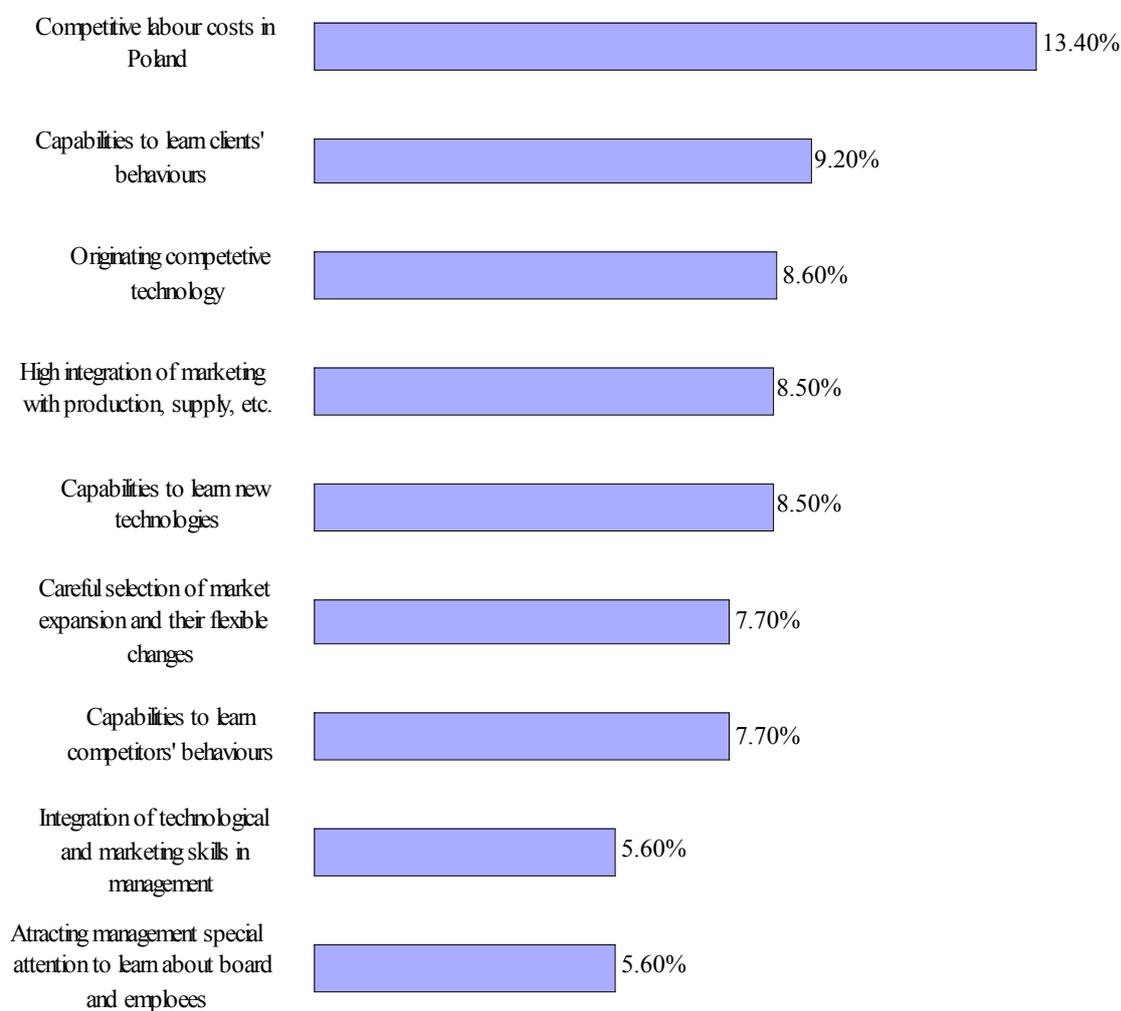
Within the group of small-sized enterprises which assigned jointly 1500 points of note to all the sources of the competitive advantage, the first position was assigned, according to

the obtained number of points, to originating competitive technology (328 points), the second position was assigned to competitive labour costs in Poland (199 points), and the third one was assigned to capabilities to learn respondents' preferences and behaviours (134 points).

Analyzed small businesses hardly ever did indicate such sources of the competitive advantage as: production in the countries of low-paid labour force (no ratings) and advantage of marketing skills, non-originating competitive technology, imported patterns or components and other sources of advantage (with the frequency of ratings: 1.3 per cent). Less than 10 points were assigned to the following sources of the competitive advantage: production in low-paid labour countries (zero points), imported patterns or components (eight points).

Within the medium-sized businesses the leading positions were occupied by the following sources of the competitive advantage according to the number of ratings: competitive labour costs in Poland (13.4 per cent), capabilities to learn respondents' preferences and behaviours (19 per cent) and originating competitive technology, high integration of marketing with production, supply, etc., and capabilities to learn new technologies (8.5 per cent). Figure 4 shows the crucial sources of the competitive advantage within the group of medium-sized enterprises.

Figure 4
The Main Sources of Potential Competitive Advantage on the Market within the Group of the Medium-Sized Enterprises by Incidence of Notes.



Source: Own calculations based on the questionnaire research carried out under the project: Factors of the Polish businesses' success on the EU markets, The Department of Strategic Management, Warsaw School of Economics, Warsaw 2005

Within the group of the medium-sized enterprises which assigned 2700 points in total to all the indicated sources of the competitive advantage in the discussed research, the first position was given to: competitive labour costs in Poland (540 points), the second position was assigned to originating competitive technology (295 points), and the third one - careful selection of market expansion fields and their flexible changes and capabilities to learn

respondents' preferences and behaviours (265 points). The least frequently indicated sources of the competitive advantage were such as: imported pattern or components (no ratings) and production in the countries of very cheap labour force (with the frequency of ratings below 1 per cent). The sources of the competitive advantage which obtained the least notes within the group of the medium-sized enterprises turned out to be: imported patterns or components (zero points), production in the countries of very cheap labour force (20 points) and application of orders inside the company (35 points).

To summarize, we can observe how different are the both groups of enterprises. In the opinion of the Polish medium-sized enterprises, the most important source of the competitive advantage, favourable to succeed on the EU market, were the low costs of labor force in Poland which still enabled these businesses to compete with the foreign companies. However, apart from the above mentioned source, the medium-sized businesses indicated also the urge to use the originating technology in building the sustainable competitive advantage, capabilities connected with the selection of the market expansion fields and their flexible changes, capabilities to learn respondents' preferences and behaviors, capabilities to learn new technologies and integration of the marketing steps with the productive and logistic strategies.

By contrast, in the group of the small-sized enterprises the most dominant source of the competitive advantage stood out: the competitive originating technology, and then the competitive labor costs in Poland, a careful selection of the market expansion fields with their flexible changes and capabilities to learn respondents' preferences and behaviors.

In the case of the SMEs one shall very positively remark that there is a high ranking of originating technology application as a source of the competitive advantage. The fact that determines the success of the Polish small- and medium-sized enterprises in this field is that businesses sell mainly (80 per cent for the small-sized and 67 per cent for the medium-sized enterprises) private label brand products and services (see Table 2). Moreover, it refers even more frequently to the small-sized enterprises than to the group of the large enterprises. This fact is also evidence that the least remarkable or even meaningless sources of the competitive advantage are considered similarly like in the case of ratings and assessment of the respective sources: imported patterns and components, production in the countries of low-paid labor force and non-originating competitive technology playing the least important role.

Table 2
Product and Service Sale of the Polish SMEs on the EU Market by the Size of Enterprises and Brand.

No	Specification	Small	Medium	Large
		Ratings in per cent		
1	Private Label Brand Products and Services Sold on the EU Market	80	67	79
2	Products and Services Sold on the EU Market under the Foreign Brand	20	33	21
3	Total	100	100	100

Source: Own calculations based on the questionnaire research carried out under the project: Factors of the Polish businesses' success on the EU markets, The Department of Strategic Management, Warsaw School of Economics, Warsaw 2005

Conclusions

The SMEs sector has continued its growth since Poland's transformation towards rebuilding a democratic political system and a free-market economy that was initiated in 1989. Nowadays the SMEs sector has already grown in importance as a strategic source of employment and budgetary income for the country. Yet, the Polish small- and medium-sized enterprises, like the large ones, also come under influence of the open-market rules within the single European market that pose a challenge to this sector of enterprises. The SMEs have to, therefore, explore and make use of all the possible sources of the competitive advantage in order to be successful on both the domestic and the European market. While the basic source of advantage such as low labor costs was sufficient to enable the SMEs to succeed in the competitive market in the last decade of the 20th century, now there is a growing need to seek the difficult-imitable sources of the competitive advantage as there is more and more fierce competition on the single European market. The research discussed in the paper shows that some of the Polish SMEs have already succeeded in finding their new difficult-imitable sources of building their competitive power, but they still represent a minor part of the Polish SMEs sector as a whole.

As the discussed research shows, the revealed changes in attitudes of the Polish SMEs towards alternative sources of the competitive advantage and towards the new foreign-market entry modes being adopted are those appropriate to the present challenges faced on the single European market and therefore should be considered as a significant turn into the right direction and the chance of growth of competitiveness in the Polish SMEs actively operating

within the European single market. Moreover, the research provides evidence that the dominating view in the past saying that the small- and medium-sized enterprises were basing their competitiveness entirely on the so-called traditional, easily-imitable competitive advantages, is no more valid while referring to the Polish SMEs competing on the European single market. It may be therefore argued that this group of enterprises is implementing the competitive strengths of higher rank that enable them to compete successfully in the long term.

The Polish SMEs have to first and foremost seek to gain not only profits but also to focus on their businesses' value growth and to create value for customer when deciding to compete on the single European market. They shall have to give up formulating the growth strategy based only on the cost leadership which in the long term does not allow to retain uniqueness of actions for the benefit of pursuit of own competitive advantage among reserve sources of competitiveness. While deciding on immaterial capital development and own key skills, likewise it is observed among the enterprises in the highly developed countries, the Polish companies shall gain the possibility of not only maintaining but also improving their own competitiveness on the single European market. In this case the most important role shall be played by the business capabilities of effective management and joining own resources and skills in appropriate configurations. It allows to create the so-called "key skills", which are the distinctive features of a given company, thereby enabling e.g. application of a unique productive technology that is difficult to be imitated by competitors, introduction of innovative management systems, flexible responsiveness to the changing market circumstances, performing joint ventures in cooperation with selected companies, outsourcing application with simultaneous concentration on the business kind that is crucial for an enterprise, a focus on high-quality production and its uniqueness as well as on undertaking diversification actions with regard to creating new value for customers.

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**Rapid Appraisal of Local Innovation Systems and SME Competitiveness:
The South African Clothing and Textile Industry as a Case Study**

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ABSTRACT

Background and Purpose: South Africa's re-entry into the global economy after years of political isolation has opened up opportunities as well as threats for key indigenous industries such as Clothing and Textile industry which has come under due to competition from cheaper imports and dumping from other low cost countries. As part of regional efforts to address these challenges, an initiative called Rapid Appraisal of Local Innovation Systems (RALIS) which is a methodology to conduct a rapid diagnosis of a locality, a value chain or a cluster with a special focus on technology and innovation. This paper is meant to assess and evaluate the impact of this initiative on the competitiveness, productivity and sustainability of a cluster of affected SME's.

Design/Methodology/Approach: One on one interviews or small workshops with all stakeholders and participants in the initiative in the industry were undertaken to evaluate their perception of the initiative, its impact on businesses as well as lessons learned.

Findings: The initiatives have had a great impact on inter-firm collaborations as well as enhancing sharing of solutions challenges and best practices to ensure that the industry survive amidst global competitive pressures. This has resulted in key stakeholders in the industry (namely, SME's, material suppliers, industry associations) who historically worked in silos and sometimes in competition have converged and integrated their activities to promote the competitiveness within this industry through enhanced knowledge sharing as well as clustering of activities by SME's in this sector.

Originality/value: This kind of initiatives and study are important for middle income countries such as South Africa in how they can respond to challenges to SME's in key sectors wrought by competition from low cost countries.

Limitations: The study was restricted to only one industrial sector of the economy. It would have been of great interest to assess the impact of RALIS on other equally challenged sectors.

Keywords: Competitiveness, Technology Transfer, Small and Medium-sized Enterprises, Innovation.

INTRODUCTION

The drive for global competitiveness and economic growth is underpinned by innovation and technology upgrading at local, regional as well as national levels. Against the growing spectra of globalization and industrial rationalization, countries worldwide are looking at policy instruments to enhance the competitiveness of their key industries to ensure their growth and sustainability. This is described by Porter (1990) as **Sustaining Competitive Advantage** which depends, among other things on constant improvement and upgrading by firms in particular industries. The focus of economic growth and national competitiveness has shifted in recent years to Small and Medium Size Enterprises (SME's). Their flexibility, capacity to create high quality employment as well as innovative products, processes or services in both industrialized and developing countries have been widely acknowledged (OECD, 2006). For instance, in a large number of OECD countries, SME's accounts as much as 95% of all enterprises. There is however recognition that external sources of knowledge, financing and technology are needed to stimulate the growth and sustainability of SME's (Hassink, 1996). This is in response to the constraints faced by SME's such as limited internal capacity in terms of well trained personnel, low managerial skills, information and financing to focus on and exploit innovations to enhance their competitiveness (North et al, 2001; Corsten and Lang, 1988). The overall success of SME development in most countries is

hence influenced by the availability of relevant support instruments and policies in the respective countries.

These are usually set up by governments both at local and national levels in response to challenges SME's face in their quest for global competitiveness.

THEORETICAL BACKGROUND

There is a growing acknowledgement that industrial development and competitiveness can be greatly enhanced via a networked approach where key stakeholders in a particular region or industry interact to enhance collaboration and sharing of knowledge and best practices. Following is a brief description of some of the theoretical concepts that are gaining currency in both developing and advanced economies.

Systems of Innovation-An Overview

The concepts of Local, Regional and National Innovation Systems have been the focus of policy makers seeking new ways to identify instruments for economic growth and revival (Freeman, 1993; Bailey, 2003). At the heart of performance of these Innovation Systems is the availability of appropriate economic, political, educational and social institutions as well as relevant infrastructure (Lundvall et al, 2002; Fritsch and Schwirten, 1999).

National Systems of Innovation (NSI) as described by Freeman and others (Freeman, 1987; Lundvall, 1992; Edquist, 1997) are defined as networks of institutions in the public and private sectors, whose activities and interaction initiates, imports, modify and/or diffuse new technologies to bring new products and processes into economic use.

Regional Systems of Innovation (RSI) on the other hand are characterized by two key sub-systems namely knowledge application and exploitation as well as knowledge generation and diffusion (Autio, 1998; Cooke et al. 2000). Another definition by Asheim and Isaksen (2002) describes Regional Innovation Systems

in essence as systems where the interaction of knowledge generation (e.g. universities) and exploitation (i.e. industry) subsystems which in turn are linked to the global, national and regional systems for the successful commercialization of new knowledge, the emphasis being on regional rather than national initiatives. At the heart of any systems of innovation approach is the argument for the confluence of technology, industrial and general public policy (Oughton et al., 2002; Asheim and Isaksen, 1997; Doloreux and Parto, 2005).

A number of developments have given impetus to the concept of Regional Systems of Innovation. Against the pressures of trade liberalization, lowered tariff barriers and industrial rationalization firms, specifically SME's are forced to adopt more integrated innovation policies which focus on enhanced interactions between the SME's and a myriad of supporting actors such as policy makers, business support agencies, educational institutions and other knowledge providers to remain competitive and survive in the face of rising competition (Mytelka, 2000; Todtling and Kaufmann, 1999).

For SME's, with limited internal resources such as technology infrastructure, the other inherent benefit of Regional Innovation Systems is what Fritsch and Schwirten (1999) described as spatial proximity to publicly funded institutions. These institutions can provide strategic technology and knowledge transfer to enhance the innovative capacities of the SME's. Spatial proximity to exogenous technical resources and expertise can and do influence, in a positive way SME's inclination to innovate (Makun and MacPherson, 1997).

Innovation Systems: The Four Pillar Model

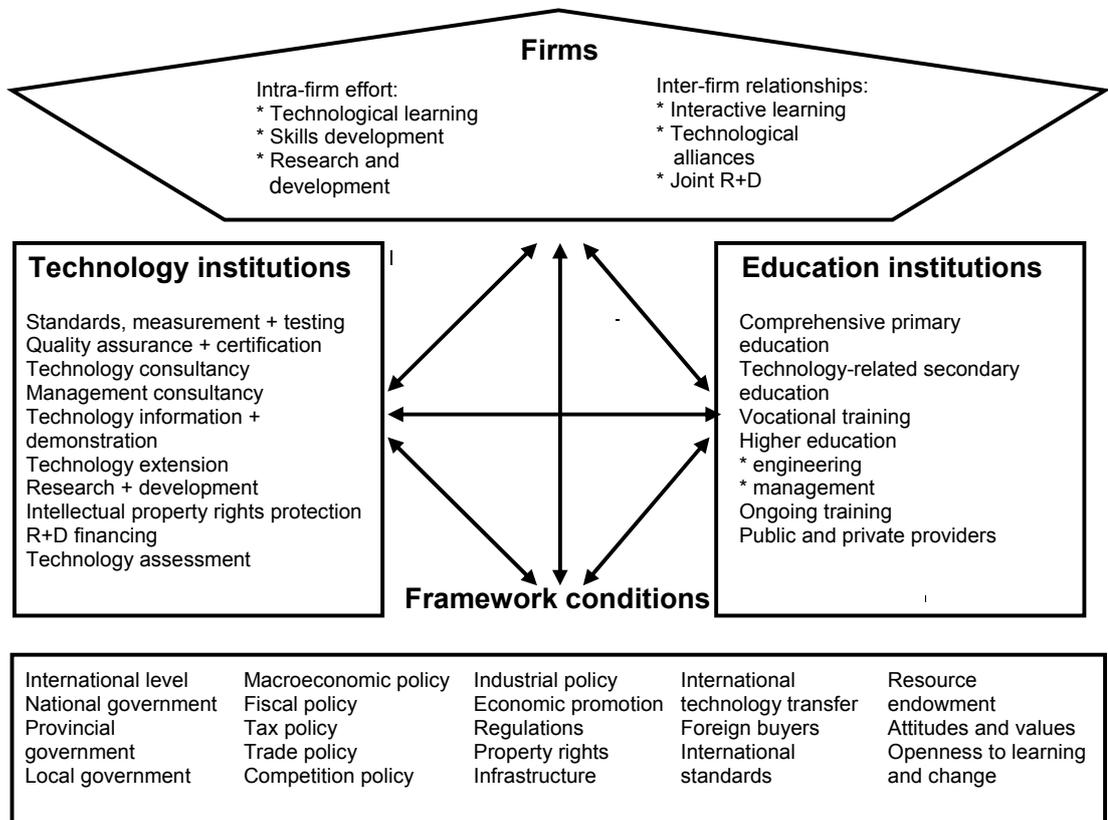


Figure 1: This inter-dependant network is the foundation of innovation capabilities. Source: Mesopartner

Governments, especially in the East and West have acknowledged and responded to the increased dependency of firms on institutions in their proximity for practical solutions to enhance their competitiveness (Shapira, 2001; Hassink, 2001). The key overarching advantage for SME's operating in a Regional System of Innovation is the sharing of tacit knowledge (know-how, know-who, know-when as well as best practices) which was described by Cooke (2002) as Institutional Learning.

The issue of where Regional Systems of Innovation exist and or flourish is an open question. In their comprehensive review of Regional Systems of Innovation, Doloreux and Parto (2005) asserts that most countries have Regional Innovation Systems, be it those with strong preconditions to innovations as well as old industrial regions and countries undergoing economic transition such as those in Eastern Europe.

Traditionally, the concept of firm innovation was a linear one where firms focused on their own R & D initiatives leading to the development of products and production processes and hopefully resulting in positive market outcomes (Edquist, 1997). This has been found to be inadequate, especially in emerging economies where levels of internal R & D within firms were low or non-existent. A more non-linear, interdependent process where the firm's innovation capabilities depends on networks with other relevant stakeholders at both regional and national levels has gained currency in terms of the Regional Systems of Innovation concept (Cooke and Morgan, 1998). Innovation could therefore be the result of formal research and development, but it is often entrenched in the way firms within their networks solve problems, experiment with new ideas and business models, and collaborate to exploit opportunities. Thus the density of networks and interactions between firms and universities, research organisations and other actors can give a sector a competitive advantage over other industries.

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Secondly, according to Cooke and others (see for example, Cooke, 1996; Simmie, 1997; Todtling, 1992; Semlinger, 1993 and Heidenreich, 1996) education level of local workforce as well as availability of Institutes of Education and Research in specific regions have enhanced the rapid development of successful regions such as Baden-Wurtemberg in Germany and Emilia-Romagna in Italy. The remarkable success of these regions has led to a growing list of initiatives in other countries to model their innovation policies to enhance economic development based on regional strength of institutions (see for example Garrett-Jones, 2004). This regional strength is described in the literature as institutional thickness where a combination of factors such as inter-institution collaboration, networking, a stated and common industrial purpose as well as shared cultural norms and values are held sacrosanct (Amin and Thrift, 1994; Raco, 1999).

The positive outputs, as illustrated by the enhanced innovative capacities of SME's in these regions (see for example, Todtling, 1992, Todtling and Kaufman, 1999) has been credited to the active presence of publicly funded institutions and their relative proximity to these SME's. Furthermore, some of the arguments driving a regional policy paradigm, at least in Europe are the relatively low level

of conversion of scientific knowledge and outputs into commercial services as compared to Japan and the United States (Morgan, 1997). It is believed that this shortcoming can be addressed more successfully at a regional level by bringing together relevant regional actors and stakeholders.

Local Systems of Innovation (LRIS) are described as a spatial concentration of firms (including specialized suppliers of equipment and services and customers) and associated non-market institutions (universities, research institutes, training institutions, standard-setting bodies, local trade associations, regulatory agencies, technology transfer agencies, business associations, relevant government agencies and departments) that combine to create new products and/or services in specific lines of business. De la Monthe and Paquet (1998) warns that Local and Regional Systems of Innovation (LRIS) covers more than just the administrative contours of infrastructure within a region but also goes into great detail about the relationship between these different levels of Systems of Innovation and its actors. Innovation is no longer being seen as a function of research and development; nor is R&D being seen as sufficient for the creation of technology-intensive industries and the valuable economic spillovers that result in high value-added jobs and exports. Indeed, much more than ever before, it is the combination of factors that contributes to innovation - ranging over skills, finance, production, user-producer linkages, the capacity of organizations to learn, and multilayered government policies that can enhance competitiveness

Sectoral Systems of Innovation concept is described as a set of new and established products for specific uses and the set of agents carrying out market and non-market interactions for the creation, production and sale of those products (Malerba, 2002). These agents are further described as individuals and organizations with specific learning processes, competitiveness, organizational structures, beliefs and objectives. Geels (2004) on the other hand described Sectoral Systems of Innovation as a group of firms active in developing and making a sector's products and generating and utilizing a sector's technologies. He further stated that such a system of firms is related either through processes of interaction and cooperation in artefact-technology development and or through processes of competition and selection in innovative and market activities.

Systems of Innovation in Developing and Latecomer Economies

Most of the studies on the influence of publicly funded institutions in local and regional development have focused on advanced economies (see for example Todtling, 1992; Todtling and Kaufman, 1999; Sternberg, 2000) with little or no focus on developing countries, let alone those coming out of years of political and economic isolation such as South Africa. The argument put forward by Arocena and Sutz (1999) and others (for example Intarakumherd and Tangchitpiboon, 2000) is that the very institutions critical to innovation systems are either isolated or non-existent in developing countries. Furthermore, Schiller (2006) has also highlighted that limited absorptive capacity as well as fragmentation of Local and Regional Systems on Innovation in these countries pose significant barriers,

especially as the bulk of the technologies are due to foreign direct investments by multinationals with little or no endogenous innovations and knowledge generation.

These discrepancies have been argued by other scholars to explain the growing gaps in economic performance between countries in the developed North as compared to the less developed South. Freeman (2002) for example argued the centrality of technical and institutional change (i.e. NSI) to economic growth of a country. Abramovitz (1986) in looking at the gap in economic growth rates between industrialized and developing countries concluded that it was due to a large extent to the formers inherent capacity to make institutional changes to respond to pressing economic needs.

Enhancing University-Industry Collaboration through Technology Diffusion

The positioning as well as challenges faced by universities in the Local and Regional economies of advanced countries where there is need for Technology Diffusion to key industries in response to globalization is well documented (Lundvall and Johnson, 1994; Chatterton and Goddard, 2000; Gunasekara, 2006). Technology Diffusion is the spreading or usage of a technology and innovation within a society, organization or group of individuals and in this context, the SME's (Rouach, 2003). Innovation itself is described as continuous improvement in product design and quality, changes in organizational and management routines, creativity in marketing as well as modifications of production processes that brings costs down, increase efficiency and ensure environmental sustainability (Mytelka, 2000). A more succinct yet equally

descriptive definition which encompasses even mature industries such as clothing and textiles describes Innovation as fresh thinking that creates value (Vaitheeswaran, 2007).

Key actors in Technology Diffusion initiatives worldwide are universities and other higher educational institutions. The evolving role of Universities in society and in local and regional economic development or as it's known worldwide as the Third Mission must be seen in a broader context. Firstly, budget cuts and in some cases declining student enrolment have led to pressures on university funding streams. To mitigate this decline in funding and tuition income, universities and other Institutions of Higher Learning are establishing technology transfer offices and Local and Regional development centres to address specific industrial and economic challenges through commercialization of research outputs (Goddard, 1997).

This is done over and above their mandatory role in teaching and research. This is a new dimension for most universities worldwide as traditionally they contributed to Local and Regional development by enhancing human capital (namely, graduates) as well as their historic role in employment creation and technology transfer through spin-off companies and science parks (see Figure 2). The additional income resulting from this third mission of the universities can also be used to fund new equipment, technology platforms and innovation initiatives, leading to more cutting edge research outputs (Poyago-Theotoky et al. 2002).

As mentioned earlier, the strength of interaction between knowledge providers and firms (i.e. university -industry linkages) is often underpinned by the localised nature of the relevant academic institutions. This spatial proximity encourages universities to focus the teaching of their students to the needs of the local industries. What has lagged behind, at least in the South African context is the provision of tailor made technology solutions, training and consultancy services to address the unique and pressing demands of SME's in specific sectors of the economy.

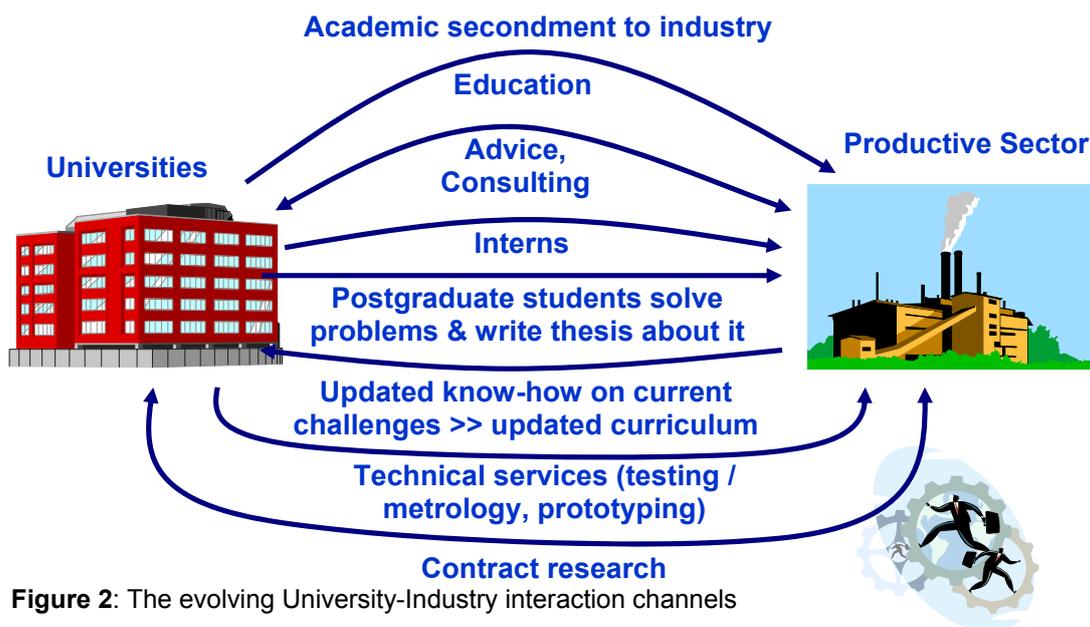


Figure 2: The evolving University-Industry interaction channels

Key questions to ask in terms of the involvement of Universities and other Institutions of Higher Education in South Africa are:

- Do education and training providers train adequately skilled manpower across different levels and fields?

- Who should own the intellectual Property Rights arising from publicly funded research outputs?
- Are Institutions responding adequately to the immediate needs of the productive sector, especially SME's?
- Is there an established, effective communication channel amongst different stakeholders?
- Do Institutions constantly upgrade and differentiate their curricula and academic programmes to address the needs of a globalized economy?

In the more developed economies, rigorous public policy debates have been raging for decades and in some cases key legislations to enhance the role of universities in the productive sector have been passed into law (see for example, Siegel et al., 2004; Mowery and Sampat, 2005; Drucker and Goldstein, 2007). For example, the key catalyst for this global drive was the Bayh Dole Act (Patent and Trademark Act), passed in 1980 by the United States Congress. The Bayh Dole Act was based on the premise that knowledge from universities to the productive sector is the most desirable outcome of federally funded research in the United States. The impact of this landmark legislation was that it promoted university ownership of Intellectual Property which in turn helped to promote the commercialization of new technology and knowledge for economic growth and competitiveness in the United States (Siegel et al. 2004).

For emerging or middle income economies such as South Africa, the role of universities beyond their teaching and research mandate is a much recent

phenomenon and similar legislation and initiatives are enjoying attention from policymakers and legislators (South Africa, 2008).

South Africa- An Overview

South Africa's re-entry in 1990 into the global economy after years of political isolation has led to a myriad of opportunities as well as threats for key indigenous industries. Amongst these, the Clothing and Textile industry in South Africa has come under severe pressure due to competition from low cost imports from other countries. Specifically, affected are Small and Medium-sized Enterprises (SME's) which are found to be not price comparative as compared to low labour cost countries in Asia. This, along with the marked reduction on import tariffs to comply with global trade treaties have led to a loss of jobs in the industry especially for SME's.

The Higher Education Landscape in South Africa

Within the South African higher education landscape, there are twenty three institutions of higher learning. These can be divided into ***Traditional Universities, Comprehensive Universities*** and ***Universities of Technology***. The Traditional Universities are degree granting institutions with their primary focus on teaching and basic research. The Comprehensive Universities came about as a result of a policy decision by the South African government to merge some of the Local and Regional universities (HESA, 2006). The Universities of

Technology (formerly known as Technikons) were originally diploma granting institutions but now also offer technical degrees up to doctoral level (namely from Bachelor to Doctor of Technology degrees).

The Traditional and Comprehensive Universities have in the past been less inclined to engage with the productive sector. The Universities of Technology (UoT's) in South Africa on the other hand have a different approach and have always engaged industry in terms of direct technology assistance, consultancy and targeted skills development. The UoT's and their precursors had thus throughout their existence had an applied focus through the adoption of cooperative education and this has now positioned these institutions to engage in formal Technology Transfer and Diffusion initiatives, specifically SME's.

FOCUS OF THIS PAPER

The paper aims to assess the impact of an integrated innovation project instated by a local university to enhance the competitiveness and long term sustainability of SME's in the South African Clothing and Textiles industry. The paper has a regional dimension with the focus of the study being on the Western Cape Province, the second largest in South Africa's nine provinces in terms of economic output.

Western Cape Province of South Africa

The Western Cape Province, located in the South West of South Africa, is home to one of the most diverse, dynamic and innovative Local and Regional economies in Africa. The Western Cape has roughly 10% of South African population; however, it contributes nearly 15% of national economic output and attracts over 16% of foreign direct investment destined for South Africa (<http://www.wesgro.org.za>).

The Western Cape Province boast, besides the clothing industry, a world class wine industry, an export driven agricultural sector, iron & steel manufacturing, automotive components, boatbuilding, financial services, property development and tourism industry. These key industries are ably supported by well developed infrastructure; road and sea based transport networks as well as able-bodied established governance systems. These factors are critical for an emerging LRIS as the appropriate infrastructure such as transport services are critical for the development of a strong and viable LRIS (Jain, 2005).

As mentioned above, key input in successful Local and Regional economic policies are Technology Diffusion initiatives to enhance innovation and knowledge transfer from Higher Education Institutions and other publicly funded institutions to the local industry. Furthermore, as noted by Atkins (1991) success of innovation policies is greatly enhanced by the existence of strong Local and Regional institutions, Local and Regional leadership and entrenched industrial sectors as well as a number of internationally renowned academic institutions, all of them existent to a large extent in the Western Cape Province.

Clothing & Textile Industry in South Africa

The Clothing and Textiles industry in South Africa employ over hundred and fifty thousand (150 000) people in South Africa. The bulk of the sector is concentrated in the Kwazulu-Natal and Western Cape Provinces of South Africa. There are approximately 2,000 active clothing, textiles, footwear and leather companies registered with CTFL-SETA. Of these, more than 80% are found in the clothing and textile industries. Well over 86% of these companies are classified as SME's, which are all firms employing less than five hundred (500) employees. In 2004, the South African clothing and textiles industries generated sales of R34 billion, which, despite a recent decline, is a significant contribution to total manufacturing output (Vlok, 2006), however only 20% of the output is exported hence the over reliance on domestic market (CTFL, 2006). Before the dawn of the democratic era in 1994, the industry was protected from outside competition with high import tariffs. Furthermore, the industry has experienced a stagnant or decline in production output since 1994, highlighted by a 20%

decrease in total exports in this sector (Kaplan, 2004). In summary the Clothing and Textile industry context in 2004 was one of decline and faced a realistic threat of extinction, similar to which has been experienced in other countries.

A number of challenges facing the industry have been identified by Barnes (2005).

These include but are not restricted to:

- Cheaper imports from low cost countries
- Proliferation of illegal imports and dumping of clothing and textile products
- Low output per employee in South African firms as compared to international firms
- Firms not prioritizing skills development and upgrading of in-house expertise
- Low level of Technology investment and upgrades by SME's
- Threats posed by the Global Value Chain phenomenon where South Africa retail chains and agents source products from low cost manufacturing platforms in other countries
- Emergence of world class manufacturing practices in competitor countries

Whereas opportunities identified for the industry include:

- Niche markets – moving from uncompetitive, unprocessed commodity products to low volume, high value finished products (CTFL, 2006)
- New and existing trade agreements which could bolster exports to western countries. For example, the African Growth and Opportunities Act (AGOA) which is a United States government initiative favoring

preferential tariffs for a number of Sub-Saharan African countries (Kaplan, 2004)

Following is a cast of actors taking an active role in the development of the Clothing and Textiles industry in the Western Cape Province of South Africa:

Technology Station in Clothing and Textiles in Cape Town

The Technology Station in Clothing and Textiles (TSCT) was established in October 2001 by the National Department of Science and Technology through its implementation agency called the Tshumisano Trust. This particular Technology Transfer Centre is situated at the Cape Peninsula University of Technology in the Western Cape and has focused on assistance to SME's in the industry under intense pressure from competition from low cost countries. Through the TSCT, the University of Technology acts as a platform to provide innovation solutions and skills development to ensure that SME's in this industry are globally competitive in terms of product and process innovation. The University has hosted a government funded Technology Transfer Centre to provide world class solutions to SME's operating in this challenged Industry. The key mandate of the Trust is to enhance competitiveness and innovation capacity of SME's through Technology Diffusion from academic institutions. The TSCT is one (1) of fifteen (15) Technology Transfer Centres (known as Technology Stations) based at Universities of Technology throughout the country. The Trust was modelled alongside the German Steinbeis Foundation (www.steinbeis.de) which operates

over two hundred and fifty eight (258) Technology Transfer Centres situated at German Fachhochulen. These Fachhochulen are similar to the South African Universities of Technology.

The SME sector of the Clothing, Textiles and related Industries of the Western Cape are the main focus of the TSCT although in some cases larger companies do obtain assistance from the TSCT. The TSCT provides services and advice to the clothing, textiles and related sectors in **production processes, product quality, testing, product development, applied research** and **training**. Over the past three (3) years the TSCT has assisted well over three hundred and twenty nine (329) SME's in major projects, technical consultancy and technology diffusion initiatives. In terms of skills development a total of five hundred and eleven (511) of SME related Training and Skills Development initiatives were also undertaken by the Technology Station (Tshumisano Trust, 2006).

With a few notable exceptions, innovation in the case of the TSCT is in a form described as synthetic knowledge. This according to Asheim and Coenen (2005) is when innovation is mainly incremental and is exemplified by application or novel combination of existing knowledge. The intervention by the TSCT is still important to creating sustainable jobs in a relatively labor intensive industry. There are however a number of SME's who have as a result of interaction with the TSCT started focusing on upgrading their technology base. For example, a number of SME's in textiles have started producing high value textile products for

the export driven automotive industry where light-weight materials are becoming increasingly important in vehicle manufacturing (Tshumisano Trust, 2006).

Clothing, Textiles, Footwear and Leather SETA (CTFL-SETA)

SETA stands for Sector Education and Training Authority. The main function of the SETA's is in skills development and upgrading to enhance overall productivity and competitiveness of the industry. These organizations were established in the year 2000 through an act of parliament (www.dol.gov.za). There are at present twenty three SETA's operating in South Africa focusing on key industrial sectors of the country. The SETA's other mandate was to implement the National Skills Development Strategy of government to ensure that people learn specific skills that are needed with training up to the agreed standards as prescribed by the National Qualifications Framework.

The CTFL SETA is tasked to develop and facilitate training to all who are employed within the Clothing, Textiles, Footwear and Leather economic sector through the promotion and implementation of effective learning programmes and skills planning to advance workplace security and productivity. For obvious reasons the CTFL SETA is primarily focused on the two epicenters of the clothing industry namely, the Western Cape and Kwazulu-Natal Provinces.

Clothing and Textiles Service Centre (CLOTEX)

CLOTEX is a non-governmental organisation that assists small clothing and textile businesses in the Western Cape. Its core mandate is to represent and provide SME's in this sector with access to mentorship, training and information

on trade contacts through a series of clustering initiatives (www.clotex.co.za). These networks enable SME's to have access to service providers and relevant public institutions to improve their productivity. It does this by identifying and promoting sustainable competitive manufacturing and business and employment opportunities among a myriad of activities.

Clotex is governed by a Board of Directors with key representatives from higher educational institutions, public and private sector players as well as Local and Regional government representatives. Clotex's has, through its visible presence in the Western Cape continued to ensure that the needs of the industry, specifically SME's are at the top of Local, Regional and Provincial development agenda.

Textile Federation of South Africa

Formed in 1975, the Textile Federation (Texfed) acts as the voice and spokesman for its members on key industry issues. Its main focus areas are trade matters and legislative changes that affect the industry (<http://www.textfed.co.za/>). Texfed represents the full complement of cotton, wool, worsted yarn, woven fabric textile manufacturers and about 70% of the fabric knitting mills in South Africa. Texfed has played a major role in dealing and influencing the many issues that have affected the industry both nationally and internationally over the past 30 years. It is the principal link between the textile industry and the various government agencies, departments and other local and international trade associations and organisations.

The South African textile industry is currently facing extremely difficult trading conditions. Employment in the industry has declined from seventy thousand five hundred (70 500) in 2003 to just below fifty thousand five hundred (50 500) in 2006. In addition, a number of textile mills have recently closed or have been forced to retrench staff (see www.textfed.co.za). Historically textile and clothing imports into South Africa originated from a wide range of countries chief amongst which were Taiwan, South Korea and India. However since 2001, imports have increasingly been sourced mainly from China.

The road to SME Competitiveness and Sustainability

Five (5) years ago, the CTFL SETA formed a collaborative agreement with the newly formed Technology Station in Clothing and Textiles at the Cape Peninsula University of Technology to enhance skills development in the industry. It further donated much needed capital equipment to the TSCT. This was over and above funding for equipment and infrastructure provided annually by the Department of Science and Technology through the Tshumisano Trust.

The Cape Peninsula University of Technology, as a contribution to the establishment of TSCT instituted a Clothing and Textile Training Unit (CTTU) for the provision of training and short courses for the industry. The CTTU has been awarded Institute for Sectoral and Occupational Excellence (ISOE) by the CTFL SETA. The TSCT also worked very closely with companies at the skills planning stage and offer its premises to SME's to have their skills planning workshops. The CTFL SETA also requests proposals to fund innovation projects from SME's

in the industry which could be undertaken at the TSCT over and above the skills development initiatives.

Rapid Appraisal of Local Innovation Systems (RALIS)

In response to the challenges highlighted above, a process called Rapid Appraisal of Local Innovation Systems (RALIS) was initiated in financial year 2003/2004 by the TSCT in collaboration with Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ). GTZ (see <http://www.gtz.de/en/>) supports the German Government in achieving its developmental objectives in a number of countries worldwide.

RALIS is a methodology to attain, within a short period of time, an overview of the main features of a local innovation system and innovation processes along a value chain. In a wider sense, it is a rapid, practical, bottom-up, participatory, network stimulating and innovation-oriented approach to value chain development and Local and Regional development (Mesopartners, 2004; Meyer-Stamer and Schoen, 2005). Its basic elements are scanning of the structure of the local innovation system and identifying main mechanisms and bottlenecks to innovation, technology upgrades and knowledge transfer to the industry (Hillebrand et al. 1994; Koschatzky, 2000).

The RALIS methodology is based on the four pillar model of an innovation system with the key actors being Firms (SME's), Technological Institutions, Education Institutions and Government. An effective Local and Regional Innovation System depends on the effective interaction of these role players.

The RALIS process started with a major stakeholder meeting in the Western Cape in early 2004 to highlight bottlenecks in the interaction between different elements of the Clothing and Textiles value chain with a specific focus on SME's in this sector. The participatory diagnostic engaged ninety (90) leaders and senior managers across the whole sector value chain. Once the innovation system and processes along the value chain have been diagnosed the purpose of the RALIS is to identify opportunities to improve the competitiveness of the sector, primarily by means of innovation and technology. The methodology promoted a focus on a limited number of practical proposals, championed by recognized key actors within the industry.

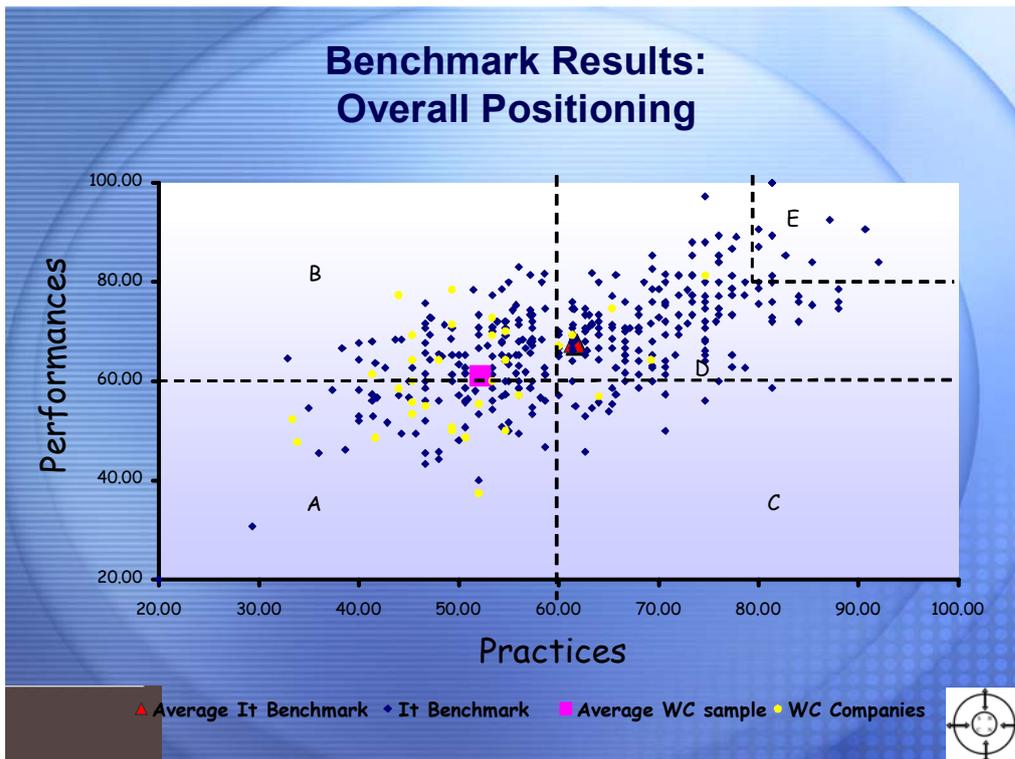
One of these proposals was to benchmark the sector across the entire value chain which had led to the Small Business Competitiveness Club. The Small Business Competitiveness Club was formed to facilitate the establishment of clusters among the SME's in the Clothing and Textile industry in the Western Cape to enhance collaboration and sharing of best practices (SBC Status Report, 2004). The primary reason for the formation of the Competitiveness Club was for it to act as a conduit for shared best practices, knowledge transfer and collaboration to enhance what has been described in the context of the Third Italy Region as social capital (Boschma, 1999).

The areas of focus of the Small Business Competitiveness Club are:

- Small businesses with similar markets, products and processes share similar business models and critical success factors

- Benchmarking to assist members to determine how competitive they are as compared to their peers in the industry
- Highlighting improvement priorities to enhance their productivity and output
- Continuous improvement systems established through institutionalised organisational learning

The Competitiveness Club initiative was driven by consultants and experts attached to the TSCT at the university with active support and funding by the Provincial Government of the Western Cape, the City of Cape Town, CLOTEX and CTFL SETA. The argument put forward to convince SME's to participate in these clustering initiatives was that if they do not maximise the benefits from sharing knowledge and improving efficiencies, they will not survive the encroaching competition from other low cost countries.



Outcome of the Competitiveness Club Initiatives

After eighteen months, small clothing manufacturers participating in measuring their performance and benchmarking enabled the SME's to assess their performance regularly, sharing of the results with their respective employees and collectively use the information to drive continuous improvement on the factory floor.

Most of the participating SME's employees gain new skills thereby enhancing their overall productivity. The benefit for the TSCT for participating was that the initiative serves as another platform to market its expanding technology transfer and diffusion initiatives among SME's and stakeholders in the province.

Some anecdotal reflections by participants of the Small Business Competitiveness Club: Said one SME owner, "*We were under the impression*

that people were doing well when they were not. The benchmarking has given us new insights into the business. We were also just throwing people at problems”. Another participant remarked “It was a huge wake-up call to see that we were not as good as we thought we were. Our productivity was not close to where it should be and the implication for our businesses and indeed the industry is huge.”

No	CSF (Critical Success Factor)	KPI (Key Performance Indicator)	Units	July 06	July 05	%Change
F1	Profit margin realised	Profit as % of Sales Revenue	%	55%	17%	234%
F2	Avg.Revenue contribution/ employee	Revenue / employee	R	R 13,122	R 6,658	97%
F3	Average Cost/ employees	Cost / Employee	R	R 4,197	R 3,913	7%
F4	Avg. Revenue contribution/ Machinist	Revenue / Machinist realised	R	R 34,346	R 15,299	124%
F5	% Overhead staff	100% - (Machinist / Total Employee Ratio)	%	52%	54%	-5%
No	CSF (Critical Success Factor)	KPI (Key Performance Indicator)	Units	July 06	July 05	%Change
P1	Cost Competitiveness	Cost / Minute recovered (sold)	R	R 2.13	R 2.31	-8%
P2	% Utilisation of Available Capacity	% of Available Minutes recovered	%	73%	56%	32%
P3	Cost Structure: Cost if @ 100% cap.util.	Cost / Minute available (paid)	R	R 1.11	R 1.01	10%
P4	Output per Employee	Recovered Minutes / Employee	Qty	2,925	2,892	1%
P5	Efficiency of Production Methods	Machinist / Total Employee Ratio	%	48%	46%	5%
P6	Output per Machinist	Recovered Minutes / Machinist	Qty	5,868	5,527	6%
P7	Productive use of space	Revenue per Square meter	R	R 880	R 571	54%
P8	Internal Rejects	No. of rejects/ Total no. units produced	%	0.3%	1.0%	-67%
P9	Defect Repair rate	No. defects/Total no. units produced	%	4.9%	4.7%	5%
No	CSF (Critical Success Factor)	KPI (Key Performance Indicator)	Units	July 06	Sep 05	%Change
L1	Committed to job & firm	Absenteeism	%	4.7%	4.7%	1%
L2	Committed to job & firm	Staff Turnover	%	6.6%	11.2%	-41%
L3	Working smarter	Bottom up ideas implemented	%	7.0	5.6	24%
L4	Invest in working smarter	Days invested in training	%	2.2%	0.3%	643%

Table1: Results from the Small Business Competitiveness Club Pilot project

The assessment on the outcomes and impact of the RALIS (Lawson and Gottschalk, 2008) proved that the performance of participants improved substantially.

The leading international small business benchmarking service provider was subsequently identified and their methodologies included three benchmarking instruments, including qualitative benchmarking. The qualitative benchmarking of business performance and management practices only requires a two (2) hour interview with the entrepreneur or owner or CEO. This reduces the barrier to participation in the benchmarking to a commitment of two and a half hours (2.5). Consequently, CLOTEX has benchmarked more than sixty (60) firms in the last six (6) months. The firms include CMTs, full manufacturers, design houses and a textile firms.

Specific Outcomes of RALIS exercise

According to the consultants and conveners, the RALIS exercise resulted in a list of fifteen short, medium and long term proposals to address key competitiveness issues such as *marketing, productivity, quality* and *service levels* in the industry. It was stated that the adoption of these mini proposals, accompanied by the requisite funding from the main actors as well as support by all stakeholders, could lead to improvement in terms of new annual employment creation from between two thousand (2 000) to as many as ten thousand (10 000) new jobs in the Western Cape. Furthermore the results showed that initiatives such as RALIS are adequate for assessing the competitiveness of a value chain in a highly industrialized environment, even in a situation of crisis as faced by the Clothing and Textiles sectors. In June 2008 an assessment of the outcome and impact of this RALIS was conducted with very interesting outcomes.

The results showed that initiatives such as RALIS managed and coordinated by regional universities are highly effective for assessing the competitiveness of a value chain in a highly industrialized environment through product and or process innovation, even in a situation of crisis as faced by the Clothing and Textiles sectors in South Africa. The harsh realities of global competition as exemplified by the challenges in this paper will hence require SME's in middle income and advanced countries to focus on the production of innovative products to survive and flourish.

Also the results from this set-up has ensured that Key stakeholders in the industry (SME's, material suppliers, industry associations) who historically worked in silos and sometimes in competition have converged and integrated their activities to promote the competitiveness within this industry through enhanced knowledge and best practice sharing as well as clustering of activities.

This followed the conclusion that RALIS can claim that it was a catalyst to many positive initiatives – the identified initiatives but also others that followed from participants doing things differently than before. Out of fifteen (15) initiatives identified, only three (3), twenty percent (20%) have shown no progress. More than fifty percent (50%) have shown substantial progress. These initiatives have reached and benefited hundreds, (100's), of firms and in excess of a thousand (1 000) individuals whether they were entrepreneurs, employees or students. The scale and scope of impact was however not as much as was hoped for due to various contributing factors. Taking into consideration that the RALIS process

cost approximately a hundred and twenty thousand rand (R 120 000) to a hundred and fifty thousand rand (R 150 000) to execute, that it was conducted in only two (2) weeks, and significant implementation followed, the instrument and approach compares very favourably with alternatives Lawson and Gottschalk (2008).

Some Final Observations from the Clothing and Textile RALIS Exercise

RALIS cannot claim the full credit for the results from the initiatives above as most of the work was done subsequent to the two (2) week RALIS process, by other parties. What it can claim however is that it was undeniably a catalyst to many positive initiatives that followed – the identified initiatives but also others that followed from participants doing things differently than before.

The process brought stakeholders together in a non-confrontational process which greatly improved their understanding of the total value chain and strengthened consensus on what the most critical issues were which required attention in the industry. In the process it established new as well as strengthened existing relationships, which led to a plethora of collaborative activities among key industry stakeholders. It established basic methodologies which now enable stakeholders to work together more efficiently. It shifted thinking about roles and programme priorities of the support institutions.

The benefits of these changes of insight and behaviour cannot be quantified (Lawson and Gottschalk, 2008).

Aftermath of the RALIS Initiative

Since 2004, Tshumisano in collaboration with GTZ have initiated three (3) more RALIS exercises in the following industries; Downstream Chemical, Foundry and Agrifood. In 2006 a RALIS was done through the NMMU Downstream Technology station and in 2008 through the University of Johannesburg hosting the Metal Casting Technology station and CPUT hosting the Agrifood Technology station. Of great interest is how this exercise without failing allows an industry to focus on identifying and verifying the real and important issues to the relevant industry and how it establishes new- and strengthen existing-relationships, which leads to a plethora of collaboration activities.

In September 2008 a review was done on the RALIS tool itself and based on the experiences of stations that hosted a RALIS already the following areas of improvement were identified (Cunningham, Meyer-Stamer and Lawson, 2008)

- Assure full participation from university and technology station staff.
- Preparation and communication of the purpose of the RALIS within the university should occur well in advance of the exercise itself.
- The execution team should be a combination of station and university staff.
- Do proper mapping of the stakeholder structure in the innovation system already early in the build-up phase.
- Revisit and update the stakeholder map as you learn about additional stakeholders, and as you start to better understand relationships between stakeholders based on the four (4) pillar model (refer to page 7)

- Map not only the innovation system but also the value chain that it relates with (which would work in some cases and be difficult in others, like downstream chemicals).
- Make sure that stakeholders understand not only the scope and topography of the innovation system they are part of, but also of the value chain they feed into.
- In order to ensure the participation of industry as a whole it is important to involve an industry body, as co-convenor.
- There are organisations and individuals who can shout, and everybody comes. Thus, the engagement with stakeholders needs to be carefully planned and competently executed.
- Using existing institutions and networks within an industry is imperative.
- Conduct a robust effort to identify ongoing activities in a given sector, in particular initiatives launched by industry associations or government bodies.
- The supplementary and the benefits to be obtained with a RALIS must be explained to those players. They must not get the impression that, through the RALIS, the TS wants to compete with them. Ideally, other players should already start to develop an idea of how the RALIS can help to leverage their initiatives before the launch of the RALIS exercise.
- In other cases, where initiatives exist on paper only, it might be possible to explore how RALIS can help to get them going.

- Involve not only SME's but also larger firms who have different needs but could often identify spin offs where SME's can get involved in. They too form part of the larger innovation system and therefore should also be considered.
- Manage expectations properly, in particular around proposals.
- Ideally, proposals should only be mentioned if some player has assumed responsibility for their implementation.
- Proposals that are not "owned" by anybody should only be presented if it is very clear that an owner is being sought, and that the TS will definitely not be the owner.
- "Champions" should be identified at a early stage to take responsibility for proposals recommended by the RALIS (The station should not solely that on this role) ?????

New Additional Tools in Conducting a RALIS Exercise

The RALIS exercises that were conducted so far relied primarily on the tools that are outlined in the RALIS documentation, in particular workshops that were structured along the Four (4)-Pillar-Model. Additionally, tools out of the PACA toolbox were used, in particular workshops using the five (5) Forces format.

What was the benefit of using these tools? (Cunningham, Meyer-Stamer and Lawson, 2008)

- The Four (4)-Pillar-Model is useful to understand the basic structure of a sectoral or territorial innovation system. It helps the various stakeholders involved in the system to understand how they fit with other stakeholders, and

how various stakeholders interrelate to create an effective (or not so effective) system.

- The five (5) Forces model is a standard tool in analysing the competitive position of a company or a cluster of companies. It helps to understand their competitive advantages as well as the main challenges they are facing.

Both tools are particularly useful at an early stage of an exploration process, when the picture of the targeted sector or locality and its innovation system is not clear at all.

What are their advantages and their downside?

- The advantage of both tools is their robustness in delivering a picture of a given sector or cluster, informing about its basic structure and its degree of competitiveness. They put the importance of technology and innovation as a determinant of the competitiveness of the specific sector and cluster into perspective, i.e. highlighting the relevance of these aspects relative to other determinants of competitiveness.
- The downside of both tools is that they do not dig deep into technology and innovation issues. They do not unpack these issues in terms of innovation behaviour, in particular the internal problem solving capacity and behaviour of companies.

So far, the tools used have been sufficient. However, as innovation systems evolve – not the least due to the changed behaviour of a Technology Station – or

engagement with more sophisticated innovation systems, further tools will be needed.

Some of them may be adapted from other methods, for instance:

- *Scenario writing.* This is a tool that has been used in technology foresight exercises for some time.
- *Expectation matrix.* This is a tool that we use in PACA occasionally to understand the expectations that various organisations with a development mandate have regarding each other's activities, and to understand which expectations are realistic and which are not.
- *Paper computer.* This is a tool that helps identify interventions in complex systems that have a high leverage factor.

For more information on these tools go to <http://www.led.co.za>, tab: approaches and instruments.

Four (4) More RALIS exercises are planned for 2009 in the following industries; Automotive, Chemical, Prototyping and a National Tooling exercise. The intention would be to incorporate some of these additional tools to increase the impact.

DISCUSSION

The paper serves to highlight the merits of a bottom-up collaborative approach involving a local university and key players in an industry under pressure from low cost competitors. This approach successfully assisted Local and Regional development as these actors, by virtue of their base are more attuned to specific local industrial and economic needs, especially those of SME's. The encouraging results from this emergent RSI could provide a framework for effective Local and Regional economic development initiatives in emerging economies such as South Africa.

The paper asserts that South Africa, although interchangeably referred to as either developing or middle income country does demonstrate encouraging signs of Local and Regional System of Innovation. In this paper, the authors also argues that an agency of the South African government, set up to improve the innovativeness and competitiveness of SME's through technology diffusion has inadvertently given rise to the development of an integrated Local and Regional Innovation Systems in a key province of the country.

The description of this initiative as an Integrated Local and Regional System of Innovation which is based on the typology proposed by Cooke (1992) and Hassink (2001). In it an integrated system is described as one (1), which although Local and Regional in character, also involve a mixture of National as

well as Local and Regionally initiated interventions and institutions as opposed to purely Local and Regional (**grassroots**) or purely national (**dirigeste**).

This emerging collaboration has a semblance of what Hirst (1994) referred to as local associationalism which have two positive outcomes for the region in question. The association can lead to enhancement of collaborative activities as well as fostering Local and Regional identities. This has resulted in enhanced skills development, training for SME's, clustering of firms to improving interaction, knowledge transfer and sharing of best practices. Secondly, the enthusiastic involvement of SME's in this nascent RIS is also encouraging. SME's, specifically those in mature industries such as Clothing and Textiles, usually lack a culture of innovation, poor linkages and a general lack of knowledge to what universities has to offer them (Potts, 2002).

Furthermore, as the experience, even in advanced economies has shown there is a relatively low level of interactions between SME's and universities in spite of the challenges these firms face in an increasingly globalized economy (Kaufmann and Todtling, 2002). A key reason put forward is that a majority of SME's do not conduct active research and innovation themselves and hence academics at universities tend to put a higher premium on working with larger multinationals (Storey and Tether, 1998).

The demands for an active role by universities in Local and Regional economic development is, informed according to Chatterton and Goddard (2000) by the drive worldwide to grow competitive and innovative SME's. Effective institutional

settings and interactive learning between major actors within the settings, classified as knowledge producers (e.g. universities) and users (e.g. firms) is hence crucial for generating innovation and enhancing national competitiveness (Lundvall, 1988; Chung, 2002).

The present collaboration and interactions has also led to SME's in the Clothing and Textiles industry in the Western Cape, after identifying key markets, to export of high value products to countries such as the United States. These networks, although informal has further facilitated, at least in the case of Clothing and Textiles SME's, the development of a platform to overcome an inherent problem for SME's where the low number of skilled employees is an impediment to establishing and maintaining linkages within an innovation milieu (Kaufmann and Todtling, 2002).

Although the primacy of macroeconomic factors such as political stability, fiscal and monetary policies to economic development is beyond dispute, scholars such as Scott and Storper (2003) have cited that regions are key foundations for both Local and Regional and National economic development.

The challenge going forward, especially in the context of this paper would be to avoid an over-reliance on central government funded entities such as the Tshumisano Trust to stimulate Local and Regional economic growth. The success of this interaction in the Clothing and Textiles sector is in part due to the operational autonomy as well as a hands-off approach the national agency affords the Technology Station in Clothing and Textiles to strengthen its Local

and Regional focus. The dominance of central government in the Systems of Innovation initiatives has been highlighted by Schiller (2006) to have hindered the development of RSI in developing countries. Hassink (2001) in his study on Local and Regional Innovation Systems in Korea also noted that the vertical dependency of support agencies in regions to central government sponsorship might result in less focus on Local and Regional economic needs and demands.

CONCLUSIONS

The importance of a local university to Local and Regional System of Innovation has been highlighted. This paper also points to the positive outcome of a hands-off approach by a national agency and allowing relevant institutions and actors to interact at Local and Regional level to address local needs. Against the background of the newly released Industrial Policy Framework for South Africa, the argument could be made those public research institutions as is the case in advanced economies (Fritsch and Schwirten, 1999) could stimulate much needed Local and Regional and industrial development in South Africa.

Like many middle-income countries, South Africa, will most probably never be able to compete with countries such as China in terms of production volume especially in labour intensive industries such as Clothing and Textiles where large population and low labour costs in latter countries underpins their extraordinary manufacturing outputs. Where there is room to compete is in the production of low volume, innovative and value added products. Although nascent, this new paradigm of collaboration have gone a long way to enhance innovation and collaboration among SME's in an industry under competitive pressure from low cost countries. The harsh realities of global competition as exemplified by the challenges in the Clothing and Textiles industry will hence require SME's in middle income and advanced countries to focus on the production of innovative products to survive and flourish. Key to this is for SME's

in the Clothing and Textiles industry to strengthen their linkages with Local and Regional support structures.

The local universities as shown by this development in the Western Cape Province of South Africa and other regions worldwide can act as conduits for product and process innovations, in key industrial sectors. This paper shows that Universities of Technology in South Africa, due to their historic applied research are well positioned to act as conduit for Local and Regional Systems of Innovation. This if properly developed and supported by Local and Regional Innovation actors, could in turn lay the foundation for a robust National Systems of Innovation in South Africa. Chung (2002) argued that in the study of Local and Regional and National Systems of Innovation of Korea that properly developed Local and Regional System of Innovation can act as either precursors to or actual bases for the formation of effective and competent National System of Innovation.

Going forward, Universities nationwide should be encouraged to emphasize applied research initiatives to address Local and Regional economic needs with a specific emphasis on SME's.

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How to Increase the Use of Marketing Strategies in Small and Medium Enterprises (SMEs) in Colombia: A Proposal Based on National and International Studies

by Ricardo Vega¹

One of the main causes for high SMEs mortality is the poor application of marketing strategies and concepts. The barriers that impede this process can be classified in three categories: the attitude that the companies have in front of the importance that should play the marketing in the firm, the focus of SMEs managers' work and the available resources to implement this process. In the document is proposed a program to improve this application in Colombian SMEs and cover aspects related to creation of a task group, barriers detection and classification, conceptual and experience learning, follow-up activities, recognition of the best SMEs, and compilation of the best marketing practices in the Colombian environment. It is recommended to make deeper programs to guarantee not just the creation but also the survival of Colombian SMEs.

Introduction

Every time the importance of the SMEs becomes more evident in the generation of economic growth in the countries, because of their impact in the employment and Gross Domestic Product (GDP) generation. For the low income countries they represent 31 percent of employment generation and 15 percent of their GDP; for the countries of middle income the SMEs represent around 55 percent of employment generation and almost 40 percent of the GDP. But where they are more important is in the environment of high income countries where they achieve levels of around 65 percent in employment generation and they represent 50 percent in their GDP (Ayyagari, Beck, and Demirgüç-Kunt 2003). This way, the SMEs are an important development engine for any type of society. Colombia is not unaware of this trend and the SMEs represent 99.8 percent of the country's businesses (National Planning Department (NPD) 2006), 67.2 percent of the formal employment and 38.7 percent of the GDP (Ayyagari, Beck, and Demirgüç-Kunt 2003). In the case of Bogota, the SMEs represent 99 percent of the companies in the city, that in 2005 were 219.000 or 27 percent of the country's companies (Bogota Chamber of Commerce (BCC) 2006).

Although in general high income countries are associated to the presence of big companies in their economies, the previous figures show that there is also a direct relation between the income of the countries and the weight that the SMEs have in the economy. One of the explanations could be that big companies push the creation and growth of the SMEs because many of them are their suppliers. Colombia, a middle income country, has a high level of employment generated by the SMEs (above of the level of the high income countries) but in terms of GDP

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generation its level is similar to that of the other middle income countries. In other words, Colombian SMEs have a high power to generate employment, but not the same force to create wealth. However, like in the rest of the world, SMEs have a vital importance in the Colombian economy and, for this reason, the impact that the improvements of management practices in the SMEs could have all over the country's economy.

For this paper, SMEs are defined based on the Colombian legislation (Diario oficial 2004) that divides them in Micro Companies, that are businesses with a labor force non superior to 10 workers or total assets, excluding the family's house², less than 500 legal monthly minimum wages (LMMW) (approximately US\$103.158 in 2009); Small Companies, that are enterprises with a labor force between 11 and 50 workers or total assets between 501 and 5.000 LMMW (approximately between US\$103.159 and US\$1'031.589); and Medium Companies or companies with a labor force between 51 and 200 workers or total assets between 5.001 and 30.000 LMMW (approximately between US\$1'031.590 and US\$6'189.535). Subsequently, big companies are businesses with more than 200 workers or total assets greater than 30.000 LMMW (approximately US\$6'189.536 or more).

Given the above mentioned importance of the SMEs in the Colombian economy, the National Development Plan 2006-2010 (NDP) has a section titled "Specific Strategies of Productivity and Competitiveness for the SMEs" (NPD 2006). One of the proposed strategies is the access to non-financial Services of Management Development (SMD) that tries to improve the capacities of managers transferring and developing technical, technological, and managerial capacities in the companies. But the structuring of this kind of supporting programs will be more useful with previous knowledge of the main characteristics of Colombian SMEs in order to be able to design programs of advice, consulting, and training that match these diagnostic organizational studies filling the main weaknesses that are found in Colombian companies.

Creation and Closing Down of Companies

Part of the impact from the public and private supporting programs is reflected in the creation and closing down of companies, and the BCC highlights that in the period 2003-2005 were created in the country's capital 43.716 new companies, with a growth of 16 percent regarding the previous triennium (BCC 2006). But in this same period 8.593 companies were liquidated (79 percent micro companies, 16 percent small companies, and 4 percent medium companies) representing around of US\$1,3 billion in accumulated capital (BCC 2006), being almost 20 percent regarding the formed companies. But it is important to supplement these figures with the causes that generated these liquidations, and which are (BCC 2006):

1. Lack of veracity of the financial and accountable information of societies
2. Excess in the grant of loans to partners
3. Difficulties of the companies adapting to technological changes
4. Low use of the installed capacity or a high level of inventories
5. *Low share of exports in the total sales*
6. *Inability to form a brand power and to maintain the commercial management of their products*

² Colombian law assumes that micro companies are basically family companies, and for that reason it excludes the family's house in the calculation of assets.

7. Imbalance between the structure of costs and prices
8. Reduction of the capital and significant increase of the liabilities
9. *Negative trend of sales*
10. Difficult management of the financial leverage and of the cash flow

The points five, six, and nine are a direct consequence of the marketing management that companies develop and make relevant the research of elements that impact this aspect of the business administration and the importance that it has in the short, medium, and long term in the case of the Colombian SMEs.

Strategy and Strategic Marketing in the Success of Companies

Mullins, Walker, Boyd, and Larréché (2007) define strategy as "a fundamental model of present and planned goals, deployment of resources, and interactions of an organization with the markets, the competitors and with other environmental factors". Knight (2000) contends that "Strategy reflects the firm's short- and long-term responses to the challenges and opportunities posed by the business environment. Companies execute strategies to attract customers and deal effectively with a myriad of environmental concerns, such as competitors, suppliers, and scarce resources".

Multiple theoretical developments have been made by the outline of implementation of strategies through a process of strategic planning and which is defined by Serna (2007) as "a formal process through what the decision makers in an organization obtain, process, and analyze significant information, internal and external, with the purpose of evaluating the current situation of the company, as well as its level of competitiveness and decide about the strategic direction of the firm to face the future". This author adds that the strategic direction is carried out defining the core elements of the company: the mission, the vision, the global objectives, and the strategic axes; framed in the firm's principles and values (Serna 2007).

But the strategic planning implies to link the main elements of the organization, and following the four perspectives outlined by Kaplan and Norton (1993), that should combine the financial, internal business processes, learning and growth, and customer strategies. The last perspective is covered under the marketing strategy and is one of the fundamental pillars for the achievement of the objectives and the organizational success.

Porter (1991) contends that "the strategic success requires the choice of a relatively attractive position given industry structure, the firm's circumstances and the position of competitors. It also requires bringing all the firm's activities into consistency with the chosen position".

Lamb, Hair, and McDaniel (2006) define the marketing strategy as "the activities for selecting and describing one or more target markets and to develop and maintain marketing programs that produce mutually satisfactory exchanges with these markets". Murdoch, Blackey, and Blythe (2001) say that "A formal strategic marketing plan, with its principal focus being the identification and creation of a competitive advantage, is seen to be a source of significant benefits to any organization", independently of its size.

The last elements are more or less significant in the management of any organization depending on the market orientation of the firm and Uncles (2000) states that "is concerned with the processes and activities associated to create and satisfy customers by continually assessing their needs and desires, and doing so in a way that there is a demonstrable and measurable impact on business performance". Palmer and Pels (2004) complement that "Market

orientation is therefore a component of the overall business strategy, which is seen to contribute positively to business performance”.

A factor that also plays an important role in the analysis of marketing strategies of the SMEs is the deployment and formalization that is made of the same ones. They can differ between the formulated and the implemented strategies (Palmer, and Pels 2004) and between the explicit and the implicit strategies (Murdoch, Blackey, and Blythe 2001), respectively. But, it does not imply that the formalization necessarily reflects the orientation grade to the market a company has, although some studies have shown that companies with formal plans have better performance than those without them (Murdoch, Blackey, and Blythe 2001; O’Neill, and Duker 1986; Siu, Fang, and Lin 2004). Marketing Strategy is important to SMEs because it can give a structure for objectives, decisions, and actions and its essence is to meet market changes (Knight 2000).

Barriers to the Application of Strategic Marketing in SMEs

But, it has been found that strategic marketing is not broadly applied in SMEs like it could be thought (Lancaster, and Waddelow 1998) and it is affected primarily by three elements, interrelated to each other, the attitude that the company has in front of the importance that the marketing in the firm should play, the focus of the managers’ work on the SMEs, and the availability of resources to implement this process. Regarding the first element, Murdoch, Blackey, and Blythe (2001) found that in Welsh SMEs, marketing is perceived more as a short term activity than as a strategic function and then there is a general reluctance to spend money in this activity seen as something 'expensive' and ineffective.

Lancaster and Waddelow (1998) detected as the main barriers to implement this process the fact that the SMEs consider it too long (generating a poor return on the invested effort) and furthermore it will be outdated when it is finished (wasting significant resources). It is not seen as a continuous process of adaptation to the environment but as a task that provides useless information. It is not perceived as an orientation or philosophy that can guide the business.

Carson and McCartan-Quinn (1995) add that the attitude of SMEs in front of this process rises from the misunderstanding that marketing is impossible to quantify in terms of cost, and that its results are intangible and of difficult measurement. It is considered more a cost than an investment. Marketing becomes a peripheral activity and it does not have a significant impact on the business performance.

Murdoch, Blackey, and Blythe (2001) say that in this type of organizations the managers put more emphasis in ‘doing’ than in ‘thinking’. They are more focused on day by day activities than in the medium and long term thinking that demands the strategic planning, and in the case of Colombian SMEs, they do not write formal marketing plans (Zapata 2005). Lancaster and Waddelow (1998) affirm that the SMEs managers’ focus is ‘the processes’ more than ‘the strategy’. Many of them, for the own structure of the companies, make multiple tasks assuming responsibilities in the areas of production, sales, finances, accounting and human resources; and then there is little available time for the strategic planning and to carry out activities of training and personal improvement.

Lancaster and Waddelow (1998) add that few managers understand that ‘thinking’ is one of their most important activities. They skip from one task to another and are oriented towards the achievement of results in the short term. Their ‘work ethic’ and their culture are based on ‘getting things done’. They feel that it is better to make

things than simply to think about them. This takes them to plan based on the firm's tradition and on tactical things according to their day by day managerial reality. The positive part of this situation is that it takes them to generate action plans that they consider can be implemented.

They conclude that this 'doing' more than 'thinking' has four consequences: there is a constant pressure and stress with the work; there are failures in the prioritization process and they become problem solvers; it is more rewarded the loyalty that the effectiveness in their employees; and they enter in a vicious circle of the 'here and now', believing that if they do not solve the urgent problems there won't be future for the company. As the saying goes "urgent things do not allow doing the important ones". This characteristic is reinforced because many of SME managers rarely receive a formal education and training in business administration (Kirby 1990).

About the available resources to develop strategic planning in this kind of enterprises, Knight (2000) affirms that SMEs, because of their own size, lack the capabilities, the market power, and other resources that big companies have. Murdoch, Blackey, and Blythe (2001) assert that the above mentioned situation is reflected in the little experience and training in marketing in this type of companies.

Another typical situation in SMEs is the lack of time to develop strategic planning and, in most of the cases, this type of organizations cannot offer competitive salary packages that give big companies and in many occasions they hire personnel that offer more loyalty and empathy than abilities and aptitudes in its work (Lancaster, and Waddelow 1998).

Based on Lancaster and Waddelow (1998), the barriers that have been found in literature can be classified in three categories as seen in figure one. This classification allows proposing strategies to face obstacles in a more structured and simple way as it is presented in the Colombian case.

As a consequence of this situation, a certain number of attempts have been made in order to propose theories and formal models for the strategic planning in the SMEs. In spite of this, Murdoch, Blackey, and Blythe (2001) comment that none of these theories and models has been adopted by SMEs and that coherent guides have not been generated to this respect. The evidence shows that the complexity of the strategic marketing planning is discouraging for this type of organizations and generates prejudices against it (Murdoch, Blackey, and Blythe 2001). But these authors add that this question is more related to the way marketing principles are applied than to the transferability of the same ones to the SMEs.

Lancaster and Waddelow (1998) take their conclusions farther affirming that the process of marketing strategic planning is outlined in the modern theory for big companies and is required a simpler methodology in the case of SMEs. But they recognize that the marketing strategic planning is like accounting: there are common principles that can be adapted depending on the specific necessities of each organization. The problem for these authors resides primarily in finding a practical way to apply the principles of marketing strategic planning in such a way that it contemplates the organizational characteristics of SMEs.

There is an entire theoretical framework to develop marketing strategic planning independently of the firm's size but there are also many barriers that hinder the application in the case of the SMEs. The necessity to propose theoretical solutions with pragmatic applications to resolve this situation in a given environment appears (Alpander, Carter, and Forsgren 1990; Watkin 1986). But this position will be more coherent if previously there is a characterization of the current state of the context in front of the application of the marketing strategic planning.

A Proposal to Improve the Application of Strategic Marketing in Colombian SMEs

The Colombian government has developed, in the last decades, a program of supporting the entrepreneurship and creation of new enterprises, mainly SMEs. But this program has a generic conception in terms of the application of similar management methods to all kind of businesses (Cardona, Vásquez, Montes, and Monsalve 2007) and its focus is the financial leverage for the development of the companies in their first stages. The marketing component of this program is small and there is not a follow-up about the application of the marketing strategies in the companies created. One of the consequences of this is the high mortality of businesses due to marketing reasons as it was shown in the BCC (2006) research. For these reasons, it would be convenient to generate a program in order to improve marketing practices in Colombian SMEs not just in the first years but in every part of their corporate life as it is showed in figure two.

Creation of a Multidisciplinary Task Group

This group would have been formed by people originating from the government, the academics, the big companies associations, and the SMEs associations. This composition assures a multi focus and pragmatic approach to analyze and to propose solutions to the situation. Furthermore, it gives validity to the group in front of the users of the information generated.

Barriers Detection

A pertinent step is the knowledge of the strategic marketing practices and the barriers to the application of them, in the Colombian environment, and will be more useful to do that dividing SMEs in their respective industrial areas, based on the Standard Industrial Classification (SIC) and on the geographical regions of the country. In this way, it is possible to establish if there are significant differences in Colombian SMEs regarding economic activity and/or the location of the business and propose customized activities according to any differences detected.

Classification of the Detected Barriers

Although there will be own specificities corresponding to Colombian SMEs, it will be possible to divide the barriers in the above proposed classification (see Figure 1) and with this classification in mind structure the content and material for the training program customized, if necessary, according to the industrial activities and regions of the country.

Training Program

The structure of the training program is based on the article of Carson, Mc Gowan, and Hill (1996) that establishes a very consistent process in order to get the improvement of marketing practices in SMEs.

Conceptual Learning: In this introductory phase, SME managers will receive training in the main concepts of marketing, strategic marketing, and the best and contemporary marketing practices in big and small companies contrasting how the concepts and methodologies have to be adapted in accordance with the environment and contingencies that the business faced and the available resources.

Experience Learning: It is complementary to the previous step and is more related to the own characteristics of SME managers because experience is a significant competence for them (Carson, McGowan, and Hill 1996) and it will be more useful the training when they learn in their own environment and apply marketing concepts and practices in real situations.

Personal Contact Networks: These groups reinforced the knowledge of their members and allowed exchanging experiences and suggestions that can be formed not only by SME managers but also by big company managers, academics and government officials (Díaz, Lorenzo, and Solís 2005). According to Carson, McGowan, and Hill (1996), the networks have to be dense, reachable and diverse. Density means the number of contacts between people in the group (in the Colombian case, it is possible to assure that by the incorporation of members of different sectors and regional areas of the country). Reachability refers to the easiness to make contact among the network members. Today, the use of Internet makes easy to put in contact people with different backgrounds, business experiences, and perspectives to get solutions to the problems and challenges of the network members. And the last characteristic is the diversity that refers to number of different sources to get information or assistance, and in this case this is guaranteed because of the multidisciplinary approach of the network and which will become learning organizations (Slater, and Narver 1995) and communities.

Joint Learning: It is the incorporation in SMEs of young managers and contact them with experienced SME managers, generating a reinforcing process where the experienced manager learn new techniques and concepts from the young manager and he/she learns the real “cases” and “decisions” from the expert manager.

Follow-up

All of the former activities need to be assessed to generate feedback and virtuous circles in the process of learning and growth of Colombian SMEs. This control has to be based on international and national benchmarks according, in first instance, to the industrial sector, but also on the business location in the country. But, it would be more appropriate to use international reference points because of the internationalization of the Colombian economy and of the big competence that Colombian SMEs are confronting in national and international arenas.

Recognition Process

Other aspect to reinforce this program is the social and industrial credit that distinguished SMEs can receive for their marketing practices in the respective sector and using the comparative process that has been developed in the last step. Annual prizes could be established to highlight in front of the SME community the results that can be obtained for the application of strategic marketing practices.

Best Marketing Practice Guidelines

As a way to spread the best SME marketing practices it would be important to publish them in guidelines that enable all SMEs managers to know them in their training process. The information compiled can come from national and international sources and be installed in web sites to facilitate the access from all national SMEs and from every location in the country, and these practices also can feedback the task in order to improve the whole process.

All this proposed process, with its activities' flow, is presented in figure two.

Conclusions

One of the most significant causes for high SME mortality is the lack of application of strategic marketing principles and techniques and as a consequence many of these companies do not match in a convenient way their customer necessities, their competitor challenges and the opportunities in the markets where they compete.

In principle, strategic marketing would seem to be focused on the big industry but academics, industrial associations, and governments have to generate the actions to disseminate this kind of knowledge and tools in SMEs because it is one of the most significant elements to succeed in the high competitive environments that companies face today.

International, Latin-American, and Colombian information has been revised in order to understand the main barriers that impede a broad application of the concepts and tools of strategic marketing in SMEs, and it is proposed a methodology to get an ample use of these managerial methodologies in Colombian SMEs.

These barriers can be classified in three categories: in first place, those that come from incorrect perceptions about the role and effects that strategic marketing has in the management process: It is considered an expensive, ineffective, long, and complex process, more a cost than an investment; in second place, those barriers related to the focus of SME managers because they do not have enough time to develop this managerial activity, and they are focused in the short term; and finally, barriers dependent on the available SME resources (like those necessary for training), and attractive salary packages.

Marketing practitioners and academics have to generate a theoretical and practical framework that enables the application of Marketing principles and tools in SMEs because until today Marketing is a discipline more focused on the Big Industry. These efforts have to be complemented with Governmental Plans in order to give the SMEs an ample support for the conception and real implementation of Marketing planning and the access to its tools.

The proposed program to improve the detected barriers is based on the following aspects: combined efforts between the different players of this process; detection and classification of the barriers; training of SME managers; trailing activities; recognition of the best SMEs; and compilation of the best practices. The main aspects to create sensibilization will be covered with this program; knowledge and application of strategic marketing in Colombian SMEs.

Recommendations

Academics have to develop research programs in order to know exactly how Colombian SMEs approach the Marketing theory and its implementation and then can propose new ways to do this in a pragmatic and useful way for the SMEs.

The Colombian financial sector and the Government have put more emphasis in Marketing Strategies in the Business Plans. They demand to approve financial support because these Plans have to be more holistic in their conception and not just a financial exercise to prove the economic viability of businesses.

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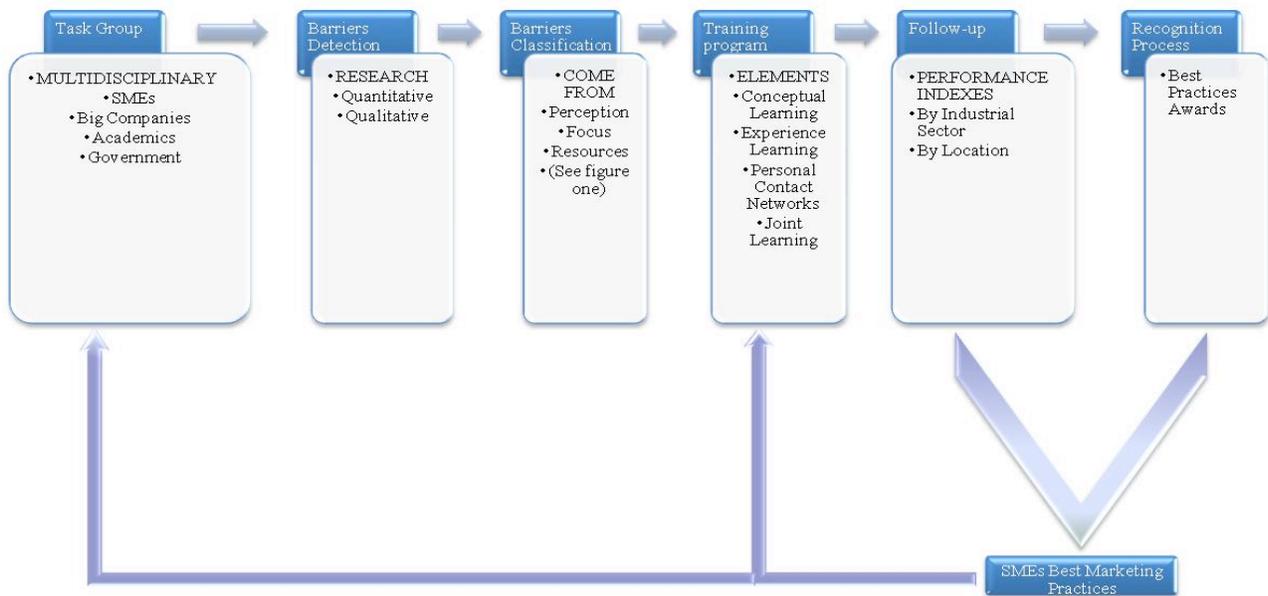
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Figure 1
Classification of the Barriers for the Application of Strategic Marketing in SMEs

Barriers are Related to:		
Perception	SME Focus	Available Resources
Marketing is a short term activity	Tactical	No education in Business Administration
Expensive	Short term	No training in Marketing Management
Too long process (Planning)	Traditional	Low salaries
Ineffective		Low Market Power
Inefficient		No time available
Difficult measurement of return on marketing investment (ROMI)		

Figure 2
Proposed Program to Improve the Application of Strategic Marketing in Colombian SMEs



The Role of Small Enterprises in the Manufacturing Sector in Bangladesh

By Muhammad Mahmood

This paper provides an overview of small manufacturing enterprises in the Bangladesh economy and their role in economic development. Despite government initiatives to promote small manufacturing enterprises to stimulate economic growth and to generate employment opportunities, their share of total manufacturing output exhibited a declining trend between 1985-86 and 2000-01 and thereafter an increasing trend to 2007-08. Their contribution to GDP also showed a fluctuating pattern hovering around 3.5 to 5 percent. Although some employment gains have been achieved, structural and institutional rigidities pose a serious challenge in achieving the government's stated small business objectives.

Introduction

Most developing countries since the early 1950s have favoured a strategy of rapid growth through capital intensive large scale industrial development. This has also been seen as a means to modernize those economies. As most of those industries proved to be inefficient, they had to be given protection from foreign competition, sometimes even from domestic competition. Such a policy also works against the growth and development of small enterprises. However such a policy failed to stimulate growth sufficiently to create adequate employment opportunities. The importance of small enterprises in developing economies is now well recognized, in particular their role in promoting economic growth and creating employment opportunities and social stability. It is also seen as an instrument to distribute the benefits of economic development far more widely because of its much wider geographic spread across the country than large scale industrial development which is primarily urban centred. It also contributes to increasing competition in the market and hence promotes economic efficiency. At the same time in many instances the relationship between large and small enterprises can be complementary where large firms develop supply relationship with small enterprises.

The contribution of small enterprises goes beyond employment generation. They also contribute to new innovation, and more importantly they engender entrepreneurial spirit. Indeed the promotion of small enterprises has become key element of government policy in many developing countries to stimulate economic growth and employment including self employment. As such many governments are actively supporting small enterprise growth.

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In a developing economy like Bangladesh their role has become even more crucial in fostering economic development and employment creation. Bangladesh still remains primarily an agrarian economy. Agriculture still accounts for 17.3 percent of GDP, employing 51.7 percent of total employed labour force while manufacturing contributes 16.5 percent to GDP employing only 9.7 percent of total employed labour force (see BBS, 2007).

There is a continuing drift of population from rural areas into urban areas in Bangladesh. Such a drift is exacerbating the already existing serious unemployment situation in urban areas. Moreover about a million people are estimated to be added to the labour force every year. The unemployment rate is estimated to be 40 percent. It is generally suggested that small enterprises are by nature relatively labour intensive and have a lower capital labour ratio. As such small enterprises in the manufacturing sector are more likely to help create more employment opportunities than large enterprises. They also require less capital to achieve a given level of output. Moreover most small enterprises in Bangladesh rely on locally available inputs and this will lead to developing closer links with the agriculture sector. Small manufacturing enterprises are fairly scattered around the country and many tend to be located in rural areas close the sources of raw materials they need. Small – scale industry has been seen not only as providing a remedy for unemployment, but also as spreading the benefits of economic development more widely, in much the same way as small-scale agriculture distributes increased incomes more widely than plantations (Elkan, 1995). The flexibility of SMEs also enables them to adjust to the market demand in a shorter period of time, thus helping to keep inflation under control.

Bangladesh is one of the least developed economies in the world with per capita income US\$480.00 in 2005 with a population of 140.6 million in a geographic area of 144,000 sq km. The country is also the most densely populated country with a population density of 1,109 per sq. km in the world except Singapore. The proportion of total population that live below the poverty line based on calorie intake per day by per person was 40.4 percent in 2005-06 compared to 47.75 percent in 1988-89 (see GOB, 2007). Although this indicates a declining trend between 1988-89 and 2005-6, but in absolute numbers, the people that live under the poverty line increased from 49.66 million to 55.28 million (see BBS, 1998). This figure possibly now has risen to 75 million. According to the World Bank (2007) 49.8 percent of the population live below the poverty line. 75 percent of the total population in Bangladesh live in rural areas. The popular view in Bangladesh like in most other developing countries favours the labour intensive method of industrialization based on SMEs. This view is based on the fact that in Bangladesh there is a strong case for capital saving and labour intensive technology given the relative abundance of labour.

There are many advantages in promoting SMEs, especially in the context of Bangladesh given that three quarters of the people live in rural areas and the incidence of rural unemployment is very high. These advantages include (i) lower capital investment (ii) more labour intensive and create employment opportunities for low skilled labour

(iii) lower capital output ratio (iv) less energy intensive, so more environment friendly (v) star-up time is shorter (vi) contributes to competition and (vii) provide an environment for the development of entrepreneurship. SMEs supply the very basic needs like food, clothing and many other daily necessities life especially to the rural people. SMEs can be dispersed across the country, especially in rural areas. Given the very high level of unemployment coupled with low skill formation, any attempt at just fostering high- tech large scale industries is most likely to be counterproductive in a country like Bangladesh. While recognizing that firm size, even in developing countries, always may not be a good indicator of labour intensity as quite a sizeable number of small firms are indeed very high-tech capital intensive in many developing countries; a more balanced approach where small and large enterprises can complement each other is more likely to help stimulate growth in the manufacturing sector. This also calls for improving the overall business environment for all firms and improving the functioning of appropriate institutions.

Therefore the main objective of this paper is to provide an overview of the role of small enterprises in the manufacturing sector in the Bangladesh and their role in fostering economic development and in particular their ability to generate employment opportunities. This paper, however, does not examine the role of cottage industry (Household production using traditional technology. These household enterprises, also known as cottage industry are quite pervasive in rural Bangladesh. They are in many instances work as a cushion against seasonal unemployment in rural Bangladesh) which is quite closely associated with small manufacturing enterprises in Bangladesh.

Literature Review

Over the last two decades, there has been considerable research undertaken to examine the role of small business in the economy especially its role in promoting economic growth and employment. The economic analysis of small enterprises usually emphasises the role of small enterprises in new business formation and their contribution competition. Small enterprises contribute economic dynamism and entrepreneurship. Most of these research were undertaken in developed countries. Birch (1979) in his pioneering work suggested that in the United States, half of the jobs were created by small enterprises between 1969 and 1976. Storey (1994) also found that small firms in the U.K created jobs at a faster rate than large firms. OECD (1996) suggests that SME growth may provide an independent source of general economic growth. In most developed countries the government support for small enterprises has been due to their perceived contribution to employment, and in some instances their contribution to regional development. Acs and Audretsch (1993) also emphasized the special advantages of small enterprises in certain major areas such as improving competitiveness, innovation and employment creation.

However in the context of developing countries, the role of small enterprises is seen as a promoter of economic development and employment including self employment. The promotion of small scale industries (SSIs) is seen as a ‘bottom up’ approach in income distribution instead of ‘trickle down’ approach favoured under the

large scale industrial development approach. Small scale industries (SSIs) are used as an instrument of capacity building in the economy. The World Bank (1978) viewed SSIs as part of an important role in creating income and employment in developing countries. The World Bank since then been also actively involved in designing SME strategies and providing finance for SMEs in developing countries. Weeks (2002) points out that in the context of developing countries, the essence of small enterprise argument is that establishment size is a close, if not exact, proxy for labour intensity. In this view, labour intensity is correlated negatively with scale, and small enterprises because they pay lower wages, choose more labour intensive techniques. The lower wages in small enterprises are alleged to reflect more closely the social opportunity cost of labour than do the higher wages enjoyed by workers in large establishments. The higher wages in the latter are attributed to 'market distortions', either trade union power or government regulation of wage levels. Large enterprises exist, despite paying higher wages, because of a range of government-sponsored benefits(for example, trade protection, subsidized credit, and self serving health and safety regulations. However Little (1987) argues that earnings are generally lower in small enterprises because labour productivity is lower. Scase and Goffee (1987) also point out that although many new businesses are created, some are particularly vulnerable because of their dependence on a very limited number of customers.

ILO/UNDP (1997) indicated that small and medium enterprises are essential to promote economic growth which would contribute to increased employment opportunities and income. OECD (1996) suggests that the role of small and medium enterprises (SMEs) in producing economic growth has come from local productive systems such as industrial districts. An industrial district can provide i) a dense relationship of business activity in a limited space; ii) a focus on industrial activity; iii) a production process based on a mass of small firms specializing in different phases of the process; iv) a mix of competitive and cooperative inter-firm relationships; and v) a host of community with a local culture that is a mix of supportive socio-cultural norms and values and an "industrial atmosphere"(widespread local understanding of the production process along with a diffusion of skills and innovations).All in all it can be argued that industrial districts can enable small firms within the district to achieve external economies of scale which will cause cost of production to decline making these firms cost competitive.

However Little (1987) found that small enterprises are not reliably more labour intensive than their larger counterparts, nor are they consistently more technically efficient in their use of resources. Sandesara (1991) highlighted the importance of small enterprises in their ability to generate self-employment, thereby opening up employment opportunities for their family members. Liedholm and Mead (1999) found that when the economy grew rapidly, small enterprises take on more workers but many micro enterprises closed down.

Staley and Morse (1965) argued that the most efficient/productive industrial structure for any country is a combination of large, medium and small manufacturing

enterprises. In developing countries this implies that small manufacturing enterprises must be encouraged and supported in order to promote economic growth.

There is now an increasing amount of evidence to show that the employment performance of small businesses varies geographically. In particular, the employment creation potential of small firms in urban areas appears to be less than that of comparable firms in non-urban areas (North and Smallbone, 1995). However Saith (1992) points out that in so far as rural non-farm activities and rural industrialization are viewed as policy instruments for the alleviation of rural unemployment and rural poverty, it is necessary to emphasise, at the outset, that in many developing economies a high incidence of rural poverty is found to coexist with a high rate of participation of the rural population in such non-farm activities.

The role of small enterprises need to be viewed in the proper context in addressing the issues surrounding economic growth and unemployment. Small enterprises have a role in helping to stimulate economic growth and employment opportunities by creating increased competitive pressure, innovation, and skill development including entrepreneurial skills. But small enterprises can not be the main instrument to promote growth and employment, thereby to help to reduce both urban and rural poverty in developing countries. Small business policy can be an adjunct to other major economic policy initiatives to create an economic environment where the economic incentive mechanism will help allocate resources to its optimum use which in turn will contribute to sustained economic growth. The case for stable macroeconomic and political environment and the creation of a competitive business environment with enforceable private property rights which will benefit all firms. In the context of Bangladesh, a stable political environment has become an important factor as in the recent the country appears to lurching from one political crisis to another. This obviously has a flow on effect on the macroeconomy.

The Economy of Bangladesh

Bangladesh still remains one of the least developed economies in the world. It is also the most densely populated country with population density of 1,024 per sq km in the world except Singapore. The adult literacy rate is 47 percent and poverty remains very pervasive. About a quarter of the population is estimated to be chronically undernourished and 48 percent of children under the age of 5 suffer from malnutrition (see WB, 2007).

The current labour force is estimated be at 80.8 million people compared to 51.1 million people in 1991. The current unemployment rate is estimated to be 40% which includes underemployment. Despite reasonably higher economic growth over the last two decade, did not ease the unemployment situation. A large proportion of rural population are landless, and alternative employment opportunities are very limited except during the rice harvesting seasons. This makes unemployment situation far worse in the rural area than in the urban area. 53 percent of rural population live below the poverty line

compared to 36.6 percent in urban areas (WB, 2007). It is estimated that unemployment in Bangladesh has been increasing at around 3 percent per annum since the early 1990s.

Table 1
Composition of GDP, Bangladesh
(in percent)

Year	Agriculture	Mining	Manufacturing	Services	Total
1985-86	40.39	0.001	9.34	50.27	100
1990-91	37.6	0.02	9.8	52.58	100
1995-96	32.24	0.03	11.35	56.38	100
2000-01	31.75	0.05	11.3	56.9	100
2005-06	18.74	1.09	16.52	63.65	100

Source: G.O.B (various issues): Statistical Year Book of Bangladesh

Bangladesh predominantly remains an agrarian economy despite the fact that the share of agriculture in GDP declined from 58 percent in 1972-73 to 18.7 percent in 2005-06. The sector is responsible for providing employment to 63 percent of labour force and 75 percent of population live in rural areas. This sector is dominated by crop production accounting for almost 80 percent of output, with rice being the single most important crop. The share of the service sector went up from 26 percent to 64 percent during same period. Bangladesh pursued an import substitution strategy for industrialization since its inception in 1971 to the mid 1980s, thereafter a relatively more outward oriented industry policy has been put in place. However the legacy of dirigiste policy is still reflected in a large number of large inefficient, mostly loss making state owned manufacturing enterprises which are yet to be privatized. This has consequently led to low levels of saving and investment. Furthermore import substitution remained the industry policy objective until the mid 1980s. Such a policy significantly discriminated against small enterprises both in terms of access to imported inputs and finance.

The share of manufacturing in GDP increased from 9 percent in 1972-73 to 16.5 percent in 2005-06. The bulk of the growth in manufacturing output over the last two decades came from one industry – textiles and clothing. The industry is totally export oriented. Textiles and clothing accounted for more than 75% of total exports. This makes the manufacturing sector extremely vulnerable to external shocks.

A series of market friendly economic reform measures have been introduced to stimulate economic growth over the last two decades but inadequate progress in implementing those reform measures coupled with bad governance have not resulted in any significant progress in poverty alleviation, Bangladesh still remains one of the poorest countries in the world with half of the population live below the poverty line (WB, 2006). Furthermore the lack of well-functioning financial markets and ineffective and cumbersome legal systems make it difficult for all firms, large and small, to operate at their optimum level of efficiency.

Small Business Policy in Bangladesh

Like many other developing countries, Bangladesh has also been quite active in promoting small business. Industry policy in Bangladesh emphasises the importance of small enterprises in the manufacturing sector in the context of their role in creating employment opportunities, income generation and poverty alleviation (see GOB, 1992). A special government agency, the Bangladesh Small and Cottage Industries Corporation (BSCIC) has been given the responsibility to promote small and cottage industries in the country. Its mandate is quite wide ranging, incorporating substantial regulatory responsibilities and other responsibilities including the provision of finance and marketing services, creation of dedicated infrastructure, and to liaise with other relevant ministries and government agencies to help implement small business programs. The BSCIC has set up a number of industrial estates across the country to stimulate and facilitate local small manufacturing activity. The main objective is to provide basic infrastructural facilities like land development, water and electricity supply and road transport. It also runs 4 regional offices and 64 industry service centers across the country (see BSCIC, 2000). The industrial estates are located in urban centers at the district level, not in rural areas. By 2007, 74 industrial estates were established across the country with 5152 industrial units (GOB, 2008). Mannan (1993) further observed that the BSCIC tended to favour modern small manufacturing requiring higher levels of capital. BSCIC since its inception has remained a very centralized organization which militates against its involvement in rural areas.

The government also introduced:

- Small Industry Credit Guarantee Scheme;
- Tax incentives;
- Assistance Scheme for Sub-contracting;
- Programs for promotion of female entrepreneurs;
- Export credit insurance for small firms; and
- Bangladesh Bank small business refinancing scheme.

There are other government agencies who have also programs which have relevance to small manufacturing enterprises, but it is the BSCIC which is the prime mover in stimulating small manufacturing enterprises. However Mannan (1993) suggested that institutional supports were inadequate to stimulate small enterprises. Sardar et al (1997) found that most of the variance in small firm performance is unaccounted for by the influence of support services. Anecdotal evidence also suggests that support services have not been able to successfully address many common problems faced by small enterprises such as finance, marketing, logistic and lengthy and cumbersome regulatory compliance requirements including those related to taxation. Furthermore whatever support services that are available, most of the target recipients of these services are unaware about them due to the lack of dissemination of information on support services for small enterprises. This is symptomatic of lack of capacity building by BSCIC to undertake its increasingly expanded responsibilities over time.

Public interventions within a policy context ought to be articulated within the operating market system. The government must identify the gaps in the market system while designing their public intervention instruments so that those can be bridged. This will help reduce dependency on the state and encourage the development of an enterprise culture. It is also not possible to provide tailored assistance to a very large number of disparate small enterprises in the country. Any attempt to do so will increase budgetary outlays resulting from very large transaction costs. However it is also the responsibility of government to provide a stable macroeconomic environment, simplified tax system, business and other law, regulation and good governance. These will provide a sound economic environment which will significantly reduce costs to small business. Notwithstanding the government's policy initiatives to stimulate small manufacturing enterprises, inadequate progress in institutional reforms coupled with bad governance will continue to impede any policy implementation to achieve the objectives.

Small Enterprises in the Manufacturing Sector

In the manufacturing sector plant scale economies are very important and small firms face a disadvantage because of this. In addition the size of the market may also constrain the achievement of the full advantage of economies of scale in a country like Bangladesh. Information deficiencies and the cost of expanding the distribution network also adds to the problems of small firms. However, fragmentation of markets caused by differing tastes or specialized needs of consumers tend to undermine the advantages arising out of scale economies. This likely to cause productive inefficiency which ought to be weighed against consumption efficiency resulting from increased choices provided by product variation. Technological changes have made small enterprises increasingly capable of benefiting from scope economies which help them to customize products. Small firms with competitive prices, quality, innovative design and product development, ability to customize and timely delivery can achieve a competitive advantage. Small manufacturing enterprises also benefit from scale economies through vertical and horizontal integration. In the case of vertical integration it can be both forward and backward.

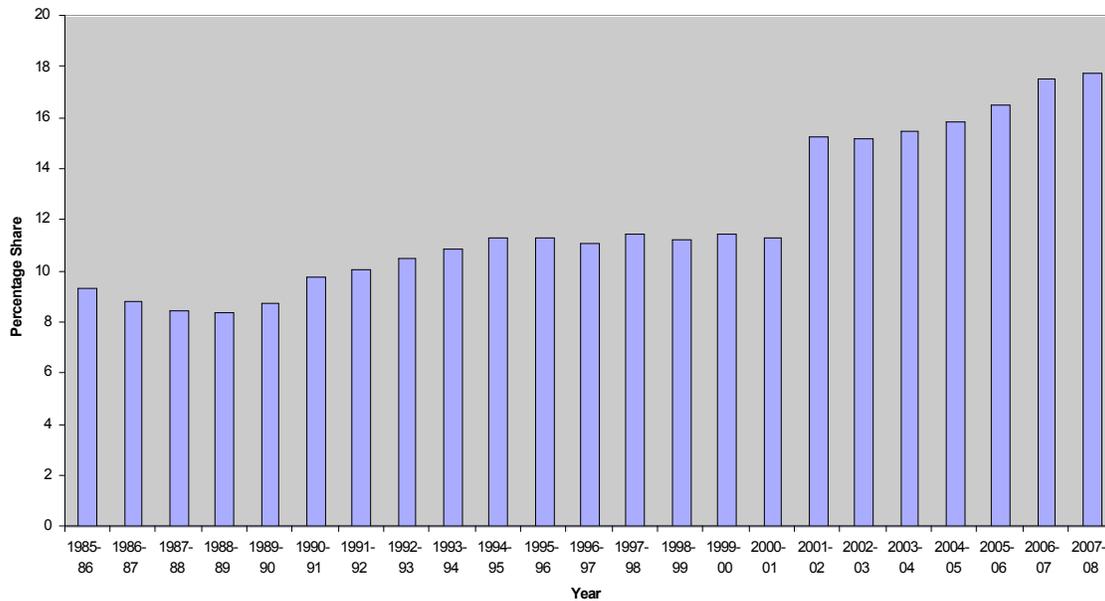
The relative importance of small enterprises in the economy is determined not by sheer numbers alone but also its share of employment and its contribution to economic growth. Any changes in small enterprise's relative position in the economy over time should reflect changes in its relative importance in each industry vis a vis changes in the relative positioning of these industries over time in the economy.

The contribution of manufacturing to GDP in Bangladesh can be seen from figure 1. It shows that the manufacturing sector's contribution to GDP varies from year to year, but overall there is an upward trend in its contribution from the mid 1980s to the mid 1990s and thereafter it appears to be stagnating, then picking up since 2001-02. Manufacturing has also attracted the highest level of FDI and the textile and clothing industry largely located in the export processing zones (EPZ), accounted for the largest share of FDI in the manufacturing sector (see GOB, 2008).

During the second half of the 1990s, the variations in the manufacturing sector's share of GDP was largely due to changing activity levels in the clothing, processed food and chemical industries. However it now appears that activity in the sector has picked up since 2001-02 resulting from increased levels of protection provided to the manufacturing sector through para-tariffs and tariff escalations since the late 1990s. This has resulted in tariff peaks (highest tariffs) exceeding the maximum tariff rate. Bangladesh now has the highest average tariffs in South Asia and is one of the most protected economies in the world.

Figure 1

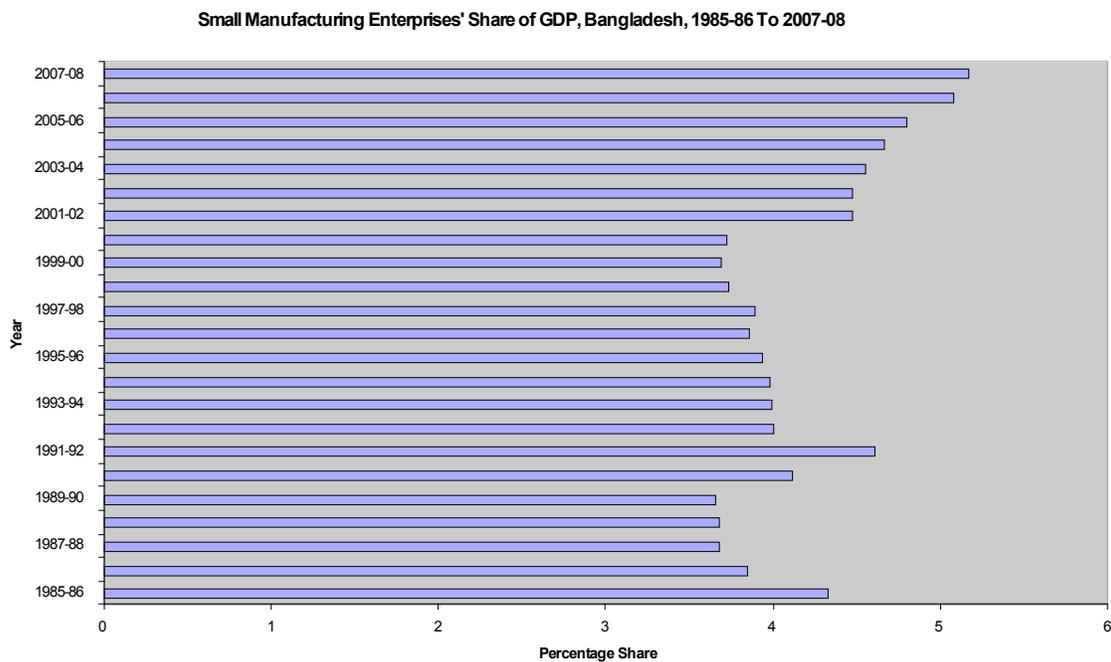
Manufacturing Share of GDP in Bangladesh, 1985-86 To 2007-08



Small manufacturing enterprises' Share of GDP like the manufacturing sector's share showed a year to year variation between 3.5 percent and 5 percent (see Figure 2). This volatility in their GDP share is symptomatic of the readjustment response to a slowly liberalizing economy. There are also problems associated with capacity utilization resulting from both internal and external factors. The readjustment process has equally affected large manufacturing enterprises causing total manufacturing share of GDP to fluctuate. The notable feature is that small manufacturing enterprises' share of GDP also has exhibited an increasing trend since 2001-02 along the line with the manufacturing sector itself. Therefore it appears that small enterprises also benefitted as much as large enterprises from the increased levels of protection provided to the manufacturing sector. It may also indicate that strong linkages are being forged between large and small manufacturing enterprises. There are anecdotal evidence available that indicate that most this output growth has come from domestically focused industries rather than export oriented industries.

Small manufacturing enterprises are mostly concentrated in food and allied products, textiles and clothing, leather, ceramic light engineering, electrical and electronic goods production. Most of these industries are largely rely on locally available inputs. There is also an emphasis on the part of the Government that small manufacturing enterprises to use locally produced inputs whether they are in import competing and export oriented industries. They contribute about 30 percent to manufacturing output. Small manufacturing enterprises, however, account for more than half of employment in the manufacturing sector. This is just indicative of low labour productivity which has significant implications for their competitiveness.

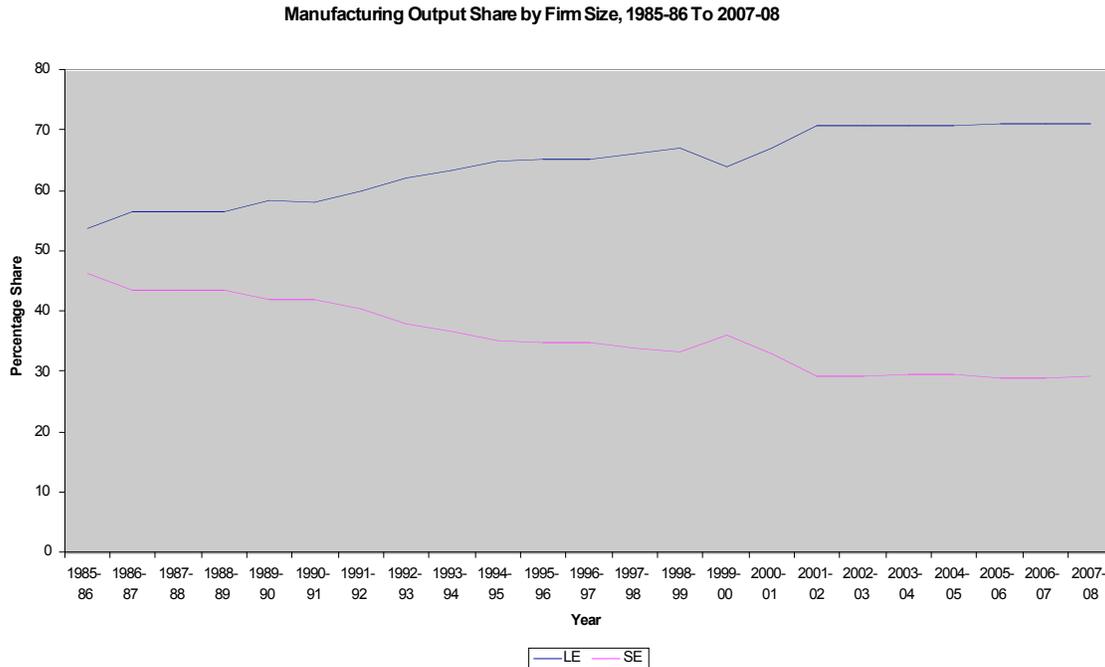
Figure 2



Between 1996-97 and 2001-02, small manufacturing enterprises exhibited a fluctuating pattern in their growth while large enterprises showed a steady growth pattern resulting in a trend decline in small manufacturing enterprises' relative share of manufacturing output (see Figure 3). This is due to the sluggish demand for domestically produced consumer goods arising from import competition in a relatively open economic environment resulting in the closure of a large number of small enterprises. A significant slowdown in activity in the export oriented clothing, processed food and chemical industries also further added to the decline in their share of manufacturing output. However the period from 2001-02 to 2007-08 both large and small enterprises maintained an upward trend in their respective shares. It also further indicates that linkages between large and small manufacturing enterprises increasingly becoming complementary, both in the export oriented and import competing industries. During this period both the World Bank and the Asian Development Bank were also extended refinancing facilities of small enterprises through commercial banks. Bangladesh Bank

was also involved in the similar endeavour. 2004 small enterprises in the manufacturing sector benefited from the refinancing program (see GOB, 2008).

Figure 3



Small manufacturing enterprises are very largely concentrated in the food and allied products industry with 55.5 percent share (see table 1). This industry is dominated by rice milling which accounts for 64 percent of all establishments in the industry (see BSCIC 1994). There has been no other survey of small industries undertaken till to-date. It quite plausible to assume that no significant structural change has taken place in this sector since the last survey. The growth in rice milling reflects the rapid decline in the traditional mode of rice processing in the rural households. This slow but steady transition from household based production using traditional technology to more mechanized form of technology has also helped expand the scope of the market. This is the second largest industry, after the textiles and clothing industry in the manufacturing sector in terms of its contribution to manufacturing value added and employment.

Table 2
Small Manufacturing Establishments Share by Industry

Industry	% Share
Food and allied products	55.05
Textile, clothing and leather products	8.51
Wood and wood products	4.58
Paper, paper products, printing & publishing	6.37
Chemicals, petroleum, rubber & plastics	7.32
Non-metallic mineral products	2.89
Basic metals	7.62
Fabricated metals, machinery and equipment	5.12
Other manufacturing	2.49
Total	100

Source BSCIC (1994): Survey of Small Industries in Bangladesh, 1991

The food and allied industry is also marked by very low productivity due to lack of technological innovation, in particular in rice milling which dominates the SSI sector. It is estimated that more than half of employment in small enterprises is in this industry. Both the rice and leather industries are wholly dependent on locally available raw materials.

The number of small manufacturing enterprises increased from 16,331 in 1962 to 34,294 in 1991 to 64,444 in 2006. During the same period employment also went up in line with the expansion of small manufacturing enterprises (BSCIC, 2006). Given the sluggish performance of small manufacturing enterprises in the 1990s, the employment growth likely to have come largely from small firms in the non-tradeable sector which is completely geared to the domestic market and industries marked by low productivity such as the food and allied industry which is also very domestically focused industry. Overall it appears that output produced by large enterprises grew at a much faster rate than that by small enterprises in the manufacturing sector resulting from productivity differences between large and small enterprises. Any sustained employment growth in the future will depend upon the better performance of export oriented and import competing small manufacturing enterprises.

Conclusions

The performance of small enterprises in general and small manufacturing enterprises in particular has had a significant impact on major government policy objectives such as economic growth, employment generation and poverty alleviation in Bangladesh. Small manufacturing enterprises' contribution to GDP showed a year to year variation but on average they contributed 30 percent to manufacturing output but

employed about half of the labour force in the manufacturing sector. Small manufacturing enterprises are also facing structural readjustment in a relatively more open economic environment causing fluctuations in their output and employment levels. In such an economic environment, it is important that small manufacturing enterprises need to be competitive so that they can contribute to not only to export expansion but also can effectively compete with imports in the domestic market. This is only possible where a dynamic self sustaining process of innovation is at work. This can happen where adequate incentives are provided for entrepreneurial drive and initiatives

The government has taken a number of policy initiatives to foster small manufacturing enterprises. But the emphasis should be more on entrepreneurship rather than simply on enterprises. Despite the government's active promotion of small business in general and small manufacturing enterprises in particular, institutional capacity constraints in policy implementation, inadequate progress in structural and institutional reforms and continued bad governance will seriously impede in achieving its stated small business policy objectives.

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The Trade Effect and Economic Ripple Effect of the Government Subsidy for Korea Trade Exhibition(SMEs)

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Exhibition industry the most major high value-added industries of knowledge-based industries is an engine propel the 21st century Korea's economy. So Korea government select the exhibition industry as one of 11 promising service industries and has been presented strategic development plan.

Focus on this, this study draw the trade effect and the economic ripple effect of the government subsidy supported to trade exhibition, especially for brand exhibition, stress the need of political support and try to suggest a new alternative of subsidy policy through the analysis of trade effect of brand exhibition in recent 3 years.

Track: 2. Small Business in Developing & Transition Economies

What factors influence entrepreneurial success in Fiji?

What are the implications?

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Key words: entrepreneurship, opportunity, innovation, change.

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SUMMARY

Entrepreneurship is a worldwide phenomenon. It has taken on greater momentum since the 1950s to impact theory, management and policy, refocusing on human values before technology and profit in the new world order. It entails the idea that individuals comprising about 5-40% of the general populace, who, due either to natural make-up or environmental upbringing, are dreamers, planners and, most importantly, *innovators*. Sourced as capital, entrepreneurs, create opportunity from market diversity aligned to universal entrepreneurial success factors. This moral compass model of groundswell ‘win-win relationships’ and trust, consolidated by strategic business planning, process innovation for added value change to sustain business success.

ID351 Mere Tuisalalo Samisoni

ABSTRACT OF THESIS

WHAT FACTORS INFLUENCE ENTREPRENEURIAL SUCCESS IN FIJI?

WHAT ARE THE IMPLICATIONS?

Entrepreneurship is a worldwide phenomenon that has gained greater momentum since the 1950s. It is a human process, where technology and profit are secondary (Timmons, 1999, 2006; Timmons & Spinelli 2007, 2009; Dana & Anderson 2005, 2007; Morris et al. 2008).

Entrepreneurship encompasses the idea that there are certain persons, comprising perhaps only about *5-10 percent of the general populace*, (Rasheed 2001) or 10-15 percent (Bolton 1986 cited Bolton and Thompson 2004) or even 40 percent in the case of the US (Bygrave 1998 cited Bolton and Thompson 2004) who, due either to natural make-up or environmental upbringing, are dreamers, planners and, most importantly, *innovators*.

They may or may not be well educated, or good market analysts. They may or may not be obstructed by red tape, or always have a particularly good idea or plan. What we do find is that they *universally possess the drive, innovation, focus and resourcefulness to get a project from dream to business plan, to financial backing to implementation*.

They have the *resilience* to persistently pursue this *process, through failure after failure*, but always *learning*, until they hit *commercial 'pay dirt'*. They also lead and build *good professional teams that are empowered* to integrate their personal vision with that of their managed customer markets and enterprises.

The study of entrepreneurship has evolved as a *multi-disciplinary theory*. Entrepreneurship itself has a *variable nature, with a diverse knowledge base, operating at different levels within organisations* leading

to many different definitions being used by academics and business writers (Gartner 1985; Gartner & Brush 2003). Initially, studies focussed on entrepreneurial traits, or the personality of entrepreneurs. That *focus has shifted from the entrepreneur, to the organisation to process, based on the driving force* of the entrepreneur that emphasises business context, relationships, and ‘wholes’ linked by positive and negative feedback systems with a premium on serving the valued customer.

Academic and business writers *cannot agree on a definition for entrepreneurship*. *Economic classicists* say entrepreneurship is about buying and selling, balance or equilibrium, creative destruction and agents of change. *Labour market economists* regard it as *informed decision-making* and the choice between being an employee or employer. *Social anthropologists*, on the other hand, say entrepreneurs are responding to market diversity and human value systems for a ‘whole’ truth founded on a respective knowledge base that can be measured, accounted for, and sustained in the modernisation and development of man in an equitable way. *Sociologists* see it differently again; as a *learning process*, rooted in *history* that started with our *first teacher or mother*, linked to the transformation of *Protestantism and western capitalism* as defined in *Weber’s (1904) Protestant Work Ethic to link in psychology*. Here, *hard work is a ‘calling’, and accumulation of capital is a sign of salvation where self-supervision of one’s own state of grace is equated to moral behaviour in capitalism or entrepreneurial activity*.

To capture this entrepreneurial phenomenon, mixed methodologies were used in this study: (1) The exploratory or qualitative; (2) The quantitative or descriptive. These were selected as the most inclusive, responsive and representative of the context, population and relationships being studied. In the design of this study, a ‘holistic’ approach in ‘concurrent nested strategy’ (Creswell 2003) was found to be consistent with the entrepreneurial framework.

The key findings showed the following factors impacted entrepreneurial success in Fiji: employment, turnover/profit, ICT platform, innovation, opportunity, source of capital and loan equity to capital and loan structure of the firm, motivation (satisfaction, own capital, work from home, own boss), type of business, age of firm, religion, products and communication. These universal success factors are indicated in local markets by: education type and level, race/ethnicity, diverse and emerging markets, religion, pricing, teambuilding leadership management styles and board of directors.

The findings answer the research problem, questions, and objectives at the four levels of: 1. Individual; 2. Organisational; 3. Environmental; 4. Process. The hypothesised and statistically-significant relationships found, support the propositions that an entrepreneurial framework and process model can produce business success for Fiji through State and Indigenous entrepreneurship.

This paper is based on the author's thesis. For details see URL site:
<http://research.usc.edu.au/vital/access/manager/Repository/usc:3566>

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1.1 *Outline of thesis*

This thesis, What factors influence entrepreneurial success in Fiji? What are the implications?, is presented in six chapters. Chapter one outlines the research, briefly defining entrepreneurship, the problem questions, and the objectives and propositions to answer those questions in Fiji's context. Chapter 2 reviews the literature used to guide these investigations, focusing on business contexts (Porter 2006) and processes (van Praag 1996; Timmons 1999, 2006; Porter 2006; OECD 2007; Timmons & Spinelli 2007) that enable entrepreneurs in Fiji to measure, fill and align the 'empirical value gaps' that beg the 'why', 'when', 'where' and 'how' of 'whatever' they do best as entrepreneurs. Chapter 3, Stage 1, describes the exploratory research of the depth interviews and focus groups that identified the entrepreneurs and the entrepreneurial perspective by definition. This led into Stage 2, the quantitative methodology in which the randomly-selected, stratified sample population made up the main study for this research, and which determined the development and finalisation of the main questionnaire. Chapter 4 analyses the data gathered using SPSS v. 13 (2006) to deliver the results of the major study. Chapter 5 synthesises the results of the analysis and discusses these in terms of similar work mentioned in the literature review to then elaborate on the propositions and draw conclusions for recommended practices in Chapter 6. Findings are discussed particularly in terms of their implications for management, policy and research, development aid, entrepreneurial practices and academic contributions for future recommended research.

With the right questions, this paper can now be summarised to define the entrepreneur, entrepreneurship, research methodology and theory that support the findings, contributions and recommended practices for Fiji.

1.2 Background to the research

Entrepreneurship as a worldwide phenomenon has, since the 1950s, manifested itself in the growth of small to medium business. A study of a group of engineering undergraduates at Cambridge University in the 1980s concluded that 10-15 percent of the students were potential entrepreneurs (Bolton 1986 cited Bolton & Thompson 2004). More rigorous assessment by the late Professor Scott of Stirling University of the population at large produced a similar figure. Rasheed (2001) argued for 5-10 percent. Bygrave (1998 cited Bolton & Thompson 2004 p. 14) argues the potential figure is higher and quoted figures for the US of more than 40 percent.

In terms of capturing and measuring defining characteristics, entrepreneurship research has expanded to opportunity recognition, innovation and motivation. However, the concept of entrepreneurship had much earlier beginnings, having been described by Richard Cantillon (1680-1734 cited in van Praag 1996) in an economic context of supply and demand. Entrepreneurship is not confined only to start-up business or quality of products and services. It applies also to the ability to change and add value while serving market needs and values in a positive sum game (Porter 2006; Kirzner 1973-1982). In these dynamics, Kirzner (1973) theorised that the economy was unbalanced and the innovative entrepreneur was the person who identified the imbalances to exploit and redress them, thus bringing the market towards equilibrium.

This led to the off-shoot discipline of business economics. Prior to that, development economists, in their pursuit of solving economic problems from an objective standpoint, tended to seek out a formula for every problem. In doing so, they factored out human ability, talent and temperament to innovate. Kirzner (1973), however, brought human capital back into the business economics equation, in line with natural and social science (van Praag 1996; Timmons 1999, 2006; Denzin & Lincoln 2000,

2005; Bolton & Thompson 2004; Denzin & Lincoln 2000, 2005; Bryman & Bell 2007; Timmons & Spinelli 2007, 2009; Morris et al. 2008).

Kirzner (1973) established that pricing policy for margin analysis would give space to innovative entrepreneurs to use in their strategic business planning and exit strategising. Differentiating and targeting distinct margins for each sub- or niche market need, allow for risks and benefits trade-off decision-making. This strategic flexibility in the pricing policy elevates the discipline of accounting to a leadership concern. Thus, taking a holistic approach to decision-making will result in more focus and benefits for the firm's core business and values.

At this level, systematic and accurate margin analysis reinforces the portfolio of institutional, policy and technical strategies. These turn ideas into opportunities such that technical application can be measured for sustained business success. The principle of franchising, for example, is based on pricing policy and margin analysis in order to capture markets through company and legal property rights, branding, and cookie-cutter replication of successful management systems, policy and processes.

1.2.1. Definition of entrepreneurship.

From such a background, this study defined entrepreneurship as a process by which individuals, through their organisations, pursue opportunities without regard to alienable resources they currently control (Hart, Stevenson & Dial 1995). The entrepreneur is, therefore, opportunity rather than resource-driven. Hart et al. (ibid) modified Stevenson and Jarillo's (1994) definition to recognise the importance of industry experience and reputation as resources that enhance a new venture's distinct competitive and comparative advantage. Van Praag's (1996) motivated entrepreneur expands new ventures' competitive and comparative advantage to include motivation as social and human capital in organisational behaviour, particularly in terms of allowing opportunities to access markets (Timmons 1999, 2006; Timmons & Spinelli 2007, 2009). This supports

Kirzner's (1973) pricing policy and Gartner's (1985) process, so as to integrate Gartner and Brush's (2003) organisational types, levels, cycles and stages with Drucker's innovative entrepreneur (1985, 2005, 2008; Porter 1990, 2006; Kuratko's 2003; Bolton & Thompson's 2004 and Morris et al. 2008).

Further to this social capital perspective, Dees (1998) adds that entrepreneurship provides a professional, innovative and sustainable approach to systemic change that also creates and sustains social values out of local knowledge (Dana & Anderson 2005, 2007). De Bruin and Dupuis (2003) reinforce this argument with social embeddedness of entrepreneurship (ibid p 137). Moreover, Porter's (1990, 2006) use of innovation in his diamond perspective, strengthens the direct relationship between social subjective well-being, creativity, innovation and successful entrepreneurship in hi-tech and high-growth firms, as shown in Figure 1.1 (OECD 2007).

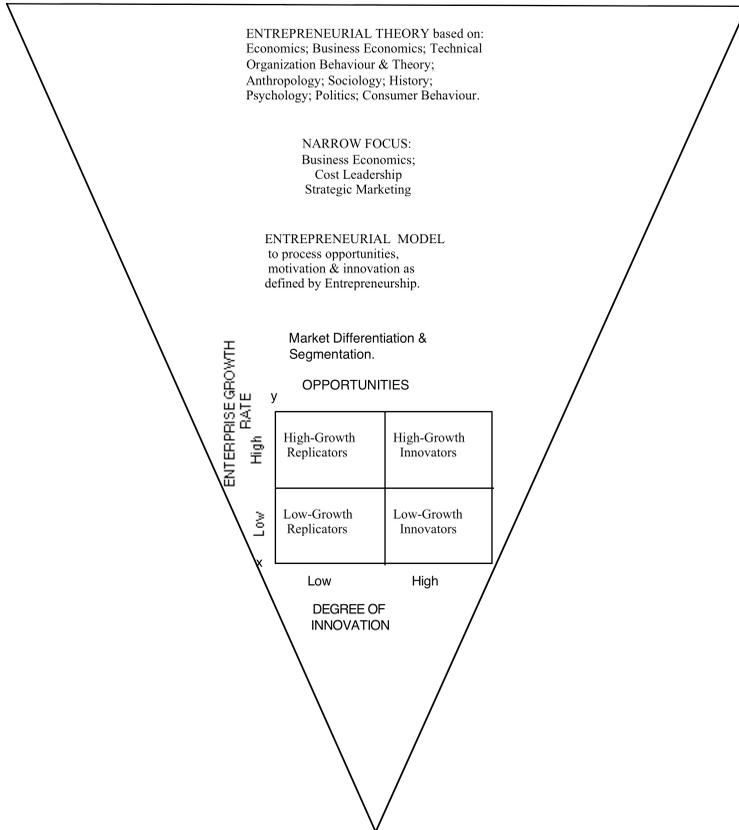
To put this global economic growth phenomenon into context, Toffler (1980) warned that change is inevitable; an unavoidable fixture that must be planned for, not left to chance. He described the present change as the '3rd wave' civilisation, the movement from an agricultural and industrial order to a new information civilisation. By contrast, leaving "change" to chance without strategic planning will result in more resistance to change, since the trend will threaten the existing power and class structures that profited most from the old order of the capitalist and labour elite. Toffler (ibid) predicted conflict from the elite when decentralisation of power, structures and processes take place, as dictated by ICT advances and market demographics (Li & Bernoff 2008).

Nevertheless, when built on solid research methodology and data, this understanding of entrepreneurship has theory, policy and management implications for Fiji in the country's macro economic, political, legal, social and technical vision. This will be particularly true if entrepreneurship can be cultivated within the national micro-economic base. Likewise, successful

use of strategic business planning by these entrepreneurs will enhance wealth creation and re-distribution. Such an impact would be important since Fiji's development needs far outstrip the Government's ability to provide through taxation and expenditure from current low levels of public sector productivity of one percent (UNHDI 2002 cited Governor Reserve Band of Fiji 2005).

1.3 Justification for the research

Figure 1.1: Broadfield Entrepreneurial Theory



SOURCE: Perry 1990, Timmons 1999, Porter 1990, 2006 & OECD 2007: The higher the innovation the higher the enterprise growth rate to fit into Porters Innovation Diamond Perspective (1990, 2006) to upgrade and innovate, Timmons Entrepreneurial Process Model (1999; 2006) and Entrepreneurial Framework (OECD 2007) within Perry's (1990) Entrepreneurial Theory Framework, modified for this thesis.

Source: OECD (2007) Enterprise Growth Rate Matrix. The Y axis explains the entrepreneur's growth from low to high-growth replicators, and X axis the degree of innovation to company growth from low-growth replicators and low-growth innovators. The OECD (2007) matrix fits the

entrepreneurial process model (Timmons 1999, 2006; Timmons & Spinelli 2007, 2009) and Entrepreneurial Theory Framework (Perry 1990).

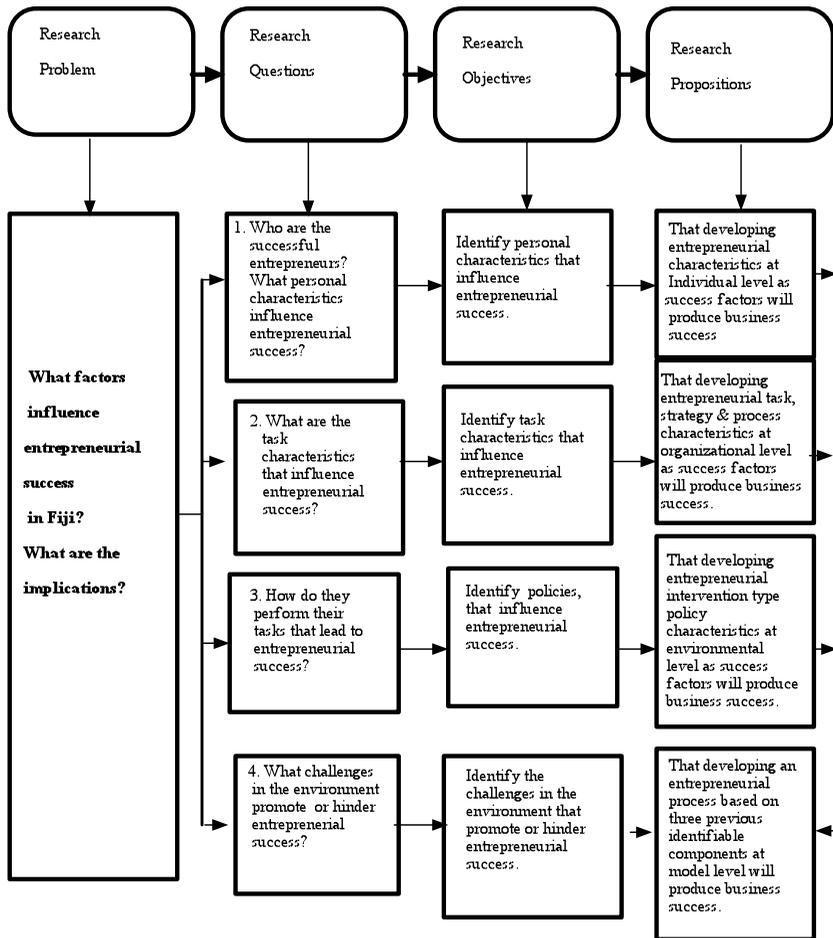
Labour productivity level and growth per employee in Fiji in 2005 was F\$25,469. This had grown on average by only about one percent annually from 2000. People in paid employment in Fiji in 2005 is estimated at only 117,000. Fiji's export band is narrow and does not have much of a presence in world market share.

Fiji's meagre total exports in 2005 were F\$1,192.4 million, comprising domestic exports of F\$847.46 million, plus re-exports of F\$345.0 million. Fiji's domestic exports have been declining, while exports overall have been increasing along with the country's trade deficit.

Fiji's productivity growth is four times lower than that of Mauritius and, when compared to SE Asian countries such as Singapore, the comparison is worse. (Although many other nations also compare poorly with Singapore today, the issue for Fiji is that its GDP was once identical to that of Singapore in 1970 when the two countries gained independence from Great Britain). Moreover, the growth gap of Fiji's GDP per capita was higher than that of Mauritius in 1978. Within eight years Mauritius had surpassed Fiji, and continues to do so. In the Pacific, Fiji has traditionally had a GDP per capita higher than Samoa and most other regional developing economies. In 2001, Fiji's growth rate fell below that of Samoa.

In the UN Human Development Index (UNHDI 2002 cited in Governor RBF 2005), Fiji was ranked 81st, around halfway amongst world countries in 2002. Fiji was doing better than the average of all the developing countries, and its Pacific neighbours such as Papua New Guinea, Solomon Islands and Vanuatu. Samoa's position, however, is higher than that of Fiji. Fiji has continued to lose ground over the years. For example, it was ranked 66th in 1995, 72nd in 2000, and 81st in 2002, slipping 15 positions (RBF 2003, 2005).

Against this backdrop, development of an entrepreneurial process model to tap economic opportunities in ways that create value, will also address the research problem, questions, objectives and propositions presented next. (See Figure 1.2.) Figure 1.2: Research problem, questions, objectives, propositions and contributions



Source : Prepared for this Thesis.
Layout: cited Mitrchob 2000.

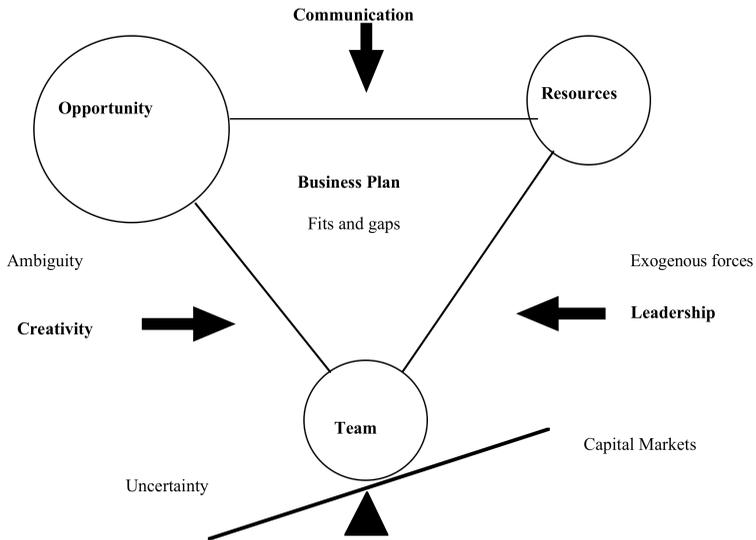
The research questions are the most important aspect of this thesis, since they will directly determine the impact of research findings and recommendations. These questions are: **What factors influence entrepreneurial success in Fiji? What are the implications?** Defining the research questions lies at the heart of the thesis. It is important for academic research that has managerial, policy and theory implications. The four research questions identified above are described in detail in the methodology, Chapter 3.

This research is designed to address specific objectives, the first three of which are internal, and the fourth external. These are:

- to identify the development of entrepreneurial personal characteristics at individual level that produce business success;
- to identify the development of entrepreneurial organisational task, strategy and process characteristics at organisational level that produce business success;
- to identify the development of entrepreneurial interventionist type policy characteristics at environmental level that produce business success, and
- to identify challenges in the environment that promote and/or hinder the feedback process in terms of the three previous identifiable components within the model level that produce business success for Fiji.

The objectives follow on from the research questions to the research propositions. So essentially, this thesis develops a model for determining universal success factors and their respective local market indicators from entrepreneurial, task, strategy policy and process characteristics in respect of Fiji. The model developed is based on Timmons (1999, 2006) entrepreneurial process model in Figure 1.3 next.

Figure 1.3: The entrepreneurial process model



Timmons' Entrepreneurial Process Model. 1999. p37.

The forces driving successful new venture creation are shown in Figure 1.3. Developed by Timmons (1999, 2006; Timmons & Spinelli 2007, 2009), this model can be modified for entrepreneurship in Fiji's developing island economy so that policy-makers come to understand and appreciate its benefits.

The entrepreneurial process model has brand value that can draw upon and leverage existing trust-based relationships from social capital of cultural and historical ties. In Fiji's case, one such example is Ratu Sir Lala Sukuna's (1980) three legged stool. The legs represent: (1) *Kalou* (God, spiritual identity, or moral authority); (2) *Matanitu* (government or administrative leadership) and (3) *Vanua* (land, kinship, consensus and community-building leadership, or access to resources). Together, via the feedback process, this model has some potential to align and adapt the

collectivist, holistic culture of the indigenous Fijian market into an entrepreneurial dynamic. This would certainly be to Fiji's competitive and comparative advantage (Porter 2006; OECD 2007).

An important factor to be considered in any successful uptake of new entrepreneurial perspectives is personal learning styles. The left side brain learning in the limbic system takes place through motivation, extended practice and feedback. By contrast, right side brain learning in the neocortex takes place through technical and analytical ability. This means that teaching styles, programmes and objectives should match (Goleman 1998; Goleman et al. 2002; Goffee & Jones 2000, 2005). Emotional Intelligence or maturity associated with authentic leadership is significantly linked to business success. It is learnt through the desire to be effective and successful, and comes through practice and feedback (ibid). This area of research should be further explored, given its association to motivation and authenticity.

In any event, this research can be justified on two grounds: (a) its theoretical contributions; (b) its practical contributions in respect to identification, introduction and promotion of universal entrepreneurial business success factors and their local market indicators. The 'empirical and research value gaps' identified here will be filled by entrepreneurs at individual, organisational, environmental and process levels by investing in business success. Each of these contributions is discussed in turn.

1.3.1 Theoretical contributions

A considerable body of research knowledge on entrepreneurial theory and success characteristics highlights which of these produce business success, and why. Findings in the Literature Review (Chapter 2), however, show that the majority of these studies have been mainly western in context, model and content, with only 17 percent originating in developing countries and countries in transition. None have been recorded from developing island

economies. This euro-centric bias, and some methodological inadequacies based on comparative method and anthropology of primitivism, therefore, represent significant flaws in a developing nation-specific context (Denzin & Lincoln 2000, p56, 2005; Bryman & Bell 2007; Dana & Anderson 2005, 2007).

Table 1.1: Summary of Literature Review by country of origin

	DEVELOPED MARKET ECONOMIES	DEVELOPING AND TRANSITIONAL ECONOMIES
Individual	90 percent	10 percent
Organisation	88 percent	11 percent
Environment	72 percent	28 percent
Sub-total	250/3	49/3
Weighted average	83 percent	17 percent

Theorists, however, argue that it is not geography, gender, race/ethnicity or economies of scale that are crucial to the production of entrepreneurial business success. It is market information, based on differentiation, segmentation, communication and process, that provides opportunities (Timmons 1999, 2006; Timmons & Spinelli 2007; 2009) for added value (Porter 2006; OECD 2007; Morris, Kuratko & Covin 2008) and which converges on the relevance and use of research mixed methods (Frechling 1997; Neumann 1997; Shadish 2003; Rocco, Bliss, Gallagher & Perez-Prado 2003; Cresswell 2003; Johnson & Onwuebusie 2004).

Mixed methods, therefore, should be able to facilitate such a transition from the bottom up, supported by this study. Undeniably, this study is the first research empirical study on universal entrepreneurial business success

factors with recommended practices for Fiji. The major gaps and weaknesses identified in this field of international entrepreneurship on universal business success factors from the Literature Review are summarised below:

- a lack of research on the adoption and use of entrepreneurial success characteristics in developing island economies;
- a lack of descriptive models and theory building studies in this area of research to address this need in developing island economies;
- a lack of comparative studies from other developing island economies, and only 20 percent from developing economies and countries in transition, and
- lack of participant observer (Denzin & Lincoln 2000, p 673-674, 2005; Bryan & Bell 2007 p. 502-506) researchers representative of developing island communities.

While it is important to gather Fiji-specific data, the experiences of other similar undeveloped, and even some developed countries, still have visionary, educational and motivational value. Notwithstanding, there is a lack of awareness, political will, and expertise in Fiji regarding the need to target entrepreneurship development.

Research on entrepreneurial characteristics for business success in Fiji is non-existent. Not surprisingly, therefore, no entrepreneurial model has been created for the Fiji context. That is why political will is necessary to drive needed change. In anticipation of that change, this study will contribute to a professional body of knowledge designed for Fiji as a developing island economy, based on unique local input, and linked and strengthened by universal entrepreneurial success factor experiences from the international community.

1.3.2 Practical contribution

In addition to the implications of entrepreneurial theory, this research has inferences for practitioners and the many stakeholders involved in the adoption and/or practice of entrepreneurial business success factors. The major practical contributions of this research will be:

- (a) The provision of updated and accurate information from market differentiation and segmentation measurements to assist entrepreneurs make informed decisions regarding investment in success-producing entrepreneurial business factors. The interdependence between a social network and the growth of capital unique to Fiji (human, social, technical, economic, asset, financial, moral, political and information include research methodology) will expose hidden assets in keeping with the global trend in clustering and networking (Ratu Sukuna 1980; Ravuvu 1983, 1995, 2005, 1987; Qalo 1997; Thaman 2003; Denzin & Lincoln 2000, 2005; Porter 1990, 2006; Carlsson & Mudambi 2003; Bolton & Thompson 2004; Drucker 2005, 2008; Naboro & Baba 2006; OECD 2007; Dana & Anderson 2005, 2007; Bryman & Bell 2007; Baba 2008). Certainly a strategic business plan and exit strategy are ideal communication tools to integrate and consolidate (a) above with (b) below (Sahlman 1997; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009);
- (b) The provision of an appropriate model to process, standardise, measure and predict entrepreneurial behaviour characteristics, given the subjective nature of innovation, personality and learning styles (Goleman 1998; Goffee & Jones 2000, 2005); Porter, 2006; OECD 2007) of entrepreneurs. The model will have new tools, knowledge, structure, culture, systems and relationships, based on trust and transparency. This will require a new worldview to impact education, training, content, learning and delivery styles for a new school in entrepreneurship. This school would need to stand alone to achieve its purpose (Kuratko 2003) as it is strengthened by (a) above to facilitate

local ownership tapping into social embeddedness (de Bruin & Dupuis 2003) as enlightened by Skinner's 'black box' and mixed research methods (Denzin & Lincoln 2000, 2005; Bell & Bryman 2007), and as motivated by a higher level of ethical and moral capital (Weber 1904; Novak 1998; Koyzis 2003; Skillen 2004).

This provision for relevant space, educational and training content and material is necessary for upgrading skills and organisational capacity appropriate to Fiji's need for the new market information world order. The change is necessary because technological primacy has moved on from industrial to ICT, empowering the customer to dictate terms and be involved in decision-making through feedback loops. For these reasons, a change in thinking from Aristotle's zero sum game (cited in van Praag 1996, p. 9) to Porter's (2006; OECD 2007) positive sum game is in order to foster win-win relationships. This is important for the indigenous landowning population who own over 93 percent (BoS 2007) of Fiji's land and sea resources, make up 57 percent (ibid) of the general population, yet represent only 21 percent of the business market (Samisoni 2008). Balancing out these statistics has implications for political stability and development in Fiji.

Indeed, this kind of development will positively impact the four entrepreneurial levels - individual, organisational, environmental and process. How these benefits can be realised is explored in S 1.4 next.

1.4 Methodology

Research must be based on suitable research design. For this thesis, appropriate design involves mixed methods catering for the needs of a developing island economy. Both qualitative (or interpretivism) and quantitative (or positivism) methods will help achieve that aim, if they are balanced by context, representation and inclusiveness of the phenomenon

being observed. According to Rocco et al. (2003) there are five purposes for using mixed methods: triangulation, complementarity, development, initiation and expansion.

Language use, questionnaire relevance, a stratified random sample and measurement scales will address the nature of the research problem and questions so that errors, chance and biases are reduced while simultaneously achieving the objectives of the research. The advantage of using established scales is that they have known statistical properties and tests, ensuring further reliability and validity by citing previous publications (Gartner 1985; Frechtling & Sharp 1997; Denzin & Lincoln 2000, 2005; Sexton & Landstrom 2000; Gartner & Brush 2003; de Bruin & Dupuis 2003; Johnson & Onwuegbuzie 2004; Porter 2006; OECD 2007; Bryman & Bell 2007).

The logic of inquiry is a combination of induction (discovering of patterns), deduction (testing of propositions) and abduction (relying on the best set of explanations for understanding the research results) of the observations (Frechtling 1997; Neumann 1997; Shadish 2003; Rocco, Bliss, Gallagher & Perez-Prado 2003; Creswell 2003; Johnson & Onwuegbuzie 2004). These processes increase validity, interpretability, development scope and depth. Such a process to measure and account the data collection from the mixed methods will be integrated during the analysis phase of the study (Creswell 2003).

Such ‘concurrent nested strategy’ (ibid) will be applied to synthesize and complement success factors identified from Chapter 2 to Chapters 3, 4, 5 and inferred (Singh 2006 pp 171-178) to Chapter 6 under recommended practices and main contributions, in order to meet the word limitation criteria of this paper.

1.5 *Delimitation of scope*

A number of delimitations exist. Firstly, this research is delimited to Fiji entrepreneurs and citizens, except for the regional students attending the MBA programme at the University of the South Pacific (USP) who belong to other developing island economies. Their input as a focus group in the exploratory stage of research methodology was sought to ensure their updated knowledge on entrepreneurship, and the use of ICT at work and home (USP) added to the vitality of their entrepreneurship. However, the ideas and concepts of entrepreneurship obviously have implications beyond Fiji's borders into the (Pacific Islands) region, and internationally.

Secondly, this research is geographically delimited to Fiji. For practical purposes the research is confined to the Fiji economy. This study could, however, be extended to other developing island countries which have the same collectivist culture, English-speaking society, narrow tax-base economy and small formal business sector context for comparative cross-national research studies and database development. The educational recommendations can be facilitated by the Training Productivity Authority of Fiji (TPAF) and its networks at national and international levels. Despite the failure of the Doha Rounds of trade negotiations in July 2008, its vision is entrepreneurial and should reconvene when the time is appropriate given today's global financial crises.

1.6 *Conclusion*

This chapter has laid the foundation for the thesis. It has introduced the research problem, questions, objectives, propositions and contributions. The research was justified for theoretical and practical reasons, and based on the concepts of universal entrepreneurial success factors and their local market indicators.

The linkages from positive and negative feedback loops will provide opportunities to exponentially increase the production of venture, employment and profit creation (van Praag 1996; Dana & Anderson 2005, 2007) for Fiji in general and indigenous Fijians in particular (Ravuvu 1983, 1995, 2005, 1987; Qalo 1997; Thaman 2003, Naboro-Baba 2006; Baba 2008). The mixed methods of both exploratory (qualitative) and descriptive (quantitative) techniques were briefly explained to measure and account for the input variables that are posited to increase the production of business success. For these reasons the thesis was outlined, definitions presented and delimitations given. The thesis can therefore proceed, commencing with the Literature Review to identify the entrepreneurial universal business success factors, barriers and entrepreneurial process model in Chapter 2.

2.1 Introduction

The research problem identified in Chapter one provides a requirement to reduce costs in business failure and unproductive use of limited resources including human, social, economic, technical, moral, financial, political and information capital. By changing this trend, the Fiji government will be able to redirect and increase investment in the production of sustainable business success through the key question, ‘What are the entrepreneurial success factors, and what are their implications for Fiji?’

To manage the research problem, the Literature Review in the scope of the research criteria is as follows: the entrepreneurial success factors were identified in materials covered by local, regional, national and international experiences, not limited to publications by source cover, time, period or depth. The sources were biographical, directory and bibliographical. The Internet played an important role in accessing more than 1000 articles, mainly through USC, of which 214 were selected for the Literature Review to commence the inquiry through the designed research process proposal, using mixed research methods.

2.2. *Universal Success Factors*

The articles and books were classified, ranked and rated using Gartner’s (1985) variables and Gartner & Brush’s 2003, Cycles types in Figure 2.1 and Table 2.1.

Figure 2.1: Entrepreneurial Cycles: (Gartner and Brush 2003)

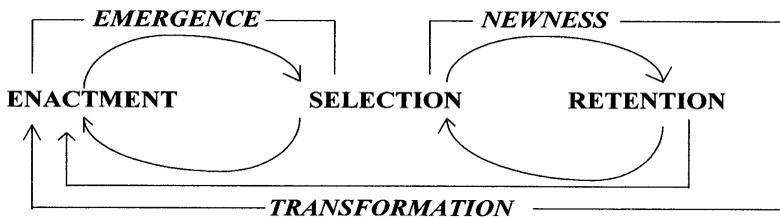


Table 2.1: A framework of types of entrepreneurship research

Cycle type, level of analysis	Emergence	Newness	Transformation
Individual	Gatewood, Shaver and Gartner (1995)	Sexton, Upton, Wacholt and McDougall (1997)	Pearce, Kramer and Robins (1997)
Organisation	Chrisman, Hynes and Fraser (1995)	Carter, Williams and Reynolds (1997)	Koberg, Uhlenbruck and Sarason (1996)
Environment	Dean and Meyer (1996)	Bates (1997)	Gopinath (1995)

The Literature Review revealed a summary of the most influential universal success factors and the researchers. These are presented in Table 2.2 below.

Table 2.2: Success factors proposed by this Literature Review as most influential

Influencing Constructs	Definitions	Level of Analysis	Literature review	Theorist
INDIVIDUAL				
Education	Human capital, sciences and technical content	Individual	Motivation Entrepreneurial theory	McClelland 1961 & 1969; Atkinson 1958, 1964 & with Feather 1966, cited in Timmons 1999; 2006; Gartner 1985; van Praag 1996. Morris et al. 2008.
Age	Human capital, experience, skills focus and energy levels	Individual	Motivation Entrepreneurial theory	Gartner 1985; van Praag 1996; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009.
Experience	Industry and entrepreneurship specific	Individual	Motivation Entrepreneurial theory	Gartner 1985; van Praag 1996;

				Thurik, 2001; Heifetz & Linsky, 2002; Bennis 1989; 2004; 2008; Drucker 2004a,b; 2005; Porter et al. 2004; Bolton & Thompson 2004; Gavin & Roberto 2005; Zyman & Brott 2005; Huntsman 2005; Porter 1990, 2006; OECD 2007. Bennis et al. 2008
Training	Investment in industry and entrepreneurship specific Markets Policy	Individual, organisational and environmental	Motivation Entrepreneurial theory Business economics	van Praag 1996; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009; Argyris 2004; Morris et al. 2008

ORGANISATIONAL				
Cost Leadership or value chain management	Marketing Distribution channels Supply value chain Diversification Differentiation and segmentation Networking	Organisation	Strategic marketing Entrepreneurial theory Business economics	Gartner 1985; Witt 2000; Gartner & Brush 2003; van Praag 1996; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009; Kotter & Cohan 2002; Lee 2004; Slone 2004; Zyman & Brott, 2005; Katz 2005; Kaplan & Norton 2001; Paine 2003; Koch 2004; Stuart 2005; Kara et al.2005; Tambunan 2005; Porter 2006; OECD 2007.

Strategic marketing	Customer and market segmentation Networks and value added chain	Individual, organisational and environmental		Kaplan & Norton 1992, 1996; 2001; 2005a,b; Zook & Allen, 2001; 2003; Barud & Tumulu 2004; Carte & Fox 2005; Mitroff 2005; Mitzberg et al. 2005; Porter 2006; OECD 2007; Morris et al. 2008.
Information Communication Technology (ICT)	Technology		Strategic marketing Motivation Entrepreneurial theory Social and business economics ICT	Gartner 1985; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009; Kotter & Cohan 2002; Gartner & Brush 2003; Zyman & Brott, 2005; Garcia 2005; Prahalad 2005; Friedman 2005; Porter 2006; OECD 2007.

ENVIRONMENTAL				
Government and private sector policies access opportunities	Access products, service, ICT and markets	Individual, organisational and environmental	Motivation Entrepreneurial theory Social and business Economics	Gartner 1985; Gartner & Brush 2003; van Praag 1996; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009; Verhuel et al. 2002; Zyman & Brott 2005; Prahalad 2005; Friedman 2005; Tambunan 2005; Stuart 2005; Katz 2005.

Government and private sector policies access resources	Financial capital, venture capital, social, human capital and capital markets to add value using ICT	Individual, organisational and environmental	Motivation Entrepreneurial theory Social and business Economics	van Praag 1996; Timmons 1999, 2006, Timmons & Spinelli 2007, 2009;Verhuel et al. 2002; Tambunan 2005; Stuart 2005 Friedman 2005.
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Timmons’ pro-growth business success factors (1999, 2006) based on market segmentation, show that the most successful entrepreneurs have a business of 20 employees or more, and revenue of \$1-3million in high-technology, high-growth industry. Klofsten and Scheele (2002) and Zyman and Brott (2005) agree with this profile and principle of demand market segmentation, namely that high-technology can successfully be transferred, particularly to developing countries. When based on entrepreneurial innovativeness, it will add greater value, provided that liberal conditions for innovative environments are present within a regional or national context to catch the ‘technology spill over’ by virtue of positioning in relation to developed economies.

In summary, innovativeness, technology and a friendly democratic environment clearly demonstrate that entrepreneurial success characteristics are linked through all levels of analysis, as generally explained above. Thus 1st, 2nd, 3rd and the collective 4th research gaps can be strategically integrated under the entrepreneurial process framework. At each of these levels, through strategic marketing, business planning and exit strategising, the success factors may be identified, analysed, synthesised and implemented to fill the empirical research gaps.

Expanding the success factors to processes in Table 2.3 below, will complement the empirical success factors in Figure 2.2 that allow for initiation and development in Figure 2.3.

Table 2.3: Leading entrepreneurial process practices (Timmons 1999, 2006; Timmons & Spinelli 2007, 2009)

Leading marketing practices of fast growth firms:

- Deliver products and services perceived as highest quality to expanding segments;
- Cultivate high profile, best-of-breed, pace-setting new products and services;
- Deliver product and service benefits demanding an average market or higher pricing;
- Generate revenue flows from existing products and services that typically sustain approximately 90 percent of present revenue base while achieving flows from new products and services that typically expand revenue approximately 20 percent annually;
- Generate revenue flows from existing customers who typically sustain approximately 80 percent of ongoing revenue base while

achieving flows from new customers that typically expand revenue flows by about 30 percent annually;

- Create new high impact product and service improvements with development expenditures that typically account for no more than 6 percent of revenues;
- Utilise high yielding sales force that typically accounts for approximately 60 percent of marketing expenditure;
- Rapidly develop broad product and service platforms with complimentary channels to expand a firm's geographic marketing dimensions.

Leading financial practices of fast growth firms:

- Anticipate multiple rounds of financing (on average every 2.5 years);
- Secure funding sources capable of significantly expanding their participation amounts;
- Utilise financing vehicles that retain the entrepreneurs voting control;
- Maintain control of the firm by selectively granting employee stock ownership;
- Link the entrepreneur's long-term objectives to a defined exit strategy in the business plan.

Leading management practices of fast growth firms:

- Use a collaborative decision-making style with the top management team;
- Accelerate organisational development by assembling a balanced top management team regardless of prior experience of working together;

- Develop a top management team of three to six individuals with capacity to become entrepreneur's entrepreneurs;
- Align number of management levels with number of individuals in top management;
- Establish entrepreneurial competency first in functional areas of finance, marketing and operations;
- Assemble balanced board of directors comprised of both internal and external directors;
- Constantly calibrate strategies with regular board of directors meetings;
- Involve board of directors heavily at strategic inflection points.

Leading planning practices of fast growth firms:

- Prepare detailed written monthly plans for each of next 12 to 24 months and annual plans for three or more years;
- Establish functional planning and control systems that tie planned to actual performance and adjust management compensation accordingly;
- Share with employees periodic planned versus actual performance data directly linked to the business plan;
- Prospectively model the firm based on benchmarks exceeding industry norms, competitors, and the industry leaders.

The above knowledge and processes have added value and contributed to business success of high and fast growth firms across a diverse groups of industries.

However, a distinction needs to be made between the concepts of added value and profit (Perman & Scouller 1999). *The definition and quantification of the added value by a business* as a result of its trading practices will be given by the value of its sales, less the cost of bought-in goods and services, wages and salaries and capital. The second distinction between profit and added value concerns their objectives. It has been suggested that the accounting treatment of profit implies a role of wealth created for the firm's proprietors — the shareholders. On the other hand, the concept of added value measures the wealth created by the partnerships between:

- the firm with its various assets;
- the employees using their diverse skills;
- the providers of capital funds (shareholders and lenders);
- the government, which provides the environment within which the firm operates and employees make their living paying back tax for that service (Rockley 1984).

Hence, the value added statement and financial ratios for the year's end should show an equal distribution amongst the partners with the economics resulting in a gross profit margin of approximately 25 – 40 percent (Osborne 1994; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009). One of the greatest advantages to be gained from the use of value added statements rests with the firm's employees and their trade union representatives. On the one hand, the employees' part in wealth creation is given some pride of place in the value added statement. On the other hand, a limit to the size of the employees' total wage and salary bill must be seen to be determined by the value added sum itself.

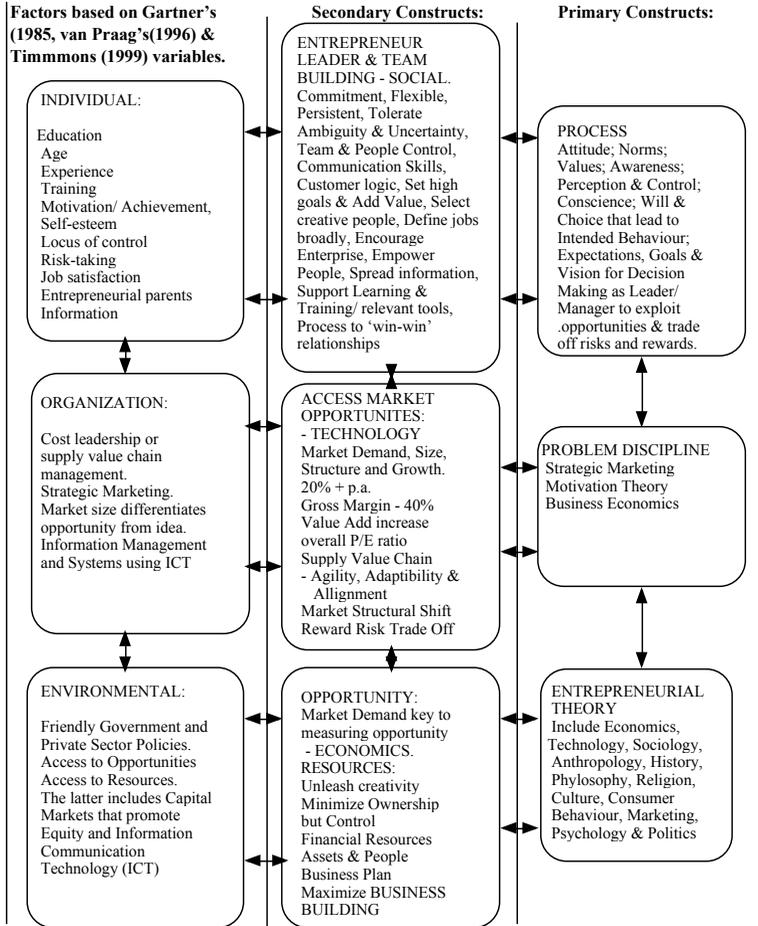
Trends in the proportion of total value added being paid to employees can be studied. These trends and their comparison with distributions found that companies will generate effective change for corporate efficiencies and productivity (Rockley 1984). There is a computer programme, COMPASS

(2002), that gives value added statements. It is being introduced by the author's firm in the area of Management Information Systems (MIS). This will help to improve decision-making that adds value in profitability, efficiency and productivity.

According to this dynamic perspective of leveraging information from internal financial reports and projections, as well as various external sources, this thesis will focus on high potential, high moral, high-growth, high-tech firms that have proven the highest success factor ratings (Timmons 1999, 2006; Timmons & Spinelli 2007, 2009; CWBR 2003a,g, 2004a, 2005a,b).

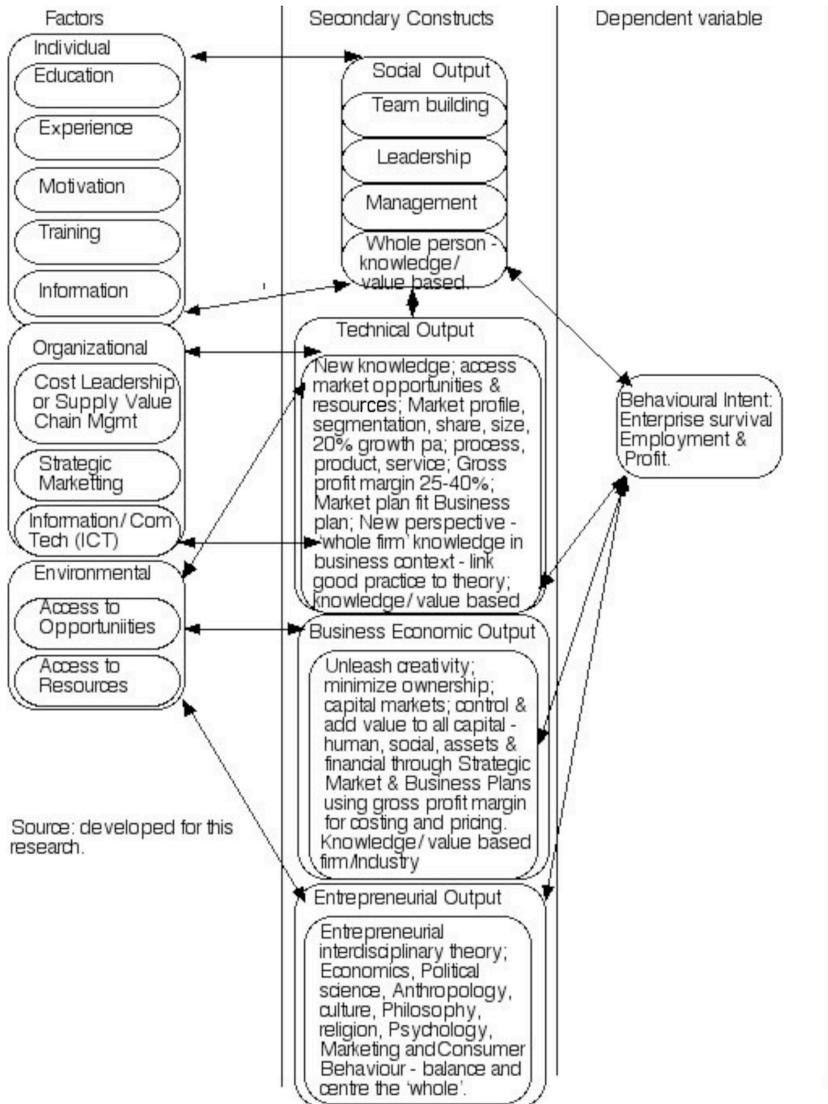
ICT should suit the development needs of Fiji's small island economy. This is consistent with the definition of business economics as the study of entrepreneurial guided and collective search for value by firms/enterprises and friendly government policies that target entrepreneurs and their clusters (Porter 1990; Bolton & Thompson 2004; Carlsson & Mudambi 2003; Drucker 2005, 2008; Stuart 2005; Tambunan 2005; Kara et al. 2005; Porter 2006) in order to grow in a market economy.

Figure: 2.2. Preliminary Model of entrepreneurial business success factors, multidimensional relationships, influences and theoretical base.



Source: Prepared for this thesis. Entrepreneurial Process, holistic relationships & linkages.

Figure 2.3: Entrepreneurial process model of three success factors and influences



The model in Figure 2.2, summarised from tables 2.2 & 2.3, is justified to develop in Figure 2.3, which has been refined to support the strength of the listed factors at input in the system. The primary construct outcomes contribute directly to behavioural intent at individual, social, team-building and motivational levels plus institutional levels, to enable better market access, or rather yield, in order to produce business success.

In summary, the original ten factors have been efficiently reduced by design to three secondary constructs, namely: access to (a) team-building leadership knowledge and skills, (b) market opportunities, and (c) resources that reinforce Timmons' (1999, 2006; Timmons & Spinelli 2007, 2009) entrepreneurial process model with Ratu Sukuna's three legged stool concept/brand. The innovative team-building leader entrepreneur (Porter 2006; OECD 2007; Morris et al. 2008), using a strategic business plan and exit strategy, can measure, link, bridge and bond relationships to leverage talent, customer and market power at individual, organisational and environmental levels. So, by fostering communities through clustering trends, these can help grow the economy productively and equitably. The business context in Fiji fits the holistic entrepreneurial framework, positively impacting the dependent variables, namely: survival of the firm, profit, and employment-creation.

Working from the empirical evidence above, the following definitions and theories are confirmed from the Literature Review as the position taken by this dissertation.

2.3. *Definition:*

2.3.1. Entrepreneur team-building leader

At an individual level, entrepreneurs see that, in the face of adversity, ambiguity and uncertainty in the environment, new ideas, data, information and knowledge are generated. To develop certainty, margin analysis in pricing policy helps turn ideas into innovative technical applications in the strategic business plan and exit strategy, in order to produce business success.

In this context of technical management skills and support, the entrepreneur injects behavioural characteristics like imagination, motivation, commitment, passion, tenacity, perseverance, integrity, teamwork and vision.

Entrepreneurs thrive on INNOVATION, OPPORTUNITIES and CHANGE to create something from almost nothing. They are satisfied by the challenge of producing results from calculated risks. In that sense, entrepreneurs need to achieve, and take responsibility. They are goal orientated, independent, and often have a good work ethic with honesty and integrity. In this regard they are natural leaders. In the information age, where transparency is linked to trust (Badaracco 1998, 2006; Bennis et al. 2008), positive human relationships form the base culture and ‘glue’ that link individual, organisational, environmental and process levels to the entrepreneurial perspective and system. Accordingly, all capital and relationships will need to be accounted for in the strategic business plan and exit strategy. In entrepreneurship, this responsibility lies with the team-building leader (Foti & Miner 2002; Latham & Pinder 2005).

The entrepreneurial framework allows entrepreneurs to undertake a team-building leadership and/or managerial role in their activities. Leadership is brought to the fore in coping with change (Kotter 1990, 1996, 2001, 2004, 2007). Management, in contrast, is about coping with

implementation and complexity (Zalesnik 1977, 1992). In this sense, entrepreneurial activity is fleeting. An individual may perform an entrepreneurial function by creating an organisation, but is then often relegated to the role of managing it without performing an entrepreneurial role, namely to add value. In this sense, many small business owners would not be considered to be entrepreneurs. On the other hand, individuals within organisations (i.e. non-founders) can be classified as entrepreneurs since they pursue the exploitation of opportunities and innovation, which is referred to as ‘intrapreneurship’ (Drucker 1985, 2005, 2008; Bolton & Thompson 2004; Morris et al. 2008) and is obviously a form of entrepreneurship.

2.3.2. Strategic marketing and problem discipline

In a strategic dynamic system, entrepreneurship places this subject in a business economic context, where the entrepreneur either creates a gap in the market through changing customer demands/tastes, or fills a gap in the market through innovation and renovation which, together, add value. Strategy-making is fundamentally a market-driven, customer-focussed decision-making activity to answer the questions: “Who are my customers?” and “What market or segment do they represent?”, in order to serve that market segment (Kotler 2000; Gavin & Roberto 2001; Lee 2004; Iansiti & Lavien 2004a, b; Kanter 2006). Entrepreneurs have an eye for emerging market opportunities being keen observers of customer values, tastes, needs, lifestyles and aspirations, and new venture business creation. They also have an appetite for risk-taking (Thompson & Strickland 1999; Zyman & Brott 2005). When these behaviours are internalised through margin analysis, market shares become market opportunities that guide strategic marketing, as linked to a value chain management of cost leadership in the service industry, now a global trend. How this is to be achieved has been explained in Table 2.3 as value added statements.

2.3.3. Motivation theory

Theory that explains human behaviour and the entrepreneurial mind has been researched by McClelland (1961, 1966 and 1969) of Harvard University, and Atkinson (1958, 1964) of the University of Michigan and their colleagues for more than 35 years in order to understand individual motivation. Their theory of psychological motivation is a widely accepted part of the literature on entrepreneurial behaviour, and has been used to a considerable extent in research evaluation and training efforts that will be expanded on later in this thesis (Timmons 1999, 2006; Timmons & Spinelli 2007, 2009).

The theory states that people are motivated by three principal needs: (1) the need for achievement, (2) the need for power, and (3) the need for affiliation. The need for achievement is the need to excel and gain measurable personal accomplishment. A person competes against a self-imposed standard that does not involve competition with others. The individual sets realistic and challenging goals and likes to get feedback on how well he or she is doing in order to improve performance.

The need for power is the need to influence others and to achieve an ‘influence goal’, which is the goal of outperforming someone else or establishing a reputation or position according to an externally derived and orientated standard. While the negative aspects of power motivation come to mind, socialised and civilised power needs have played an important role in influencing people and institutions (Larmour 2005). The need for affiliation is the need to attain an affiliation goal, which is the goal to build a warm relationship with someone else and/or to enjoy congenial understanding and friendship.

2.3.4. Business economics

Economics is the study of the nature, characteristics, operations and performance of economic relationships. It is about better understanding these relationships in the hope of using them more beneficially. Economics is the efficient allocation of scarce resources to maximise wealth, utility and profits. The market is any allocative system that is deemed most efficient. But there are also market failures due to lack of information and, therefore, inability to price etc. (RBF Governor Narube 2004).

Business economics is the study of the collective search for value by firms/enterprises operating within a market environment and subject to government regulations as explained in Table 2.3. (Perman & Scouller 1999; Kaplan & Norton 2001, 2004, 2005a,b; Paine 2003; FRCR 2004 pp. 11,15,16,17; Koch 2004; Surowiecki 2004; Duncan 2004; Stuart 2005; Useem 2006; SDP 2003-2005 rolled over to 2007-2011). While economic efficiency is not the Holy Grail of entrepreneurship, one can still find innovative, or even straight-forward ways to improve business efficiency.

2.3.5. Entrepreneurial or parent theory

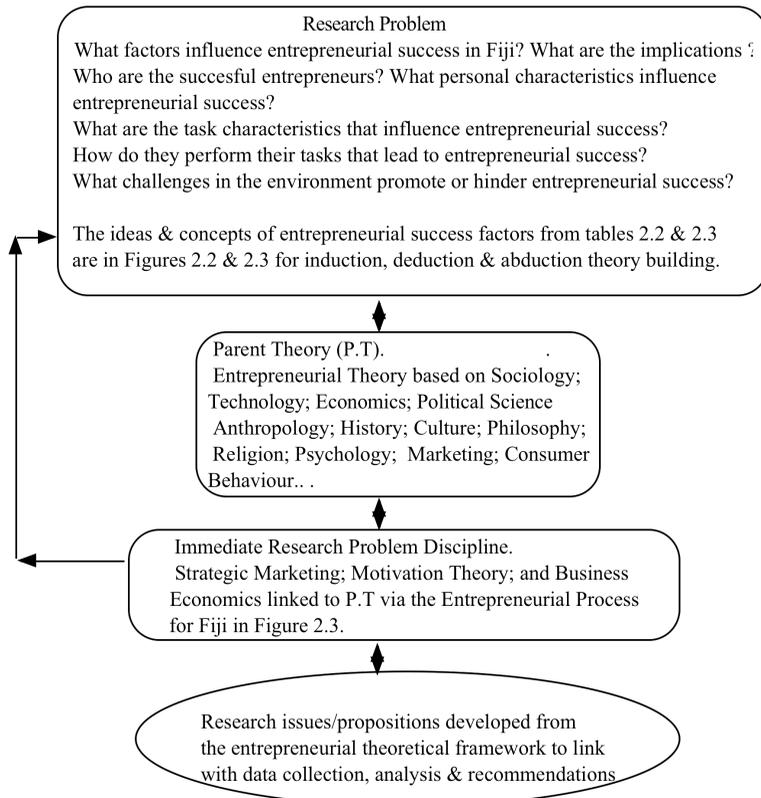
Entrepreneurship includes economics, technology, sociology, history, anthropology, philosophy, culture, religion, psychology, marketing/consumer behaviour and politics in a framework within a business context (Gartner et al. 1992; Wennekers et al. 1999; Audretsch 2000 cited in Sexton & Landstrom 2000; Sexton & Landstrom 2000; Scott & Venkataraman 2001; de Klerk & Kruger 2003; Yamamori & Eldred 2003; de Bruin & Dupuis 2003). The framework can be likened to an ecosystem (Tofler 1980; Ticol 2004; Iansiti & Levien 2004a,b; Laudicina 2005; Zyman & Brott 2005) that responds to market consumer behaviour, entrepreneur's needs and external forces. In so doing, it creatively adds value so that achievement in business success also positively impacts the different theoretical disciplines, symbiotically strengthening the system as a

whole with high moral order. The benefits in total are reflected in the phenomenal global growth of new ventures in service delivery, employment and profit from value creation worldwide (Sexton & Landstrom 2000; Laudicina 2005).

Together, the entrepreneur and the firm play an important role in the modern economy in the discovery, supply, demand and distribution of products and services. The challenge for the nation state is to create a friendly environment and to harness this market demand to the nation state's institutional competitive and comparative advantage (Porter 2006; OECD 2007). But this dynamic takes entrepreneurial team building leadership to release its value added potential.

Entrepreneurship is manifested in small to medium new businesses, growing at a phenomenal rate worldwide. Empirical evidence linking growth rates to the market and industrial structures suggests an ongoing shift towards smaller enterprises that tend to promote rather than retard economic growth. The countries that foster a greater element of entrepreneurship have been well rewarded with additional growth and productivity. It is therefore the task of policy makers to reformulate policy in harmony with this shift from a centrally-controlled and static economy of the industrial era, to the decentralised, creative, knowledge-based entrepreneurial one of the modern era (Mazzarol et al. 1999; Audrestch & Thurik 1999) in which all may gain from the change in market structures with no losers in positive sum game (Porter 2006).

2.4. Figure 2.4: The immediate discipline



Conceptual/theoretical dimensions of the literature that discovered research issues or propositions from a new theoretical framework. Perry, C. 1990.

2.5. Conclusion

The literature reviewed highlighted the depth and extent of motivating behavioural intention with diffusion of opportunity and innovation, as revealed through mixed methods research. Key behavioural intention factors were identified and summarised in Tables 2.2 & 2.3, in Figures 2.2 and 2.3.

The motivation theory of planned behaviour was identified as a model that provided complete understanding when examining entrepreneurial success factors in order to produce business success for Fiji.

The literature on entrepreneurial success factors revealed those entrepreneurial success characteristics and their respective success factors at individual, organisational, environmental and processes levels, are distinct. Further, success itself is a motivation construct that influences decisions as identified in Figure 2.3. The secondary constructs have been used in the preliminary model of influences in Figure 2.3. Ten Factors identified were distilled to construct a preliminary model made up of three components access to – team-building leadership, knowledge and skills; market opportunities and resources both information and finance. The three components are integrated within the holistic entrepreneurial parent theory, comprised of multi-disciplines.

This abstraction or synthesis began the process of induction, deduction, and abduction (Johnson and Onwuegbuzie 2004) for innovation. The Fijian vernacular for these words are: *Bulia*, or creation; *Bulivou*, or new creation; *Vulivou*, or new learning insight; *Gaunavou*, or new order; *Yavuvou*, new structure; *Yalovou*, new spirit and soul, and *Raivou*, or new vision from enlightenment. These words build on Naboro-Baba's (2006) '*Yalomatua*' or maturity, in line with emotional intelligence and authentic leadership that also fosters business success (Goleman 1998; Goleman et.al 2002; Goffee and Jones 2000, 2005). They also build on the works of Ratu Sukuna 1980; Ravuvu 1983, 1995, 2005; Baba 1993, 2008; Qalo 1997; Kedrayate cited Naboro-Baba 2006; Naboro-Baba 2006.

The empirical and research gaps indicate the lack of literature backed by research relating to entrepreneurship in developing island economies, and specifically on the factors that will influence their adoption or enhancement. The refocus on customer values reinforces the fact that human values have not changed (Kotter 1990, 1995, 2006; Badaracco 1998, 2006; Collins & Porras 1996, 2006; Duck 1993, 2006). Only through

strategy and process when converted into a business plan and exit strategy, will the entrepreneur be able to fill the consumer value gaps. The Literature Review suggests further research to find out why, despite the presence of entrepreneurs in Fiji, there is still a barrier to investing in business success for more productive use of the islands' limited resources and national assets. This begins next, in Chapter 3.

3.1. Research Methodology

The previous chapter identified, through the Literature Review, the proposed factors likely to influence the production of universal entrepreneurial business success. From that developed a preliminary entrepreneurial process model for Fiji. This chapter describes and justifies the two stages of the methodology. The first is the exploratory or qualitative research methodology, and was used to further explore the determining factors that influence the production of entrepreneurial business success. The second stage, the main study, is the descriptive or quantitative research.

Using the mixed methods that are part of a 'concurrent nested strategy' (Creswell 2003), 10 entrepreneurial success factors from Figure 2.3 in the qualitative, exploratory stage one of the Literature Review, were tested by selected depth interviews and focus groups. The factors were discussed as the basis for approximately eight questions per success factor, for a total of 80 questions. These would be put to the stratified random research population sample to answer in the quantitative Stage two or main study.

The same process is used to group, classify, rank, triangulate and cross-tabulate the results of the questions using SPSS v.13 (2006). Statistical multi-variate techniques and non-parametric tests will fine-tune the independent variables identified as success factors by their related market indicators. Furthermore, these were tested for correlation, random error and significance levels to accept or reject the relationship to their variable group

classifications, or their effect on dependent variables (namely venture and job creation, survival of firm, and profit).

The mixed methodology used provides the necessary results for triangulation, (Perry et al. 1998), complementarity, development, initiation & expansion for synthesis (Ravuvu 1983, 1995, 2005, 1987, 1988, 1991, 1995; Qalo 1997; Frechtling & Sharp 1997; Newman 1997; Denzin & Lincoln 2000, 2005; Shadish, Cook, & Campbell 2002; Thaman 2003; Rocco, Bliss, Gallagher & Perez-Prado 2003; Creswell 2003; Johnson & Onwuegbuzie 2004; Naboro & Baba 2006; Bryman & Bell 2007; Baba 1993, 1996, 2008) that can be inferred (Singh 2006 pp. 171-178). The epistemological and ontological orientations imply that the findings will be true.

3.2. Methodology, Analysis and Results, Discussion, Recommended Practices and Contributions.

Due to criteria constraints for this paper, please refer to thesis URL site for details on Research Methodology Design and Process (induction) in Chapter 3; Analysis and Results (deduction) in Chapter 4; Discussion and inferences (Singh 2006 p 171 - 178) (abduction) in Chapter 5, and Recommended Practices in Chapter 6 (Johnson & Onwuegbuzie 2004).

The main findings link Chapters 3, 4, 5 and 6 are supported by Figure 2.3 in the Literature Review, the depth interviews and focus groups in the qualitative exploratory Stage 1. This was namely that the non-parametric X2 tests in the quantitative Stage 2 rejected the null hypotheses that there were no relationships between the 185 success factors and their local indicators, and accepted the alternative that relationships did exist at alpha levels of .05, .01 and .001 or *, **, and ***. These were grouped under 50 percent significant (*) with the balance 50 percent highly significant (**, ***) and these were then abducted, according to Timmons Entrepreneurial Process

Model (1999, 2006; Timmons & Spinelli 2007, 2009) by levels for the Fiji market.

3.2.1. Entrepreneurial Process Model.

1. Access to Team-building Leadership at Individual level:

The X2 hypotheses testing model measured the correlation co-efficient of associations between 54 success factors and their local indicators support proposition one (that developing entrepreneurial characteristics produce business success as in Figure 1.2). The tests show the significant success factors are employment; turnover/profit; ICT platform (fax, mobile, email and internet); innovation; source of capital equity; source of loan equity; motivation (satisfaction, own boss, work from home, dissatisfaction, opportunity and own capital); age or survival of firm/when firm was established: type of business: religion: process: service and communication. At this level, job dissatisfaction is a motivator at a .05 alpha level.

The market indicators used to measure entrepreneurial business success are: level of education: type of education: ethnicity, motivation (satisfaction, own boss, opportunity and own capital); leadership style; management competency; levels and skills: board of directors; religion; market size; growth; demand; customer; opportunity and Internet.

Motivation includes training as a moderating variable. The more training, the more motivation to succeed in business. Cross tabulation showed connectivity of entrepreneurship that is embedded (de Bruin and Dupuis 2003) as per Skinner's 'black box' (1971, 2002). Indeed, the relationship between ICT access (not telephone) and innovation, as measured by education level and type, are highly significant at an alpha level of 0.001 ***, and appear with other propositions 2, 3, and 4. The same goes for opportunity and motivation.

Additionally, the findings have implications to **continue further research questions** as this dissertation has argued for leadership focus to balance decision-making through win-win relationships and process. But, as personality and leadership styles are entrepreneurial characteristics, these have also been negative in the form of coup-making in Fiji. On the positive side, personality has also been identified as persons who make up about 5-40 percent of the general populace (Rasheed 2001; Bolton 1986 cited Bolton and Thompson 2004; Bygrave 1998 cited Bolton and Thompson 2004) who, due either to natural make-up or environmental upbringing, are *innovators* and *emotionally intelligent* authentic leaders who are significantly correlated with enterprise effectiveness and success.

So to address the inherent market uncertainty which induces entrepreneurial talent will require developing entrepreneurial characteristics through team-building leadership knowledge and skills. Additionally, utilizing ICT and strategic business planning and exit strategising to produce certainty and business success for Fiji. This then comprises the first component in the entrepreneurial process model. The second component is supported (next) using the same process, so repetition of it will be avoided.

2. Access to Market Opportunities at Organizational level:

The X2 hypotheses testing model measured the correlation coefficient associations between 80 universal entrepreneurial success factors and their local indicators that support Proposition two (that developing entrepreneurial task, strategy and process characteristics produce business success as in Figure 1.2). The tests show the universal success factors are: turnover/profit – source of loan equity; source of capital equity; capital structure of firm to capital equity; capital structure of firm as percent of loan equity; age or survival of firm (or when firm was established), and, type of business, motivation (satisfaction, job dissatisfaction, own boss, work from home, opportunity and own capital). Test 27, Job dissatisfaction

at 1df and alpha level of significance, 0.10 is below the cut off point of .05 so is not accepted as a motivator to succeed in business. This test also highlights Skinner's (1971, 2002) positive reinforcement that satisfaction is the motivator, not dissatisfaction.

The indicators used to measure entrepreneurial business success are: ethnicity/race; market size; market share; market structure; market growth; emerging market; fragmented market; market demand; customer demand; market opportunity; products; service; processes; promotion; occasion; purchase; communication; multiple rounds of financing; financing vehicle; maintaining control; exit strategy; turnover/profit, and pricing.

The organisational characteristics to develop entrepreneurship focus identified for Fiji are:

- high-tech/high-growth firms with a turnover range from \$50,000–\$1.9M (51.3 percent of sample);
- employing between 1-99 staff (68.7 percent of sample);
- targeting a gross profit margin between 20 percent – 49 percent (68.5 percent of sample) as identified;
- use market and strategic business plans to link organisational structure, vision, mission, objectives and process to communicate through feedback loops with an exit strategy (Sahlman 1997; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009);

In respect of the ethnic Fijian market, various recommendations from focus group B are included. These relate to Ratu Sukuna's (1980) goodwill, vision and authentic leadership style in his three-legged stool concept now being augmented by strategic business planning and performance measures. These were, I believe, the missing links for success at the time the idea was floated. Strategic performance measures from GPM targets and analysis ensure investment returns from financial, technical, economic, social, human, intellectual, natural, moral and information capital. With legal

agreements and/or titles, such capital is bankable in the modern arena of capital markets.

Accordingly, to access markets, through the second component in the entrepreneurial model can also help address the historical failures of indigenous business by building on the strengths of the collectivist culture, using cooperative structures and strategic business plans that link with the next level (3).

3. Access to Resources (both information and finance) at Environmental level:

The X2 hypotheses testing model measured the correlation coefficient associations between 23 universal entrepreneurial success factors and their local indicators supporting Proposition 3 (that developing entrepreneurial intervention type policy characteristics produce business success as in Figure 1.2). The tests show the significant universal success factors are: turnover/profit; capital structure of firm to capital equity; capital structure of firm as percent of loan equity; source of capital equity; source of loan equity; age or survival of firm; type of business, and motivation (e.g. work from home, own capital).

The indicators used to measure entrepreneurial business success are: education level; race; turnover/profit; pricing; ICT (mobile, fax, email, Internet); motivation (e.g. work from home, own boss, opportunity and own capital).

At a policy level, the insignificant relationships found from other levels relating to age, experience, gender, location, legal status, type of organisation, and serial business owner are recommended for further research and cross-tabulation. This is because of their potential as associated markets for growth in the global information entrepreneurial economy of social market networks and connectivity.

4. Access to process at model level.

The X2 hypotheses testing model measured the correlation coefficient associations between 28 universal entrepreneurial success factors and their local indicators supporting Proposition 4 (that developing entrepreneurial process characteristics produce business success as in Figure 1.2).

The tests show the significant universal success factors are: turnover/profit; capital structure of firm to capital equity; source of capital equity; source of loan equity; survival of firm; type of business; motivation (work from home and own capital).

The indicators used to measure entrepreneurial business success are: education level; service delivery; innovation by product; service and process; pricing; revenue; high impact products; yield, and diversity.

Through cross tabulation, tests of significance support propositions oneto 4 and, therefore, the process model suggested. The process concerned is ongoing (not a one time event) in terms of positive and negative feedback loops, in order to produce self-sustaining business success specifically for Fiji.

3.2.1.1. *Contributions*

3.2.1.2. *State Entrepreneurship; Theory, Policy, Management & Research.*

The organisational characteristics to develop entrepreneurship focus identified for Fiji from this dissertation are:

- high-tech/high-growth firms with a turnover range from \$50,000 – \$1.9M (51.3 percent of sample);
- employing between 1-99 staff (68.7 percent of sample);

- targetting a gross profit margin between 20 percent – 49 percent (68.5 percent of sample) as identified;
- use market and strategic business plans to link organisational structure, vision, mission, objectives and process to communicate through feedback loops with an exit strategy (Sahlman 1997; Timmons 1999, 2006; Timmons & Spinelli 2007, 2009);
- Government at policy level to target high tech, high growth, high moral firms as identified under organizational characteristics to access markets and grow in the 21st century economy.

3.2.1.3. Indigenous Entrepreneurship

- In respect of the ethnic Fijian market, various recommendations from focus group B are included. These relate to Ratu Sukuna's (1980) goodwill, vision and authentic leadership style in his three-legged stool concept now being augmented by strategic business planning, performance measures and exit strategising.
- These were, I believe, the missing links for success in 1980 at time the concept was floated. Strategic performance measures from GPM targets and analysis ensure investment returns from financial, technical, economic, social, human, intellectual, natural, moral and information capital. With legal agreements and/or titles, such capital is bankable in the modern arena of capital markets.
- Access to markets, through the second component in the entrepreneurial model can also help address the historical failures of indigenous business by building on the strengths of the collectivist culture, using cooperative structures and strategic business plans that link all levels of entrepreneurship to account.

3.2.1.4. Future Research & Mixed methods.

- At a policy level, the insignificant relationships found from other levels relating to age, experience, gender, location, legal status, type of organisation, and serial business owner are recommended for further research and cross-tabulation.
- The potential as associated markets for growth in the global information entrepreneurial economy where social networks identify hidden assets in undervalued business platforms, untapped insights into customer preferences and under-exploited capabilities (Zook 2004).
- Fijian as a patriarch society, Indian women with their inherent dowry problems and Muslim women with female circumcision, gender balance will require more research for opportunities and time to change with human priority and choices.
- Additionally, the findings have implications to continue further research questions as this dissertation has argued for leadership focus to balance decision-making through win-win relationships and process.
- But, personality and leadership styles are also entrepreneurial characteristics and these have also been negative in the form of coup-making in Fiji when a bad law has been gazetted placing the President above the people and God's law to service despite swearing on the Bible.
- Further research on learning styles by L sided vs R sided brain; motivation, practice and feedback vs technical analysis ability with matching delivery styles given the innovative and subjective nature of entrepreneurship linked to high tech, high growth firms and effective leadership in business.

3.2.1.5. Stand alone school for Entrepreneurship.

- To facilitate the new economic order and culture for change and added value with priority on being human followed by profit and technology.

3.3. *Summary.*

In summary the entrepreneurial process, within the entrepreneurial framework described here, provides a system in which diversity of customers, companies and capital allows local ownership, relationships and input into the identifiable and universal components.

These are namely: access to team-building leadership knowledge and skills; markets; and resources (informational and financial) to produce business success.

The main contribution of this thesis is theoretical, management, policy and mixed methods research for developing island economies to justify the use of entrepreneurial theoretical framework and process model.

The second contribution is State and Indigenous entrepreneurship with practical implications for a stand-alone school of entrepreneurship that promotes evidence-based learning and delivery to manage any organisation like a business.

Locally, these will help move control on, from Fiji's old economic order and undemocratic military coup powerbase, whose outdated capital structures add costs, delink and constrain freedom of choice in the new customer focused civilisation for change, added value and moral public good.

Globally issues of financial recession, greed for power, money and status, sustainable development, climate change, terrorism, gender balance, growing food and energy prices, poverty and nuclear proliferation demand

answers. All capital starting with customer human values, must be consolidated using strategic business planning and exit strategising, to collectively link and balance the entrepreneurial ‘gold’ of the 21st century economy. This authentic integrity cannot be melted down. It is the human moral compass.

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Equity financing for innovative SMEs from information technology sector. Financial profile and capital structure of IT firms entering NewConnect market in Poland.

by Agnieszka Kurczewska¹

The aim of the paper is to present and discuss the specificity of Polish information technology SMEs using equity financing to reach their growth intentions. The regression model of financial leverage is tested for IT firms entering NewConnect, an alternative market for small and medium enterprises in Poland (OLS method). According to the results the financial leverage of IT firms entering NewConnect is determined positively by tangibility of assets and their size and is negatively related to their profitability. The econometric analysis proves the relevance of pecking order theory for describing sequence of financial choices of IT firms entering NewConnect.

Introduction

A small and innovative firm used to be considered as a victim of imperfect markets, especially if it is new in a competitive business or industry. There are several interrelated reasons for that situation. First group of causes concerns the specificity of the highly innovative profile, with projects characterized often by high risk of failure and uncertainty, inability for quick market verification and difficulties in merits evaluation. The second reason is a distinctiveness of small business, a group of firms often associated with weak economic and financial condition, and high rate of insolvency. Thirdly, being young means no financial history and no experience, that discourages traditional creditors to take a risk of investing. The situation becomes even more complex when a company is a high growth one and though eludes from standard behavior. In consequence, young, small and innovative firms encounter lots of barriers in financing their potential. Especially traditional debt instruments, as credits, become very often inadequate or inaccessible for them. Some negative phenomena as: credit rationing, adverse selection, moral hazard or information asymmetry may appear. However, if not classic debt financing, firms may consider to use equity financing, which usually means choosing between: venture capital funds, business angels or going public. The dilemma of choosing an adequate source of financing seems to be particularly common for information technology (IT) firms. Current research in IT sector seems to prove the Schumpeterian (1941) thesis about domination of equity capital over debt financing in innovative firms. The choice between debt and equity financing depends of course on existence and maturity of equity market. Most developed economies have already experienced a dynamic growth of equity finance institutions and special equity capital tools. During last decade they also appeared in

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post-transformation countries of Central and East Europe, including Poland. One of the newest option is NewConnect (NC) stock market, intended to be a platform for innovative small and medium sized enterprises (SMEs) seeking for capital to realize their high-value projects. An important group of firms looking for capital through NewConnect are IT firms.

The aim of the paper is to present and discuss the specificity of Polish small IT firms using equity financing to reach their growth intentions. Theoretical considerations are enriched by the capital structure analysis of Polish IT firms entering new alternative trade system NewConnect. The paper is divided into four sections. The first part describes problem of financing innovative firm, reduced to a brief presentation of two competing capital structure theories: pecking order theory and static trade-off theory, and their application to the specificity of innovative firms. It is followed by an analysis of the distinctiveness of small information technology firms, taking into consideration Polish economy context. The third part describes a maturity of Polish equity market for SMEs with a special focus on NewConnect as a source of capital for new, technology based companies in Poland. It presents the criteria of entry onto the market, basic rules of alternative trade system and simple statistics about quoted firms. Forth part characterizes IT companies listed on NewConnect, with a special attention on their financial behavior and capital structure when entering the market. It examines capital structure of Polish IT SMEs using sample of all ($n=11$) companies of that profile quoted on NC, trying to find the relevance of capital structure theories (pecking order theory or static trade-off theory) in explaining their financial choices. The last part of a paper is conclusions, with a discussion on research results and reflections on the match between NewConnect offer and specificity of Polish IT firms from SMEs sector.

I: Problem of financing innovative firm in economic theory. Capital structure of innovative firm

Capital structure of a firm may be defined as the combination of debt and equity. It is shaped by both financial barriers and managerial preferences, depending on costs and benefits of particular relation between debt and equity. The problem of choosing optimal source of financing, its level and sequence became central subject of leading capital structure theories and concepts, like: pecking order theory, financial asymmetry, control rights, static-trade off, or bankruptcy costs. Despite many researches, it has not receive any ultimate answer. The relation between level of debt and profitability is still not unequivocally determined. In addition, innovative firm seems to break accepted logics. The chapter presents briefly most recognized capital structure theories, trying to find some exceptions for innovative firms.

Pecking order theory (POT). In the original version of pecking order theory, created by Myers and Majluf (1984), the sequence of choice of financing source is as following: first firms chose retained profits, then external financing in a form of debts (credits), and as a very last choice they decide on external equity financing (Zoppa and McMahon 2002). Retained profits are preferable due to no adverse selection and no additional costs. Equity and debt financing are both connected with high investment risk. On the equity side it seems to be higher (Goyal and Frank 2000). However, the versatility of this order is being undermined. For example, Brouwer and Hendrix (1998) consider that the sequence of choice of financial source for start-ups operating in high-tech sectors is reverse to one presented by Majluf and Myers. In their view in case of innovative and young firms, prioritizing debt financing over equity financing has less justification. Brouwer and Hendrix argument that because own capital is usually insufficient to finance technology advanced investments, and credit due to high risk of a project is difficult to receive, equity financing becomes primary source of financing innovative start-ups.

Control rights. Control right theory supports pecking order theory, however by giving another arguments. It assumes that, the less significant value of a firm's assets, the more prone external investors are to take control over a firm to ensure security for borrowed financial resources. Firms prefer then to rely on financing by retained profits. Their second choice is to decide on debt financing. Only in case of capital-intensive investments firms take a decision on equity financing, transferring part of control rights on investors. Innovative firms often execute project of the value exceeding the value of their assets, those group of firms will be in fact more dependable on external financing, preferring equity than debt capital (Aghion, Klemm, Bond, and Marinescu 2004).

Information asymmetry. The idea of information asymmetry is also consistent with POT. The theory is particularly applicable for innovative firms. Companies of that profile possess incomparable profounder knowledge about the investment's rationale and probability of its success, than potential investor. The dilution costs are high. A complete disclosure of innovative project may expose a firm on risk of losing the most important competitiveness factor. Hogan and Hutson (2005) take notes that information asymmetry is perceived by entrepreneurs or managers as financial barrier foremost in bank credits sector, whereas in venture capital financing it is possible to overcome.

The static trade-off theory of capital structure is second significant theory of capital structure. It is based on assumption that there is optimal capital structure, which is possible to obtain in case when the net tax advantage of debt financing balances leverage related costs such as bankruptcy. A firm shapes its debt level by trading- off costs and benefits of debt (Frank and Goyal 2003). Bankruptcy costs of debt are the costs of financing with debt instead of equity. For innovative companies the costs of bankruptcy are even higher, which is connected with assets structure. Firms with innovative curricula are usually characterized by higher share of intangible assets, whereas traditional firms accumulate their wealth in fixed assets. On a given level of debt, the risk of bankruptcy is higher for firms investing in R+D than in equipment or machinery. In consequence, innovative firms are less dependable on debt financing to minimize expected bankruptcy costs (Aghion, Klemm, Bond, and Marinescu 2004).

Financial leverage. Hyytinen and Pajarinen (2005) put attention on level of financial leverage in small IT firms, characterizing it as more conservative than in traditional firms. They match this characteristic with a level of R+D investments. According to their research the R+D sphere in a company influences the choice of equity financing and is unlikely financed by debt capital. Moreover, firms with high innovative profile are more exposed to adverse selection and moral hazard (Himmelberg and Petersen 1994).

Most of empirical research indicate that innovative firms more often decide on equity than debt financing. However, Hall (2002) underlines that no matter the character of external financial source (equity or debt one), it usually generates higher costs for innovative firms than standard firms. So retained profits are extremely important in companies of high-tech profile.

Interesting conclusions derive also from the research conducted by Aghion, Klemm, Bond, and Marinescu (2004) concerning relations between the choice of financing and intensity of R&D among publicly traded British companies. The main conclusions deriving from that research are:

- Innovative companies, conducting intensive R&D, use debt financing less intensively. With growing intensiveness of R&D the level of debt financing decreases, however companies with low level of R&D exploit more debt than companies with no research and development.
- There is a linear dependence between intensiveness of R&D and equity financing. The higher the intensiveness of pro-innovation works, the higher probability to use of equity financing.

- With an increase in R&D the total indebtedness of firms decrease.

Problem of selecting equity financing by innovative firms may be viewed from supply and demand side. In supply approach Hogan and Hutson (2005) develop two reasons why new, technology based firms are relying more on equity than debt financing: greater information asymmetries and lack of collateral. From demand side, managers of small and innovative firms are more willing to cede control. The paper concentrates on firms choosing equity financing, especially on one of its form- going public. Mahéroul describes going public as *a last stage in the equity route of a company* (2004, p. 221). However, again, from the perspective of young and innovative firm this last stage may become the first or even single choice.

II: Specificity of small IT firms - Polish context

The information technology sector in Poland follows global upward trend. According to the Polish IT market research agency DiS, in 2007 IT market grew by over 25,7 percent, from 18,1 milliard to 22,8 milliard zlotys (report *Rynek IT w Polsce przyspieszył w 2007*). The structure of Polish IT market is shaped by rising level of services, decreasing value of equipment and stable share of software. The most perspective IT segments are: notebooks, LCD screen monitors, IT outsourcing, IT solutions for energetic sector, management software for SMEs (Malicki 2007). Information technology firms constitute specific group. Their distinctiveness lies in a production, business, research, as well as financial, sphere.

General profile and structure of firms. Majority of information technologies firms operating in Poland are young ones, that is functioning on the market from no longer than from few years. Many of them experience high dynamics of growth. The Business Gazelles Ranking, organized by Polish business magazine *Puls Biznesu*, clearly shows dynamic of annual growth in number of IT firms. In 2001 the distinction in form of Business Gazelle Statue received only seven firms, in 2007 already 68. Most of IT SMEs are service oriented. The value of equipment in that companies is decreasing. The development of service companies is connected with computerization of firms and implementation of IT management systems (ERP, MRP, CRM, CEM). The profile and activity of small IT firms are often determined by the profile of entrepreneur (being at the same time an owner and a manager), his knowledge, creativity, personal qualities, and ability to manage risk (more on a role of entrepreneur in high technology firms: Hoffman, Parejo, Bessant, and Perren 1998).

Employment. Number of employees in information technology firms very often do not reflect the real economic power of that firms. The preferred form of cooperation is subcontracting or outsourcing, so in official documents and statistics their workforce is underrated. Due to fiscal reasons a lot of IT experts choose a self-employment and work for several firms. As a result, IT firms seem to be weaker, less dynamic, disposing less economic power, than in reality. Poor visibility on Polish market happens to be caused by assigning majority of products or services for foreign markets. However, low level of employment induces higher labour effectiveness of IT firms.

Research and Development. The development of IT sector is enhanced by growing technology advancement of products and services (Narula 2004). Following the newest technologies in a firm implies development of R+D. Statistics clearly show a very low level of R+D investments in Poland and its negative structure – a dominance of public financing over private one. The analysis done by Polish IT market research agency DiS indicates that research and development is conducted by narrow group of 1000 firms, giving an employment for 19 thousand person (report *Sektor IT: badania i rozwój 2008*). However, according to Central Statistical Office in Poland (GUS 2008) in 2004 – 2006 the dynamics of investments in R+D in ICT sector was three times higher than in whole production and service sector. The development of IT sector is supported by general prosperity on the market,

which is levelling low investments on R+D. In longer perspective, the consequences of low investments in research and development sphere by private sector may negatively influence dynamic of the market.

Innovativeness and patenting. Driving force of IT sector are innovative ideas. The leaders are global corporations setting the directions of sector development: Google, Microsoft, Apple, Yahoo. An important role is played by international standardization organizations fixing standards for firms, for example The World Wide Web Consortium or European Association for Standardizing Information and Communication Systems. Small firms in IT sector have to observe constantly the leaders and take into consideration standards in force. IT staff systematically has to raise its competences, that is participate in various courses and obtain professional certificates. The competitiveness means necessity to register elements of intellectual property rights. The problematic and controversial issue for IT firms remains patenting. For example, the algorithms on which programming is based are not usually patented in Europe. European Patent Law does not allow software patenting. European Union conducts advanced works on implementing the directive solving this problem. Nevertheless, putting that directive into force may lead to the decrease in competitiveness of small IT firms, which usually have problems with accumulating enough capital to proceed patenting. In turn the position of leaders may be reinforced. It has to be also stressed that small and medium IT firms in Poland chose patenting in the USA. Activity in information technologies requires also licensing, which implies knowledge of law, types of licensing and their influence on company's profits.

Business profile and competitive pressure. IT firms are specific also in business context. Innovative information technology firms usually offer products and services in market niche, the mass production is less common. The distinctiveness is shaped by shorter life cycle of products. The high pace of IT sector development implies necessity for the persistent search for new solutions and ideas, which provokes higher investments on R+D. However, it has to be stressed, that creating new product or service requires industrial, development and implementation works. They very often embrace following phases: conceptualization, creating functioning model, testing, implementing and commercialization. These processes usually present high level of complexity. Amin and Thrift (1994) state that production in advanced technology sectors is a function of knowledge structure and expert systems within a firm. The IT sector is commanded by high competition. Polish firms compete not only with national firms, but also American and European ones, as well with emerging markets. As in majority of advanced technology branches the competition tool is very often not a price, but a standard of technical advancement and innovativeness, which influence level of research and development investments (Keeble and Wilkinson 1998). IT firms base their functioning on knowledge and investments in human capital. In IT the key success factors are high competences, especially ability to gain and transfer knowledge. Offered products and services are the results of research and development. Packages of services offered by SMEs are adjusted to needs of an individual client and IT related business models are very flexible. Each change in product or service implies further research and in fact include scientific component. In information technology sector a desirable competence is also ability: to organize knowledge and manage innovation processes, to command of rules and procedures, to communicate with employees, which all enable coordination and running up a firm (Keeble and Wilkinson 1998). What is also important, consumer market in Poland is not the main source of profits for IT sector. The power of the sector lies in B2B (business to business), and the most significant are the orders of large companies.

Consolidation tendencies. Competitive pressure forced Polish companies to consolidate by buying smaller firms and creating larger capital groups. Such consolidations trends are necessary to remain competitive on international markets.

Building up partnership. Granstrand writes: *The technology-based firm draws strength from its co-evolution with modern science and technology* (1998, p. 465). Important determinant of a success of IT firm is a cooperation with research institutions. This criterion is very often required by public authorities during distribution of grants for innovative firms. Previous weak cooperation between Polish firms and research institutions is gradually improving. Such partnership is usually promoted in national and European competitions. Building partnership takes place also at the level of cooperation between firms in the sector (networking). Created consortia increase chances of receiving funds, for example in peer-reviewed research grants administered by the Ministry of Science and Higher Education or Polish Federation of Engineering Associations.

Internationalisation trend. Some researchers (Keeble, Lawson, Smith, Moore, and Williamson 1998) state that a small company operating in advanced technology sector has to internationalise commercial activity, especially sales, even at a very early phase of firm development cycle. Internationalisation at so early stage requires highly educated and skilled entrepreneurs and high value returns on investment. The tendency to internationalize is also visible in Poland. Majority of Polish IT firms design its products or services to conquer foreign markets. Research shows that 40 percent of large IT firms export its services or products (Malicki 2007). Strong orientation on export causes minimisation or even elimination of activities connected with promoting brand in Poland.

Tendency to cluster. IT firms traditionally profit from privileges of operation within cluster or industrial park. An example of good practice in Poland may be the Pomeranian Science and Technology Park in Gdynia covering 70 firms, majority of which are from ICT sector. The park offers cooperation between research institutions, lenient organizational, financial and legal conditions as well as support in technology transfer.

Legal problems. One of the most significant problem for IT firms in Poland remains unclear tax and duty law, especially in case of licenses, patents, as well in interpreting law by various legal institutions (Report PIIT 2005).

III: NewConnect as the source of capital for new, technology based companies in Poland.

The information technology sector requires high capital investments. IT projects are usually associated with: high level of innovativeness, high risk and uncertainty, inability for quick market verification, difficulty in merits evaluation. Traditional financial instruments, as credits, become very often inadequate or inaccessible for entrepreneurs. Banks unlikely decide on financing this type of projects. The sector does not have long tradition and it is associated with unpredictability and variability, which hampers objective evaluation of the projects.

In 2008 Polish private seed fund BAS prepared an interesting report „LaunchIT 2008” presenting IT entrepreneurs view on financing firms. The research embraced 749 persons involved in e-business. For the question concerning considered source of financing a new IT firm 59 percent of respondents indicated business angels, which was followed by European Union Funds (58 percent) and Venture Capital Funds (34 percent). Only 21 percent of them would choose bank credit. The results of the report indicate high conscious of alternative forms of financing among Polish IT entrepreneurs. However, it is explainable as equity market is fast developing one. From few years Poland experiences systematic and dynamic development of private equity (PE) and venture capital (VC) market. According to Polish Private Equity Association in 2007 PE/VC investments in Poland reached 684 million euro, which is two times more than in 2006. In the IT sector the level of investments reached 16,3 million euro. Another new way of financing small and innovative IT firm is applying for private investment funds. One of such examples is BAS, first Polish private seed fund, created by business angels. BAS was start up by private Polish entrepreneurs and finances small,

dynamic firms in ICT and biotechnology sector. The level of financial support by BAS is from 100 thousand to 4 million zlotys. Another example may be Lublin Business Angels Network LSAB or Silesian Business Angels Network SilBAN. The most distinctive seems to be networks of business angels, like Polish Business Angels Network PolBAN or Lewiatan Business Angels.

In 2007 new possibility of financing innovative firms appeared. Warsaw Stock Exchange created an alternative trade system NewConnect, a new market for small and medium enterprises. Polish capital market consists now of two markets: regulated (Warsaw Stock Exchange) and non regulated one (NewConnect). NC is a financial platform, playing role of entrepreneurship incubator for young, innovative and dynamically developing firms, mainly from perspective sectors (mainly ICT, biotechnology, advanced manufacturing, electronic media, alternative energy or environment protection). From the debut in August 2007 till the end of March 2009, 87 firms has been already quoted on NewConnect. The projected capitalisation of a firm listed on this alternative market is up to 20 million zlotys. To be quoted on NewConnect an issuer is obliged to have appropriate legal status (joint stock company or a joint-stock limited partnership company) and to guarantee unlimited transferability of shares. An appropriate information document has to be prepared and cooperation with Authorised Adviser or Market Animator ensured. NewConnect is designated for small and medium enterprises seeking to raise between a few hundred thousand to a few million zlotys. The entry criteria, formalities and costs are more lenient than for regular stock exchange. The most preferred for NC group of companies are ones functioning shorter than three - four years, including start-ups.

NewConnect is one of ten alternative markets associated in FESE (Federation of European Securities Exchanges), which includes: ENA (Athens), Entry Standard (Frankfurt), Alternext (Euronext), IEX (Dublin), AIM (London), MAC (Milan), First North (OMX), Axess (Oslo) and Dritter Markt (Wien). Taking into consideration number of quoted firms, NC takes fifth place.

IV: Capital structure and financial profile of IT companies entering NewConnect

From point of view of microeconomics, the capital structure of a firm depends foremost on its size, age, profile (that is sector of operating), profitability, type of assets (mainly their tangibility), tax shield, growth and investment strategy. This set of determinants was used in tests of capital structure of firms in developed (Rajan and Zingales 1995 or Hall, Hutchinson, and Michaelas 2004) and developing countries (Booth, Aivazian, Demircug-Kunt, and Maksimovic 2001). In the paper researched group of IT firms, by definition of entry criteria on NC, are young and with similar investment strategy (growth through innovation). Tax considerations may be excluded from the list as smaller firms usually do not generate so high profits to use debt for tax shields (Pettit, Singer 1985). Although all firms listed on NC ought to be SMEs, the disparities in size among researched firms seem to be significant, so the size determinant is taken into consideration in process of building a model.

The chapter is constructed as follows. In first part an analysis of basic financial ratio is done, looking at similarities and dissimilarities in the research population. Next, determinants of capital structure are chosen and the regression model of financial leverage is built and tested by method of ordinary least square regressions. It leads to an answer to which capital structure theory behavior of IT firms listed on NC is more relevant. Data from publicly available accounts for all 11 IT companies listed on the NewConnect are used. Because NC started to function in August 2007 and the aim of a study is to analyze the capital structure of firms entering NC, one year data are used, which is the year preceding the entrance on the market (2006 or 2007).

The capital structure evaluation is conducted by simple analysis of seven ratios, of following formulas:

- (1) Leverage ratio (total debt/total assets),
- (2) Long-term indebtedness ratio (long-term debt/total assets),
- (3) Short-term indebtedness ratio (short-term debt/total assets),
- (4) Tangibility ratio (tangible fixed assets/total assets),
- (5) Profitability ratio (gross profit/total assets),
- (6) Long-term investments ratio (long-term investments/total assets),
- (7) Short-term investments ratio (short-term investments/total assets).

All financial variables are book values reported on firms' balance sheets. Means of the ratios, and their standard variations are put in table 1. An analysis of the above ratios leads to following conclusions:

Common features in capital structure of researched group of firms:

- 1) **Level of indebtedness.** All tested firms, except two, experience moderate level of debt, that is not exceeding 50 percent of total assets book value. The ratio of total debt on average is 46 percent of total book value of assets.
- 2) **The composition of debt financing.** Short term debt dominate over long term debt in all firms. In majority of cases firms (six out of eleven) are not incurring long term debt at all. Short term debt takes important position in debt structure. On average 87 percent of total debt is a result of short term indebtedness, which represents on average 40 percent of total assets.
- 3) **Investments.** All tested firms experienced a very low level of long term investments. For ten out of eleven firms the share of long term debts in total assets were zero level. However, short term investments contributed on average to 18 percent of assets total.
- 4) **Tangibility of assets.** The share of tangible fixed assets in total assets reach on average level of 6 percent. Intangible assets represent 18 percent of total assets.

Dissimilarities in capital structure of researched group of firms:

- 1) **Profitability.** Tested firms reach diversified levels of profitability. On average the share of gross profit in total assets is 34 percent, but high standard deviation is observed. However, only one tested firm experience negative gross profit.

The aim of the study is to search for the character of relationship between various microeconomic determinants of capital structure in IT firms entering NewConnect. The main focus is put on a relation between profitability and debt ratio (financial leverage). The assumption is that if it is negative - a pecking order theory seem to be applicable (the more profitable the firm, the lower the debt ratio), if it is positive – a static trade-off theory is confirmed. Daskalakis and Psillaki (2005) explain negative relation between leverage and profitability in a following way: firms that are profitable will use their internal funds to finance their operations and investments and thus they will borrow relatively less than firms with low profitability.

Table 2 presents determinants of capital structure and their influence on a firm's indebtedness according to POT and STO.

To check which alternative theory, the pecking order or a static trade-off, is more relevant for IT firms entering on NewConnect market following explanatory variables of financial leverage are chosen:

- **profitability**, measured as share of gross profit to total assets,
- **tangibility**, measured as share of tangible fixed assets in total assets,
- **size**, measured as natural logarithm of total assets;

Table 3 presents correlations between different variables: profitability, tangibility, total indebtedness, short term indebtedness and long term indebtedness. The results show that

tangibility is positively related to profitability while profitability has a negative relationship with size and leverage. This may lead to a very interesting conclusion that smaller firms tend to have higher profitability, whereas, profitable companies tend to have more tangible fixed assets. The negative relationship between profitability and financial leverage seem to signal the relevance of pecking order theory. Further research requires construction of a regression model of financial leverage, with three explanatory variables: tangibility, size and profitability of a firm. To avoid heteroscedasticity problems the variables are deflated by total assets value (Buferna, Bangassa, and Hodgkinson 2005). Following regression model is proposed:

$$L_{i,t} = \beta_0 + \beta_1 \text{PROFIT}_{i,t} + \beta_2 \text{SA}_{i,t} + \beta_3 \text{SIZE}_{i,t} + \varepsilon_{i,t} \quad (1)$$

$L_{i,t}$ leverage (measured as the ratio of total debt to total assets),

$\text{PROFIT}_{i,t}$ profitability of a firm (measured as a relation of gross profit to total assets),

$\text{SA}_{i,t}$ tangibility (structure of assets measured as relation of tangible fixed assets to total assets),

$\text{SIZE}_{i,t}$ size (measured by the natural logarithm of total assets),

β_0 the intercept,

$\varepsilon_{i,t}$ the random error term.

To estimate the parameters of the model ordinary least square (OLS) method is used. The results leads to the following form of function:

$$y = -1,2274 - 0,1615 * \text{PROFIT} + 2,2460 * \text{SA} + 0,1097 * \text{SIZE} \quad (2)$$

$\beta_1 < 0$ (profits are negatively correlated to leverage)

$\beta_2 > 0$ (the higher the share of tangible fixed assets in total assets, firm has more collateral possibilities, so the level of debt may be higher)

$\beta_3 > 0$ (bigger firms tend to be more indebted as they have better reputation among creditors)

Detailed results of OLS regression and statistical descriptions of the model are put in table 4 and 5 respectively.

The function (2) shows that financial leverage of IT firms entering NewConnect is determined positively by tangibility of assets and their size and negatively by their profitability. The model indicates thus the relevance of pecking order theory for firms entering NewConnect market. The more profitable the firm, the less debts it incurs.

All used independent variables explain the leverage ratio determination of researched firms. The adjusted R-squared is at 71 percent, which may be evaluated as satisfactory. The F-statistic proves the validity of the estimated model. All the coefficients are statistically significant at the level of confidence of 95 percent. T statistic results are also satisfactory, all explanatory coefficients reach higher level than critical one, which is 2,365. The Jarque-Bera test proves that data have normal distribution (the J-B test for the sample is 0,037, so much lower than critical value 5,99). The regression model may be used to estimate capital structure

The evaluation of IT firms on the basis of standard financial statements may bring to misleading conclusions. It happens that such firms do not invest systematically in tangible fixed assets, and their wealth is accumulated in current assets or intangible assets. Their activity relies on human capital investments. Main costs embrace staff costs, especially non-salary labour costs. Computer equipment is often financed via leasing and servers are hosted

from external providers, so the value of IT equipment very often do not appear in balance sheet.

Conclusions

The paper relates to the specificity of young and innovative IT firms entering NewConnect market in Poland. Their distinctiveness is present in each sphere of activity: business, production, research and finance. Their capital structure also stands out. The paper tested the relevance of two capital structure theories for firms entering alternative market by using data of all IT firms listed on NewConnect. According to the results, pecking order theory seems to explain better financial profile of innovative firms entering alternative market, as their financial leverage is negatively correlated to profitability. Study proves that IT firms entering NewConnect prefer equity than debt financing. Especially long term debt financing is not popular among tested group. It leads to an important conclusion that NC creates possibilities to acquire capital for investments of start-ups without involving in long debt financing. From the point of view of investor, the investment risk in firm listed on NC is not high.

The general conclusion deriving from the research is that dynamic and innovative IT firms may be characterized by some common patterns concerning their capital structure. In general, young and high growth IT firms experience moderate level of indebtedness, which structure is largely dominated by short term debts. Tangible fixed assets constitute small share of assets total, intangible assets tend to be more important for them.

However, there are some studies that undermine presented conclusions. Goyal and Fama (2003) give the argument that profitability may be a sign of investment opportunities and high profits reduce leverage automatically. In that sense negative relation between leverage and profitability may be interpreted inversely.

The researched IT firms constitutes very narrow and specific group. These firms are young, fast growing and innovative. From creditor point of view all these features are unfavorable, in practice they enabled firms to profit from new source of finance and entering NewConnect. In that sense NC market may be called polar solution for innovative SMEs. NC has fulfilled tight but existing gap in financing Polish small and medium sized firms. Growing number of entering firms testifies that it may be attractive source of equity capital for firms. Despite short history, NewConnect market has become one of the fastest growing markets for SMEs in Europe. It has to be stressed that debut of NewConnect fell on very enthusiastic period on Polish capital market. However, no later than one year after the debut it is being tested in unfavorable economic situation caused by global financial crisis.

The paper presents first stage of more complex research. Further works will concentrate on comparing capital structure of IT firms before and after entering NewConnect market, answering the question how NC changes capital structure and evaluating those changes.

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TABLE 1.
CAPITAL STRUCTURE RATIOS.

RATIO	MEAN	STANDARD DEVIATION
Indebtedness ratio (total debt/total assets)	0,4608	0,2013
Long-term indebtedness ratio (long term debt/total debt)	0,1002	0,1497
Short-term indebtedness ratio (short term debt/total debt)	0,8656	0,1601
Tangibility ratio (tangible fixed assets/total assets)	0,0635	0,0634
Intangibility ratio (intangible assets/total assets)	0,1813	0,3433
Profitability ratio (gross profit/total assets)	0,3389	0,7806
Long-term investments ratio (long-term investments/total assets)	0,1002	0,1497
Short-term investments ratio (short-term investments/total assets)	0,8656	0,1601

TABLE 2.
**DETERMINANTS OF CAPITAL STRUCTURE AND THEIR INFLUENCE ON A
FIRM'S INDEBTEDNESS ACCORDING TO POT AND STO.**

DETERMINANTS	PECKING ORDER THEORY	STATIC TRADE-OFF THEORY
Profitability	-	+
Tangibility	+	+
Size	-/+	+

**TABLE 3.
CORRELATION MATRIX.**

VARIABLES	PROFITABILITY	TANGIBILITY	SIZE
Tangibility	0,585588		
Size	-0,25341	-0,3568	
Leverage	-0,38389	0,0986	0,584064

**TABLE 4.
RESULTS OF ORDINARY LEAST SQUARE REGRESSIONS.**

VARIABLES	LEVERAGE
Tangibility	2,246025
Size	0,109679
Profitability	-0,16147
Intercept	-1,22745
<i>SE</i>	0,137
R^2	0,706
<i>F</i>	5,601

**TABLE 5.
OTHER STATISTICAL DESCRIPTIONS OF LEVERAGE MODEL.**

VARIABLE	REGRESSION COEFFICIENT	ELASTICITY	T- STATISTICS	LEVEL OF SIGNIFICANCE
Intercept	-1,2274		-2,283	0,056
Profitability	-0,1615	-0,1187	-2,472	0,043
Tangibility	2,2460	0,3095	2,696	0,031
Size	0,1097	3,4729	3,083	0,018

Assessing the role of SMEs financing policy: does it work in lowering financial access barriers in Korea

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In spite of their important role in creating new employment and economic value added in GDP, SMEs (small and medium-sized enterprises) in Korea have been suffered from financial shortage. Commercial financial institutions usually require SMEs to prepare for physical collateral or guarantees for the loan. We investigate whether the policy-supported loan system for the SMEs in Korea contributes to lower the financial access barriers to SMEs, using firm-level data. We do analyze if SMEs are getting properly assessed by commercial banks after receiving government-supported loan. It turns out that the financial support system has significant positive effects on the start-up companies and SMEs in early stages, in term of its effectiveness on financial accessibility (i.e., holding more long-term loans associated with low interest rates).

Track: 11. Financing SMEs

Title: Financing SMEs Throughout Africa –

A Practitioner's Actual Findings

by

Author: Kenneth Fisher

Abstract:

Blue Financial Services (Pty) Ltd is a specialist micro-finance and SME (Small and Medium Enterprise) lender that operates in 13 African countries at present i.e. South Africa, Swaziland, Lesotho, Namibia, Botswana, Kenya, Tanzania, Rwanda, Nigeria, Uganda, Malawi, Zambia and Cameroon. We commenced SME lending as a new division in April 2008 and at present have no bad debts and arrears of under 1%.

Our key success factors are:

- *98% of our Loan Officers have over 20 years of experience conducting viability studies.*
 - *We meticulously focus on viability and then do it. We do not talk the talk and then place greater emphasis on own contribution and collateral.*
 - *We proactively go out and find the businesses we want to finance instead of waiting for people to come to us.*
 - *Our loan processing time is generally far quicker than competitors. For example, in respect of uncomplicated applications we take approximately one to two weeks from receipt to approval and for complicated applications approximately two to four weeks.*
 - *We consider applications with a minimum own contribution in cash or kind of up to 5% and collateral of between 10 to 50%.*
 - *We understand the needs of the various African markets and what generally works.*
 - *We adopt a holistic approach and training programmes and mentorship are often a condition of the loan and capitalized.*
-

1. Introduction.

Blue Financial Services (Pty) Ltd is a specialist micro-finance and SME lender that operates in 13 African countries at present i.e. South Africa, Swaziland, Lesotho, Namibia, Botswana, Kenya, Tanzania, Rwanda, Nigeria, Uganda, Malawi, Zambia and Cameroon. Our business was founded in 2001 and we are the largest private micro-finance lender in Africa. We are listed on the Johannesburg Stock Exchange (Altx) and the Botswana Stock Exchange and currently provide credit to over 400 000 customers in 13 countries through 300 branches and employ approximately 3 000 staff. Our SME division is a new division and commenced lending in April 2008. At the end of our previous financial year as at 28 February 2009, we are pleased to announce that we have had no bad debts and arrears of under 1%, which is highly commendable.

2. Key Performance Statistics.

During our financial year ending 28 February 2009 the following key performance results were achieved i.e.

Item	Amount / No / %
1. Number of Loans Approved:	<u>256</u> (South Africa: 77; Swaziland: 17; Nigeria: 160; Lesotho: 2)
2. Rand Value of Loans Approved:	<u>R52,8m</u> (South Africa: R37,5m; Swaziland: R2,8m; Nigeria: R12,2m; Lesotho: R0,3m)
3. Rand Value of Loans Disbursed:	R23,3m (44,1%)
4. Average Loan Size: All Countries: R206 180	South Africa: R486 654; Swaziland: R168 647; Nigeria: R75 457; Lesotho: R147 00
5. Number of Loans Declined & Withdrawn:	237
6. Rand Value of Loans Declined & Withdrawn:	R156,0m
7. Number of Pending Deals for Approval:	51
8. Rand Value of Pending Deals for Approval:	R20,2m
9. Average Processing Time: Application to Approval:	22,2 days
10. Average Processing Time: Application to Disbursement:	43,2 days
11. Number of New Businesses Financed:	44 (17%)
12. Number of Existing Businesses Financed:	212 (83%)
13. Average Own Contribution %:	39%
14. Average Collateral / Security %:	66%
15. Black Businesses Financed %:	89%
16. White Businesses Financed %:	11%
17. Gender of Businesses Financed %:	Male: 63%; Female: 37%
18. Number of Jobs Created / Maintained:	1 290
19. Family Members Supported: Spin-off	6 450

Factor x 5:	
20. Average Cost Per Job Opportunity:	R40 916
21. Number of SMME Training Courses Presented:	38
22. Number of Entrepreneurs Trained:	125

As can be seen the success of our loan book was proactively constructed by deliberately concentrating on finding good existing businesses (83%), combined with some good start-ups (17%). We did not wait for applications to walk in the front door, we proactively went to find the businesses we wanted in our SME portfolio.

3. Debtor's Age Analysis as at 28 February 2009.

Due to good credit control techniques and business after-care and mentorship interventions, we are proud to announce that we have no bad debt write-offs in our portfolio at present and our arrears is less than 1% which is excellent.

Country	Balance of Disbursed Funds	Current	30 Days	60 Days	90 Days	120 Days +
South Africa	14 974 826	512 464	0	13 713	39 040	55 148
Swaziland	1 617 069	36 733	0	0	0	0
Nigeria	3 166 437	19 134	6 933	0	0	0
Lesotho	0	0	0	0	0	0
Total:	19 758 332	568 331	6 933	13 713	39 040	55 148
%	100%	2,9%	0,04%	0,07%	0,20%	0,28%

The following techniques have worked particularly well for us i.e.

- We run our debit orders on the last day of each month when entrepreneurs still have money instead of by the 7th of the next month as most financial institutions seem to do. Therefore, we can strike repeatedly if necessary, whilst businesses still have money.
- In countries like Nigeria, we also take post-dated cheques as collateral, because if a debit order bounces, you may present a post-dated cheque and if it bounces it is regarded as a serious criminal offence and the entrepreneur can be arrested and incarcerated.
- We quickly identify and implement salvaging interventions to assist clients who are in arrears.

4. Key Success Factors.

We would like to believe that the key factors that have contributed to our success thus far can be epitomised as follows i.e.

- 98% of our Loan Officers or SME Loan Specialists have over 20 years of experience conducting viability studies, which makes a vast difference as there is no substitute for experience and perspicacity.

- We meticulously focus on viability and then do it. We do not talk the talk and then place greater emphasis on own contribution and collateral. A great deal of time and effort is spent researching the viability of businesses, probably more so than in most financial institutions in Africa.
- We proactively go out and find the businesses we want to finance instead of waiting for people to come to us.
- Our loan processing time is generally far quicker than competitors. For example, in respect of uncomplicated applications we take approximately one to two weeks from receipt to approval and for complicated applications approximately two to four weeks. Most other institutions take far longer. The main reasons are: i.e.
 - Permanent centralised decision-making within 48 hours.
 - We often pay out loans in most instances when security documentation has been signed and not always on registration.
- We consider applications with a minimum own contribution in cash or kind of up to 5% and collateral of between 10 to 50%.
- We understand the needs of the various African markets and what generally works.
- We adopt a holistic approach and comprehensive training programmes and mentorship are often a condition of the loan and capitalized.

5. Loan Assessment Criteria.

All loan applications, irrespective of which country they are from, are assessed in terms of the criteria listed below i.e.

Assessment Criteria	Client Rating 1 to 5	Weighting %	Total Score
1. Viability of the Business		50%	
2. Entrepreneurial Competence		25%	
3. Reasonable Own Contribution		10%	
4. Reasonable Collateral / Security		10%	
5. Market / Industry/ Country Need/ Value-Add		5%	
Total:		100%	

Client Rating Scale: 1 = Extremely Poor. 2 = Poor. 3 = Average. 4 = Good. 5 = Excellent.

6. Categorisation of Client Risk Profile.

After a client's business proposal has been assessed above and allocated a score out of 100%, then that score is converted into the table below and the client risk profile determined i.e.

Total Assessment Score	Risk Profile	Financing Decision	Risk Profile Category
75 - 100	Low Risk	Yes	A
65 - 74	Medium Risk	Yes	B
60 - 64	High Risk	No	C
0 - 59	Extremely High Risk	No	D

7. Interest Rate Guidelines.

We currently have the following interest rate guidelines for the various countries we operate in i.e.

7.1 South Africa, Lesotho, Swaziland, Namibia and Botswana Interest Rate Guidelines.

Total Assessment Score	Risk Profile & Client Category	Fixed Interest Rate Over Term
75 - 100	Low Risk: A Category	18 % to 19%
65 - 74	Medium Risk: B Category	20% to 22% +

7.2 Nigeria Interest Rate Guidelines.

In Nigeria, we currently only operate in two of the large states and the interest rate guidelines are as follows i.e.

- Lagos State: 43%.
- Oyo State: 36%.
- All co-operatives that on-lend to members: 24% to 26%.

7.3 Other Considerations.

We also require a minimum cash flow margin of safety percentage (%) of a minimum of 20% for retail and service businesses and 15% for manufacturing businesses. Furthermore, our Credit Committee may also grant moratoriums of up to a maximum of 6 months in exceptional cases for businesses which take a long time to breakeven and whose cash flow requires such supporting measures. Clients who come back for repeat loans and who have a successful repayment track record will also qualify for preferential interest rates the next time round.

8. Loan Sizes and Loan Repayment Terms.

8.1 Loan Sizes.

In South Africa, Swaziland, Lesotho, Namibia and Botswana we generally provide SMME loans ranging in size from R15 000 to R3 000 000. The limits are revised each year according to market demands. In certain states in Nigeria the bottom limit may be as low as R3 000, but the upper limit is the equivalent of R3 000 000 (South African Rands).

8.2 Loan Repayment Terms.

In South Africa, Swaziland, Lesotho, Namibia and Botswana the following loan repayment guidelines are adopted i.e.

- Working capital: up to a maximum of 3 years.
- Assets: up to a maximum of 5 to 7 years.
- Business land and buildings: up to a maximum of 10 to 20 years.

In Nigeria loan repayment terms are normally much shorter and normally never exceed 1 to 2 years, with only a few loans over 3 years. The high volumes of business in this country, coupled with higher margins of safety and the culture of trying to be debt free as soon as possible, make the Nigerian business model quite unique and different from most countries.

9. SME Business Support Services and Interventions.

In order to adopt a holistic funding model approach and to mitigate risk, the following SME business support services and interventions are provided in most countries i.e.

- Accredited short small business training programmes and workshops.
- After-care and mentorship services and interventions.
- Access to accredited bookkeepers at a reduced fee.

These are mostly made a condition of the loan and the costs normally capitalized onto the loan amount.

9.1 Small Business Training Programmes and Workshops.

The following short training programmes and workshops are currently available i.e.

Training Programme or Workshop Title	Duration	Selling Price Per Person	Business Sector Targeted
1. Simply Successful Small Business Course	2 days	R4 500	Formal & Semi-Formal
2. Simply Successful Selling Course	2 days	R4 500	Formal & Semi-Formal
3. Business Plan Guidelines Workshop	3 hours	R650	Formal & Semi-Formal
4. Micro-MBA Course	5 days	R5 500	Informal & Semi-Formal

9.2 After-Care and Mentorship Interventions.

All SME Loan Specialists or Loan Officers are required to do telephonic after-care on their portfolio of clients monthly and after-care visits regularly in order to ensure that clients are on track and that problems are resolved.

In countries where accredited mentors are available, we make use of mentors to coach clients and assist them in solving their problems. All loans above R250 000 in value are allocated a mentor and we make use of top class external service providers, like Business Partners in South Africa, who have a pool of highly experienced mentors available. At present this service is only available in South Africa and will be extended to other countries soon. The client is charged a fee upfront, normally approximately R4 500, which is capitalised onto the loan amount. This is for normal after-care mentorship interventions and different fees are charged if more specialised interventions are required. The following types of mentorship interventions are available i.e.

Type of Mentorship Intervention	Description
1. Standard after-care visit.	Two hour visit to do basic after-care.
2. Quick and dirty salvage assessment.	A one day assessment to determine if a business experiencing serious sustainability problems can be salvaged.
3. Salvage operation.	A complex mentoring intervention to salvage a business over a period of a few months.
4. Short, complicated, specialised viability study.	Making use of specialised mentors in fields where we do not have the expertise to conduct short, complicated, specialised viability studies.
5. Long, complicated, specialised viability study.	Making use of specialised mentors in fields where we do not have the expertise to conduct long, complicated, specialised viability studies.

9.3 Access to Accredited Bookkeepers at Reduced Fees.

In certain countries we provide clients with access to accredited bookkeepers at fees normally up to 25% lower than normal market rates in order to ensure that they get monthly management accounts. They normally sign a debit order with the company concerned and the accredited company then provides us with their monthly management accounts by the 7th of each month.

10. Various Fees Levied.

Each country has its own version of the various national credit acts in operation and there are a number of different fees which companies are allowed to levy. Due to the fact that they all vary and are too numerous to mention here, we can only list some of them. Some countries only allow some of these fees whilst other countries allow various combinations. The most common types of fees that can be levied are as follows i.e.

- Initiation or processing fees.
- Administration fees.
- Loan investigation fees.
- Management fees.

- Training course fees.
- Project management fees.
- Mentorship and after-care fees.
- Legal fees.

11. Various Lessons Learnt.

The following are the most important lessons learnt from the following countries i.e.

- The world economic crisis has forced us to be more circumspect in terms of high risk industries where disposable income is a major contributor.
- In countries with small populations like Swaziland (1,1m), Lesotho (2,1m), Namibia (2,1m) and Botswana (1,9m) margins of safety are lower and the risk is much higher for similar businesses, as opposed to countries like Nigeria (149m+) and South Africa (49m) with much higher populations. Due to this reality and the potential lack of sustainability of such businesses a financier's risks are magnified and these kinds of businesses will probably fail faster than in other countries where sheer volume of potential customers might result in the business being at least salvageable.
- Without comprehensive training and after-care and mentorship services you can never hope to have a low arrears and bad debt figure and will never succeed.
- Without a core of highly experienced SME Loan Officers or SME Loan Specialists you will make many costly mistakes and ultimately not be successful.
- You have to adapt your financing model to each country and their unique needs and you have to be proactive and creative in your funding initiatives.

12. Conclusion.

Our plans are to become the SME Financier of choice in Africa eventually and we will be expanding our SME operations to Namibia in May, Botswana in June and then to all of the other countries we operate in as well as new countries like Mauritius, Angola, Mozambique, Ghana, Congo, Sudan, Egypt etc in due course.

We trust that this short expostulation gave you some insights into how we conduct our business and some of the practical lessons learnt in the African countries we operate in.

Author's Biography.

Kenneth Fisher is the General Manager of the SMME Division of Blue Financial Services and heads up their international SMME expansion initiatives. He has a Masters degree (M.Phil: International Management Centre: Buckingham, England) in Entrepreneurial Training and Development, as well as a Bachelor's Degree from Free State University and an Honours Degree from the University of Johannesburg and has worked in the field of small business development for the past 23 yrs. He worked as a Senior Manager at the Small Business Development Corporation and as a General Manager at the North West Development Corporation and at Khula Enterprise Finance as a General Manager: Operations for a large number of years. Furthermore, he has also run his own small business in the past and is author of the following publications i.e.

- Simply Successful Small Business: a Blue publication. (2008)
 - Simply Successful Selling: a van Schaik publication. (2004)
 - Business Plan Guidelines: a Blue publication. (2008)
 - How to compile a Business Plan: a Small Business Development Corporation publication. (1988)
 - How to start your own small business: a Small Business Development Corporation publication. (1990)
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Acknowledgements.

- CIA World website: population figures, 2009.
 - www.blue.co.za website: see our website for more information on Blue Financial Services.
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The Impact of Basel II Accord on the Loans to Small and Medium Enterprises (SME) in Korea

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[Abstract]

Most previous studies on the impact of Basel II on the SME loans in Korea argue that there will be a negligible negative effect by pointing out the availability of retail credit and the feasible policy options for sterilizing the pro-cyclical nature of Basel II. This retail finance clause for the SME loans below 1 billion won is designed to shield some negative effects of Basel II on the SME loans.

This paper demonstrates that most previous studies have, somehow, underestimated the detrimental effects of Basel II on the SME loans by carrying out a statistical test on the raw data collected from credit officers of commercial and special banks. The idiosyncratic factors comprise the screening process, the basic tenet of supervisory board, the high priority on the credit rates and collaterals in the context of the undercapitalization of most SMEs.

I. Introduction

The Bank for International Settlement (BIS) is an international organization based in Basel of Switzerland which was established in 1930 to coordinate the war reimbursement of Germany since the end of the 1st World War. Its major functions comprise the international currency cooperation, the facilitation of mutual understanding and discussion on the pending issues on money and banking among central banks. The “Basel Committee on Banking Regulations and Supervisory Practices” (Basel Committee) is an affiliated unit of the BIS which aims at improving supervisory system, establishing the general principles, promoting the international cooperation on supervision and information swap on alerting the financial risks in advance.

The mega-trend of liberalization and internationalization of the financial markets on a global scale have brought forth some positive effects of enhancing efficiency since the early 1970s. But they also have brought forth some negative ones such as the deterioration of profitability and the increased instability because of the fierce competition among banks as well as between banking and non-banking institutions. Furthermore, the repercussion effects of bankruptcies or insolvencies of banks are not only confined to the relevant banks, but also to the whole financial system regionally or globally via financial contagion. In July of 1987, the Basel Committee of BIS had reached an overall consensus to implement the regulation on the ratio of net own capital (or net worth) to the total capital (ROC from hereafter) in order

to achieve a more stable operation of international banking system. This movement also provides a threshold of installing the harmonization of competition policy on bank regulation.

There has been a strenuous effort of the BIS to reflect the relative weight on risk premium which has been suggested by several international commercial banking groups. The Basel Committee puts forward three relevant issues which may be indispensable for increasing the financial stability. They comprise the offsetting between credit holders and debit holders, the regulations on the ROC on market risk and the estimation on the interest risk. A revised version, which was designed to supplement the market risk caused by the changes in interest rates, stock prices and exchange rates, was reached in 1996. The development and expansion of derivative market had also brought forth a new operation risk, which had been exhibited through the bankruptcies of the Orange County of the United States in 1994 and the liquidation of the British Barings Group in 1995. The Basel II, which aims at regulating the required ROC on the basis of the new criterion, was finally formulated in June of 2004. The banking system of G-13 countries has implemented the Basel II since 2007.¹ Most industrialized countries, except the United States, have reached an overall consensus to implement the Basel II Accord. The Korean banking system has implemented the Basel II Accord since the 1st of January in 2008 despite having acknowledged some pending issues from this implementation.

The Basel II Accord aims at reducing the credit risk of default, the market risk of volatility and the operation risk of mismanagement. Such risks may bring forth some negative impulses which are liable to impair the working mechanism of financial intermediaries. The BIS undertakes the supervisory role of detecting the uncontrollable risks by enhancing the risk surveillance capability. The application of a more stringent control on the required ROC is designed to compensate the contingent financial losses caused by the various kinds of risks.

Although the Basel II maintains the same required ROC of 8 per cent, it differs from the Basel I in that it further adds the different risk premiums on the basis of individual performance of firms. The implementation of Basel II into the Korean banking system will bring forth both positive and negative effect. The positive effects comprise the enhancement of financial stability and risk management of financial institutions. The negative effects may be brought forth by the additional adjustment cost of the Korean financial institutions whose development stage is far lagging behind compared with that of the industrialized ones. Put this in another way, the Korean financial institutions, like other financial institution in developing countries, have to meet the required ROC as a means of sterilizing the additional risk premium. The quantitative impact survey 3 (QIS3) was carried out by the BIS in March of 2002² has shown that it is expected for the financial institutions of G-10 to make a downward adjustment of the required ROC whereas those of developing countries are expected to make an upward adjustment of the

¹ G-7 comprises the United States, France, Italia, Canada, the United Kingdom and Japan. G-13 adds the Netherlands, Switzerland, Belgium, Luxemburg, Sweden and Spain to the G-7.

² This study was a major undertaking, involving more than 360 banks from over 40 countries. Bank Committee on Bank Supervision, Quantitative Impact Survey 3, 2003

required ROC if the Basel II is implemented in accordance with its original version.

Because most banks are requested to meet a relatively higher ROC on their lending to the small and medium enterprises (SME from hereafter) that are exposed to higher credit risks, it may be quite natural for banks to reduce their loans to the SME which in its turn clamp down the business activities of SME. Such a trend may bring forth a setback in those realms of the economic growth, the personal distribution of income and the balanced regional development. The affiliated SME to large firms are exposed to credit risks if their parent companies are evaluated to the category of junk credit rate. These firms are also exposed to operation risks in that they are not virtually influential at all on the decision-making process of parent companies unless they have procured core competencies.

According to the first draft of the Basel II, it is crystal-clear that banks are requested to meet the higher required ROC for their loans extended to the SME without fully taking into account the low credit rates and poor collaterals of the SME. There emerged a harsh criticism on the indiscriminate application of required ROC which virtually deters the development and growth of the SME. It is undeniable that the first draft of Basel II may work as a serious impediment factor to the growth rate of Korean economy by clamping down the development of SME.

The Basel Committee proposed a revised version which accommodates such a criticism on its treatment of the SME in the following way. Firstly, it modified an estimation method which reduces the required ROC for the SME by assuming a low correlation between the credit risk premium and the SME loans. Secondly, it allowed those loans whose amount is less than 1 million euros to be treated as retail finance. This revised version is based on the assumption that there is a positive correlation between the scale size of borrowing firms and of credit risks.³

The SME in Korea, which account for 99.9 per cent of total number of firms, contribute 88.4 per cent of total employment and 50.8 per cent of GDP in 2007.⁴ They also have played catalyst roles in regional development. Some of the SME may provide indispensable components for export items. For instance, it may be highly improbable for the Korean motorcar industry to become successful in enhancing its brand equity if one takes into account the prevalent mode of module production method in which the core capability of the ancillary industry really matters. The SME have played important roles in increasing the value-added contents of ancillary products of motorcar industry. If the SME are driven to incur higher borrowing cost in terms of credit availability and interest rate due to the implementation of Basel II, it may be quite possible for the Korean economy to incur some extra costs from the reduced output and losses in employment. This paper aims at carrying out a statistical survey on the impact of Basel II Accord on the loan availability to the SME with the raw data collected from questionnaires from the credit officers. It also formulates some policy implications for the credit officers of banks and

³ As will be clarified in 3.3.1, this assumption may be misleading in Korea because most SME are undercapitalized and low credit rates with relatively poor collateral

⁴ Statistics of Small & Medium Enterprises for 2009, Korea Federation of Small and Medium Business

entrepreneurs of SME how to cope with the financial adjustment cost incurred by the Basel II.

II. Salient Features of the Basel II Accord

This section aims at capturing the contrasting features of Basel II against Basel I as a preparatory stage for analyzing its impact of Basel II on the SME loans. Both Accords are the first attempt to apply the ‘harmonization of competition policy’ in the financial sector or alternatively to implement a global standard on banking.

2.1 Background and Basic Tenets of the Basel II

The prime objective of Basel II is to enhance the effective control on the fulfillment of the ROC as a means of coping with the rapid pace of the development of financial market. It may be quite possible for banks to keep the required ROC at the level of 8 per cent ostensibly while they are entangled with the portfolio of high risks and high returns by making transactions on financial derivatives or by making use of loopholes of capital arbitrage.⁵ Ferguson (2003) points out that it may be possible for banks to facilitate capital arbitrage by making use of the simple approach on risk-weighted premiums. The financial accidents of Herstatt⁶ and BCCI⁷ well exemplify such cases. The mega-trend of M&A of global financial industry has exacerbated such risks.⁸ The Basel II allows the supervisory board to apply risk-weighted credit evaluations in estimating the ROC and make such evaluations available to different interest groups through public notice.

The adoption of Basel II is evaluated as a proper step to reduce various kinds of risks and to coordinate different rules and regulations by introducing a new global standard. But there also emerges a worrisome criticism on the Basel II in that it may bring forth some negative effects on less developing countries or emerging economies. Such effects comprise the adjustment cost of banks or SME to the economic fluctuations, the underdeveloped financial market and the poor capabilities in the scopes of risk management.

2.2 Contrasting Features of the Basel II Accord compared with the Basel I Accord

The Basel II Accord adds the operation risk besides the credit and market ones in estimating the ROC. Banks also reflect the credit rate of borrowers by quoting the internal or external credit evaluation. Such a change allows supervisory authorities to regulate more effectively on those transactions which may impair the required ROC. The supervisory bodies have imposed tighter control on the ROC in order to reduce the possible investment losses of banks. The control on the ROC, which was started in a simple

⁵ The regulatory capital arbitrage refers to the phenomena that the transactions on those sectors, which have a weak capital regulation and low burden on capital accumulation, are up-surged.

⁶ The bankruptcy of Herstatt bank of Germany in 1974 is a typical case of mishandling the market risk.

⁷ The closure of BCCI bank due to the financial irregularities of illegal acquisition of equities and accounting manipulation of dealing with the fund for heroine in 1991 is a typical case of operation risk.

⁸ The M&A of banks made it relatively easy to hide credit risks for a longer period as compared with those days when their magnitudes are small. But such hidden risks may end up with a avalanche of liquidation with a certain time lag.

method of setting the lower limit of the ratio of own capital to total capital, has contributed for the improvement of soundness ratio. But it has reduced the earning potentials by limiting the use of financial leverages. The Basel Committee revised this simple fixed ratio into both the credit and the operation risk-weighted ones to supplement the inherent rigidities of such a simple ratio. It also added the market risk to the revised ratio in 1996 when most banks were actively involved in security transactions since the early 1990s.

The market risk related with transaction account can be divided into general market risk and individual one: the former comprises changes in interest rate, stock price and exchange rate caused by market fluctuations whereas the latter comprises changes in the credit rate of security issuing bodies. The Basel Committee announced a revised version in June 1999 as a means of deterring irregular transactions that were designed to circumvent regulations of the ROC. The Basel II added the operation risk to the credit and market risks in order to cover the possible loopholes of misconduct of individual banks.

The capital regulation is designed to shelter financial institutions from bankruptcy. But it may bring forth some negative effects by increasing financial transaction cost if this regulation is too tight. The BIS introduced a new capital regulation to strike a balance between the stability and extra cost incurred by fully taking into account the possible loopholes of the required ROC.

The Basel II consists in three Pillars. The original Pillar I comprises the minimum regulation on the required ROC. The Pillar II specifies on the role of supervisory board in monitoring the appropriateness of risk evaluation and the suitability of the required ROC. The Pillar III stipulates that each bank is obliged to make a public announcement on the inherent attributes and levels of risk exposures. This last pillar has been reinforced to provide a threshold to meet the imperative need for fortifying the supervision and evaluation on the bank management by the supervisory board and market participants respectively.

2.2.1 Minimum Own Capital Regulation (Pillar I)

The estimating methods on the required ROC and market risk are intact, but those on credit risk and operation one have undergone through substantial changes. The credit risk is evaluated by making use of internal or external credit ratings and the operation one is estimated by taking into account the inappropriate internal decision-making procedures and malfunction of internal system.

2.2.2 Audit of Supervisory Board (Pillar II)

Besides the maintenance of the required ROC, it may be also indispensable to establish the risk management system in order to detect and sterilize various kinds of risks. The Basel II stipulates that supervisory boards are entitled to reinforce necessary measures to the credit officers as a means of restoring the risk management system as well as the appropriate rate of own capital. This implies that both supervisory boards and banks have to probe such external factors of the interest rate risk, the liquidity risk, the strategic and reputation risks, the frequency and duration of business cycles and the

degree of loan concentration.

2.2.3 Market Regulation (Pillar III)

The thrust of the market regulation is the public notice on the levels of inherent risks and the subsequent changes in the required ROC. Such a regulation is designed to supplement the regulation on the required ROC and the auditor role of supervisory board by augmenting the counter-checking roles of market participants.

III. Previous Studies on the Impact of Basel II Accord on the SME Loans in Korea

Most previous studies are concerned with the pro-cyclicality of Basel II and the subsequent effects on the lending patterns of banks on the realms of the corporate banking, housing loans and SME. The critical benchmark in analyzing the impact of Basel II on SME loans in Korea may be the effectiveness of retail credit clause for the loans below 1 billion won. It may be also equally noteworthy to trace out the two main factors of actual operation of SME loans in Korea, i.e., the lending practices or conventions of credit officers and the basic tenet of the supervisory board.

3.1 The BIS Studies

There used to be a mega-trend among banks to reduce risk premiums on loans extended to prime firms with high credit rates. Such a benefit has been also extended to the SME loans since the introduction of the retail finance clause. According to the QIS3, the required ROCs among different financial institutions differ with a wide margin when the internal ratings-based approach (IRB from hereafter) is adopted as compared with the adoption of the standardized approach. The major finding of the QIS3 is that the required ROCs for G-10 nations will be reduced and those for the rest of the world will be increased. This increased wedge may be interpreted by the increased credit and operation risk premiums of the non G-10 nations which outweigh the reduced risk premiums of retail finance.

Basel Committee announced the guidelines on the core principles and methods to fortify the corporate governance in April 2006. It also emphasized improvement measures for the banking activities to enhance transparency by facilitating flows of relevant information among stake-holders.⁹ The BIS asked the Federal Reserve Bank and the IMF to raise interest rates of the U.S. by pointing out the underestimated credit risk.¹⁰ The Basel Committee Accord Implementation Group's Validation Subgroup (AIGV) also provided more detailed measures for the new loan items based on the IRB system.¹¹ Despite such an attempt of AIGV, there is an overall consensus to develop the harmonization on the application of IRB to financial items as well as practices. The BIS report points out that it may be necessary to increase the risk

⁹ This is the reflection of the mega-trend of stressing the corporate social responsibility which has been one of the issues at stake around the world since the litigation of executives of world.com and Enlon company

¹⁰ Economist, June 2005.

¹¹ BIS Quarterly Review, June 2006, p. 81

premium of the asset-backed securities (ABS) in Korea by pointing out the languished role of the credit guarantee corporate fund in Korea since the currency crisis of 1997.¹²

3.2 Previous Foreign Studies

Opinions are divided among the previous foreign studies on the impact of Basel II on the availability and interest rates on the SME loans. Catarinew-Rabell et. al. (2003) argue that the Basel II will exacerbate the business cycles by showing the increased required ROC with the assumption of the on-going trend of repression of late 1990s. They report that the required ROC of G-10 banks will be increased to the extent of 16 to 36 per cent when the internal ratings-based approach is adopted by making use the classified data based on the credit rates on corporate lending of G-10 nations published at the QIS3 of the BIS. Their study implied the contraction of SME loans due to the amplified fluctuation of business cycles and the increased risk premiums on SME loans. But Carpenter, Whitesell and Zakrajesk (2001) put forward a polarized version by maintaining that the magnitudes of the increase in the required ROC will be virtually negligible given the circumstances of the high credit rates of leading corporations assessed by the external credit assessment institution (ECAI).

Hayes and Saporta (2002) argue that there is no pressure on the additional increase in interest rates on loans among industrialized countries because the magnitude of economic capital is larger than that of regulated capital. By the same analogy, it may be quite possible for emerging economies to come across with the increase in interest rates because the required regulated capital outweighs the economic capital in most emerging economies. Powell (2002) maintains that the Basel II allows the extension of credit spreads to developing nations to a greater extent. Reisen (2001) also points out there will be no additional increase in interest rates among emerging economies when the standardized approach is adopted. But it may be inevitable for these banks to incur an up-surge of interest rates when IRB is implemented.

Berger et. al. (1998) analyzes the impact of Basel II on banks on the basis of credit rates between large banks and small ones. According to the Basel II, the required ROC will be reduced to one-third for the case of retail finance as the risk premium is reduced from 50 per cent to 35 per cent for the loans based on the household collateral. As Basel II applies risk premium of 20 per cent to the high credit range of AAA to AA banks and implement adverse risk premium of 47 per cent to 368 per cent to the lower credit range banks, it may be liable for the lower credit banks to incur higher interest cost in procuring external credit or to be overloaded to meet the required ROC. It is highly recommended for the small-sized banks to capitalize the available measures as a means of improving ROC.

3.3 Previous Domestic Studies

¹² The shift of final responsibility of guaranteeing on ABS from the corporate to the government over the period 1997-2001 in Korea demonstrates the severe difficulty to maintain independence of guarantee functions

3.3.1 Korea Development Institute (KDI)

The Basel II assumes that the magnitude of borrowing firms and credit risk have a positive correlation. The QIS3 report states that “banks with a large proportion of retail exposures generally have significantly low capital requirements in the new approaches relative to current levels, reflecting the generally lower risk in this portfolio.” This implies that the credit risks of SME are relatively small magnitudes compared to those of large firms. But Kim and his colleagues (2004) found the inverse relationship between the firm sizes and the associated credit risk by using the multi-factor credit risk model.¹³ They, thus, recommended to the credit officers to adopt a more conservative stance for the extension of the SME loans by taking into account the undercapitalization and poor collateral. They also pointed out that the ROC for related banks will be increased up to 6-8 per cent above the required ROC by Basel II. This finding implies that the implementation of Basal II may bring forth some contraction on the SME loans.

Their study, based on the Quantitative Impact Survey (QIS) data on the SME loans extended by six commercial banks, demonstrated that the average risk premium will be reduced if the Basel II is adopted.¹⁴ This result may be influenced to a greater extent by the drastic decline of risk premiums on the SME loans which are classified into the realm of retail credit.¹⁵ Their result may also be interpreted as a consequence of the increased competition between the banking and non-banking institution because the Basel II comprises several factors of inducing financial institutions to join the retail finance market. They formulate a model by making the ratio of bad debt, the net interest margin and the risk-weighted ROC as endogenous variables which influence the incremental rate of lending. They showed that the magnitude of available loans will be increased by 0.5 per cent per quarterly if the risk-weighted required ROC will be reduced about 6.0 per cent.¹⁶ This projection can be also applicable to the SME loans if there is no change at all in the portfolio of borrowers.

Some papers presented at the special international conference on Basel II held by the KDI in 2006¹⁷ have positive stances by demonstrating the available options for subduing the cyclical nature of the Basel II, the effectiveness of external credit assessment institution and the trivial impact of guarantee fund contraction on the SME loans. This group emphasizes the improvement of infra-structure of financial market such as ‘future-oriented risk management,’ ‘increase in the surplus capital of banks’ and ‘enhancement of the function of credit bureau’ as a means of reducing the pro-cyclical effect of Basle II on bank loans. Hahm, Kim and Kang (2006) argue that the Basel II may contribute to shape a positive environment by buffering the contraction of total guarantee amount on SME loans. Koh and Lee (2006) highlight some of the difficulties for banks in their attempts to find reliable data that may serve as the

¹³ They had 10,000 simulations on the risk exposures reflected on the balance sheet provided by the National Information and Credit Evaluation Investors Service.

¹⁴ This is a commissioned project from the Financial Supervisory Service (FSS). The relevant data were provided by the FSS.

¹⁵ But the risk premium will be increased if the commercial banks adopt the advanced IRB approach.

¹⁶ The quarterly data for this test comprise the 11 commercial banks and 6 local banks over the period the first quarter of 2000- the first quarter of 2004.

¹⁷ The main content of this international conference was edited by Kim and Shin in 2006

statistical basis for calculating operational risk for the advanced measurement approach of IRB. They also point out the imperative need to develop the independent credit assessment institutions which are equipped with those capabilities of reinforcing the fair evaluation before designating the external credit assessment institution (ECAI).

The common threads among negative reactions on the Basel II at this conference are based on the controversies on the appropriateness of Basel II in the context of non-industrialized economies whose financial working mechanisms keep a certain distance from those of industrialized nations. Shin (2006) describes a possible mechanism whereby the adoption of Basel II may amplify the financial cycle. When asset prices rise, balance sheets become stronger. But when banks attempt to restore leverage, this can give rise to bidding up their prices further. He puts forward his worrisome stance on the Basel II by pointing out the possible irrelevance of the assumption that the banks of G-10 nations accrue a substantial profit boosted by the downward adjustment of required ROC on retail finance and house-mortgage loans. He further stresses that the credit risk has an attribute of endogenous factor which is mainly shaped by the responses of credit officers to the challenge of Basel II guidelines.

Nacaskul (2006) of Thailand points out that the Basel II may amplify the pro-cyclical movement through the self-fulfilling process towards the liquidation of banking industry in developing countries. The wedge between the G-10 nations and the rest of nations in this globe is expected to be widened because most variables of Pillar I have been set and coordinated by G-10 nations as a means of increasing the soundness of financial institutions of G-10 nations. He concludes that the institutional challenges refer thus the Bank of Thailand's own institutional capacity, i.e., the capability internally and the credibility externally to engender and enforce Basel II effectively amongst the supervised banks. Ping (2006) of China also points out that it may be premature for developing countries to accommodate the requirements of Basel II as revealed by the QIS3. He also adds that there will be an up-surge of the required ROC among developing countries. His tentative conclusion is that it may be premature for China to implement Basel II despite its heuristic value of enhancing the soundness of banking sector. As a major milestone for banking supervision, Basel II is the way forward for all supervisors globally going forward. But emerging markets including China are best advised not to rush for an artificial adoption of Basel II in light of their own market condition.

3.3.2 Public Research Institutions

Jin (2004) of the Bank of Korea (BOK) argues that banks are liable to amplify the economic cycles on the process of maintaining the required ROC of Basel II by making diverse assumptions on risk-weighted credit ratings on the financial statements of banks. He also maintains that the outstanding lending asset in total asset increases in parallel with the increase of own capital to total capital. Having fully acknowledged the critically important role of counter-cycle measures, Suh (2006) of the BOK reckons that Korea can cope with some negative effects of Basel II by adopting several flexible measures. He

argues that such a pro-cyclical nature of Basel II can be mitigated or subdued by changing the required ROC in accordance with the changes of credit rates or by adopting the flexible operations of the required ROC. Song (2007) of National Institute of Finance argues that the marginal SME may incur adverse effects from the Basel II implementation due to their low credit rates. His finding is partly derived from the probability model of default under the Basel II implementation.

3.3.3 Private Research Institutions

Oh and his colleagues (2006) of the Federation of Korean Industry (FKI) have pursued an empirical verification on the impact of Basel II by using the macroeconomic model of the FKI. Having interpreted the implementation of Basel II as an external financial impulse to the Korean economy, they attempt to estimate the changes in lending interest rates by using the methodology of Reisen (2001). They trace out the changing financial cost of firms with the assumption that banks make adjustment of spreads on lending interest rates in order to maintain the required ROC in Basel II. They resort on the credit view in making an assessment on the effect of monetary policy which attaches importance on the lending behavior of banks by reflecting asymmetric information.¹⁸ They strongly recommend to the SME to explore the alternative measures for financing the SME loans.

Cheng and Cho (2005) of the research department of Industrial Bank of Korea (IBK) analyze the impact of Basel II on the SME loans by using the data on SME loans for the year of 2004 provided by the Financial Supervisory Service (FSS). They classify the risk-weighted asset change (total effect) into the following three categories: the change from the differentiation on required own capital derived from the probability of default (differentiation effect), the change derived from the recognizing methods on the collateral (collateral effect) and the change generated by the default risk exposure of the unused credit quota ceilings (unused quota effect). They arrive at the following conclusions by adding the increased interest rate, which may be caused by the credit risk premium on the unexpected losses to the lending interest rates of banks. Firstly, most banks will take a conservative stance on the SME loans by taking into account the up-surge of the risk-weighted asset up to about 40 per cent under the implementation of Basel II. Secondly, it may be required for both the relevant banks and the supervisory boards to keep a prudential stance for the unused credit quota whose effect is nearly approaching nearly half of the total effect. Thirdly, there will be a wide range of differences in interest rates on the SME loans due to the accelerated risk premiums on the low credit rates. It is noticeable that this research points out the possible adverse effect of Basel II even if the SME loans are classified as retail finance.

IV. Quantitative Analysis on the Impact of Basel II Accord on the SME Loans in Korea

Most previous studies point out that the implementation of Basel II will bring forth a negligible negative impact on the SME loans. But it may be rather difficult to make a blank endorsement on such results

¹⁸ The monetary view insists that the monetary total matters for the analysis of monetary policy.

without substantiating the reactions of the credit officers for the SME loans. Such a lateral approach is based on the lending practices or conventions in Korea whose two major determinants have been the screening process of the credit officers and the basic tenet of supervisory board. This analysis is an extension of the credit approach in which the decision-making process of credit officers with asymmetric information influences the actual operation of Basel II.

4.1 Impact of Basel II on the SME loans in the context of the Korean Economy

The consumer banking in Korea has achieved a remarkable progress compared with the corporate banking since the currency crisis of 1997. It is quite natural for credit officers to extend more credit to households which have quite reasonable collaterals. Most Korean firms are heavily undercapitalized. This trend has resulted in the squeeze of credit to the industrial sector whereas it has resulted in the expansion of credit to the household sector. Under these circumstances most SME, which have low credit rates and relatively poor collaterals, are doomed to incur unfavorable borrowing conditions unless their borrowings are not classified as retail finance. The ratio of own capital to total capital was 39.9 per cent for SME and 53.9 per cent for large firms in 2007. The corresponding ratio of outstanding debt to total capital was 150.8 per cent of SME and 85.3 per cent for large firms.¹⁹

4.1.1 The Vital Roles of the SME for Employment Generation

Most SME in Korea are rather sluggish in investing on the capital goods and core components. They also incur higher production cost due to sub-contracting practices with large firms. The OECD defines the SME in the manufacturing sector whose employment size is below 250 employees. It further classifies this into the micro-enterprise whose employees are below 10, the small enterprise whose employees are below 50 and medium-sized enterprise whose employees are below 250. The share of the micro-enterprise, whose employees are below 10 persons, to total SME in Korea is about 43 per cent which ranks the top among OECD member countries. This implies that most SME in Korea are exposed to the low wage rates and relatively adverse working conditions.

The Small Business Corporation (SBC), whose main function is the promotion of SME, officially announced the important roles of SME in 2006 in the following way. Firstly, they play the vital role in creating jobs in amidst of jobless growth. Secondly, they are the sources for dynamic impetus for growth. Thirdly, they also play a buffer stock to alleviate the widening gap of personal income distribution or the disparity of regional development. It is the same with the United States and the EU for their positive stances which regard the SME as the vital majorities.

4.1.2 Different Patterns in Lending Preferences between the EU and Korea

The risk premium on bank credit is partially influenced by business cycles. This change in turn brings

¹⁹ Statistics of Small & Medium Enterprises for 2009, Korea Federation of Small and Medium Business

forth total outstanding credit adjustment on the process of meeting the required ROC. The credit provision of banks may move to the same direction of business cycles in that credit provision will be expanded in prosperity and contracted in recession. Instead of preparing for the case of meeting the required ROC in accordance with the downward adjustment of credit rate of borrowers, the credit officers are apt to curtailing total outstanding credit instead of increasing it in the recession phase. Such a parallel movement of credit availability may contribute to amplify business cycles.

According to the operation manuals of the Basel II, the risk premium of retail finance and loans for high-credit rates will be reduced while that of loans for lower-credit rates will be increased. The subsequent changes in risk premium render credit officers prefer more stabilized loans. By the same analogy, the credit officers may be keen to reduce loans on the lower-credit rates. There is a stark improvement of risk premium for retail finance in the EU. The risk premium for loans for household collateral and household loans declined to 15 per cent and 25 per cent respectively on the basis of standardized approach and further declined up to 3 per cent to 48 per cent and 5 per cent to 72 per cent respectively on the basis of internal ratings-based approach.²⁰ But a substantial portion of SME loans in Korea are not treated as retail finance due to the low credit rating and high risk premium, thus, they are highly improbable to be treated as retail finance. Most credit officers are reluctant to apply the waiver clause of retail finance to SME loans in order to reduce the possible default rates.

4.1.3 Universal Reasons for the Reluctant Stance on the SME Loans

Doran and Levisky (1997, p. 6) explains universal reasons why most commercial banks are reluctant to extend their loans to SME. Firstly, the transaction cost per unit loan is much higher for SME as compared with that for large firms. Secondly, the provision of SME loans brings forth an additional cost to banks due to the credit evaluation and other monitoring cost after the initial transaction. Most banks ask the extra collateral or guarantee, or alternatively reduce the loan amount as a means of buffering themselves from any kind of asymmetric information. Thirdly, many countries provide the SME loans with low interest rates as an application of egalitarian approach to the SME despite the high default risk of SME. But such a preferential interest rate had been adjusted upward as the capital market liberalization spread over this globe in parallel with the accelerated pace of globalization. Under these changed circumstances, most commercial banks become reluctant to extend SEM loans on a preferential basis as they can increase their profits elsewhere. Lastly, most banks prefer to procure more physical or monetary collaterals as a means of buffering themselves from the adverse repercussion effect from the undercapitalization and vulnerable collaterals.

4.1.4 Need for an Empirical Verification

The concessionary assumption on the inverse relationship between the expected risk premium and the

²⁰ Berger, Allen N. etl, al (2001)

size of firms may be misleading from the viewpoint of financial soundness. This is because such an unrealistic assumption may induce credit officers to set the mandatory regulatory capital below the required economic capital.²¹ The outcome may be the increase in the risk factors of financial system because the mandatory regulatory capital of banks may not be sufficient enough to cover the contingent credit risks. Although Kim and his colleagues (2004) point out that the maneuvering range in the retail finance without a keen competition by pointing out the market segmentation for the SME loans. But most quantitative impact survey (QIS) demonstrate that it may be highly probable for large banks to enter into the SME loans market because the reduction of marginal cost of large banks outweighs the incumbent competitive advantages of small banks. This implies that the credit assessment on the SME loans may become more stringent after a certain phase of collusive behavior between the large and small banks.

4.2 Statistical Hypotheses for Setting up Questionnaires

One of the plausible approaches, which can effectively analyze the impact of Basel II on the SME loans, may be the application of multiple regression models by adding the additional variables of Basel II to those variables which have been already selected as endogenous ones for the analysis of the SME loans. This research adopts the following stages of statistical analysis on the questionnaires on the credit officers because the feasible contour of procuring the relevant information on the SME loans from the Financial Supervisory Service (FSS) is rather bleak.²² Firstly, it formulates null hypotheses based on the endogenous and influential factors of Basel II on the SME loans by exploring the relevant literatures and by arranging interviews with the credit officers who are in charge of extending SME loans, the CEOs of SME, the government officials of the FSS and the managerial staffs of the Bank of Korea. Secondly, it prepares the questionnaires based on these hypotheses and dispatches these questionnaires to the credit officers of the commercial banks as well as special banks. Thirdly, it carries out statistical tests on the collected data. The following hypotheses are drawn by amalgamating important findings of the section 2, section 3 and 4.1 of this section.

4.2.1 Evaluation on the Credit Rate, the Collateral, the Unused Credit Quota and the Operation Risk

Hypothesis 1: The credit officers will evaluate the credit rate, the collateral, the unused credit quota, the operation risk and allowances for bad debts for the extension of SME loans. This hypothesis is formulated by reflecting the endogenous attributes of credit risk. The impact of Basel II may be influenced by the reaction patterns of the credit officers on the waiver clause of retail finance on the SME loans below 1 billion won.

²¹ The 'economic capital' has a similar concept with the 'equilibrium capital' in the flexible acceleration principle in which investment can be interpreted as having such a function of bridging the gap between the equilibrium capital and actual one

²² The procurement of relevant data may be almost impossible. And it may be most likely that the Financial Supervisory Service (FSS) provides very limited data for confidential reasons even if vigorous consultation with the FSS becomes successful.

Hypothesis 1-1: The credit officers will evaluate the credit rate of individual firms before deciding the amount of the SME loans and its interest rate despite the explicit regulation of the Basel II on the application of retail finance to those SME loans below 1 billion won.

Hypothesis 1-2: Despite the regulation of the Basel II and the guidance of the Financial Supervisory Service on the waiver clause on the SMB loans, the credit officers will take into account their priorities by making an objective assessment on the various kinds of collaterals for the SME loans such as the real estate, guarantee on the asset-backed securities and guarantee on credit.

Hypothesis 1-3: The credit officers will reflect the differentiated responsibility of matching their own capital on the evaluation process on the SME loans because the unused credit quota effect nearly approaches up to the half of the total effect generated by Basel II.

Hypothesis 1-4: The credit officers will set up the criteria for the retail finance which are designed to evaluate the operation risk of individual firms by taking into account the high contingency rate of shifting the operational risk from the SME to the bank.

Hypothesis 1-5: The credit officers will confirm the availability of allowance for bad debts as a means of covering the possible financial losses from the SMB loans whose risk premiums are unduly high.

4.2.2 Preferential Treatment on SME Loans based on the Relative Share of Retail Finance

Hypothesis 2: The overall lending conditions to the SME will be improved in parallel with the increase in the relative share of retail finance to the total SME loans.

Hypothesis 2-1: The credit officers are ready to increase the favorable waiver clause of retail finance in parallel with the increase in the share of retail finance to the total SME loans.

Hypothesis 2-2: The credit officers will not provide any preferential treatment to those SME loans which can be classified as retail finance.

4.2.3 Asset Liability Management Strategy of Banks

Hypothesis 3: The actual allocation of credit may be influenced by the asset liability management strategy of banks. There is a trade-off relationship between the provision of SME loans from the unused credit quota designated as retail finance and the possible shift toward the housing loans, which are shielded by the relatively higher physical collaterals as compared with the SME loans, or alternatively to the corporate loans backed by the prime credit rates.

Hypothesis 3-1: The credit officers may divert the unused credit quota of SME loans to the prime customers of large firms or the housing loans with reasonable collaterals as a means of reducing their

default rates.

Hypothesis 3-2: The credit officers may reduce the initial magnitude of the SME loans or alternatively raise the interest rates on the SME loans by taking into account the additional cost for handling the SME loans.

Hypothesis 3-3: The SME loans may be reduced by the stringent application of the credit rates, the collateral and the unused credit quota to the ceiling of lending amount, repayment condition and other sundry expenses for a more minute differentiation on the SME loans regardless of the availability of waiver for retail finance.

Hypothesis 3-4: The credit officers are ready to treat the SME loans as retail finance if the loan applicants have achieved a remarkable progress on transparency in management in the Pillar 3 or have shown a relentless effort to improve transparency.

4.3 Formulation of the Questionnaires and the Statistical Analysis on the Collected Data

4.3.1 The Formulation, Dispatching and Collection of Questionnaires

The draft of questionnaires was based on the hypotheses formulated at section 4.2 and 25 copies of questionnaires were sent to the credit officers of Kookmin Bank, Shinhan Bank, Hana Bank, Korea Exchange Bank, Industrial Bank of Korea and Small Business Corporation (SBC) respectively in the end of May 2007. It was almost impossible to collect all the dispatched copies because the credit officers for the Basel II were rather small numbers at that time. We had successfully received the total of 109 copies until the mid-June 2007. The questionnaires are presented in a simple and succinct way at the Appendix.

4.3.2 The Statistical Analysis on the Collected Data

Actually 108 copies of questionnaires were used for the statistical analysis after discarding 1 copy from the SBC which had more than 5 defectives. The Industrial Bank of Korea (IBK) is a specialized bank for the promotion of SME. But the returned questionnaires of the IBK were lumped together with those of other banks because the IBK had exerted its own autonomy in screening the SME loans. The Small Business Corporation (SBC) actively promotes the SME by extending credit and policy recommendations to the SME. Because of the pro-active stance of the SBC for the promotion of the SME, two populations had been used for this analysis. The first population is shaped by pooling samples of all those banks except the SBC by taking into account the tilted stance for the promotion of the SME. The second population is shaped by adding the samples of the SBC to the first population. It may be much better to collect more questionnaires, but we covered the seven financial institutions among the total nine financial institutions which are allowed to deal with the SME loans. We did not cover the Korea credit guarantee fund and the city bank due to the limited time, but the share of participated credit officers of seven banks

reached approximately two-thirds of the total credit officers of seven banks.²³

[Hypothesis 1-1: Accepted] The question 8 is quoted for the test of the hypothesis 1-1 and the responses to the items of intensity are presented in the table below. The proposition, which admits the reflection of the credit officers on the credit rates of individual firms, is prevalent regardless of the two different populations.

Survey	Items	frequency	Per cent	Survey	Items	frequency	Per cent
Whole	① extremely reasonable	53	50.00 %	Bank	① extremely reasonable	49	50.52 %
	② quite reasonable	39	36.79 %		② quite reasonable	34	35.05 %
	③ not quite reasonable	12	11.32 %		③ not quite reasonable	12	12.37 %
	④ extremely unreasonable	2	1.89 %		④ extremely unreasonable	2	2.06 %
	Total	106	100 %		Total	97	100 %

We apply a statistical test to the above results

Null Hypothesis: $H_0: p \geq 0.5$

Alternative Hypothesis: $H_1: p < 0.5$

(p refers to the per cent of indicating that there is no need to take into account the credit rate.)

We encode the items of ① and ② into a bundle which argue for the need for credit evaluation whereas encode ③ and ④ into another bundle which argue the opposite case. We adopt the z-Test for the hypothesis test as well as per cent test to the population.

Survey	Items	frequency	Ratio	standard error	z-Value	significance probability
Whole	Need to evaluate credit Rate of SME	92	0.87	0.049	-7.58	0.000
	No Need to evaluate Credit rate of SME	14	0.13			
	Total	106	1.00			
Bank	Need to evaluate credit Rate of SME	83	0.86	0.051	-7.01	0.000
	No Need to evaluate Credit rate of SME	14	0.14			
	Total	97	1.00			

The statistical test shows that the significance probability 0.000 is smaller than the significance range of 0.05. Thus the hypothesis 1-1, which states that the credit officers will evaluate the credit rate of SME for the determination of loan amount and interest rates despite the waiver clause of retail finance, is accepted.

²³ Local banks deal with the SME loans but its amount is almost negligible with the nine banks located in Seoul.

[Hypothesis 1-2: Accepted] The question 19 is quoted for the test of the hypothesis 1-2. It is requested for the credit officers to write down the hierarchies of preferential collaterals and ranks are set up by comparing total points which are awarded on the basis of these priorities.

	Collateral items	frequency of first preference	frequency of second preference	frequency of third preference	total points	ranks
whole	① exclusive credit	2	2	6	16	5
	② deposit collateral	61	7	16	213	1
	③ real estate	17	13	23	100	3
	④ credit guarantee	20	52	22	186	2
	⑤ joint guarantee	0	2	1	5	6
	⑥ payment guarantee	3	21	28	79	4
Bank	① exclusive credit	2	2	6	16	5
	② deposit collateral	61	6	12	207	1
	③ real estate	12	10	22	78	3
	④ credit guarantee	17	48	22	169	2
	⑤ joint guarantee	0	2	0	4	6
	⑥ payment guarantee	1	20	25	68	4

The above table shows that the most preferential collateral is the deposit one, while the credit guarantee and real estate collateral ranks the second and third place respectively. We carried out a t-Test for its statistical significance. The preferences of items were (2, 3, 6), thus, 3 points were awarded to item 2, 2 points were awarded to item 3, and 1 point is awarded to item 6. The rests of items (1, 4, 5) were given 0 point as there were no answers. We had a t-Test to confirm the statistical significance and arrived at the following results. It is turned out that the hypothesis on “there are preferences among the credit officers on the kinds of collateral” is accepted as there are statistical significances on all possible combinations.

	Pair	average	t-Value	Standard error	df	Statistical
Whole	①-②	-2.10	-18.18	1.117	93	0.000
	①-③	-0.89	-8.86	0.978	93	0.000
	①-④	-1.81	-27.23	0.644	93	0.000
	①-⑤	0.12	3.20	0.355	93	0.002
	①-⑥	-0.67	-8.97	0.724	93	0.000
	②-③	1.20	12.18	0.957	93	0.000
	②-④	0.29	3.91	0.713	93	0.000
	②-⑤	2.21	19.57	1.096	93	0.000
	②-⑥	1.43	16.29	0.849	93	0.000
	③-④	-0.91	-12.71	0.698	93	0.000
	③-⑤	1.01	8.97	1.092	93	0.000
	③-⑥	0.22	5.17	0.419	93	0.000
	④-⑤	1.93	28.30	0.660	93	0.000
	④-⑥	1.14	21.20	0.521	93	0.000

	⑤-⑥	-0.79	-9.52	0.802	93	0.000
Bank	①-②	-2.20	-18.83	1.087	86	0.000
	①-③	-0.71	-7.84	0.848	86	0.000
	①-④	-1.76	-26.11	0.628	86	0.000
	①-⑤	0.14	3.15	0.408	86	0.002
	①-⑥	-0.60	-7.71	0.723	86	0.000
	②-③	1.48	13.11	1.055	86	0.000
	②-④	0.44	6.18	0.659	86	0.000
	②-⑤	2.33	20.67	1.053	86	0.000
	②-⑥	1.60	16.65	0.895	86	0.000
	③-④	-1.05	-14.71	0.663	86	0.000
	③-⑤	0.85	7.71	1.029	86	0.000
	③-⑥	0.11	2.77	0.387	86	0.007
	④-⑤	1.90	26.59	0.665	86	0.000
	④-⑥	1.16	21.53	0.503	86	0.000
	⑤-⑥	-0.74	-8.59	0.799	86	0.000

[Hypothesis 1-3: Accepted] The question 10 is quoted for the test of the hypothesis 1-3. It is accepted with significance through the t-test.

[Hypothesis 1-4: Accepted] The question 18 is quoted for the test of the hypothesis 1-4. It is accepted with significance through the z-test.

[Hypothesis 1-5: Accepted] The question 11 is quoted for the test of the hypothesis 1-5. It is accepted with significance through the z-test.

[Hypothesis 2-1: Accepted] The question 12 is quoted for the test of the hypothesis 2-1. It is accepted with significance through the z-test.

[Hypothesis 2-2: Accepted] The question 13 is quoted for the test of the hypothesis 2-2. The returned questionnaires are following.

	Specific items	frequency	ratio	Rank
Whole	① because of the low credit rate	47	0.45	1
	② because of poor collateral	13	0.13	3
	③ because of default exposure of unused credit quota	5	0.05	4
	④ because of operational risk of retail business	36	0.35	2
	⑤ others	3	0.03	5
	Total	104	1.00	
Bank	① because of the low credit rate	43	0.45	1
	② because of poor collateral	11	0.12	3
	③ because of default exposure of unused credit quota	5	0.05	4
	④ because of operational risk of retail business	32	0.34	2
	⑤ others	2	0.04	5

	Total	93	1.00	
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According to the questionnaires, two main reasons for not providing the preferential status to the SME are the low credit ratings and the operational risks associated with the retail business. We carried out the Chi-square test for the significance test.

Whole	χ^2	45.495	Bank	χ^2	42.087
	df	3		df	3
	Standard Deviation	0.043		Standard Deviation	0.045
	Significance Probability	0.000		Significance Probability	0.000

It has been turned out that the above frequencies of items from the returned questionnaires are significantly valid by demonstrating the significance probability of 0.000 through the Chi square test.

[Hypothesis 3-1: Rejected] The question 21 is quoted for the test of the hypothesis 3-1. The frequencies from the replied answers are following. It is gathered that the pros and cons on this question are roughly even.

Enquiry Set	Items for answers	Frequencies	Per cent (%)
Whole	① highly probable to divert	50	46.73 %
	② rather intact	31	28.97 %
	③ highly improbable to divert	23	21.50 %
	④ no probability to divert	3	2.80 %
	Total	107	100 %
Bank	① highly probable to divert	42	43.30 %
	② rather intact	29	29.90 %
	③ highly improbable to divert	23	23.71 %
	④ no probability to divert	3	3.09 %
	Total	97	100 %

Applying the statistical test on the above table,

Null Hypothesis: $H_0: p \geq 0.5$

Alternative Hypothesis: $H_1: p < 0.5$

(p refers to the ratio of 'no probability to divert.')

We encoded the answers of ②, ③, ④ into one bracket except the answer of ①, which states 'highly probable to divert.' We carried out the ratio test against the single population by adopting the z-Test. The significance probability exceeds the general significance level of 0.05, thus, the above hypothesis of 'probable to divert' is rejected.

Test	Items	frequency	ratio	Standard deviation	z-Value	Significance Probability
Whole	Probable to divert	50	0.47	0.048	0.68	0.751
	Not probable to divert	57	0.53			
	Total	107	1.00			

Bank	Probable to divert	42	0.43	0.051	1.32	0.907
	Not probable to divert	55	0.57			
	Total	97	1.00			

[Hypothesis 3-2: Rejected] The question 20 is quoted for the test of the hypothesis 3-2 and it is rejected through the z-Test.

[Hypothesis 3-3: Accepted] The question 14 is quoted for the test of the hypothesis 3-3 and it is accepted through the z-Test.

[Hypothesis 3-4: Accepted] The question 15 is quoted for the test the hypothesis 3-4 and it is accepted through the z-Test.

4.4 Conclusions and Policy Implication from the Statistical Results

The statistical analysis demonstrates that those previous studies, which argue for the insignificant effect of the Basel II on SME loans in Korea due to the introduction of waiver clause of retail finance, may be misleading. Despite having fully acknowledged the waiver clause of retail finance on the SME loans in the Basel II Accord, whose amounts are smaller than 1 billion won, most credit officers still maintain their firm stances that they still evaluate the credit rate, the collateral, the unused credit quota and the operation risk in order to collect their credit with low default rates. There is an overall consensus among the credit officers that it may be indispensable for them to confirm the extent of preparation on allowances for bad debts as a means of collecting their credit for the possibly abrupt decline of credit rates of their SME customers.

The rejection of the hypothesis 2-1 implies that the credit officers are not ready to offer more favorable conditions on the SME loans although their maneuvering ranges are increased boosted by the waiver clause of retail finance. The acceptance of hypothesis 2-2 further shows that the credit officers are reluctant or hesitant to provide beneficial terms to the SME loans.

The rejection of the hypothesis 3-1 highlights that it may be highly improbable for the credit officers to divert the SME loans to the prime customers of large firms or the housing loans. This rejection may be also derived from the substantial increase in housing loans and the increased corporate capability of direct finance by making use of initial public offerings at the global stock exchanges. It also has such a policy implication that the credit officers are neither providing a breakthrough package of preferential treatment of the SME nor diverting the remaining credit quota for SME loans for housing loans or corporate loans enthusiastically. The rejection of the hypothesis 3-2 implies that the credit officer do not surcharge the extra cost of transaction on the SME loans by taking into account the preferential treatment on the SME loans regardless of their affiliations to the special banks such as the industrial bank of Korea (IBK) or to the commercial banks.

The acceptance of the hypothesis 3-3 points out that there will be a widening wedge between the prime

customers and the low rate ones with respects to the SME loan availability, the corresponding interest rates and the other borrowing terms. Put this in another way, the credit and operation risks matter with a wide margin among the SME. It is noticeable that the credit officers have a positive stance on the corporate social responsibility (CSR) and business ethics which emphasize the imperative need of reflecting the interests of stake-holders by increasing transparency through public notice. The acceptance of the hypothesis 3-4 is a good symptom for the enhancement of CSR among the SME because the banking sector is ready to nurture those SME that abide by the CSR or business ethics. Such an endeavor may contribute for the nurturing for the enhancement of brand equity of Korea without which is almost impossible to increase value-added content significantly.²⁴

V. General Conclusions and Policy Implication

Most previous studies on the impact of Basel II on the SME loans have contributed for the possible new development by adopting multiple regression models by setting new criteria of risk-weighted credit rates. Most foreign studies emphasize the available policy options for subduing the possible amplification of business cycles or the beneficial effect of the waiver clause related with the SEM loans less than 1 billion won. Most domestic studies also provide a wide range of policy implications by augmenting new factors of Basel II Accord to the general equilibrium model. The international conference on Basel II held at the KDI in 2006 have produced excellent papers on the impact of Basel II on the financial market, the business cycles and the SME loans. The research carried out by Cheng and Cho (2005) of the research department of Industrial Bank of Korea (IBK) highlight the possible contraction of the SME loans caused by the up-surge of the risk-weighted asset to the extent of 40 per cent.

This paper carries out the statistical analysis on the raw data of questionnaires collected from the credit officers. Because of the difficulty on the time series data on the SME loans from the Financial Supervisory Service, this paper formulates the most plausible hypotheses in the context of the Korean economy by having an in-depth interview with those responsible expertise in the commercial banks, the special banks, the Bank of Korea, the Financial Supervisory Service and the Small Business Corporation. The questionnaires, which supplement several missing aspects in previous studies, were dispatched to the credit officers, who work on the frontiers of extending the SME loans, and collected in a due time. A statistical analysis has been carried out by making use of the statistics from the collected materials.

The statistical analysis on the lending patterns of SME loans augmented the Basel II Accord demonstrates that the SME loans in Korea may be contracted to a significant level unless some remedial measures are introduced to sterilize some negative effects from the implementation of the Basel II Accord. It is gathered that most previous studies, somehow, underestimate the constraints of lending conventions and the special business environment of the SME in Korea, which bring forth some negative repercussion

²⁴ The real wedge between the Toyota and Hyundai motorcar groups can be condensed into the brand equity whose components are technological innovation, relationship with the stake-holders and corporate social responsibility. The production cost and total quality management also matters, but they are the secondary factors

effects despite the introduction of waiver clause of retail finance. These idiosyncratic factors in the context of the Korean economy comprise the high priority on credit rates and collaterals, the undercapitalization and high debt ratio to total capital of most SME, and the relatively high delinquency ratio of SME.

We can identify the overall landscape on the actual operation on the SME loans by arranging several field interviews on expertise groups on the Basel II over the period April-May 2009. Despite the initial plan of implementing a blanket rule of Basel II, it is allowed for the credit officers to suspend the full application of the waiver clause of retail finance on a stepwise approach. This suspension is a tentative measure which is derived from the admittance among the credit officers of banks and the CEOs of SME that 1 billion won is not a small amount by any standard to most Korean SME. It is, thus, highly recommended to implement this waiver clause on a stepwise approach. For instance, the waiver clause of retail finance for the Industrial Bank of Korea was scheduled to apply to those SME whose assets are greater than 0.5 billion won and whose outstanding loans are smaller than 0.3 billion won. But the global financial crisis erupted from the United States in September 2008 render the implementation of Basel II halted at present by taking into account the critically important role of SME for the employment generation. All the six financial institutions, on which the questionnaires for the statistical survey has been dispatched and collected, are not such positions to take stringent stances on the SME loans. The basic tenet of the supervisory board attaches its utmost importance on the employment generation of SME as a means of reducing the unemployment rate like the fire brigades for bailing out SME from liquidation. It is expected that the Basel II may be implemented in accordance with the original schedule of the supervisory board when the Korean economy is restored on the right track in terms of economic stability. But nobody has any concrete idea when the Korean economy will be out of the tunnel of on-going global financial crisis.

The imminent corporate strategy and public policy for accommodating the Basel II Accord in Korea may be the development of alternative financial sources for the SME. Such a development is beyond the scope of this paper, but it is highly recommended to explore such measures for both commercial banks and the SME because the role of SME in the recession phase may be critically important with respect to the employment generation, the value-added content and the possible agglomeration effect through vertical integration with conglomerates.

Most professionals on macroeconomics and financial management have been proud of themselves to a certain sense in that they have endeavored vigorously to pioneer the frontiers of financial world to achieve the sound management of banking system in amidst of uncertainties and unexpected external impulses. But the current financial crisis tentatively provide a hindsight that they have attempted it in vain. The remaining problem may be how to cope with the current financial crisis and global imbalance without incurring additional cost to the financial and real sectors. There is nothing wrong inherently with the Basel II Accord except the unavailability of providing the grace period for emerging economies,

which may work as a shock absorber to a certain time period. It is highly recommended for the credit officers of banks, the staffs of supervisory board and the CEOs of SME in Korea to strike a balance between the extension of SME loans based on the viability of industrial adjustment and the maintenance of soundness of banking sector. The problem of extending the SME loans in a more effective way still remains in Korea and this problem may be the universal one to both industrialized and emerging economies.

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[Appendix] Questionnaire on the Impact of Basel II on the SME Loans

This survey is one of the projects of the Seoul European Institute at the Konkuk University on the "Comparative Analysis on the Promotion Scheme of the Small and Medium Enterprises between the EU and Korea." We are pleased to collect and to present the valuable opinions of the credit officers on the possible impact of the Basel II Accord on the SME loans. You don't need to worry at all about the confidentiality of this survey because your opinions will be treated as anonymously and they will be used only for the statistical analysis. We look forward to accommodating your considerate cooperation which may contribute for the nurturing of the overall development of the SME in Korea.

(1) What kind of measures will be adopted for your bank if the Basel II will be implemented in 2008?

- ① the standardized approach from the beginning ② the foundation IRB from the beginning
 ③ the advanced-IRB consistently (IRB refers to the Internal Ratings-Based Approach)

- ④ shifts from the standard approach to the foundation-IRB and advance IRB gradually
- ⑤ initially adopt the foundation-IRB and shifts to the advanced-IRB gradually

(2) What kind of impact will be accrued to the SME loans of your bank if the Basel II is implemented in 2008?

- ① the SME loans will be contracted ② the SME loans will be intact
- ③ the SME loans will be increased ④ rather difficult to anticipate the loan magnitude in advance

* Please move to question 3 if you choose ①, move question 4 for the choice of ③ and move question 5 for the choice of ④.

(3) What will be the major factors for the contraction of the SME loans?

- ① the reduction in the SME loans whose credit rates are low
- ② the increase in own capital to cover the unused credit quota
- ③ the increase in own capital caused by the additional operation risk
- ④ the increase in transaction cost to supplement the Basel II regulations on SME
- ⑤ specify other factors in the blank if it is deemed necessary ()

(4) What will be the major determinants for the expansion of the SME loans?

- ① the application of retail finance to the SME loans below 1 billion won
- ② the downward adjustment of asset correlation coefficient on the SME whose turnover is less than 60 billion won
- ③ the collateral effect arising from the different methods of evaluating collaterals
- ④ the credit derivative items designed for reducing the credit risk ⑤ specify other factors ()

(5) On what grounds do you reckon the difficulty of anticipating the impact of Basel II on the SME loans?

- ① the ambivalent stances on the mixed effects between the positive effect from the inclusion of retail finance and the negative effect on the exacerbated credit rates, the collateral and the unused credit quotas
- ② the possible limit on the application of Basel II caused by negative impulses from abroad
- ③ the difficulty to define the mutual interactions between the pro-cyclical effect and the SME loans
- ④ the collection of the SME loans during the adjustment process for the drastic downturn of collaterals on housing loans due to the burst of bubbles ⑤ specify other factors ()

(6) What kind of impact will be brought forth on the SME loans by the introduction of waiver clause of retail finance for the SME loans below 1 billion won?

- ① the SME loans will be increased stimulated by the reduced risk weight
- ② the SME loans will be reduced because of the stringent credit evaluation on retail finance

- ③ the SME loans will be reduced because of the stringent collateral evaluation on retail finance
- ④ the SME loans will be reduced to avoid the possible incidence of operation risk of SME to banks
- ⑤ specify other reasons ()

(7) How is your personal opinion as a credit officer for the necessity to make a distinction on the credit evaluation between the SME loans with the waiver of retail finance and the remaining SME loans?

- ① provide preferential treatment on the loans classified as retail finance
- ② provide no preferential treatment even if classified as retail finance
- ③ provide preferential treatment on the ordinary SME loans
- ④ make an assessment on the credit rate, the collateral and the unused credit quota even if the SME loans are classified as retail finance
- ⑤ specify other reasons ()

(8) What are your personal judgments on the actual practices of the credit officers who make the credit evaluation on the SME loans regardless of the application of the retail finance clause of Basel II?

- ① quite reasonable ② a little bit reasonable
- ③ a little bit reasonable ④ quite unreasonable

(9) Are there any economic rationales for the credit officers to make an assessment on the collaterals for making adjustments on the magnitudes of the SME loans that are classified as retail finance?

- ① quite reasonable ② a little bit reasonable
- ③ a little bit unreasonable ④ quite unreasonable

(10) How do you think on the rationale to take into account the differentiated treatment on the increased portion of own capital caused by the unused credit quota in retail finance when the effect of unused credit quota overwhelms the combined effect of differentiated effect and collateral effect. The unused credit quota emerges the additional exposure of unused credit quota to total credit ceiling whereas the differentiated effect emerges from the segmentation of the required ROC formulated by the probability of default based on the bands of classified credit rates.

- ① quite reasonable ② a little bit reasonable
- ③ a little bit unreasonable ④ quite unreasonable

(11) It may be reasonable for the credit officers to confirm the availability of allowances for bad debts as a means of covering the possible financial losses from the SMB loans whose risk premiums may be upsurged in parallel with a possible abrupt decline in credit rates.

- ① quite reasonable ② a little bit reasonable
③ a little bit unreasonable ④ quite unreasonable

(12) Stimulated by the decline in the weighted risks, the overall lending conditions to the SME will be improved in parallel with the increase in the relative share of retail finance to the total SME loans.

- ① quite reasonable ② a little bit reasonable
③ a little bit unreasonable ④ quite unreasonable

(13) What are the main reasons for not providing a preferential treatment on the SME loans which are classified as retail finance?

- ① because of low credit rates ② because of the vulnerable collaterals
③ because of the default exposure of the unused credit quota
④ because of the relatively high operational risk of the SME ⑤ Others ()

(14) The SME loans may be reduced by the stringent application of the credit rates, the collateral and the unused credit quota to the ceiling of lending amount, repayment condition and other sundry expenses for a more minute differentiation on the SME loans regardless of the availability of waiver for retail finance.

- ① most likely to do so ② likely to do so
③ unlikely to do so ④ most unlikely to do so

(15) The credit officers are ready to treat the SME loans as retail finance if the loan applicants have achieved a remarkable progress on transparency in management in the Pillar 3 or have shown a relentless effort to improve transparency.

- ① quite reasonable ② a little bit reasonable
③ a little bit unreasonable ④ quite unreasonable

(16) What will be the impact of Basel II on the lending interest rates based on the credit rates?

- ① the interest gap based on the credit rates will be widened
② it will have a meager effect on the interest rate gap
③ the interest gap based on the credit rates will be reduced ④ specify other cases ()

(17) What will be impact of Basel II on the lending interest rates of banks?

- ① it will increase the lending interest rates on the SME loans
- ② it will have a meager effect on the interest rate gap
- ③ it will decrease the lending interest rates on the SME loans
- ④ specify other cases ()

(18) It may be necessary for the credit officers to set up the criteria for the retail finance which are designed to evaluate the operation risk of individual firms by taking into account the high contingency rate of shifting the operational risk from the SME to the bank.

- ① quite reasonable
- ② a little bit reasonable
- ③ a little bit unreasonable
- ④ quite unreasonable

(19) What is the most preferable collateral for the case of implementing the Basel II? Please choose the three items in accordance with your rankings of priorities.

- ① exclusively credit
- ② deposit collateral
- ③ real estate
- ④ credit guarantee
- ⑤ joint guarantee
- ⑥ payment guarantee
- ⑦ others

(20) The credit officers may reduce the initial magnitude of the SME loans or alternatively raise the interest rates on the SME loans by taking into account the additional cost for handling SME loans.

- ① the SME loans will be reduced due to the increase in transaction cost
- ② it will be rather intact
- ③ it will be increased despite the increase in transaction cost
- ④ it will not reduced significantly even if the transaction cost is transferred from banks to the SME

(21) The credit officers may divert the unused credit quota of SME loans to the prime customers of large firms or the housing loans with reasonable collaterals as a means of reducing their default rates.

- ① it is highly probable to divert
- ② it will be rather intact
- ③ it is highly improbable to divert
- ④ there is no probability to diver

Resource Partitioning in the Telecom Industry: Institutional and Technological Influences on Evolutionary & Strategic Mechanisms

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Strategic activities in the generalists'/specialists' positions represent the role of adaptation. From an organizational ecology perspective, previous studies have almost exclusively investigated environmental selection processes in resource partitioning, while the role of adaptation was very much discounted. I hypothesize how incumbent generalists' adaptive strategies influence resource partition outcomes with large and small sized firms' differential survival rates in the US telecom industry context. This study further investigates the component of resource partitioning mechanism defined as "adaptive resource partitioning mechanism" with two firm-level strategic activities – alliance and M&A. These firm-level strategic activities interact with institutional and technological changes.

Track: 9. Relationships between Large and Small Firms

Supplier-Customer cooperation, relationship development and supplier's profitability

by Marko Kohtamäki and Jukka Vesalainen

By focusing on the effects of relational capital, relationship structures and suppliers' relationship specific investments on customer relationship development and also on the effect of customer relationship development on suppliers' profitability, the study contributes to the discussion on the benefits of networking in an industrial setting. The study analyses a quantitative dataset of 84 small and medium-sized subcontractors and their 253 customer-relationships. The results show 1) the direct effects of relational capital and relationship specific investments on relationship development, 2) the interaction effect between relationship structures and relational capital and 3) the impact of relationship development on suppliers' profitability.

Introduction

Value chain integration has been a popular topic for both practitioners and researchers since the late 1980s. Over the past two decades, researchers have shown an increasing interest in value chain integration especially in the research field of buyer – seller relationships, which are seen to develop from “arm’s length relationships” into long-term partnerships (Thorelli, 1986). Scholars of organizational economics, organization theory, strategic management, relationship marketing and supply chain management have all addressed the theme, each from their specific viewpoints. Findings from the prior empirical research show that value system integration has certain advantages in comparison to any purely market-based organization of the value system.

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Research on supply chain management has revealed operational performance improvements especially in terms of better quality, shorter lead times and JIT delivery improvements (Terpend, et al. 2008). Marketing research from relationship marketing and customer relationship management has focused on joint value creation between the buyer and seller in integrated business relationships (Walter, Ritter and Gemünden, 2001). Research originating from the new organizational economics, especially the relational contracting approach (MaCaulay, 1963) have built on relational capital, and especially on trust, as a factor that decreases transaction costs (Sako, 1992) and enables relationship learning (Selnes and Sallis, 2003). In this study we explain relationship development by relational capital, relationship structures and relationship specific investments and furthermore, supplier's profitability by relationship development.

An inter-organizational relationship is a complex combination involving both ex ante cooperation, to jointly create value, and ex post self-interest bargaining to claim value (Ghosh & John, 1999; Subramani, 2004). Due to the fact that global competition has increased buyers' interest in using market mechanism to govern suppliers, and that buyer-supplier relationships are often asymmetric with the power-dependence position favoring the large industrial customers, there is reason to be concerned for the survival of smaller suppliers (Gomes-Casseres, 1997; Forrest, 1990). However, prior studies have shown relatively little interest in suppliers' performance (and especially that of small and medium sized suppliers) within value systems. For example, a recent literature review of small business networking (Street & Cameron, 2007) lists and analyzes 218 research papers published between 1990 and 2002. The number includes only a few papers dealing with small/large firm relationships, and only a few of those detail SME successes in partnerships with a larger customer company. Meyer et al. (1997) for ex-

ample found that deeper relationships with larger firms that have integrity and are trustworthy may be advantageous for smaller companies in terms of survival. Studies analyzing the potential pitfalls of SME/large firm partnerships are relatively more common. The dangers of being appropriated by larger firms (Alvarez & Barney, 2002, 2001) and losing control in a partnership with a larger firm have been well documented (Gomes-Casseres, 1997; Forrest, 1990). There is also some evidence that overdependence on any single relationship can weaken a small firm's overall performance (Miles, Preece & Baetz, 1999; Larson, 1991). Hence, there is little evidence in existence on the impact of customer relationship development on suppliers' profitability.

Prior research provides some evidence of the antecedents of relationship development. Prior scholars emphasize the role of relational capital, relationship structures and relationship specific investments. Relatively little evidence exists on the effects of these factors on relationship development. Even if strong case-based evidence exists (Dyer and Hatch, 2004; Liker and Choi 2000; Sako, 2004), previous literature lacks quantitative empirical evidence on the role of these factors on relationship development (Holmqvist 2003) and particularly, as relationship development is measured in this study as an outcome variable (e.g. the development of productivity in the relationship). Particularly sparse is the research concerning the moderating role of relational capital, which we also intend to study. We suggest that relational capital moderates the link between relationship structures, relationship specific investments and relationship development.

Our research task is two-fold: Firstly, we explain relationship development by relational capital, relationship structures and relationship specific investments, and study whether relational capital moderates the relation of relationship structures, relationship specific investments and relationship development. Secondly, we intend to reveal the

advantages of supplier's engagement in integrated partnerships with their key customers by explaining the connections between suppliers' profitability and the development of suppliers' most important customer relationships. More specifically, we construct our research question as follows: 1) to what extent does integration increase relationship development (in terms of improved costs efficiency, quality, delivery accuracy and the use of capital), and 2) to what extent does relationship development affect a supplier's profitability? Our data are drawn from 84 companies and 253 business relationships from the Finnish metal and electronics industries. To test our research model, we apply hierarchical regression analysis and a moderation model. We are attempting to add to the body of knowledge found in the literature of value system integration in general. Our special interest is in manufacturing partnerships between smaller suppliers and larger industrial customer firms, which operate mostly in international markets.

The article continues as follows: after these introductory remarks, the second section reviews the literature on relationship integration and sets out five hypotheses on the impact of relationship integration on relationship performance and the effect of relationship performance on a supplier's profitability. The third section describes the conceptualization and methodology of this study and the fourth section presents the results of the empirical study. After the results section, a discussion follows underlining the implications for further research as well as for managerial practice.

Theory development and hypotheses

Value system integration is by no means a simple phenomenon, and perhaps because of that, researchers do not share a common view. The present study focuses on the effects of suppliers' customer relationship integration on relationship development and

furthermore, on suppliers' profitability. We suggest that relationship integration, in other words, relational capital, relationship structures and relationship specific investments facilitate relationship development, which furthermore increases relationship performance and eventually suppliers' profitability.

Prior scholars have conducted only a little empirical research on the benefits of suppliers' customer relationship integration (Kalwani & Narayandas, 1995; Barringer, 1997; Vickery, Jayaram, Droge & Calantone 2003; Kulp, Lee and Ofek, 2004; Subramani, 2004; Terpend, et al, 2008). The study most closely akin to our research interest is that of Kalwani & Narayandas' (1995) on the advantages of long-term customer relationships to suppliers. According to their study, suppliers favoring long-term customer relationships outperform suppliers using a transactional mode in sales growth, inventory turnover and profitability (ROI). According to some prior studies, an economic downturn favors the suppliers using long-term partnerships. For example, the empirical results from Frohlich and Westbrook (2001) show that firms that are integrated with both their up- and downstream perform better than non-integrated firms in terms of marketplace measures (market share, profitability, ROI), productivity indicators (e.g. manufacturing lead time, delivery lead time and labor productivity), and non-productivity indicators (such as customer service, customer satisfaction and supplier quality). Also Kulp et al. (2004) find that manufacturers who employ various information integration techniques benefit from these practices in terms of profit margins. It seems that collaborative practices especially, such as vendor-managed-inventory, somewhat explain manufacturer profit margins.

The present study argues that supplier's increased profits partially result from developments that occur in key-customer relationships. The concept of relationship develop-

ment is grounded in network and relationship learning research and thus based on the organizational learning theory. Network learning research defines learning as either cognitive or behavioral change (Knight, 2002). In this study, we apply the latter and define learning as relationship development, which is measured as an outcome variable in terms of development in productivity, quality, order-delivery accuracy, and efficiency in the use of capital. Prior studies have emphasized the role of learning in business networks arguing that while relationships in networks are difficult to switch, organizations need management skills to support learning in relationships. Thus, due to the recognized significance of this phenomenon in business networks, the number of studies conducted in this field has increased in recent years (Holmqvist, 2003). However, there is only a limited number of empirical studies analyzing the antecedents of learning in business relationships and networks. For example, Chang and Gotcher (2007) studied the effects of relational capital and relationship specific investments on relationship learning. According to their study, both relational capital and relationship specific investments do increase relationship learning, and relational capital does facilitate the relationship between relationship specific investments and learning. Also Claro, Hagelaar and Omta, (2003; See also Kohtamäki et al., 2006) ended up emphasizing the significance of trust as they showed that trust increases joint problem solving and furthermore that joint problem solving explains supplier's sales growth and improvements in customer satisfaction.

The impact of relational capital, relationship structures and relationship specific investments on relationship development

Some prior studies have analyzed the effects of relational capital and, in particular, trust on relationship learning (Chang and Gotcher, 2007; Selnes and Sallis, 2003) and suggest that it is an important antecedent of learning. Relational capital references trust, open interaction and a feeling of shared destiny (Adler, 2001). The concept of relational capital is based on the social capital approach (Tsai and Ghoshal, 1998) and is said to affect business-relationships in numerous ways. According to prior studies relational capital and in particular trust may decrease transaction costs, increase relationship commitment, knowledge sharing and learning (Claro et al., 2003; Håkansson, Havila and Pedersen, 1999; Sako, 1992). In this study, we focus on the impact of relational capital on relationship development. The effect that relational capital has on learning is based on the interaction that trust facilitates and which then enables information sharing and new knowledge creation (Dyer & Chu 2003; Kale, Singh and Perlmutter, 2000; Larson, Bengtsson, Henriksson and Sparks, 1998). As relational capital has also been found to increase the commitment to the relationship, we conclude that relational capital may play an important role in a joint development process. Thus, by increasing information sharing and relationship commitment, relational capital facilitates joint development processes and also development and learning within the relationship. Thus:

H1a. The greater the extent of relational capital, the higher the level of relationship development.

The concept of relationship structures is based on organization theory. We define relationship structures as structural bonds between the supplier and customer, that is, IT-systems, process integration and ways of working established between the companies

(see also Zinn and Parasuraman, 1997; Bensaou and Venkatraman, 1995; Kothandraman and Wilson, 2000). Prior research literature lacks empirical evidence on the impact of relationship structures on relationship development, but some studies seem to suggest that relationship structures facilitate social interaction between network partners that furthermore has a positive impact on learning in relationships and networks (Cai, Yang and Hu, 2008; Dyer and Nobeoka, 2000; Preiss and Murray, 2005). For example, Adler and Borys (1996) argue that enabling hierarchical structures may support interaction through regularly arranged development meetings or supplier audits. Formal structures provide a platform for interaction that may increase knowledge sharing, enable joint problem solving and hence relationship development (Cai et al. 2008; Claro et al., 2003).

H1b. The greater the extent of structural integration in the relationship, the higher the level of relationship development.

Prior studies suggest that relationship development often requires investments that are relationship specific (Liker & Choi 2000). The present study defines supplier's relationship specific investments as assets that are dedicated to a particular relationship and are thus relatively difficult to apply in other customer relationships (Dyer and Singh, 1998; Williamson, 1985). According to the resource-based view, various resources, such as tools and machinery, human capital or organizational culture, create an important source of competitive advantage (Dyer and Singh, 1998). Based on the resource-based view, researchers argue that relationship specific investment may strengthen the supplier's resource-base and engage the supplier in a process of relationship develop-

ment as the deployment of resources requires learning from the organizational members (Chang and Gotcher, 2007; Liker and Choi 2000). Since suppliers' relationship-specific investments strengthen the suppliers' resource-base, they may also improve the suppliers' ability to serve their customers. In addition, relationship specific investments may facilitate relationship development by engaging the organizational members from both sides of the relationship in a learning process in which the investments are deployed (Liker and Choi, 2000). For example, Liker and Choi (2000) argue that deployment of resources sets learning targets for organizational members that may furthermore facilitate learning. Thus, it is evident that relationship specific investments may have a positive effect on relationship development.

H1c. The greater the extent of relationship specific investments, the higher the level of relationship development.

The moderating role of relational capital on the relationship between relationship specific investments, structural capital and relationship development

Prior studies suggest that learning requires interaction facilitated by the relationship structures (Aulakh & Kotabe 1997). However, the impact of relationship structures on relationship development may be facilitated by relational capital, that is, trust, open interaction and a feeling of shared destiny, which enable information sharing between both partners and thus facilitate relationship development (Adler, 2001). In other words, without relational capital, the interaction that hierarchical structures enable, does not take place or distrust hinders information sharing in meetings and learning does not occur. Following on from Adler and Borys (1996), we suggest that relational capital facilitates the effect of relationship structures on learning. We suggest that relational capital

may have an enabling role within hierarchical structures, where it is trust that facilitates information sharing. Without relational capital, hierarchical structures may only turn out to be coercive elements that disable learning and development. Hence, we suggest that relational capital moderates the relationship between relationship structures and relationship development.

H2a. The greater the extent of relational capital, the greater is the impact of structural capital on relationship learning.

Scholars have also argued that the impact of relationship specific investments on relationship development needs to be facilitated by relational capital (Chang & Gotcher 2007). Prior studies argue that relational capital helps partners to extract the value from suppliers' relationship specific investments, since open interaction enables information sharing (Tsai & Ghoshal, 1998). Information sharing secures the common understanding about the relationship resources that supports resource deployment. Thus, relational capital enables open interaction and information sharing, supports deployment of suppliers' relationship specific resources and increases the positive effect of relationship specific investments on relationship development (Adler, 2001; Chang and Gotcher, 2007). Hence, we suggest that relational capital moderates the relation between relationship specific investments and relationship development.

H2b. The greater the extent of relational capital, the greater is the impact of the relationship specific investments on relationship learning.

Relationship development and supplier's profitability

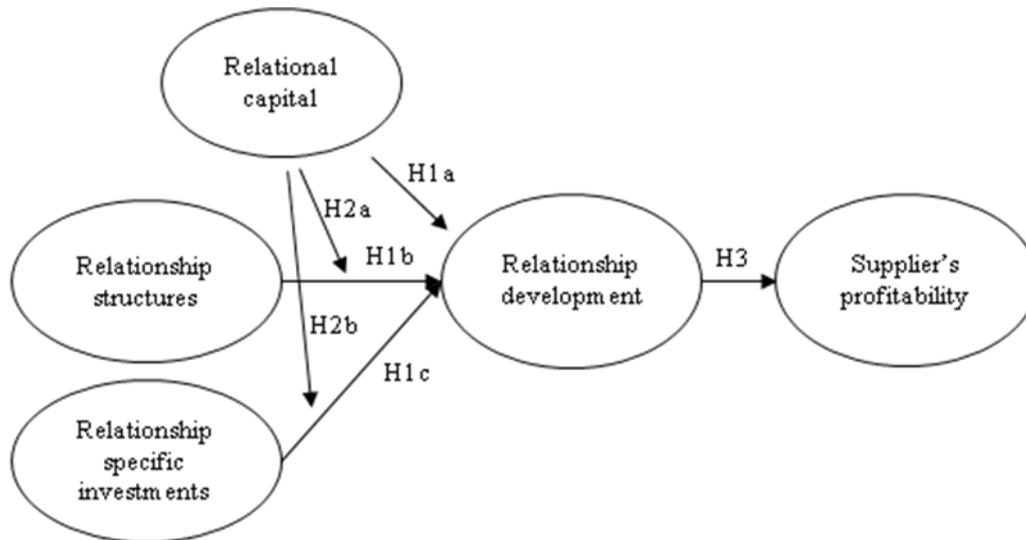
Scholars argue that the discussion about the benefits of partnerships and strategic networks lacks empirical evidence. Prior studies reveal only a little evidence on the benefits of partnerships to a small supplier. However, the theory of partnerships and networks suggests that this type of inter-organizational form should provide benefits for both the customer and supplier by decreasing transaction costs and facilitating learning and hence by increasing performance in the relationship (Sako, 1992). Following on from the literature on partnerships and networks, the present study suggests that while relational capital, relationship structures and relationship specific investments facilitate relationship development (Chang and Gotcher, 2007), relationship development should in the spirit of win-win increase also small suppliers' gross margins and profits. Groves and Valsamakis (1998) suggest that if the relationship between customer and small supplier is fair and based on a win-win principle, the development of the customer relationship should decrease the costs of the relationship and hence positively affect the supplier's profit. Hence, we suggest the following hypothesis:

H3. The greater the extent of relationship development in customer relationships, the higher is the level of supplier profitability.

The present study focuses on the relationship between the different elements of cooperation, relationship development and supplier's profitability. We argue that while relational capital, relationship structures and relationship specific investments may explain relationship development, relationship development also positively influences suppliers' profitability. Figure 1 presents the research model and summarizes the hypotheses of this study.

Figure 1

Research model of this study



Research methodology and data

Data collection, response pattern and respondents

The data were collected from 84 business units in the Finnish metal and electronics industries. The sample data consisted of details of 252 customer relationships of 84 subcontracting companies. The data sample was drawn from a database operated by the Finnish Technology Industry, which consists of 1060 of industrial companies. This counts for 56,3 % of the whole population of firms in the Finnish metal and electronics industry concerning the firms employing more than 10 employees. Out of the original database (1060) 342 companies were identified as subcontractors in cooperation with industry experts from the Finnish Technology Industry. Our aim was to identify a set of firms which as good as possible represent industrial subcontractors. The task was not easy, because there were lot of firms doing subcontracting only as a part of their total business activity. The pre-selection was, however, quite successful and only 5 cases of

the received responses were omitted due to low relative amount of subcontracting of total turnover. Thus, the data sample consisted only of small or medium-sized subcontracting companies. The relative amount of subcontractors' sales to the three most important customers was 66,5 % on average. On that basis we expect relationships having considerable impact on subcontractors' performance.

We chose one respondent from each company (CEO), who was asked to analyze three business-relationships which produced 252 supplier-customer relationships. The respondents chose which business relationships to evaluate having been asked to choose the customer relationships they felt were the most important for their companies. Thus, the present study defined "partnership" as an important long-term customer-relationship (MaCaulay, 1963; Ploetner and Ehret, 2006).

The average size of suppliers was 63,0 employees ranging from 9 to 278. The customer companies were typically large companies (over 500 employees) doing business in international markets. Only in two cases all the three most important customers were functioning only in domestic markets.

The study used an electronic web-based questionnaire to collect the data. Data collection was supported by telephoning the respondents at random. In total, 150 companies were contacted by phone, and the methods produced a very satisfactory response rate of 25 %. The questionnaire data were collected in autumn 2006.

Methods and data analysis

The present study analyzes the data by using hierarchical regression analysis, and conducts the analysis in three phases. In the first phase, the control variable (supplier's size) was entered into the regression model. The second phase adds the independent variables (relational capital, relationship structures, and relationship specific invest-

ments) to the research model to analyze the direct effect of all the independent variables. In the third phase, the interaction terms (relationship structures * relational capital and relationship specific investments * relational capital) were entered to test whether the relational capital moderates the relation between relationship structures, relationship specific investments and relationship development. In the fourth phase, we tested whether relationship development explains suppliers' profitability and again controlled supplier size.

Measures

The measurement items that this study uses have either been developed based on those used in earlier studies or specifically for this study. The construct scales and their sources are reported in appendix B. Relational capital, relationship structures, relationship specific investments and relationship development were measured by a Likert-scale (1=fully disagree, 5=fully agree) items and supplier's performance by return on investment. In this section, we will introduce the items we applied. Reliability and validity of all items is evaluated by Cronbach's alpha (Threshold value $>.7$), composite reliability ($>.7$), average variance extracted ($>.5$) and item loadings ($>.6$) (Chin, 1998; Fornell and Larcker, 1981; Nunnally, 1978). Researchers also check the data for common method bias and multicollinearity.

The study measures relational capital with three items that reflect the theory of relational capital (Chang & Gotcher 2007). Items measured trust, openness of interaction, and feeling of shared destiny. The items exceed all the threshold values, since the Cronbach's alpha value is .82, the composite reliability value .90 and the average variance extracted .74. Also all the item loadings exceed .6, which can be considered satisfactory.

Relationship specific investments were measured with three items reflecting various types of investments, namely, investment into relationship specific tools and equipment, production competencies and information systems. This construct shows satisfactory composite reliability (.82) and AVE (.61) values as well as satisfactory item loadings ($>.60$), but a slightly low Cronbach's alpha value (.65). The low Cronbach's alpha value partially results from the fact that we applied only three items, which try to capture different types of relationship specific investments that do not necessarily correlate with each other. Given this plausible reason for the low alpha value, and since the composite reliability, AVE values and item loadings exceed the typical requirements, we have concluded that the construct and measures are usable in the analysis.

Relationship structures were measured with five items that include areas such as the supplier's relationship management structures (such as account management), shared relationship steering groups, joint development teams, integrated IT-systems and shared relationship process descriptions. The items result in satisfactory Cronbach's alpha (.83), composite reliability (.87) and AVE (.59) values and satisfactory item loadings (.64 - .90).

To measure relationship development, the study uses four items focusing on a particular customer-relationship such as productivity development, quality development, development of delivery accuracy and development of efficiency in the use of capital. The items result in a satisfactory composite reliability value (.79) and item loadings (.66 - .75), but slightly low Cronbach's alpha (.65) and AVE values (.49). The recommended level for AVE is .5 (Fornell and Larcker, 1981), and the resulting value (.49) is only slightly below the threshold, which only means that the items explain a little less of the variance of the construct than its error does. In addition, the alpha value is a little low,

which may result from the fact that relationship development was measured by different dimensions of relationship development that do not necessarily correlate with each other. As the loadings of each item were above .6 and thus showed convergent and discriminant validity, and as the composite reliability values were well above the recommended threshold, we concluded that the construct is usable in the analysis, even if it needs development in future studies (Chin, 1998).

Supplier profitability was measured by the average rate of return on investment within the time-period 2004-2007. Return on investment has often been applied as a general measure of company profitability (Anderson and Paine, 1978).

We also checked the data in case of convergent and discriminant validity. Convergent validity is tested by analyzing whether each items' estimated loading on its posited construct is significant (Anderson & Gerbing 1988), which is the case in this study (Table 1). In addition, the fact that almost all the AVE-values are above .5 indicates satisfactory discriminant validity (Chin, 1998). Additionally, since the AVE-values exceed the squared correlations between constructs, we can conclude that the constructs show satisfactory discriminant validity.

We tested the data for possible multicollinearity. However, since the highest correlation between the independent variables is .36 (threshold < .9) and the vif-index, that is often used to test multicollinearity, is well below 2 (the threshold value is 10) for all the independent variables (Tabachnick & Fidell 2007), we conclude that multicollinearity is not present in the data.

The data were also checked for common method bias. We applied Harman's (1976) one factor test to assess whether the items load on multiple factors in an explorative factor analysis. We conducted the factor analysis by using the unrotated factor solution of

principal axis factoring. The test showed that common method variance was not present in the data as items loaded on 5 factors (eigenvalue > 1, KMO = 0.71) and the first factor accounted for only 25% of the variance (Podsakoff & Organ 1986).

Table 1

Means, standard deviations (SD), Cronbach alpha values (CA), composite reliability values (CR), average variance extracted (AVE) and loadings

Constructs and items (all measured on 5-point Likert-scales)	Mean	SD	Loadings
Supplier's company size			
Number of personnel in the supplier company	63.64	64.07	1.00
Relational capital (CA: .82; CR: .90; AVE: .74)	3.92	.50	
How would you describe the nature of inter-personal relationships in the most important customer relationships of your company...			
...in terms of trust	3.99	.53	.84***
...in terms of openness of interaction, constructive criticism and problem solving abilities	3.88	.55	.89***
...in terms of having a feeling of shared destiny and shared goals, togetherness, and a common understanding of best practice	3.86	.67	.86***
Relationship structures (CA: .83; CR: .87; AVE: .59)	1.89	.422	
What kind of structural bonds have you developed between your company and this particular customer?			
Our company has organized this relationship by naming a key account manager, starting a production line, which services this particular customer, or making some other arrangement that serves this customer relationship.	2.28	.532	.68***
In this particular customer relationship, we have a steering group including key personnel from both of the companies. This group holds regular meetings.	1.80	.556	.80***
In this particular customer relationship, we use development teams, which include experts from both sides of the relationship.	1.85	.484	.68***
In this particular customer relationship IT-systems are well integrated, which makes it possible to share various ordering, scheduling or technical information between the companies.	1.74	.590	.76***
In this particular customer relationship, the order-delivery process has been prescribed jointly, which helps us to steer and develop activities to avoid sub-optimization.	1.78	.580	.87***
Relationship specific investments (CA: .68; CR: .82; AVE: .61)	2.91	.68	
To what extent has your company made relationship specific investments...			
...in tools and equipment	3.12	.88	.78***
...in production competencies	3.23	.85	.90***
...in information systems	2.38	.90	.64***
Relationship development (CA: .65; CR: .79; AVE: .49)	3.74	.49	
How would you describe the performance of the most important customer relationships over the 3 most recent years...			
...in terms of productivity development	3.70	.69	.75***
...in terms of quality development	3.95	.61	.67***

...in terms of development of order-delivery accuracy	3.81	.83	.66***
...in terms of development of efficiency in the use of capital	3.50	.67	.69***
Supplier's profitability			
Average percentage return on investment in between 2004 and 2007 (ROI%)	17.39	13.87	1.00

***p ≤ 0.001 **p ≤ 0.01 *p ≤ 0.05 † p ≤ 0.1 (one-sided test)

Data analysis and results

Table 2 presents the squared latent variable correlations between all the variables in this study.

Table 2

Squared latent variable correlations (off-diagonal elements)

	1	2	3	4	5	6	7
1. Supplier's company size	1						
2. Relational capital	-.05	1					
3. Structural capital	.25*	.30**	1				
4. Relationship specific investments	.16	.36**	.17	1			
5. Structural capital * relational capital	-.11	-.21	-.21	-.10	1		
6. Relationship specific investments * relational capital	-.14	-.12	-.11	-.12	.15	1	
7. Relationship development	.01	.50**	.11	.35**	.06	-.01	1
8. Supplier's profitability	.10	.15	.09	.20	-.06	.04	.32**

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

In the second phase of analysis, we applied ordinary least squares regression analysis to study the research model and hypotheses. Table 3 displays the regression coefficients and associated t-statistics for all the independent variables.

Table 3

Results of the regression analysis

	Relationship development Model 1	Relationship development Model 2	Relationship development Model 3	Supplier's profitability Model 4
Variable	β	β	β	β
Constant	14.94	14.94	14.78	
Supplier's company size	.01	.01	.03	.10
Relational capital		.44***	.47***	
Structural capital		-.06	-.03	

Relationship specific investments		.21†	.21*	
Structural capital * relational capital			.17†	
Relationship specific investments * relational capital			.05	
Relationship development				.32**
F-Statistics	.00	7.85***	5.85***	4.93**
R ²	.00	.28	.31	.11
Change in R ²	.00	.28	.03	.11
Adjusted R ²	-.01	.25	.26	.09
† p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001.				

The first model tests the effects of the control variables. According to the results, it seems that a supplier's company size has no statistically significant impact on learning ($\beta = .01$, $t = 0.64$, n.s.).

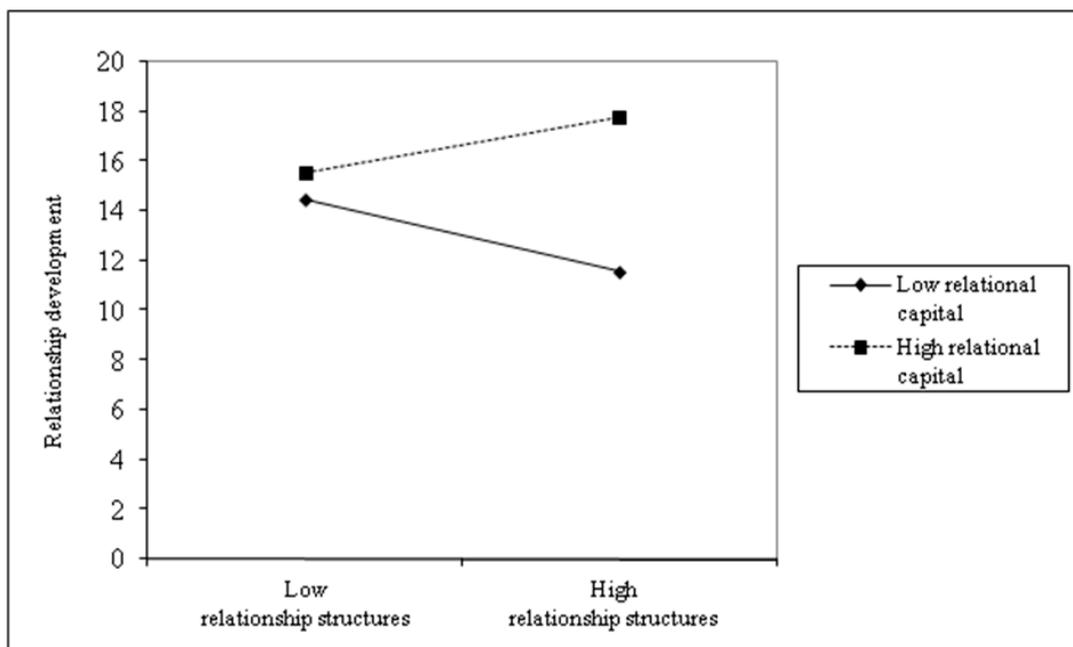
The second model adds all the independent variables — relational capital, structural capital and relationship specific investments. The results show that relational capital impacts positively and statistically significantly on learning in the relationship ($\beta = .44$, $t = 4.10$, $p < 0.001$). In contrast, the impact of relationship structures is non-significant ($\beta = -.06$, $t = -.536$, n.s.), while relationship specific investments have an impact on relationship development ($\beta = .21$, $t = 1.97$, $p < 0.10$). These variables explain 28% of the variance of learning. The model shows support for hypothesis 1a and a slight support for hypothesis 1c, while we found no support for hypothesis 1b.

Model 3 tests the effects of the interaction terms on learning. The interaction terms add 3% of the explanatory power of the independent variables. The model shows that while the impact of the interaction term between relationship specific investments and relational capital, is non-significant ($\beta = .05$, $t = .47$, n.s.) the effect of the second interaction term, in which relational capital moderates the relationship between relationship structures and relationship development, is significant ($\beta = .17$, $t = 1.68$, $p < 0.10$). The results show no support for hypothesis 2b, but some support for hypothesis 2a. How-

ever, according to Brambor, Clark and Golder (2005), the interpretation of the interaction effect should finally be based on the model that shows the interaction effect and not on its statistical significance. Thus, the result of the statistically significant interaction model is plotted in figure 2. This procedure follows the guidelines of Aiken and West (1991) and aids the interpretation of the moderator test results.

Figure 2

Interaction plots for the moderating influence of the relational capital on the relationship between structural capital and relationship learning plotted at ± 1 standard deviation from the mean of the moderator



According to the interaction model, that shows how relational capital facilitates the relationship between relationship structures and relationship development. The model shows that relationship structures facilitate learning and development only when relational capital is present. Without relational capital, the effect of relationship structures on relationship development is negative, in other words, the more bureaucratic it is, the

less the relationship develops. Thus it seems that relational capital transforms the structures so that they become enabling; that is, enabling structures facilitate information sharing and learning. Thus, these results support hypothesis H2a.

In model 5, we test the impact of relationship learning on suppliers' profitability. The explanatory power of these variables to relationship learning is 11%. Again, we applied supplier's company size as a control variable. The results of the model show that learning affects suppliers' performance statistically significantly ($\beta = .32$, $t = 3.01$, $p < 0.01$), while the control variable has no significant effect ($\beta = .10$, $t = 0.89$, n.s.). The result shows that relationship development has a positive impact on suppliers' profitability and thus shows support for hypothesis 3.

Discussion and implications

The results of this study show that cooperation in the form of relational capital, relationship structures and relationship specific investments is important in terms of relationship development. The results of this empirical study show that both relational capital and relationship specific investments directly affect relationship development. Moreover, the results show that relational capital facilitates the relation of relationship structures and relationship development.

The fact that relational capital explains relationship development may result from the positive impact that trust and interaction has on information sharing and on learning. These results support prior studies that emphasize the significance of trust for relationship learning, as trust facilitates interaction and information sharing (Claro et al. 2003).

According to these results, relationship specific investments also seem to foster learning and development in the relationship. It seems that strengthening the supplier's

resource-base has a positive impact on learning, and that suppliers' relationship specific investments foster relationship development. Prior studies, for example Liker and Choi (2004) suggest that relationship learning requires investments, and, applying case-based data, Sako (2004) reaches similar conclusions. The results of the present study support those suggestions and case-based evidence from prior research.

While in this study, relationship structures did not have a direct effect on relationship development, the moderation model showed that relational capital facilitates the relationship between relationship structures and relationship development so that the effect of relationship structures on learning becomes evident. It seems that relational capital facilitates an enriching interaction within the relationship while structures create the structures for cooperation. Thus, relational capital supports interaction within the hierarchical structures by creating a relationship structure, which Adler and Borys (1996) termed enabling bureaucracy. Actually, some prior studies have found a positive correlation between formalization of structures and innovativeness, especially when formal structures support the capture of experience and lessons learned. Thus, these results show that relationship structures should support explication, sharing and utilization of knowledge in order to support the development of relationship processes. In the light of the results of this study, it seems that relational capital may have a role to play in giving an enabling form to the coercive and bureaucratic structures, which support relationship learning and development through interaction and knowledge sharing.

The second important contribution lies in the discussion of the benefits of the network form of an organization. In light of the results of this study, relationship development seems to have a positive impact on suppliers' profitability. These results lend support to the field of network research, and suggest that while cooperation facilitates rela-

tionship development, relationship development ultimately increases the suppliers' profitability. Thus, the results suggest that customer relationship integration does pay off for suppliers in the form of increased financial profit.

The results of this study suggest that suppliers should develop deeply integrated customer-relationships. Results are encouraging in the sense that they show suppliers also benefiting from investments in customer relationship development and that it is not only the large customers that benefit from the development conducted in the relationships. The results inevitably suggest that development of in-debt social relationships is critical, as are relationship specific investments. Thus, suppliers should invest in development of strong social relationships, but also invest in relationship specific resources as well as relationship structures that facilitate relationship development.

In spite of the importance of the results of this study, we also need to consider its limitations. Even though this study has longitudinal design elements in terms of measuring suppliers' performance, a longitudinal design could also have been applied when measuring the other constructs. In addition, the measurement of supplier performance could have been timed differently. Because the data concerning the independent variables were collected in 2006, ideally, each supplier's performance should have been measured after 2006. However, as we stated in the section on methodology, we decided to apply an average variable between 2004-2007 as we considered that as a more reliable predictor supplier's profitability ROI than one applying shorter timeframe. Since in the present study we applied a sample from Finnish subcontractors, further research from other industries as well as cultural contexts would be beneficial. Even if the present study has some limitations, we believe that the results provide an interesting foun-

ation for further research and debate on partnerships between small suppliers and large industrial customers.

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Does Firm Size Matter in Explaining Firm Performance?: The Case of Korean SMEs in an Open Economy

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Abstract

We examine the effects of firm size on performance in an open economy. In particular, we attempt to estimate those effects for SMEs (small and medium sized enterprises) in Korea. In doing so, we adopt fixed and random effects estimators as well as the OLS estimator. We have found relatively strong evidence related to the performance effect of SMEs in Korea. Both the OLS estimates and the estimates obtained by random effects model indicate that SMEs in Korea, compared to larger firms, have lower performance in both productivity and profits per worker, and the negative effects are more apparent in the random effects estimates. The results on the effects of trade openness on firm performance also convey a relatively robust message. Both the OLS estimates and the estimates obtained by random effects model indicate that trade openness or foreign competition measured by tariff rate has a positive effect on the productivity of the Korean firms but not on their profitability. This result is consistent with the evidence obtained in the international economics literature that trade liberalization enhances the productivity of an economy. However, the positive productivity effect is found to be inversely related to firm size so that SMEs in Korea do not enjoy much benefit from trade openness.

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1. Introduction

When performances of firms are examined, firm size has been always considered as a fundamental variable. There are many reasons why firm size is important in explaining company performance. Larger companies are more able to exploit the economies of scale. They have a relative advantage in producing goods, training their workers, innovating new technologies at a lower cost (Barron, Black, Lowenstein 1987, 1989; Hardwick 1997). Greater firms can also take advantage of the economies of scope. They can diversify their markets and change their business activities more swiftly (Fiegenbaum and Karnani 1991; Winter 1994; Goddard et al. 2005).

However, large firms do not always lead to a better performance. Since increased firm size can exhibit diminishing returns to scale, the positive impact of size on performance may become less as the size increases. Yoon (2004) and Russeeuw (1997) show that company growth beyond optimal level can contribute less to performance. Furthermore, greater size can be associated with cumbersome formal procedures which may limit the flexibility with regard to a variety of decision makings and hence restrict speedy adaptation to changing business environments.

Performances of firms can also be significantly influenced by the types of the markets in which they operate and by the foreign competition they are exposed to. Moreover, firm size effects on performances can also vary depending on these environmental structures. There are many studies which examine how firms, large or small, react to internationalization. For example, Hymer (1976), Rugman (1981) and Dunning (1988) all examined the issues of internationalization that are related to large multinational firms and indicated possibilities of realizing the fruits of internationalization. On the other hand, Chiao et al. (2006) and Knight (2000) examined the cases for small and medium-sized enterprises (SMEs) under an open economy and showed SMEs may be able to adapt to the globalization better than larger firms in terms of marketing and sales strategies. Therefore, how firm size affects performance may be better understood in accordance with international environments that firms are faced with.

The purpose of this study is twofold. The first objective is to examine the effects of firm size on firms' performance in Korea. There are many studies on this topic, but our study is different from previous ones in that we explicitly take into account the firm-specific unobserved characteristics in estimation. We show that our approach provides more precise pictures regarding the effects of firm size on performance. The second objective is to analyze the effects of the market openness on firms performance, allowing for the effects to differ depending on firm size. As discussed above, internationalization or market openness may have different effects on firm performance depending on the size of the firm, and so it will be interesting to see the effects for Korean firms. As far as we are aware of, this study is the first attempt in this avenue.

As for the measures of performance, we use value-added, sales, and profits and for a measure of internationalization or foreign competition, we utilize tariff rates at manufacturing industry level.

Therefore, our research focus will be on estimating the effects of firm size, tariff rates and the interaction between the two on various measures of performance for the firms in the manufacturing industry.

The organization of this paper is as follows. Section 2 presents empirical models that will be estimated. Section 3 describes the data set and provides basic statistics. Section 4 estimates the effects of trade openness on training incidence and R&D activities. Section 5, which is the main part of this study, presents the estimation results for the effects of firm size on performance in an open economy. Here, we present both OLS estimates and the estimates obtained by panel analyses and reveal the differences between them. Finally, section 6 contains summary and concluding remarks.

2. Empirical Model

In order to estimate the relationship between firm size and firm performance under an open economy, we set up the following linear model,

$$(1) \ln Y_{it} = X_{it}\Gamma + \alpha Small_{it} + \beta Tariff_{it} + \gamma Small_{it} \cdot Tariff_{it} + \varepsilon_t + \nu_{it},$$

where i indexes firms and t indexes years. The dependent variable (Y_{it}) is a measure of firm performance which includes value-added, sales, profits per worker. The firm size variable ($Small_{it}$) is a dummy variable which takes 1 if the number of employees is less than 300, 0 otherwise.¹ The openness index ($Tariff_{it}$) is the average tariff rate of the industry where the firm i in year t belongs. The interaction term $Small_{it} \cdot Tariff_{it}$ allows for the effect of firm size on performance to differ depending on the level of trade openness. X_{it} is a vector of control variable which may affect a firm's performance. Following Serrasqueiro and Nunes (2008), X_{it} includes the ratio of total debt to total asset, the ratio of fixed assets to total asset, shareholder control, foreign direct investment as well as usual firm characteristics. The time varying variable ε_t is represented by year dummies. Finally, the error term ν_{it} is an error term. Given that ν_{it} is uncorrelated with any other right-hand-side variables, equation (1) can be consistently estimated by ordinary least squares.

However, if ν_{it} includes idiosyncratic firm characteristics, least squares estimates may be inconsistent. Let us assume that $\nu_{it} = u_i + \eta_{it}$ so that equation (1) becomes

$$(2) \ln Y_{it} = X_{it}\Gamma + \alpha Small_{it} + \beta Tariff_{it} + \gamma Small_{it} \cdot Tariff_{it} + \varepsilon_t + u_i + \eta_{it},$$

where u_i is the firm-specific time invariant term and η_{it} is a white noise. We assume that u_i can

¹ We also used a continuous variable for firm size, and found that the main results did not change qualitatively.

be either a constant or a random variable. Depending on the assumption on u_i , fixed effects or random effects estimators can be applied to equation (2). In actual estimation, we will apply both. The advantage of using the above specification is that we will be able to control for the firm's unobserved heterogeneities and be able to identify the genuine effect of firm size on performance, faced with a different degree of trade openness. Specification (2) is also very similar to the one used by Serrasqueiro and Nunes (2008), except for that their model is dynamic and estimated by the GMM. In our case, we only have a two-year panel data set so it is difficult to adopt a dynamic panel model. Therefore, we will leave the dynamic panel analysis for future research.

3. Data and Descriptive Statistics

This study uses workplace level information from the 2002-2003 Workplace Panel Survey (WPS) which is conducted by Korea Labor Institute (KLI). The WPS is a sub-sample from the Employment Insurance Data Base in Korea and includes workplaces, all of which employ 20 or more employees. The WPS asks questions to the general manager, employee relations manager and trade union delegate (or worker representative) in workplaces. In this respect the WPS is quite similar to the Australian Workplace Industrial Relations Survey (see, for example, Almeida-Santos and Mumford, 2004).

The WPS contains detailed information regarding human resources management and industrial relations as well as usual information on the characteristics of surveyed firms including firm size, the proportion of female workers, the existence of union, ownership for about 2,000 workplaces. KLI also merged the performances of firms such as value-added, sales and profits with the survey data so that researchers can link the firm's characteristics to its performances.

Since the purpose of our study is to examine the effects of firm size on firm performance in an open economy, we need to have a measure for the openness of the market. To this end, we constructed average tariff rates for manufacturing industries². The sources of the tariff rates are the Trade and Production by the World Bank and the OECD STAN Database. Originally, the data on tariff rates were classified according to the HS codes, so we have aggregated them into two digit industries for our purpose.

Due to the limitation that information on tariff rates is available only for manufacturing industries, the data used in analysis becomes a subset of the WPS where firms are in the manufacturing sector. In addition to this restriction, we have excluded observations with missing information on relevant variables, especially performance variables.

Table 1 reports the summary statistics of the variables used in analysis. As we can expect, there are no significant changes in the characteristics of the workplaces between 2002 and 2003 although some of the workplaces surveyed in 2002 were dropped and replaced with new ones in 2003. The proportion

² In Korea there are 23 manufacturing industries at the two digit level. In estimation we used 21 industries excluding tobacco and recycling industries due to the lack of information on the tariff rate.

of female workers for an average firm is about 26%; the average tenure of the workers is slightly longer than 7 years; the average age of the firms is about 23 years.

The proportion of small and medium sized firms is about 60%. The proportion of the firms operated by professional managers who are different from owners is about 12% which doesn't seem to be a large number. The proportion of the firms that are managed by foreign ownership is 6.7% in 2002 and 8.0% in 2003. Although the proportion seems to be increasing, its difference is not overwhelming. The percentage of workers who had received training increased from 43% in 2002 to 48% in 2003. The percentage of unionized firms is 35.7% in 2002 and 53.2% in 2003 and these numbers are quite large compared to national averages, which indicates that the sample selected here are biased toward big firms.

<Table 1> Descriptive Statistics of the Variables, the 2002-2003 WPS

Variable	Definition	2002		2003	
		mean	standard deviation	mean	standard deviation
Female	% of female workers	26.60	23.10	25.27	21.97
Tenure	average tenure	7.287	5.170	7.317	4.241
Firmage	the age of the firm	22.63	14.87	23.69	14.22
Small	=1 if the number of employees is less than 300, =0 otherwise	0.597	0.491	0.603	0.490
Profmanage	=1 if the principal manager is different from owner, =0 otherwise	0.120	0.325	0.119	0.324
Formanage	=1 if foreign shareholders have the management right, =0 otherwise	0.067	0.250	0.080	0.271
Trainrate	% of workers who received training	42.66	35.48	47.81	37.01
Debt	ratio of total debts to total assets	0.639	0.693	0.588	0.364
Assetfix	ratio of fixed assets to total assets	0.528	0.186	0.520	0.181
Union	=1 if unionized, =0 otherwise	0.357	0.480	0.532	0.499
Tariff	average tariff rate	10.22	10.65	9.973	10.59
Invadperson	log of value-added per worker	15.03	7.086	15.44	7.296
Insaleperson	log of sales per worker	13.28	3.674	12.67	2.094
Inprofrperson	log of normal profits per worker	10.63	4.956	9.656	2.911
Inprofnperson	log of net profits per worker	10.48	4.968	9.476	2.964
no.of obs.		675		520	

Note: Due to missing observations the number of observations differs depending on variables. The figures in the last row are the minimum numbers of observations.

The average tariff rate is about 10%. Although the decline in tariff rate from 2002 to 2003 is small, it captures an aspect of increasing trade openness in the Korean manufacturing sector. In order to see the distribution of tariff rates and firm size, we calculated the average tariff rates and the proportions of small firms by industry. The results are presented in Table 2. In terms of tariff rate, food and beverage industry sticks out. While the tariff rates of other industries range from 2% to 12%, the tariff rate of food and beverage industry is around 42%, showing this industry is heavily protected. The lowest tariff rate is observed for office and computing industry in which Korea has a relative advantage in international trade.

<Table 2> Tariff Rates and Proportions of Small Firms by Industry, 2002-2003

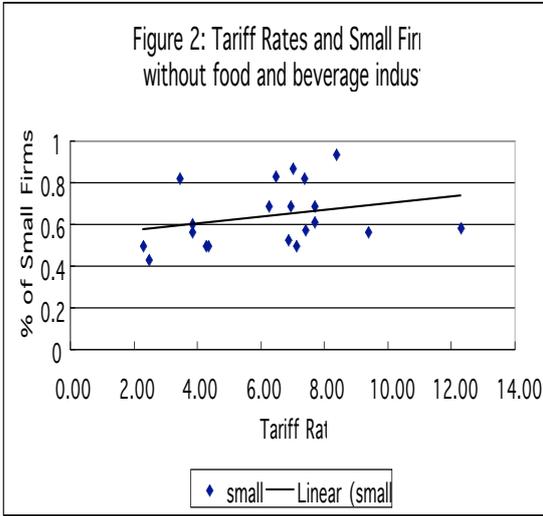
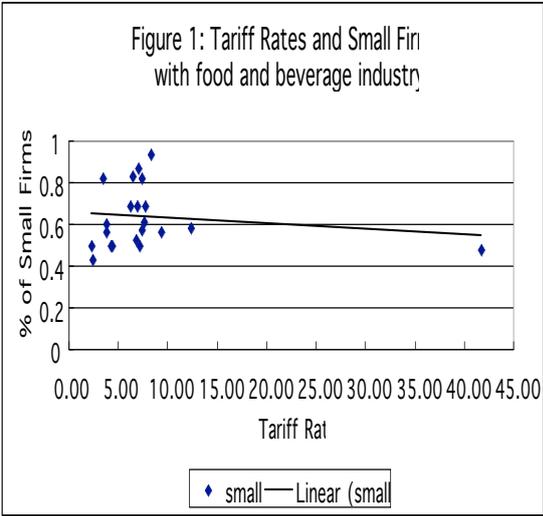
	2002		2003		2003-2002	
	(1) Tariff Rate	(2) Proportion of small firms	(3) Tariff Rate	(4) Proportion of small firms	(5) Change in tariff	(6) Change in small firms
food and beverage	42.21	0.44	41.74	0.48	-0.47	0.04
textiles	9.38	0.54	9.40	0.56	0.02	0.02
apparel and fur	12.35	0.71	12.33	0.58	-0.03	-0.13
leather and luggage	8.37	0.81	8.37	0.93	0.00	0.12
wood products	7.13	0.60	7.14	0.50	0.01	-0.10
pulp and paper products	4.87	0.49	2.47	0.43	-2.40	-0.06
publishing and printing	4.15	0.76	3.46	0.82	-0.69	0.06
petroleum products	4.38	0.40	4.36	0.50	-0.03	0.10
chemicals	7.54	0.47	6.87	0.52	-0.67	0.05
Rubber and Plastics	7.93	0.75	7.70	0.69	-0.23	-0.06
non-metallic products	7.72	0.51	7.69	0.61	-0.03	0.10
basic metals	4.68	0.53	3.84	0.56	-0.84	0.03
fabricated metal product	7.59	0.85	7.40	0.82	-0.20	-0.03
machinery and equipment	6.36	0.69	6.28	0.69	-0.08	0.00
office & computing machinery	2.34	0.63	2.30	0.50	-0.04	-0.13
electrical machinery	6.81	0.73	6.94	0.69	0.14	-0.04
communication equipment	4.16	0.58	4.27	0.50	0.12	-0.08
medical & precision instrument	6.48	0.89	6.47	0.83	-0.01	-0.06
motor vehicles	6.83	0.53	7.41	0.57	0.58	0.04
transport equipment	3.71	0.43	3.84	0.60	0.13	0.17
other manufacturing	7.29	0.81	7.03	0.87	-0.26	0.06
Correlation coefficient	-0.190(0.409)		-0.146(0.529)		-0.038(0.871)	

Note: The definition of small firms is given in Table 1.

The numbers in parentheses are p-values.

The proportion of SMEs also exhibits a considerable variation. Among the highest proportions are leather and luggage, fabricated metal products, and medical and precision instruments industries; among the lowest are food and beverage, petroleum products, and chemical industries.

The last row of table 2 presents the correlations between tariff rates and proportions of SMEs, with an intention to examine whether SMEs are faced with more severe foreign competition. All the correlations are negative, indicating that industries with higher proportions of SMEs face lower tariff rates. However, the correlations are not statistically significant. Furthermore, the correlations are very sensitive to whether food and beverage industry is included or not. Figures 1 and 2 show scattered diagrams with and without the food and beverage industry in 2003.



With the food and beverage industry the relationship between tariff rate and proportion of SMEs appears to be negative as seen in Figure 1. However, it is clearly seen that the food and beverage industry is an outlier. Figure 2 excludes that industry and shows a positive relationship between the two. The positive relationship between tariff rates and proportions of SMEs indicates that small and medium sized firms are protected by higher tariff rates and hence less exposed to foreign competition. However, even in the Figure 2, the correlation turns out to be not statistically significant. Therefore, at this point it is hard to say whether SMEs in Korea face more severe foreign competition or not.

4. Responses to Trade Openness by Training and R&D

Sengenberger (1992) argues that a firm can choose two strategies when encountering

increased foreign competition as a result of globalization and trade openness. The first strategy is the one which aims at lowering labor costs which may involve hiring irregular workers or moving the production base to a country where cheap labor is abundant. The second strategy is based on innovation which involves training workers and investing in R&D activities. Before we proceed to examine the effects of firm size on performance, it will be interesting to first overview how differently SMEs vs. large firms respond to trade openness, in terms of training and R&D.

We regress the proportion of workers who received training and the ratio of R&D expenditure to total sales on a dummy for firm size and a tariff rate as well as other explanatory variables. The coefficients on the size variable and tariff rate enable us to test which strategy Korean firms adopt in the presence of foreign competition.

The estimation results are presented in Table 3. Looking at the results for training rate, we find that SMEs are less likely to provide training for their workers. The coefficient on “Small” indicates that SMEs provide training 17.89 % point less than large firms and the difference is statistically significant at the 5% level. The evidence that large firms provide more training has been widely observed (Barron et al, 1987, 1989). The coefficient on tariff rate is positive with no statistical significance. Also, the interaction term between “Small” and “Tariff” is positive but statistically insignificant. A positive coefficient on the interaction term means that SMEs protected by higher tariff rates provide more training. If firms choose the strategy of investing more in human capital in the presence of intense foreign competition, we expect the sign of the tariff rate to be negative. Therefore, the positive coefficient on the tariff rate indicates that firms in Korea may choose the strategy of lowering labor costs when foreign competition is intensified. Furthermore, a positive coefficient on the interaction term implies that small firms have a lower training rate which foreign competition is strong. However, due to the insignificance of the coefficients, we cannot put much weight on this path of interpretation.

<Table 3> Estimation Results for Training Rate and R&D Expenditure Rate, OLS

	Training Rate	R&D Rate
Female	-0.062(0.050)	0.00002(0.00003)
Tenure	0.577(0.241)**	0.0002(0.0001)*
Firm's Age	-0.043(0.080)	0.0003(0.00005)**
Profmanage	9.847(2.890)**	0.0007(0.002)
Foreign	-0.500(3.590)	0.006(0.003)**
Small	-17.89(2.950)**	0.003(0.002)*
Union	5.753(2.022)**	-0.0002(0.001)
Tariff	0.013(0.135)	-0.00002(0.0001)
Tariff x Small	0.117(0.196)	-0.0001(0.0001)

Year2003	4.814(2.024)**	-0.0001(0.001)
Constant	46.23(3.969)**	0.014(0.002)**
Adj R-Squared	0.096	0.042
N	1,195	1,167

Note: Year2003 is year dummy.

** indicates significance at the 5% level and * indicates significance at the 10% level.

The second column of table 3 presents the estimation results when dependant variable is the ratio of R&D expenditure to total sale. The coefficient on “Small” is positive and significant at the 10%, which implies that SMEs in fact have a higher ratio of R&D expenditure than larger firms. It does not mean that small firms spend a greater amount on R&D. In fact, when we used the amount spent on R&D as a dependant variable, the coefficient on “Small” became negative and statistically significant.

The coefficients on tariff rate and the interaction between SMEs and tariff rate are both negative and statistically insignificant. Therefore, it can be fair to say that although firm size matters in explaining the training rates and R&D ratio, the firm’s strategy does not seem to be affected by its size as well as the intensity of foreign competition, at least in the 2003-2003 WPS.

5. Effects of Firm Size on Firm Performance under an open economy

5.1. OLS Estimates

Now, we turn to examine the effects of firm size on performance when firms are faced with different degrees of market openness. As mentioned in the introduction, the performances of firms can be influenced by the size of the firm as well as by the foreign competition they are exposed to. In general, larger firms have sufficient financial as well as human resources to cope with increased foreign competition while SMEs usually do not have such resources. This aspect of firm size leads to a conclusion that larger firms have an edge over foreign competition. On the other hand, it is possible that SMEs may more flexibly adapt to the changes in market conditions and globalization than larger firms. This may arise because marketing and sales strategies can be more easily transformed to cope with changing economic conditions (Chiao et al. 2006; Knight 2000). Therefore, how firm size would affect performance in the presence of foreign competition is an empirical matter.

Measures of firm performance can be of variety. Here, we employ two basic measures: output per worker and profit per worker. Output per worker can be thought of as a measure of productivity while profit per worker is the final outcome of business operation of the firm. For the former we adopt value-added and sales per worker; for the latter, ordinary and net profits per worker are used. For independent variables we use most of the variables reported

in table 1.

The OLS estimates of the output per worker equations are reported in table 4. In table 4 columns (1) and (3) do not control for the tariff rate and interaction between tariff rate and a dummy for SMEs, while columns (2) and (4) include those variables. Examining the results in column (1), we find that estimation results are in general consistent with our expectations. The proportion of female workers and the debt ratio have a negative impact on value-added while tenure, firm's age, management by professional managers, and training rate have a positive effect. SMEs have a lower value-added per worker and its negative effect is statistically significant, and also the existence of union reduces value-added per worker. The result that the ratio of fixed asset raises value-added per worker is somewhat unexpected since several studies have found a positive relationship between the ratio of intangible asset and company performance (Pusher 1995, Smith et al. 2004).

Column (2) presents the results when tariff rate and the interaction between the tariff rate and the dummy for SMEs are added. The coefficient on tariff rate is negative and statistically significant at the 5% level. The negative coefficient implies that a firm that belongs to an industry where tariff rates are lower has a higher value-added per worker. In other words, trade openness (i.e., lower tariff rates) leads to an increase in value-added per worker. This kind of positive productivity effects of trade liberalization is often observed in the international economics literature.

The coefficient on "Tariff x Small" is positive and statistically significant at the 10% level. The positive coefficient indicates that when firm size is small and tariff rate is high, the value-added per worker is larger. A higher tariff rate means a lower level of trade openness; therefore, the positive coefficient on the interaction term implies that SMEs in a more internationalized environment have a lower productivity. In other words, SMEs do not perform well with intensified foreign competition as much as large firms.³

<Table 4> Estimation Results for the Value-Added and Sales per Worker, OLS

	Value-Added/Worker		Sales/Worker	
	(1)	(2)	(3)	(4)
Female	-0.007(0.001)**	-0.007(0.001)**	-0.007(0.001)**	-0.007(0.001)**
Tenure	0.012(0.005)**	0.011(0.005)**	0.011(0.005)**	0.010(0.005)**
Firm's Age	0.005(0.002)**	0.006(0.002)**	0.005(0.001)**	0.005(0.001)**
Small	-0.169(0.047)**	-0.242(0.061)**	-0.223(0.052)**	-0.328(0.068)**
Profmanage	0.194(0.058)**	0.192(0.057)**	0.254(0.063)**	0.254(0.063)**
Foreign	0.066(0.081)	0.065(0.081)	-0.018(0.090)	-0.016(0.090)
Train Rate	0.003(0.001)**	0.003(0.001)**	0.003(0.001)**	0.003(0.001)**
Debt	-0.159(0.078)**	-0.146(0.078)**	-0.012(0.065)	-0.002(0.065)

³ It is easy to see when we differentiate the equation with respect to tariff rate.

Fixed Asset	0.580(0.125)**	0.577(0.125)**	0.187(0.138)	0.167(0.138)
Union	-0.077(0.041)*	-0.078(0.041)**	-0.049(0.045)	-0.052(0.045)
Tariff	-	-0.007(0.003)**	-	-0.004(0.003)
Tariff x Small	-	0.008(0.004)*	-	0.011(0.004)**
Constant	10.77(0.107)**	10.81(0.108)**	12.31(0.114)**	0.034(0.045)
				12.36(0.116)**
Adj R-Squared	0.251	0.254	0.204	0.207
N	904	904	921	921

Note: Year dummy is also included in the regression.

** indicates significance at the 5% level and * indicates significance at the 10% level.

Column (3) uses sales per worker as dependent variable. The results are quite similar to the ones shown in column (1): the proportion of female workers and SMEs have a negative impact on sales per worker; tenure, firm's age, management by professional managers, and training rate all have a positive effect. Column (4) also controls for tariff rate and the interaction between the tariff rate and the dummy for SMEs. The coefficient on tariff rate is negative as before but statistically insignificant. The coefficient on the interaction term is positive and statistically significant at the 5% level. The same interpretation can be applied to this case: trade liberalization or foreign competition does seem to affect the worker's productivity positively but SMEs do not seem to better cope with trade openness.

<Table 5> Estimation Results for the Profits per Worker, OLS

	Ordinary Profits/Worker		Net Profits/Worker	
	(1)	(2)	(3)	(4)
Female	-0.007(0.002)**	-0.007(0.002)**	-0.007(0.002)**	-0.007(0.002)**
Tenure	0.015(0.009)*	0.015(0.009)*	0.013(0.009)	0.013(0.009)
Firm's Age	0.008(0.003)**	0.008(0.003)**	0.010(0.003)**	0.010(0.003)**
Small	-0.187(0.096)**	-0.147(0.126)	-0.148(0.100)	-0.093(0.130)
Profmanage	0.202(0.119)*	0.200(0.119)*	0.340(0.122)**	0.338(0.122)**
Foreign	-0.221(0.169)	-0.223(0.169)	-0.242(0.171)	-0.245(0.171)
Train Rate	0.004(0.001)**	0.004(0.001)**	0.003(0.001)**	0.003(0.001)**
Debt	-1.710(0.191)**	-1.714(0.192)**	-1.332(0.196)**	-1.337(0.197)**
Fixed Asset	-0.020(0.260)	-0.006(0.261)	-0.182(0.266)	-0.163(0.268)
Union	-0.095(0.083)	-0.094(0.083)	-0.059(0.086)	-0.057(0.086)
Tariff	-	0.001(0.005)	-	0.001(0.006)
Tariff x Small	-	-0.004(0.008)	-	-0.005(0.009)
Constant	10.12(0.227)**	10.10(0.230)**	9.781(0.234)	9.762(0.237)
Adj R-Squared	0.195	0.193	0.153	0.152
N	779	779	782	782

Note: Year dummy is also included in the regression.

Net profits are obtained by subtracting special profits or losses and corporate taxes from ordinary

profits.

** indicates significance at the 5% level and * indicates significance at the 10% level.

Table 5 presents the estimation results obtained when profits per worker are used as dependant variables. Again, columns (1) and (3) exclude tariff related variables, and (2) and (4) include them. Except for the tariff related variables, estimated coefficients are in general similar to those presented in table 4, so we will not repeat interpretation here. In columns (2) and (4) both the tariff rate and interaction term are statistically significant. Therefore, it can be said that trade liberalization has not affected the firm's profitability much, at least for Korean firms in the 2002-2003 WPS. Furthermore, an insignificant coefficient on the interaction term indicates that there are no systematic differences in profitability between large firms and SMEs with regard to reacting to foreign competition. In sum, the above results suggest that (1) the performances of SMEs are worse than larger firms, (2) foreign competition may have had a positive effect on the productivity of the Korean firms but not on profitability, and (3) the positive productivity effect is inversely related to firm size.

5.2. Fixed Effects and Random Effects Estimates

Although OLS estimates provide basic information regarding the effects of firm size and foreign competition on firm performance, the estimates are likely to be biased if there exist unobserved heterogeneities which are specific to firms and those heterogeneities are systematically related to the error term. There are many cases that these possibilities are realized. For example, a manager's ability is an important variable that may be omitted in the model so that it is not the small size of the firm, but the manager's ability that matters for performance. If a manager's ability and firm size are correlated, then the coefficient on the dummy for SMEs may be inconsistently estimated. Also, a manager's ability and tariff rate may be correlated each other so that firms with a lower level of tariff rate, i.e., firms in a more trade liberalized industry, are in fact the ones with more able managers.

In order to resolve the problems associated with unobserved firm specific heterogeneities, we need to apply longitudinal estimation techniques. In this section, we adopt fixed and random effects models to estimate both productivity and profitability equations. Table 6 presents the results obtained for value-added and sales per worker equations by using fixed and random effects models.

As we can see in table 6, the estimates obtained by fixed effects model are not as statistically significant as those obtained by random effects model. This is because a fixed effects model is as same as a first-differenced model when time span is of only two years and hence the degree of freedom is significantly reduced in the fixed effects model. Although the Hausman test can be used to select an appropriate model, we prefer to look at both

models to examine the effects we are interested in.⁴

Since the fixed effects estimates are not very significant, we will focus on the random effects estimates and mention fixed effects estimates only if necessary. Examining column (2), we find that the coefficient on “Small” is -0.249 and statistically significant although the fixed effects estimate for that variable is statistically insignificant. Note that the corresponding OLS estimate was -0.242 which is very close to the random effects estimate. Furthermore, the coefficient on tariff rate is -0.008 and statistically significant at the 5% level and the coefficient on the interaction term is 0.009 and statistically significant at the 10% level. The corresponding figures for the OLS estimate are -0.007 and 0.008 respectively which are very similar to the random effects estimates. Therefore, in terms of value-added per worker, the bias of the OLS estimates does not seem to be large and so can be thought of as reliable.

<Table 6> Estimation Results for the Value-Added and Sales per Worker

	Value-Added/Worker		Sales/Worker	
	(1) Fixed	(2) Random	(3) Fixed	(4) Random
Female	0.001(0.002)	-0.006(0.001)**	0.001(0.001)	-0.003(0.001)**
Tenure	-0.0003(0.005)	0.007(0.004)*	0.001(0.002)	0.005(0.003)*
Firm's Age	0.008(0.031)	0.007(0.002)**	0.014(0.015)	0.010(0.002)**
Small	0.054(0.156)	-0.249(0.069)**	-0.024(0.083)	-0.227(0.062)**
Profmanage	0.104(0.072)	0.194(0.054)**	-0.006(0.036)	0.067(0.036)*
Foreign	-0.093(0.150)	0.059(0.087)	0.0004(0.079)	0.038(0.069)
Train Rate	-0.0001(0.001)	0.002(0.001)**	-0.0003(0.0004)	0.001(0.0004)*
Debt	-1.582(0.397)**	-0.179(0.090)**	-0.330(0.190)*	-0.057(0.071)
Fixed Asset	-1.432(0.368)**	0.496(0.146)**	-0.819(0.192)**	-0.038(0.136)
Union	-0.018(0.029)	-0.067(0.027)**	-0.010(0.015)	-0.032(0.015)**
Tariff	0.051(0.046)	-0.008(0.003)**	-0.033(0.024)	-0.007(0.004)**
Tariff x Small	0.009(0.013)	0.009(0.005)*	0.011(0.007)	0.012(0.005)**
Constant	11.99(1.107)**	10.88(0.121)**	13.04(0.568)**	12.42(0.112)**
Sigma_u	1.092	0.512	0.850	0.665
Sigma_e	0.347	0.347	0.184	0.184
Rho	0.908	0.685	0.955	0.928
N	904	904	921	921

Note: Year dummy is also included in the random effects model.

** indicates significance at the 5% level and * indicates significance at the 10% level.

Columns (3) and (4) provide estimates for the sales per worker. Again, the fixed effects estimates turn out to be not very significant, so we will focus on the random effects

⁴ The results of the Hausman test vary depending on models, so it is difficult to pinpoint an appropriate and robust model.

estimates. The coefficient on “Small” is -0.227 and statistically significant while the corresponding OLS estimate was -0.328 which is much larger. Here, we can say that the OLS estimator overstates the negative effect of SMEs on firm performance. However, the coefficients on the tariff rate and interaction term are not so distinctively different between the two estimators. Rather, the random effects coefficients on the tariff rate and interaction term exhibits stronger statistical significant.

Although the magnitude of the coefficients can differ, the coefficients on “Small”, “Tariff” and “Tariff x Small” in table 6 are not qualitatively different from the corresponding figures in table 4. From the estimates, we conclude that SMEs have both lower value-added and lower sales per worker compared to larger firms. Furthermore, the negative coefficient on tariff rate and the positive coefficient on the interaction term indicate that trade openness (i.e., lower tariff rates) leads to an increase in both value-added and sales per worker and SMEs in a more internationalized environment have a lower productivity. This conclusion is also the same as the one derived from the OLS estimates.

Next, we examine the estimation results for profits per worker which is provided in table 7. For ordinary profits per worker, we find that SMEs significantly lowers profits per worker by about 27.5% compared to large firms.⁵ In the OLS case in table 5, the corresponding coefficient was 14.7% and statistically insignificant. Therefore, the random effects estimates provide more adverse and clear effect of SMEs on profits per worker. The effect of SMEs on net profits per worker is negative but statistically insignificant. However, the coefficient of -17.3% is larger than the OLS coefficient of -9.3% in table 5. Therefore, the previous claim that the random effects estimates provide more adverse and clear effect of SMEs on profits per worker is still valid.

<Table 7> Estimation Results for the Profits per Worker

	Ordinary Profits/Worker		Net Profits/Worker	
	Fixed	Random	Fixed	Random
Female	-0.001(0.004)	-0.006(0.002)**	0.001(0.004)	-0.005(0.002)**
Tenure	-0.004(0.009)	0.005(0.007)	-0.003(0.008)	0.004(0.007)
Firm’s Age	-0.147(0.064)**	0.010(0.004)**	-0.152(0.062)**	0.014(0.004)**
Small	-0.108(0.299)	-0.275(0.139)**	-0.027(0.293)	-0.173(0.144)
Profmanage	-0.168(0.148)	0.024(0.108)	-0.110(0.146)	0.126(0.109)
Foreign	-0.111(0.303)	-0.154(0.176)	-0.088(0.296)	-0.136(0.177)
Train Rate	0.001(0.002)	0.003(0.001)**	0.0001(0.001)	0.002(0.001)**
Debt	-2.198(0.956)**	-1.617(0.219)**	-1.215(0.926)	-1.141(0.227)**
Fixed Asset	-3.062(0.747)**	-0.285(0.296)	-3.075(0.732)**	-0.502(0.304)*

⁵ Since the dependant variable takes a form of logarithm, a coefficient on a dummy variable is approximately the percentage difference.

Union	-0.083(0.056)	-0.110(0.051)**	-0.056(0.055)	-0.077(0.051)
Tariff	0.136(0.096)	-0.004(0.007)	0.116(0.088)	-0.003(0.007)
Tariff x	0.019(0.023)	0.003(0.009)	0.012(0.022)	-0.0001(0.010)
Small	14.62(2.401)**	10.35(0.255)**	14.18(2.298)**	9.933(0.262)**
Constant				
Sigma_u	3.107	1.053	3.162	1.119
Sigma_e	0.593	0.593	0.581	0.581
rho	0.964	0.758	0.967	0.787
N	779	779	782	782

Note: Year dummy is also included in the random effects model.

Net profits are obtained by subtracting special profits or losses and corporate taxes from ordinary profits.

** indicates significance at the 5% level and * indicates significance at the 10% level.

The coefficient on the tariff rate is negative for both profit measures, which indicates that trade openness raises profits per worker and therefore supports the argument of trade liberalization. However, those coefficients are not statistically significant. The coefficient on interaction term is positive for ordinary profits per worker and negative for net profits per worker. Again they are not statistically significant so we cannot give much meaning to those estimates. To sum up, trade openness does not seem to have much impact on profits per worker regardless of firm size.

6. Summary and Concluding Remarks

There have been numerous studies which have attempted to identify factors that influence firm performance. Among them, firm size has been always considered as a fundamental variable. Normally, firm size is found to have a positive relationship with performance and there have been many proposed reasons. Suggested reasons for the positive relationship between firm size and performance may include (1) economies of scale concerning operating costs and costs of innovation (Hardwick, 1997), (2) the possibility of more diversified activities (Fiegenbaum and Karnani 1991; Winter 1994; Goddard et al. 2005).

However, we can at times find a negative relationship between firm size and performance when (1) an increase in firm size exhibits diminishing returns to scale (Yoon 2004; Russeeuw 1997), (2) owners have less control over management as a consequence of increased size (Pi and Timme 1993; Goddard et al. 2005). Furthermore, greater firm size may imply the existence of more formality which may limit the organizational flexibility.

Firm size effects on performances can also depend on the severity of trade openness or foreign competition. On the one hand, large firms like multinational companies may be able to realize the fruits of internationalization (Hymer 1976; Rugman 1981; Dunning 1988). On the other hand, SMEs

may better adapt to the globalization due to numerical and functional flexibility in the areas of marketing and sales strategies (Chiao et al. 2006; Knight 2000). Therefore, the effects of firm size on performance under an open economy are an empirical matter and will vary depending on country and period to be examined.

Our purpose was to examine the effects of firm size on performance in the context of trade openness in Korea. In particular, we have attempted to examine those effects for small and medium sized firms in Korea. In doing so we adopted fixed and random effects estimators as well as the OLS estimator. We have found relatively strong evidence related to the performance effect of SMEs in Korea. Both the OLS estimates and the estimates obtained by random effects model indicate that SMEs in Korea, compared to larger firms, have lower performance in both productivity and profits per worker, and the negative effects are more apparent in the random effects estimates.

The results on the effects of trade openness on firms' performance also convey a relatively robust message. Both the OLS estimates and the estimates obtained by random effects model indicate that trade openness or foreign competition measured by tariff rate has a positive effect on the productivity of the Korean firms but not on their profitability. This result is consistent with the evidence obtained in the international economics literature that trade liberalization enhances the productivity of an economy. However, the positive productivity effect is found to be inversely related to firm size so that SMEs in Korea do not enjoy much benefit from trade openness.

Probably, one of the main criticisms of this paper may come from the measure of foreign competition or trade openness or internationalization. In this paper we used tariff rates for the measure so we examine the effects of the openness to foreign markets on firm performance. In other papers like the one by Chiao et. al. (2006), the ratio of export sales to total sales is used as the measure of internationalization which may have different implications on firm performance. There is no single or unique way to define internationalization or trade openness, and the choice will be different depending on the nature of internationalization and the purpose of the analysis. Various measures characterizing the open economy need to be developed and tested in order to better understand their effects on firm performance in the future.

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Transfer to a group: what consequences for subcontractor SMEs in the automotive industry?

By Véronique FAVRE-BONTE and Catherine THEVENARD-PUTHOD

Since the 1990s, the automobile industry has seen its foundations deeply changed and its competition reinforced. This context has been particularly difficult for the small-sized subcontractors who had to evolve to ensure their long term survival. In order to stand out from the competition, SME owners did not hesitate to sell their company to larger ones.

The objective of this article is to better understand the consequences of the transfer of a subcontractor SME to a group. We have chosen to study acquisitions from a resource-based view perspective. Our results (based on 14 cases of transfers) show that selling a SME to a larger group is only a good strategic choice if this group can and has the will to bring resources and skills to the SME.

Introduction

At the end of the 1990s, the automobile industry was affected by mergers and acquisitions and saw its foundations deeply changed. Beyond international and major groupings at the car manufacturer level, concentrations concern the whole industry, from the parts manufacturers to the lowest ranking suppliers. In France, many small-sized subcontractors changed owners and were absorbed by groups that were often foreign. The constraints of the automobile industry (changes in the relationship between contractors and subcontractors, new share of risks within the industry...) are the main causes of transfers to a group. Subcontractors, and more especially those whose economic model is based on selling “man hours”, have ever increasing difficulties in proving their added value to the main contractors. They try to get promotion in the industry’s pyramid structure by various means hoping to become a “partner” supplier or a “preferred” supplier (Turnbull, and al. 1992) or just make the strategic decisions that will ensure their long term survival. The requirements to achieve this goal are high (Lyons, and al. 1990; Galt, and Dale 1991) : investment in efficient production tools in order to increase productivity and to resist increasingly aggressive foreign competition ("low cost" competitors); integrating IT and communication technology in order to speed up data exchanges with their main contractors (Hyun 1994 ; Kalwani, and Narayandas 1995); constantly improving technical expertise and innovating to meet the increasingly complex

customer demands (Ali, and al. 1997) and accompanying them internationally (Andersen, Blenker, and Christensen 1995 ; Holmund, and Kock 1998). In order to follow those requirements, the SMEs have two types of handicap which are cumulative: their small size (lack of resources and skills) and their situation of symbiotic dependency (in the sense given by Pfeffer, and Salancik 1978) on their main contractors. Faced with these difficulties, SME owners do not hesitate to sell their companies to larger ones which, through a transfer of resources and skills, can help them to vertically reposition in the chain of production (Teece 1987; Shelton 1988; Granstrand, and Sjolander 1990; Hyun 1994). However, we can question the relevance of this strategy.

Mergers and acquisitions are often considered disappointing (Young 1981; Pritchett 1985; Porter 1987, Schoenberg 2006; Van Dick, Ullrich, and Tissington 2006) as they cause many difficulties. But in the management literature, the buyer's point of view is often privileged (Schwartz 1982; Capron, and Pistre 2002; Clodt, Hagedoorn, and Van Kranenburg 2006). Few studies analyse the consequences of an acquisition from the seller's point of view. The objective of this article is to better understand the consequences of the transfer of a sub-contractor SME to a group. What becomes of these firms after being sold? Do they succeed in reorganizing their position in the automotive industry?

To attempt to answer these questions we have organised our article into two parts. In the first section we will present the analysis framework constructed on a resource-based view of acquisitions, and the methodology used for the empirical study. In the second part we will study the impact of transfers on SMEs by studying 14 cases of recent transfers. We will see that selling a SME to a larger group is only a good strategic choice if the group brings the resources and skills that will allow the SME to reduce its dependency and a part of its handicap.

1. Transfer of Subcontractor SME to a Group: the Framework for Analysis

Literature on mergers and acquisitions may lead to think that transferring to a group is not always the best choice for a SME. Everything depends on the buyer's motives (§1.1), on the difficulties of the touchy post-acquisition integration phase (§1.2) and from the transfer of resources and skills to the benefit of the targeted company (§1.3). These three points are our framework for analysis. The first part will conclude by presenting the methodological approach that was used for the subject (§1.4).

1.1 Buyer's Motives

As stated above the owners of automotive sub-contractor SME's may make the decision to sell out in order to survive (the loss of profitability makes the sale inevitable) or to redeploy (search for a complementary buyer in order to reposition the SME in the industry). Whatever the reason for the sale the owner is often dedicated to the company and is attached to its long term survival: the owner wants the company to continue its growth, maintain employment and perpetuate the story of a family's enterprise (Thévenard-Puthod, and Picard 2007). The choice of a buyer may even lead to leaving financial questions in the background. However, in the context of a transfer to a group the question of long term survival is difficult to assess. A buyer can take over control of a SME for many reasons, some of which are not always very positive. If we summarise the works of Kitching (1967), Walsh (1988) and Buono and Bowditch (1989), we can retain four types of acquisition based on different strategies and entailing different types of risk for the targeted company.

- If the acquisition is horizontal (the buyer is another sub-contractor in the car industry and both firms sell the same products in the same geographical area) the motive for purchase can be varied. The buyer may want to increase its production capacity in order to meet the demands of a main contractor or for reasons of economy of scale. It might also want to increase its power of negotiation and become an essential industry player (Berkovitch, and Narayanan 1993). The buyer might also be trying to concentrate resources and skills that are not available on the market but which the targeted company holds without intending to develop the SME's activity (Capron, Dussauge, and Mitchell 1998). For example, the acquisition may give control of valuable technology (Cloudt, and al. 2006). Finally the motive could be quite simply to eliminate a competitor. Consequently these motives do not correspond to a strengthening of the acquired company (unilateral takeover of the strategic know-how or resource and / or transformation of the acquired entity into a simple production site not taking into account any other skills of the acquired organisation).
- If the acquisition is related (firms selling complementary products or located in different geographical zones), vertical (prior industry supplier-customer business relationship) or non-related (buyer positioned in another industry than the target firm), the motives of the buyer can be to widen product ranges in order to reduce commercial dependency; to take up a position in a foreign country in order to accompany its main

contractor in its international development; to reduce transaction costs or to improve supply-chain management. This type of motive appears more positive for the growth of the SME since it implies that the buyer needs the targeted company to survive. The buyer can be expected to have a better behaviour towards the targeted company and has no interest in making it lose in efficiency.

- Finally, financial motives cannot be ignored. The bought company may be an investment for the buyer. The SME might be having financial difficulties which make it an easy prey. In these situations the buyer has an interest in the growth of the targeted company after its acquisition which is the profit that will be made when the company is next sold. However this may result in a drastic rationalisation of investments which will raise short-term profitability but cause a long term weakening of the company.

As we can see, the consequences of the transfer of a SME to a group can turn out to be more or less positive. This in turn can lead us to the following statement.

Proposition 1: the motives behind the acquisition influence the long term survival of a SME after its purchase. The closer the relationship between the two companies the more likely the motives for buying are to be negative for the targeted firm.

1.2 Post–Acquisition Management: Degree of Independence Left to the Targeted Company and the Difficulty to Integrate

Literature on mergers and acquisitions reveals a high disillusion on the success of this type of operation (Pritchett 1985; Buono, and Bowditch 1989; Van Dock, and al. 2006), mainly due to post-acquisition problems.

Firstly, at an organisational level, even though subcontractor SMEs have light structures, reorganising them is not always easy to implement (Mace, and Montgomery 1962; Shrivastava 1986; Graebner 2003). Working methods must be standardised, IT systems changed and the management hierarchy redefined. If the purchase is horizontal then “physical” reorganization is needed (analysis of common assets, removal of redundant assets, merger of departments, search for synergy...). If this structural reorganisation is needed to make the two entities work together efficiently (Pablo 1994) and seems interesting from an economic point of view, it may also lead to a loss of skills.

At a human level the SME staff may react badly to the change in ownership (Larsson 1989; Schweiger, and Weber 1990; Pritchett 1985). In small structures, there is generally a strong bond between the owner and the staff (Thévenard-Puthod, and Picard 2007). A merger is a threat to the organisation's identity and the staffs' social identity (Gaertner, and al. 2001; Van Dick, and al. 2006). Contact with another structure generates a culture shock (Datta 1991; Buono, and Bowditch 1989; Teerikangas, and Very 2006) which is all the more important if it has an international dimension, i.e. if the buyer is foreign (Weber 1996; Krug, and Hegarty 1997).

There may be passive (absenteeism, turnover...) or active resistance to change (anger, sabotage...). Doubts over possible layoffs or relocations generate a loss of productivity and a deterioration of the working climate (Walsh 1988; Napier 1989, Datta, and Grant 1990, Cannella, and Hambrick 1993; etc.). Staff that cannot get on with the new management will resign as will those who wish to take advantage of the change to advance their careers. Consequently, there is a risk of loss of skills that can be dangerous for the survival of the targeted companyⁱ.

The depth of these problems depends on the level of integration of the targeted company (Olie 1990; Schweiger, and Very 2003; Teerikangas, and Very 2006) and whether the owner remains in the company after the sale. It depends on how far the merger seems to deteriorate the pre-merger organisation (Van Dick, and al. 2006). If the staff notices few changes they will have a more positive attitude toward the merger (Vanbeselaere, Boen, and de Witte 2002). Following Jenster's (1987), Buono, and Bowditch's (1989) and Napier's (1989) works, we can define three levels of independence for a targeted company after the transfer:

- 1 Strategic autonomy, the target remains completely autonomous and undergoes only minor changes. The buyer intervenes little and the manager of the SME retains his freedom to act.
- 2 Operational autonomy, which can be summed up by the definition of the strategy at the corporate level, but a certain amount of freedom to implement it is given to the subsidiary's management.
- 3 No autonomy, the SME loses its independence. The small firm is completely absorbed by the restructuring buyer's group. We believe that this case generates the biggest difficulties.

Consequently it seems necessary to assess the process of integrating a SME within a group.

Proposition 2: the degree of integration of the SME after the transfer influences its long term survival. The less the targeted company retains its autonomy, the greater the post-merger difficulties will be and the more the targeted company will be affected by its transfer to a group.

1.3 The Transfer of Resources and Skills

Strategic literature shows that acquisitions can be positive for targeted companies through the redeployment of resources (Lubatkin, and O Neil 1988; Bowman, and Singh 1993; Seth 1990; Capron, Dussauge, and Mitchell 1998). Acquisitions allow a targeted company to benefit from the buyer's resources and/or skills in three different ways (Haspeslagh, and Jemison 1991).

The first way concerns operational resources: the buyer can bring physical assets to the SME (such as buildings, machines ...) or the financial resources which it is lacking. SMEs often suffer from shortage of equity (Chatterjee 1986; Palepu 1986), but in the case of subcontractors, their commercial dependency increases their financial problems. Their weak power of negotiation allows the main contractors to impose price cuts which result in low profit sales (Wilson, and Gorb 1983; Holmlund, and Kock 1996). Furthermore due to the development of inversed bidding on the Internet, prices are going down. The result is that subcontractors are not very profitable (1.8% versus 3.8% for the rest of the industry; Sessi 2001). This lack of financial resources represents a substantial obstacle to investment in the human and material resources needed to improve their status in the industry.

The buyer can also transfer functional skills in research and development (technological skills, development of new products...), technical know-how or marketing skills (management of a distribution network, customer relations management, reputation ...) to the subcontractors who are generally not very structured. In their situation of symbiotic dependency (Pfeffer, and Salancik 1978), they sell a product which is designed by their main contractor. The consequence is that they do not need research or marketing departments. The arrival of new skills may help them to reposition themselves on their competitive marketplace.

Finally, the buyer can also transfer management skills and thus give the targeted company more general skills such as leadership, strategic planning, the use of business intelligence tools..., and any other skills needed in the administration of a company. These skills would also be beneficial to sub-contractors who are often lacking at the strategic level due to a lack

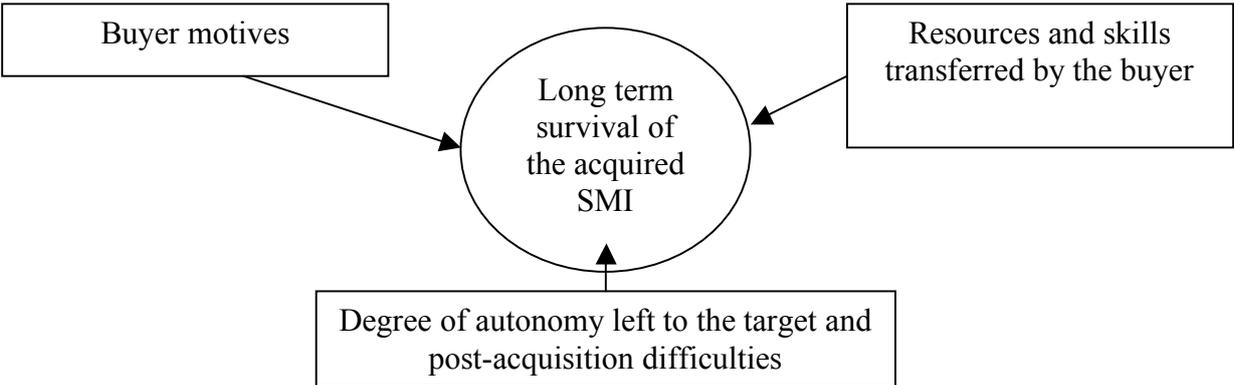
of vision on the part of the managing director (attachment to tradition, difficulties faced with change, reactive strategy and nearsightedness which hinders a correct analysis of the environment) (Minner, Smith, and Bracker 1992). The subcontractor company owner is generally educated in more technical aspects and tends to concentrate on the operational side of the business which tends towards short term efficiency and relegates strategy to the background. It has also been shown that dependency does not favour enterprise (Barbat, and Hlady Rispal 2007); the head of a subcontractor tends to nurture its relationship with its main contractor and neglect company growth and development (Wilson, and Gorb 1983).

Consequently the various transfers of resources and skills might greatly help the SME to face changes in its environment and the new constraints this implies.

Proposition 3: the amount of resources and skills transferred to the target company after the merger influence its long term survival.

Therefore it is using our three dimensional framework of analysis (buyer motives, degree of autonomy and post-acquisition difficulties, and transfers of resources and skills: see figure 1) that we chose to approach the subject in order to attempt to better understand how subcontracting SME's evolve after their transfer to a group.

Figure 1
Analysis Framework



1.4 The Choice of a Qualitative Methodology

Given the exploratory vocation of this research and the wide questioning (the number of variables underlying the outcome of a transfer), a qualitative methodology seemed to give more insight (Teerikangas, and Very 2006). In order to understand how transfers to a group

impact subcontractor firms and analyse the process in its context, we chose to analyse case studies.

The number of cases retained for this study is related to the hypothetical and practical number of different existing situations. We wanted to have a good overview of the different types of integration and buyers and to take into account the differences in the size and activity of the targeted companies. But we also wanted to have certain homogeneity in order to better compare it. We then selected 14 companies acquired between 1995 and 2002 (cf. table 1: sample presentation) by 10 buyersⁱⁱ. Those companies are French ones and are localised in the same geographical area.

Our approach to these case studies was to carry out a triangulation of sources of information (Yin 1994) by analysing different materials. Semi-directive interviews of two to three hours were carried out of the different managers involved in the operation (owners and managers of the target company, but also of the buyer in order to confront points of view, and members of the institutional environment: trade unions...). A guide was created using the analysis framework described above and structured chronologically depending on the steps in the process: the context of the SME before the acquisition, the type of buyer and its motivations, how the operation was carried out, and post-acquisition assessment (the degree of autonomy left to the SME, transferred resources and skills, changes made after the sale, internal and external difficulties, and finally an assessment of the entire operation). Large amounts of documentation were gathered: sector-based notes, internal presentations / notes written by companies at the time of their acquisition, press articles published at the time of the operation... A passive observation completed the method (visits of factories and offices...) in order to get an idea of the immediate environment of the persons, the working atmosphere and to better assess implemented changes.

The assessment of the effects of the acquisition was made using several criteria, statistical criteria (evolution of turnover compared to the sector average and evolution of profitability) and qualitative criteria: reduction of commercial dependency (diversification of the customer base and sector-based diversification) and improvement of the competitive position.

Each case has been analysed in depth. However this article will concentrate on the results of the analysis of all cases even though this cannot reveal the richness of the collected data.

Table 1
Presentation of the Sample

Acquired SME	Date of acquisition	Key figures before the purchase: nb employees, annual turnover in millions € (Net return / Turnover)	Activity	Seller's motives	Type of buyer	Nationality of the buyer
Maurice	2002	45 empl. 6.6 M € (10 %)	Mass-production turning	1/ Fatigue 2/ Lower growth 3/ Cash-in of assets	Very Small group (holding of a few persons)	French
Joseph	2002	17 employees 3 M € (losses)	Basic screw cutting	Receivership	Very Small group (holding of a few persons)	French
Merlin	2000	24 employees 3.5 M€ (0.3 %)	Screw machining of small and average series (40 % of turnover) and trade (60 %)	Fatigue + absence of a successor	Very Small group (holding of a few persons)	French
Georges	2002	9 employees 1 M € (weak)	Manufacture of tubular-steel-pieces	1/ Development capacity 2/ Aftereffects of a previous bankruptcy 3/ Financial opportunity	Diversified industrial group (18 000 employees)	German
Laurent	1996 & 1998	197 employees 19.2 M € (4.2 %)	Mass-production turning, from 5 to 35 mm. Wide ranges.	At first, merger to strengthen power of negotiation facing customers + customer diversification. Then successive repurchases	Industrial group (2 000 empl.) that was bought back by a bank	Swiss
Michel	1995 & 1998	139 empl. 14.5 M€ (52 %)	Precision turned parts (0.3 to 10 mm pieces)	Cash-in of assets	Successive take-over by 2 industrial groups, the last one (2000 empl.) having been bought by a bank	Swiss
Bernard	1997 & 1999	110 empl. 15.4 M € (losses)	Basic screw cutting (average to mass production)	Receivership	Industrial group (2 000 empl.) controlled by a bank	Swiss
François	1998	700 employees 76.2 M€ (2 %)	Mass-production of high precision turned parts	1/ Fatigue, fear for the future of the business 2/ Departure of a shareholder	Industrial group (900 empl.) controlled by a pension fund	American
Bertrand	2001	390 empl. 43 M €	Mass-production turning, assembly of subsets	Need of capital, important debts, problem of inheritance	Industrial group (900 empl.) controlled by a pension fund	American
Pierre	2001	28 employees 2.3 M€ (2.6 %)	Plastic injection and aluminum moulds	1/ Need of financial means for future investments. 2/ Opportunity	Autonomous industrial group (600 empl)	French
Isidor	1999	100 empl. 13.7 M€	Design subsets in metal & plastic	Need of money to refloat another business, uncertainty	Autonomous industrial group (600 empl)	French
Théodore	1999	135 empl. 13 M€	Niche market. Precision turned-parts and subsets for the automobile and aeronautics industries	Retirement and a sense of increasingly difficult competition	Autonomous industrial group (230 000 empl)	American
Didier	2001	180 empl. 14 M€ (3 %)	Precision turned-parts. Mass-production of mechanic components	Retirement and the desire to be supported by a group	Autonomous industrial group (450 empl)	Italian
Henri	2001	50 empl. 5 M € (5 %)	Soldering (niche market). Screw cutting	Retirement and the desire to be supported by a group	Autonomous industrial group (60 empl)	French

2. The Impact of Transfers on Small and Medium Industry (SMI) Sub-contractors: Main Results

In our sample, the owners of SMI sub-contractors sell their company for different reasons. The first reason is the demographic context which has already been evoked. Retirements and inheritance problems caused 6 operations (cf table 1 above) out of 14. Next come motives related to the changes in the automobile industry. When interviewed, four former owners showed fatigue faced with an increasingly constraining environment. In six cases declining growth and financial problems were mentioned. Finally, five directors expressed their desire to be supported by a group in order to be more competitive. Only one company was sold by opportunity with the idea of cashing in the owners' assets advantageously.

Having given the reasons for the transfers we will now concentrate on the consequences. Table 2 summarises the main effects of the purchases on the SMI sub-contractors of our sample. We will see that the purchasers seemed to have praiseworthy intentions in favour of the bought entities (§2.1) and that the integration phase does not seem to be at the origin of important difficulties in the transferred SMI due to the relative autonomy that they kept after the operation (§2.2). We will also note that the enrichment of skills is not always systematic (§2.3). Finally, we will attempt to draw up a synthesis of these results (§2.4).

Table 2
The Impact of Acquisition on Targeted Companies

SME	Health of the Target before Purchase	Motives of the Buyer	Degree of Autonomy left to the Target	Post-acquisition difficulties	Transfers of Resources and Skills	Evolution of the Key Figures	Evolution of the Sector-based Dependence (SD) and Commercial Dependence (CD)
Maurice	Good but in a deteriorating situation	Both: industrial (local investment) and financial (diversification of investment)	Strategic	No difficulties	Resources	No	Reducing SD because of diversification
Joseph	Losses. Financial pbs	Non-strategic opportunity. No strategic interest (obtaining of a resource).	Nil (take-over)	Strong lack of motivation of the staff	Resources, Functional Skills	Decrease of the work-force but increasing turnover	Increase in CD: the target became the subcontractor of its buyer
Axe	Profitability pbs	Industrial / Desire for development	Nil (take-over)	Resignation of 8 employees	Resources Functional Skills, Managerial Skills	Increase in Work-force, turnover and profitability	Reducing SD because of diversification
Georges	In improvement after previous crisis	Industrial (horizontal and vertical + international)	Strategic, then weak (attempt of merger), then strategic	Punctual attempt to merger = important internal and external difficulties	Resources, Functional Skills, Managerial Skills	Increase	Reducing SD because of diversification
Laurent	Average +	Industrial (Horizontal), then financial (investment) further to shareholders' changes	Operational	Anxieties of the employees, decrease in the work-force	Functional Skills, Managerial Skills	Increase	Position improvement (CD) by extension of the know-how (impossible to circumvent subcontractor)
Michel	Very good	Industrial (horizontal) then financial (investment)	Operational	Anxieties, resignations following the move	Resources, Functional Skills, Managerial Skills	Fall in profitability	Increase SD (more customers in the automobile ind.)
Bernard	Financial problems	Non-strategic: local pressures (horizontal acquisition)	Nil	Strong lack of motivation	Resources, Functional Skills	Improvement but always negative result	Become a production site for the group
François	In growth but weak profitability	Industrial (horizontal + international) then financial	Operational	Resistance to change, cultural difference	Resources, Managerial Skills	Increase in profitability	No evolution
Bertrand	Correct but excessive debt	Industrial (horizontal) then financial (shareholders' change)	Operational	Rivalries between subsidiaries	Resources, Functional Skills	Neutral	No evolution
Pierre	Average	Industrial (Horizontal)	Operational	No difficulties	Weak	Increase of the work-force	No evolution
Isidor	Average	Industrial (Horizontal)	Strategic then operational	No difficulties	Functional Skills, Managerial Skills	Increase in turnover	Reducing CD. New markets
Théodore	Average	Industrial (diversification)	Strategic	Strong lack of motivation	Weak	Neutral	No evolution
Didier	Good	Industrial (horizontal + International)	Operational	No difficulties	Resources, Functional Skills, Managerial Skills	Decrease of the work-force but increase in turnover	Reducing CD: new customers
Henri	Problem of competitiveness	Industrial (international) then financial	Strategic then nil	Strong lack of motivation of the staff	Weak	Neutral	Become a production site for the group

2.1 The Identification of the Two Main Types of Buyer

Our 14 SMIs were bought by ten different purchasers with varying profiles: there are small groups which can be defined as an entrepreneur having created a holding company to acquire firms by using lever effects (our sample contains two transferees of this type but with different profiles, the first technical, the second managerial), autonomous industrial groups (6 cases) and industrial groups owned by financial institutions (banks or pension funds: 2 cases). These groups took control of the SMI sub-contractors for two main reasons:

-**Essentially industrial motives** for almost all of the 14 operationsⁱⁱⁱ, at least at the outset. The buyer's industrial project corresponds most of the time to either reaching a critical size on the international market in order to become a supplier impossible to ignore (horizontal and international acquisitions), or connected to diversification, i.e. the search for a SMI with know-how and additional products in order to propose the customer a global offering.

-**Financial motives**, which either come in second place behind industrial motives (1 operation), or become a priority following the change in the buying group's shareholders (4 operations).

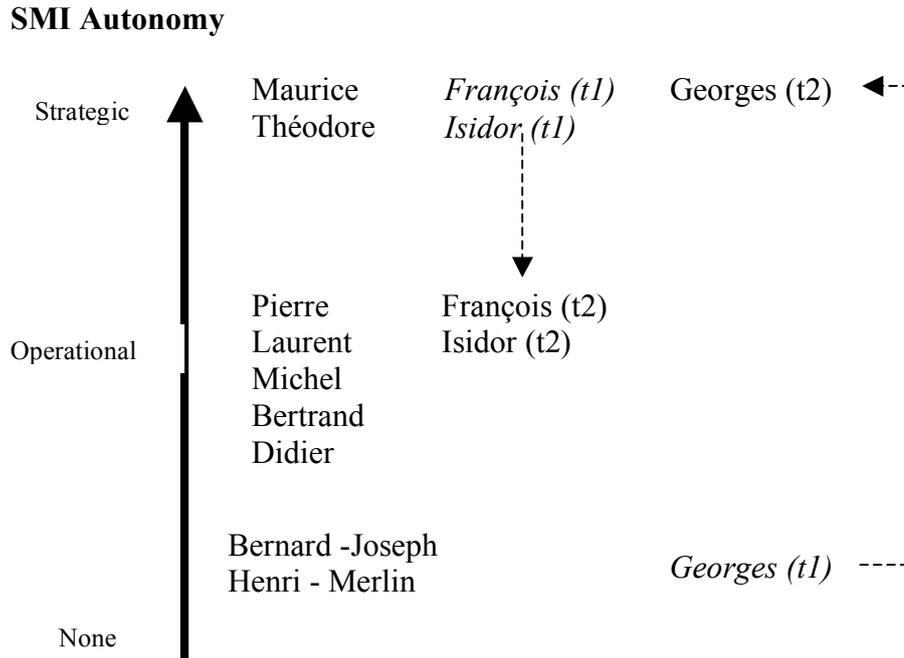
Except for 2 cases the buyer intended to protect the acquired entity to develop it, at least during a first period.

2.2 Real Difficulties to Integrate which are Limited by the Autonomy Left to the Target Companies

Two thirds of the companies in the sample benefit from **relative post-acquisition autonomy** (see Figure 2): three targets are totally autonomous and seven have operational or "directed" autonomy. Only four companies no longer have any independence. This therefore seems positive for these SMI sub-contractors, who, even if they have lost their legal independence, seem to maintain some level of freedom. It must however be noted that the strategic autonomy left to some comes with tight profitability objectives and regular reporting to the buyer. It should also be noted that the degree of autonomy can evolve in time. Some operations were abandoned (Georges' merger attempt was stopped in the face of difficulties) or, on the contrary, some were progressive with the target gradually losing its autonomy (Isidor and François that change from t1 to t2).

Figure 2

The Degree of Autonomy Left to SMIs after their Acquisition



However, even though the targets managed to maintain a certain degree of autonomy, external growth operations resulted in profound changes (reorganisation, more rigorous management, relocation...), as we shall see below. It is therefore not surprising that in most cases (10 companies out of 14) purchase caused **integration difficulties**. The extent of these difficulties varied but was rarely perceived as disturbing by the interviewed directors (for whom a basic change in ownership inevitably results in a period of insecurity and worry for the staff). We thus noted a temporary decrease in productivity in practically all cases (except in the four cases where no change took place and where the former director remained). The staff sometimes reacted negatively to the attempts by the buyer to intervene (Bertrand, François, Michel, Georges, and Merlin); this was proportionate to the changes that were made. Georges, for example, went through a major crisis while attempting to merger with another subsidiary of its buyer's group. Merlin lost 8 employees out of the original 24 because they neither agreed with the new owner nor were ready to accept changes. Finally, differences in national culture were sometimes felt, in particular at François, which was acquired by a group with an American culture. Cultural difference seems to be less disturbing in the case of European acquisitions^{iv} (Georges, Laurent, Michel or Didier).

2.3 The Enrichment of Skills Closely Connected to the Type of Buyer

SMIs that entered a group generally experienced an increase in their power of negotiation after the operation and had a better image on the market (today their customers are more confident because of their being part of a solid group). But aside from these benefits arising from concentrations, some acquisitions brought many resources or skills.

2.3.1 A Priority to the Contribution of Resources

The acquisitions that we studied have almost all led to the bringing of new resources to the purchased company. The first of these resources is the transfer of equity capital which was carried out in almost half of the cases (Maurice, Merlin, Georges, Bernard, Michel, Didier). These additional financial means allowed the smallest targets of our sample to attack new markets (purchase of new machines, transfer to bigger buildings, recruitment of staff). As such, the acquisitions were springboards for growth. For some companies, these additional financial resources also made it possible to cross a period of crisis. This result confirms that of Capron, Dussauge, and Mitchell (1998) who noted that 88 % of the purchasers brought financial resources to their targets.

Six targets that joined groups also benefited from **new information and management systems** (access to an Intranet, an ERP, a Computer Assisted Production Management system...) which were installed to facilitate data exchange with the head office or the other subsidiaries (allowing, among other things, internal benchmarking) and therefore improve the company operation.

These contributions, if they can be considered as limited, were however a positive experience for the targets.

2.3.2 New Functional Skills for a More Structured SMI

The purchase of a SMI by a big company can strengthen the subcontractor's strategic position because the larger entity injects elements of functional skills appreciated by customers and give it the means to develop them. This consolidation of the target has become increasingly necessary due to the growing collaboration within the automobile industry. In our sample, the concentration of functional skills on the target, which happens in almost one case in two (Georges, Laurent, Michel, Didier, Bertrand, Merlin and Isidor), took place almost at the start of the post-acquisition phase in order to rapidly structure the organization. This transfer was

either made by the buyer, or by the group subsidiaries. Geographical proximity seems to be an important condition for the transfer.

Various types of transfers were observed. The most frequent concerned logistics/procurement, quality assurance and Human Resource Management (HRM) functions. Georges, for example, saw its logistics strengthening after the acquisition, a necessary step considering the foreign origin of the major part of its purchases of raw material, the supply chain to be managed (several hundred tons) and delivery deadlines imposed by the customers. The introduction of the notion of quality also led to reaching a very high standard for the automobile industry. For Merlin, the acquisition allowed the introduction of a profit sharing agreement for the staff resulting in higher motivation. Finally, in some cases the buyer removed some tasks from the target (Isidor) while transferring HRM and quality related skills. In large entities project management skills were also transferred to the target (Michel, Laurent). Some transfers also occurred at the sales level. For example, the new manager of Merlin completely changed the current policy by introducing more anticipation and by becoming a real force of proposal for the customers (search for product improvements, anticipation of price cuts ...). Other SMIs (Isidor, Michel, Laurent, François) implemented a new more centralized policy since sales were made on a group basis.

However, despite the transfers of skills noted above, there were a very low number of transfers of technical skills (for example R&D collaboration, installation of an engineering and design department). Only Merlin, Laurent and Michel saw an improvement in these skills following the purchase, the latter two through numerous exchanges between the group engineers. Sometimes the transfer operated the other way. This is the case for Pierre whose R&D skills were transferred away by the buyer. Considering the importance of technological factors in the car industry, we can only regret this absence of technical transfers which would enable the SMI sub-contractors to both increase internal learning potential and their capacity to absorb external knowledge, and therefore better defend their position on the marketplace.

2.3.3 A Transfer of Managerial Competences

Besides the transfer of resources and functional skills mentioned above, the change in ownership, in 9 cases out of 14 (Isidor, Théodore, Didier, Georges, Merlin, Michel, Laurent, François, Bertrand), resulted in an **evolution of managerial skills** (following the results of Capron et al. which indicate that 90 % of the buyers of their sample brought managerial skills to their targets). The purchase brought about a change in company structure with the implementation of more rigorous and formalised management (dashboards, value analysis...).

Two scenarios were then identified. In the first, the former leader remained in place, but took advantage of training in the strategy and management tools used by the buyer (Georges, Laurent, Michel, Didier, Isidore). One can thus speak here about a real transfer of skills. In the second case, the former leader was replaced by a manager chosen by the buyer^v and having the required level of skills (Merlin^{vi}, François, Théodore and Bertrand).

This reinforcement, in the financial groups, accompanied a new direction for the company which turned increasingly to financial management and short-term profitability (François, Bertrand, Théodore). This view sometimes led the purchasers to rationalize their subsidiary's investments which caused some negative side effects. Some activities are very capital-intensive and require permanent investments so that companies are technically "up to date" or even in advance.

Except for two targets in our sample (Maurice and Georges), the companies all underwent strategic reorientations. The directors, especially when they were new, did not hesitate to make major changes: site specialisation (every subsidiary specialising in one type of product or on a geographical area), attack of new markets (sector-based diversification) or obtaining new standards.

This **new strategic vision** (of the business and the skills to be mastered, of the sector and its growth perspectives, of the territory and its future) resulted in a more proactive approach (the will to offer customers solutions instead of waiting for requests). Some purchasers have very ambitious projects. One of them plans to set up small manufacturing units all over the world, near the customer plants, and connected with the French based company headquarters where products are designed by a digital bridge.

Let us note to finish that three companies were transformed into production sites for the rest of the group and therefore saw their skills being reduced.

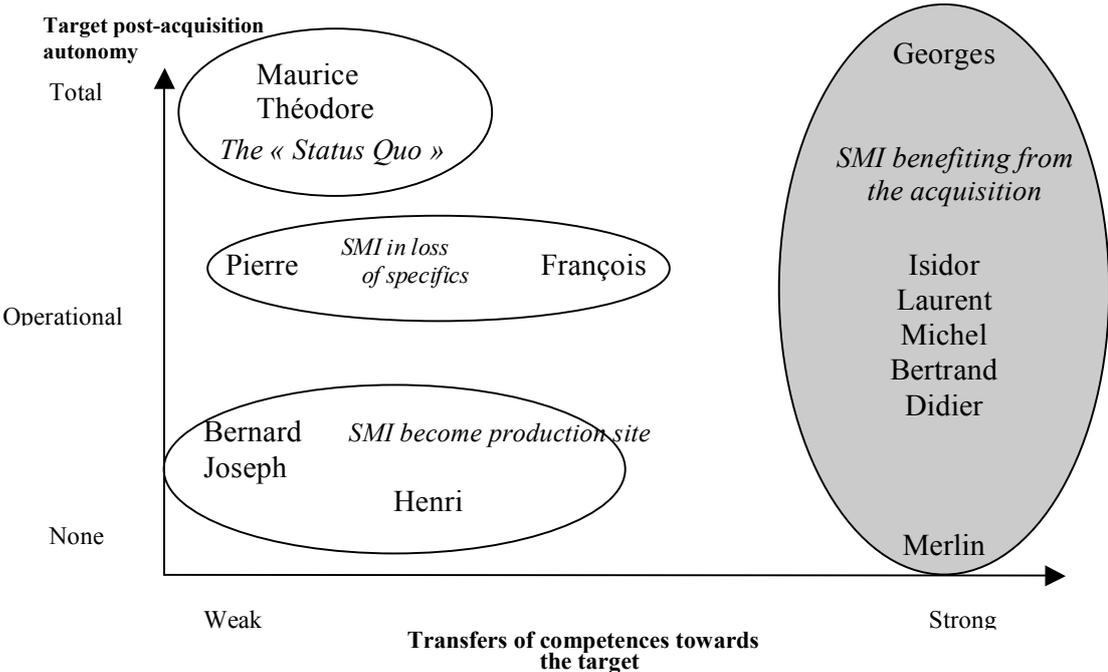
2.4 Synthesis of Results: the Dominant Role of the Transfers of Resources and Competences in the Repositioning of SMI Sub-Contractors

Our results show that the impact of acquisitions on acquired SMIs is major. One can see a true **transformation of the value chain**, which is globally modified in most cases (Pierre, Isidor, Didier, Henri, Merlin, Joseph, Georges, Laurent, Michel, Bernard, Bertrand). Sales,

production and logistics functions are impacted in practically all cases. Only two companies did not seem very affected by the change in ownership (Maurice and Théodore).

Looking at the key figures, one notices that more than half of the purchased companies see an increase in sales turnover and results after the purchase (Joseph, Merlin, Georges, Laurent, Bernard, François, Pierre, Isidor, Didier), whereas the five others stagnate or decline. The reasons given by the interviewed directors to explain the decreases are related to the economic context (since 2001 many markets are declining and it is more and more difficult to maintain a satisfactory level of activity). However it is not surprising to notice that the companies that progress the most are those which benefited from a true transfer of skills from their purchaser or other subsidiaries of their group (figure 3). This is in line with our proposition 3 which relates the resources and skills transferred by the buyer to the long term survival of the SME.

Figure 3
More or Less Beneficial Acquisitions



The transfer of skills indeed allows to have a more proactive vision of strategy, to attack new markets and, therefore, to improve the situation of dependency of SMI sub-contractors. Seven SMIs thus saw their position improving in the industry following their purchase ("SMI benefitting from the acquisition"). In addition to this group of companies, three other groups can be identified. A first group where the targeted SMI hardly saw any change in their position after the purchase ("Status quo"), a second where the SMI saw its situation of dependency deteriorating after the purchase ("SMIs become production sites") and, among

these two, a group where the SMI brought its know-how to the purchaser and only obtained minor profits from their purchase even though they still enjoy relative autonomy ("SMI in loss of specifics"). These situations illustrate our proposition 2 which emphasizes the impact of the degree of the SME's integration on its long term survival, but only when no transfer of skills is realized by the buyer (we found in the "SMI benefiting from the acquisition" group different levels of autonomy).

Finally, the results show that the degree of transfer of skills to the purchased SMI is, in fact, closely related to the type of buyer and its motives (proposition 1). We encountered various buyer profiles in our sample:

-hypogroups with a central director having either managerial skills (endowed with a strategic vision, with numerous development projects and sales aggressiveness: this type of buyer is conscious that technical skills are not matchless), or technical skills (with a strategic vision limited to technical know-how: the commercial approach of this buyer is more passive and the strategy more based on investments in machines).

-More important groups who bring more constraining controls (reporting, investment justification ...), but also new opportunities (strengthened power of negotiation, better image related to the solidity of the group, management tools and IT systems ...). The motives of these groups are of two kinds:

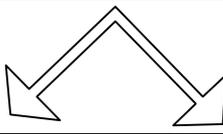
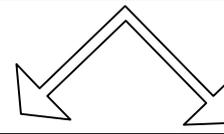
* essentially financial: there is very little implication of the group in the operational management of the target and few transfers of skills, but on the other hand strong pressure for short-term profitability and for an increase in productivity.

* *or* more industrial: exchanges and transfers of skills between group entities are then much more numerous.

It seems that purchasers who make a real transfer of skills to their targets are of two types: hypogroups directed by a leader with a "managerial" profile and the more important groups driven by a real industrial project (table 3).

Table 3

Different Impacts According to the Type of buyer

<i>Type of buyer</i>			
<i>Hypogroup</i>		<i>Group</i>	
Often limited synergy. Development only based on the competence of the leader of the target (former or new).		New constraints: reporting, justification of the choices of investments ... New opportunities: power of negotiation strengthened, better image (solidity of the group), contributions of management tools and IT systems ...	
			
<i>Profile of the leader "engineer"</i>	<i>Profile of the leader "manager"</i>	<i>Financial motivation</i>	<i>Industrial motivation</i>
Strategic vision limited to the technical know-how. Often passive commercial steps. Strategy based on the investment in machines	Real strategic vision, numerous projects for development, greater commercial aggressiveness. Consciousness that technical skills are not matchless.	Not much implication in the target's operational management and few transfers of skills. Requirement of short-term profitability. Push for a rise in productivity. Rationalization of investments	Exchange of information. Transfer of numerous skills and use of any complementarities.

Conclusion

The objective of this article was to define the impacts of acquisitions on SMI sub-contractors in the automobile sector and to see in what measure the transfer to a group could allow these companies to reposition themselves in the sector.

Our framework of analysis and the study of 14 cases of transfers allowed us to highlight a certain number of points. Like Capron and, al. (1998), we first of all noticed a greater structuring of purchased companies, a sophistication of management practices and the setting up of transfers of resources and skills which allowed most SMIs (at least half) to reposition in the sector and to restore the balance of power with their clients.

However, in certain cases the impacts are more debatable. The contribution of skills does not happen or is very limited depending on the type of purchaser: it does not have skills to pass on (two cases), it bought the target to get its know-how or a key resource (two cases) or it contents itself with rationalizing investments to make the operation profitable (one case).

Some SMIs even saw their situation of dependency deteriorating after their acquisition because they were transformed into production sites for the purchasing group (3 cases).

It seems that the director-owners of SMI sub-contractors anxious to get the support of a group to ensure the growth of their company should carefully choose the buyer and make sure of its good intentions and skills (the hypogroup controlled by a leader with a managerial profile and the group with industrial motivation appear to favour development more). The success of an SMI after the acquisition is more related to the scope of skills from which it will benefit than to the degree of operational post-acquisition autonomy^{vii}. This transfer could therefore be the subject of more care during negotiations and during the drafting of sales contracts.

This work has limits which leave room for further research. The chosen method, namely case studies, highlighted a number of points (notably a typology) which it would be appropriate to test with a bigger sample of companies, especially since this study was carried out on a restricted geographical territory (a single department). Comparisons with other departments could also be considered. Finally, the actors privileged in this study were the leaders (past and present) of the companies (purchasers and targets). This undoubtedly explains the way the difficulties in integration were considered as only relative. The interview of other members of staff may have shown a different understanding of the impact of acquisitions.

Nevertheless, the importance of skill transfers which are necessary to remain competitive in an increasingly difficult automobile sector and to maintain the long term survival of SMI sub-contractors takes all the more its meaning in the actual financial and economical crisis context. The automotive industry and its suppliers are ones of the most affected industries and we will certainly assist to major restructuring.

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Footnotes

ⁱ Krug and Aguilera (2005) noted almost 70% departures of the target firm executives during the five years following an acquisition.

ⁱⁱ Following the advice of Eisenhardt (1989) for whom the ideal number of cases is between four and ten, we had settled as an objective to analyze ten cases of acquired companies. However, we were in the presence of groups which acquired several SMEs in the same territory. It was then necessary for us to include these various "targets" in our sample because it had an influence on the process of integration, notably on the possibilities of resource and skill transfers between subsidiaries of the same group and on the degree of autonomy left to the SME.

ⁱⁱⁱ Only two SMI were bought for non-strategic reasons: advisability for the purchaser to recover an interesting resource (a building of big size and well localised) and the pressure of the authorities to save employment. Lastly, one case is in an intermediate way between the industrial and financial motivations, since the transferee (an individual via a holding) wishes to invest only in local companies, to maintain local economic activity and an activity (undercutting) to which it is attached, choosing however companies with potential.

^{iv} This corroborates the results of Pablo (1994).

^v Let us note that in the majority of the cases, the leader-salesman remained in place after the operation, at least for a transitional period (which could go up to three years in the case of François).

^{vi} Here, it is the transferee who manages the company.

^{vii} This result thus brings a nuance to Graebner's work (2003) that shows that the autonomy left to the leader of the target influences positively the creation of value. In our cases, this autonomy is not sufficient.

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WORKSHOP: The barriers of entrepreneurship

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The politicians value entrepreneurship highly and want to advance entrepreneurship and high growth entrepreneurship, but they know too little of the reality of small enterprises. The road which entrepreneurs go by is filled with obstacles, let's investigate together how broad and deep those obstacles are.

The barriers of entrepreneurship are in connection with supranational (EU) and national legislation. There's a need to initiate an analysis together on how old and also continuously increasing legislation narrow the possibilities of small entrepreneur.

Track: 10. New Venture Creation and SME Growth

Are Public SME financing institutions still viable in a maturing economy?

KIBO case: Shifting its position to Market Partner

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Abstract

Regarding the recent controversy over public SME financing institutions' role in SME sector in Korea, this paper begins by reasoning that market failure occurs in SME financing sector even with the existence of mature and efficient market players, which implies that there still remains important roles for smart public institutions even in mature economies.

*As an insightful example, this paper introduces Kibo's recent efforts placed around its technology appraisal schemes. The content includes the illustration of Kibo's disruptive innovation of Kibo Technology Rating System, organizational shift, and its strategies. This paper further suggests the remaining tasks for Kibo; the application of **floating guarantee coverage ratio** in debt-financing and the use of **technology appraisal certificate** in equity-financing. Finally, this paper concludes that smart public SME-supporting entities would facilitate the efficient market functioning by specializing in solving uncertainty that market players are not familiar with or that building own capacity to tackle such uncertainty would be too expensive for any single market player.*

Key Words: Kibo Technology Fund, Technology Appraisal, KTRS (Kibo Technology Rating System), Technology Appraisal Certificate, Technology Appraisal Guarantee, Market-friendly enhancement, Floating Guarantee Coverage Ratio

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that of any organization with which he is or has been affiliated.

Introduction

In the past, the Korean economy has largely depended upon public policies implemented through the close coordination between government entities and functional quasi-government institutions. After successfully growing major industries in the 1970s, Korean government shifted policy focus onto boosting entrepreneurship in the SME (Small & Medium sized Enterprises) sector. In the process, Credit Guarantee has been widely utilized as a main policy vehicle in Korea.

However, the controversy regarding the usefulness of SME financial supports of such kind has recently been brought up by both policy-makers and academia. The reasoning behind those with negative viewpoints on the role of public institutions in SME financing is primarily based on two beliefs. The first one is the assumption that market has its own efficient and reasonable mechanism and such policy-driven tools only distort the fine functioning of the market. The second is that the public financial supports cultivate more recurring dependency rather than improving competitiveness.

The first half of this paper begins by introducing four economic views relative to the extent of the government's intervention. The following chapter will briefly discuss the culminating negative views upon SME supporting financial institutions in Korea.

And then, this paper will touch upon the origin of paternalistic policy-implementing attitude toward SME sector in Korea as a whole and draw some implicative policy categories within the entire SME sector. It will also point out the causes behind recurring SME financing market failures even after large-scale government policy measures. It will further look into the reasons that even a market with a plenty of efficient private participants would fail and address the recent SME market failures.

In the later half, this paper will introduce the case of the Kibo Technology Fund in Korea which has recently shifted its role from money supplier for technology SMEs mainly through credit guarantee provisions to a

market partner through its differentiated technology appraisal capabilities and flexible coordination with market players.

Finally, this paper will conclude with universal lessons for public or quasi-public SME financing institutions in the world under any degree of market development.

Four Economic Views pertaining to the degree of market development

At the early stage of planned economies, the economic growth of a country would depend largely on the ability of its government. As we see from the case of Korea and many other emerging countries, the role of the government is crucial in terms of resource mobilization in accordance with the priority in growth strategy where there is neither efficient market nor sizable industries. This stage would be called as the stage of **Revisionism** from Development State View (Johnson, 1982, Amsden, 1989, Wade, 1990).

On the other axis of the spectrum, **Neo-classical View** exists assuming that market is just perfect.

In a bit more moderate position, the **Market Friendly View** (World Bank, 1993) presumes that – in the absence of inefficient government intervention – the market '**generally**' functions efficiently, and so the government should act to ensure secure property rights and competition, but otherwise not interfere in economic activity¹. As the definition speaks for itself, it may apply to the economies with mature markets.

Taking positions somewhere between Development State View and Market Friendly View, the **Market Enhancing View** (Aoki, et al., Council of Economic Advisers 1997) – proposes that the pertinent role of the government is to engage in activities which complement the market. This view presumes that most economic activity should be performed by decentralized agents engaged in

¹ Financial Restraint and the Market Enhancing View, Thomas Hellmann, Kevin Murdok, & Joseph Stiglitz 4/12/97

market transactions, but it also recognizes that market failures are much more pervasive than it implicitly recognized by the Market Friendly View².

As we witnessed from the recent Sub-prime Mortgage Crisis from U.S., even a market regarded as the most efficient could fail occasionally. George Soros points out in his recently published book, *New Paradigms for Financial Markets*, the assumption of efficient market which maintains equilibrium by its own power is wrong because market belongs not to the world of natural science but to humanities. Because market fails from time to time, facilitating an efficient and active market with the public sector playing complementing roles is important. From the other perspective, it is to a large degree true that government's excessive attention may bring about the intentionally weak functioning of market players if government care continues even in a maturing economy, just as some juveniles still demand parents' support as if they are infants.

Also from the government side, it is often beyond its capacity to take perfect care of now widely diversified and highly complicated maturing stage economy. Hence, it is desirable for a maturing economy to take Market Friendly Economy as 'Orientation Coordinates' and to contemplate how to redefine government's role to complement market by jointly promoting it with market players.

This paper is not to discuss which view is right. Instead, it attempts to place these three views except Neo-classical View on a time series.

In explaining the changing role of public sector institutions in Korea, a nation which proudly completed the government-led development stage and 'pursues' the market friendly economic environment while having a lot of imperfect and decentralized market players, **this paper takes a position in between Market Friendly View and Market Enhancing View**. Although I described it as 'in between' my nuisance is tilted more toward Market Enhancing View for the following reasons.

- (i) Korean economy has just completed Development Stage

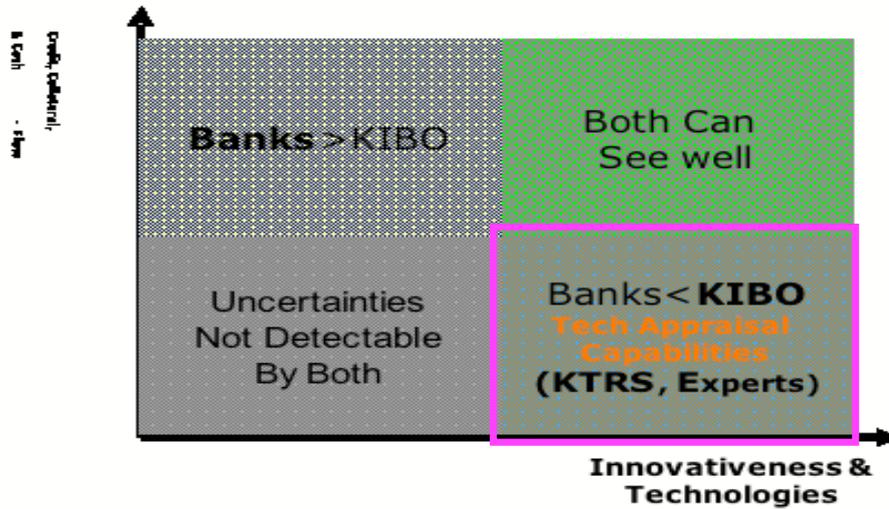
² Same paper as footnote 1

- (ii) Even in mature economies, joint R&D program between government and private sector such as Advanced Technology Program in U.S. exists which means there are certain areas where market itself would not develop on its own and individual market players cannot see benefits justifying the associated costs although it would benefit the entire economy
- (iii) Inefficient government intervention may interrupt efficient functioning of the market, however, opposite natures of interventions would promote it

In brief, my paper presumes that the role of the Korean public SME institutions in this transitional stage is to facilitate a more efficient functioning of private sector, not merely providing Kapital. In the next chapter, the case of Kibo Technology Fund will be introduced as an example of a successful shift from a market maker to **market's partner**.

Complementing or jointly-promoting market with market participants would mean that **public institutions should tackle the problems which market players are unable to or unwilling to cope with** because benefits of having such capabilities on their own do not justify the associated costs. For Kibo, the role in the new era toward market orientation meant complementing market with its differentiated technology appraisal capability. The diagram below shows how Kibo would reduce the uncertainty of technology sector by tapping into the part, untouchable by commercial banks.

<Figure 2> Categorized Uncertainties



Risks coming from the gray area of uncertainties not detectable by both private sector and Kibo would be shared by both players. This paper will further look into it in later chapter.

Increasing criticism on public SME financial supports

Unlike Korean earlier government principals who mainly supported large industrial players, the institutions in Korea established to enhance the SME financing market have lately been bombarded with surging criticisms from policy leaders, academia, and market players.

Main arguments are as follows: (i) Without desired outcome of GDP growth proportional to public expenditure on SME financing, tax-payers' money is just wasted only to feed uncompetitive businesses. (ii) It only delays the liquidation of marginal firms supposed to be shaken out by market earlier, which becomes a serious obstacle for healthy competing firms. (iii) It impedes an efficient functioning of market by violating market rule of law.

This paper attempts to contradict the criticisms relying purely on the market-friendly view. First of all, a central role of an economic system is to coordinate economic activities across the various players in the economy. Above all, each market player has an incentive to protect themselves from uncertainties of any sort and further enhance their interests whenever there is a chance.

Market players would not regard their activities purely as pivotal parts of aggregate national economy. With this nature inherent in their operations, even efficient market players fail to optimize their activities due to their limited capabilities of risk-hedging or intentionally avoid uncertainty by exploiting the loopholes of public institutions.

Korean Economy and SMEs

1. The reasoning behind the paternalistic attitude toward SMEs in Korea

Korea is known as a successful example of late government-led industrialization. The industrialization policies in Korea had previously been clear with industry focuses. Policy target shifted stage by stage starting from promoting exports in textile and garment industry in 1960s to developing heavy chemical industry through 1970s and 1980s. However, when the Korean government's focus moved from big players to SMEs, which is **size categorization**, there has rarely been the sense of sharply targeted field classification. Instead, entire SME sector was somewhat treated as an industry. During the late 1990s, the concept of *Ventures* has developed; however, the entire venture sector was treated as an industry. It was not until early 2000s that Korean government began to seek more and more concrete 'choice and focus' approach among SMEs and Ventures.

The reasoning for this phenomenon is worth attempting because it would give a useful implication toward the root of SME sector problem. Korean Economy is a successful government-led one. Together with Japan and Taiwan, its success has contradicted the mainstream economic views from the west as the fact is known worldly. During the industrialization course, resources were mobilized and coordinated by the government in accordance with its industrial policy priorities. While some parts of economy were favored under 'choice and focus approach', the other parts were left neglected creating imbalances under **Growth First, Distribution Later** philosophy.

Therefore, supports toward SMEs in Korea has had slightly different connotation than those for larger cousins in target industry sectors in the earlier past. While it must be true that Korean government hoped to see the competitive

growth of SME sector to make a new growth engine of Korean economy, it also had a strong intention of balancing its economy with the left-over part from the previous stage. The attitude of **Paternalism** must have been built toward SMEs under such sense of responsibility. Since Korean economy never had deep enough cushion of welfare like many west-European nations, growing SME sector in general to create employment opportunities, for as many people as possible, would have been regarded as the most cost-effective method of building social safety net. **The liquidity provision toward entire SME sector** would be justified in this sense until such element-inputting (K) activity reaches **the stage of decreasing return** where an additional inputting of Kapital fosters no longer the desired impacts on GDP growth and on employment.

2. The conceptual classification of SMEs for policy implication

Taking into account the reasoning drawn in the previous paragraph, SMEs, a broad name, can be classified into three conceptual categories for policy implication as below. The three below are all policy-implementation-worthy categories. Marginal firms are not considered here.

- (i) SMEs with scalable business models or disruptive technologies
- (ii) Good SMEs with fair management abilities and lasting business prospects
- (iii) SMEs in general in which GDP growth effect out of monetary support is positive netting the costs of such support

The first category can also be called as **VC-investable firms** whose hyper-growth-potential gives a reasonable prospect of successful exit within a foreseeable future. The second category is not VC-investable, but, **still important as the backbone of national economy**. The third category is worth supporting to some extent because the collapse of such SMEs due to liquidity trap would create significant repercussion in economic stability and social safety.

The problem with previous measures for market failure – Causality Analysis

The discussions on SME issues all over the world eventually leads on the identical theme, *financing*. Government role regarding SME financing is

normally thought of as **preventing market failure**. In case of Korea, The primary way to do so was providing liquidity into SME loan market, mainly through Industrial Bank of Korea or quasi-public credit guarantee institutions such as Kodit & Kibo.

To solve the problem, we have to see the root of the problem. Policy leaders need to look into the **cause-and-consequence relationship** at this point. Liquidity trap, the main SME loan market failure, normally happens because of information asymmetry. The chronic liquidity shortage is the consequence, and the cause is the difficulty of market players in sourcing and selecting among credit-worthy SMEs.

Supplementing liquidity into the market either by increasing the amount of fund available or by providing the significant portion of guarantee coverage touches the consequence part rather than dealing with the reason behind the phenomenon. The practice is like putting the cart before the horse. Before pouring liquidities into the consequence part for immediate impacts, the efforts to develop such functions as identifying, sorting, and tackling the SME specific information asymmetry should have been at least paralleled; it is *causa sine qua non*. Without such efforts, **simply reducing or increasing the size of liquidity packet will not heal the problems rising from the root, information asymmetry**. Also, **the sources of the uncertainty may differ depending** on each technical field as well as **on the three policy categories** mentioned in the previous chapter.

The importance of looking at the root of Market Failure: Information Asymmetry

1. General Behavioral tendency of market players

Basing the argument purely on market-friendly view, one may content that market would perform efficiently with absence of the inefficient support by public sector. Thus, with far reduced amount of supports from public sector, banks will develop their own capabilities to deal with SME specific uncertainties; voluntarily changing collateral-based lending practice to more sophisticated cash-flows based

lending. This is only partially true in the field of SME financing.

One fundamental reason for the chronic market inefficiency in SME loan market is from commercial banks' natural behavior, profit-maximization through **cost-benefit consideration**.

Assuming the total amount the same, it is more costly to manage loans to a lot of smaller companies rather than servicing the same amount of credits to fewer familiar companies. This is particularly so when loan department's productivity is measured as total amount of loans rendered divided by number of loan officers, which used to be common evaluation criteria in Korean banking industry. At the application phase, it takes almost equal amount of efforts to evaluate the credit of clients regardless of both the size of firms and the amount of credit. At the post-lending loan management phase, it is much more complicated to manage risks of various smaller clients than to administrate fewer bigger clients.

Some may argue that this sort of reluctance to render credit to many smaller firms will be bent when banking industry matures with increasing degree of competition. This is only partially true. In case of Korea, commercial banks have competed harshly in SME loan market since late 80s until the early 2000, after they noticed big and stable companies were now relying more upon direct financing. However, the surge of competition was subsided due to two major reasons. Firstly, the profit margin of around 2% in SME loan market is hardly enough to justify the risky credit-based lending. The new requirement from Basel II has also tied commercial banks to complex risk management practices, which was not the case in the past. **Third, there are other sources to generate bank income rather than from SME lending**. Commercial banks now tend to compete not in the SME loan market, but in such new areas as fee creation activities to which Basel II is not applied and as investment banking where higher expected returns could justify higher risks banks take.

Under the profit-maximization concern, short-term rather than long-term, **commercial banks will expand their capacity or capabilities to cope with SME related uncertainties so long as their foreseeable-term benefits of doing so justify the increased costs and the opportunity costs**. Thus, what

a reasonable commercial bank, irrespective of its capability level, considers the optimal may not be optimal from the perspective of the entire economy. The following part of this paper would mention that venture capitals are different only to a limited degree.

2. The recent evidence of market failure even with efficient market players & sufficient liquidity

Korean commercial banks have improved their operational efficiency and risk management capabilities since they suffered from Asian currency crisis in 1997. The highly difficult nature of the twin crisis stemming from both liquidity and currency mismatch forced them to redesign their organization. Korean government was also decisive and resolute to reform the Korean banking sector and the practice has been well known as paragon success. With the capacity and competency built through the time of crisis, Korean banks became capable of developing their own sophisticated risk management systems corresponding to the requirement under Basel II.

However, the recent behavior of commercial banks in Korea provide evidence that such efficient market players did not work as efficiently as it is supposed to. Due to global economic downturn, Korean government took a drastic measure to stabilize the Korean economy by providing direct liquidity to commercial banks allowing their capital stabilization. The amount is estimated about 20 billion Korean Won. Also, banks themselves attracted savings, 20 billion Korean Won in February 2009 alone. However, SME loan increased by only 3 billion Korean won during the same period. In 2008, the SMEs which realized operating profit but suffered from cash-flow deficit increased to 34.8% from 18.4% in the previous year. As additional measures, Korean government had to ease the credit guarantee ratio of public SME credit guarantee funds from 80-85% to 90-100%, also requiring the guarantee funds to relax the assessment condition. Even with higher guarantee ratio, some banks tried to charge higher interest rate on SMEs to cover their loss.

Venture capitals, which are supposed to be the most efficient in the early-stage financing, are funding more money to fewer firms as Table 1 shows. Moreover, investment focus has been shifted from early stage to mid-to-later

stage from 2001 to 2008. According to the Korea VC Association, early stage investments which were 63.6% in 2001 has been decreased to 27.5% in 2004 and stayed around the similar level up until 2008 even with government's fund of funds supports. Equity-financing is known to be optimal for the high-risk early stage growth firms and so VCs are allegedly specialized in the early-stage financing. However, as figure 1 illustrates, early-stage financing has decreased dramatically during the same period, Korean government provided much less capital to public SME financing institutions. All these evidences suggest that **simply decreasing public sector activities does not warrant the efficient market performance** expected by market believers.

<Table 1> VC Investment Trend in Korea

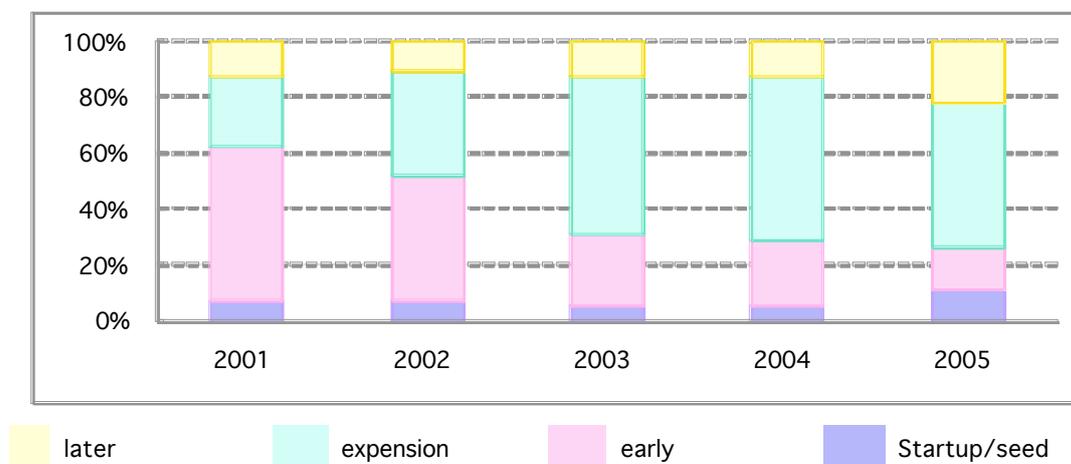
(Unit : Number, 100 Million Korean Won)

	2002	2003	2004	2005	2006	2007
Newly Invested Amount	6,177	6,306	6,044	7,573	7,333	9,917
Number of the companies invested	768	630	544	635	617	615
Average Investment Amount	80	10.0	11.1	11.9	11.9	16.1

Source: STEPI policy Financing for Innovation – Its Effects and Proposals for improvement – Seungil Jeong et al, August 2008

<Figure 1>

New investment by invested company stage



Source: KDI, Developing VC industry and the Role of the Government in Korea, Suil Lee, April 2007

In summary, either by fostering market players to decide on their own or by simply changing the level of government monetary supports would not often create the desired effects. Changing liquidity level is not sufficient; some measure should be taken toward reducing the size of information asymmetry in a specialized manner at least by each policy category.

The Characteristics of Innovative SMEs: Technology-based SMEs

In an increasingly knowledge-intensive economy, economic development is strongly influenced by innovation performance, which relies on the generation, distribution and exploitation of knowledge. SMEs and entrepreneurship are a key source of innovation and flexibility even in advanced industrialized countries, as well as in emerging and developing economies³. While innovative SMEs account for a relatively smaller portion in the overall SME sector, they would be strategically significant for nations.

³ Sergio Arzeni, OECD, "Financing Innovation-Oriented SMEs: A Boost to Sustainable Growth and Employment", Conference on Financing Innovation-oriented Business to promote Entrepreneurship: Experience of Advanced Countries and Lessons to Korea

The law of decreasing return per unit increase in input due to its marginal propensity can only be improved lifting curve through either technology innovation or management innovation. While the word signifies broad connotation, it mainly means technological innovation in this paper.

Unlike under traditional business circumstance where the entrepreneur raising debt naturally has an incentive for moral hazard to increase risk known as leverage-preference, business risk in Technology-based SMEs is somewhat admitted as inherent.

However, the prevailing nature of collateral-based debt-finance in Korean banking industry posed difficulties in funneling appropriate amount of credits to Technology-based SMEs. Even with advanced pure cash-flows-based lending practices widely available, credit-shortage would have only partially been covered due to following three characteristics of technology-based SMEs. To be brief, technology-based SMEs are more vulnerable than general SMEs to asymmetric information due to different risk characteristics.

First, the success of technology-based SMEs is associated with the growth potential that is difficult-to-assess. Second, their prime assets are mainly intangible ones such as intellectual properties. Third, their products or services mostly lack track record as the word new technology speaks for itself.

Intangible assets are unsuitable for collateral. Even if cash-flows-based lending prevails in an economy, still size, profitability, and past track record matter when it comes to evaluation. In tech sector, however, it is difficult for commercial banks to assess technological projects and to draw the paragon of good lending practices.

By introducing the recent efforts taken by Kibo Technology Fund as a **case example**, the following chapter will discuss the potential roles that can be played by SME supporting institutions in a maturing phase of an economy.

KIBO & KTRS – Innovation in enterprise evaluation methodology

From its establishment in April 1989 until a few years ago, Kibo Technology Fund was a mere Credit Guarantee Institution favoring its main target sector, technology-based SMEs. Kibo has tested a diverse array of capital market related guarantee instruments such as Venture Primary-CBO Guarantee and Venture Investment Guarantee.

Despite its applications of guarantee schemes to various financing methodologies, a main performance indicator such as default rate has not been improved. Kibo's default rate was above 8% on average. Government continuously raised questions whether it was only due to the inherently risky nature of the Technology-based SME sector. Some argued that it was a natural result from the practice of debt-financing for risky businesses. The people of other school argued that it was Kibo's undifferentiated appraisal capability from the other existing credit guarantee institution such as KODIT.

Kibo's past practice was no more than liquidity-provision through any sort of debt guarantee by assessing corporate credit and by favorably taking

technology factors into account. To be more precise, its appraisal was mainly based upon the past financial information and credit performance of the firms, and it gave a favor to Technology-based firms by taking technological potential into account in the practice of credit rating. Kibo had just embraced more credit risk of a technology SME sector while keeping the evaluation methodology similar to other credit-based institutions, what so called, **Technology-preferential Guarantee Scheme**.

The practice proved almost no incentive for the government to hold two different SME credit guarantee institutions. A guarantee institution could provide liquidity to entire SMEs with sector-by-sector variations in the degree of favor in accordance with government policy priority. With this reason, Kibo developed a standard technology appraisal model, KTRS (Kibo Technology Rating System) together with a team from Yonsei University in December 2004.

Before Kibo developed KTRS, Kibo has brought in continuous improvements in the organization's capability regarding technology evaluation. It employed many seasoned engineering or science Ph.Ds, Masters, and CPAs and founded **TACs (Technology Appraisal Centers)** mainly composed of those technology specialists to help branch offices to be better informed of technology factors of firms. Kibo also operated some of the guarantee instruments designed mainly for firms at the Start-up stage, the guarantee decision of which were utterly made by TAC. This **Dual Methodology System** allow more firms to access to credit because some firms which were refused by branch offices due to their weak credit history and past financial performance even under technology-preferential guarantee scheme became eligible for credit guarantee service. In order to compensate the risk of looking much less on the credit side, Kibo introduced **Success Fee scheme** in which companies which reach the promised project milestones successfully or succeed in going public must pay extra fee to Kibo.

However, all those measures taken under the hope of improvement in gradualism did not enhance Kibo's financial stability. Management and many employees realized Kibo needed **Disruptive Innovation** rather than Continuous Improvement. From the lessons gained through years of operating TACs and its

expert-subjective technology appraisal practice, Kibo began to look for a standard technology appraisal system, which is KTRS.

Kibo firstly called on its experts to set up the theoretical foundation of technology appraisal. It also actively solicited some ideas and knowledge from outside such as universities and research institutions. The model should embrace two seemingly mutually contradictory goals of screening firms mainly through future variables such as Technology development & Commercialization potential, Profitability forecasts, Marketability and improving Kibo's average default rate.

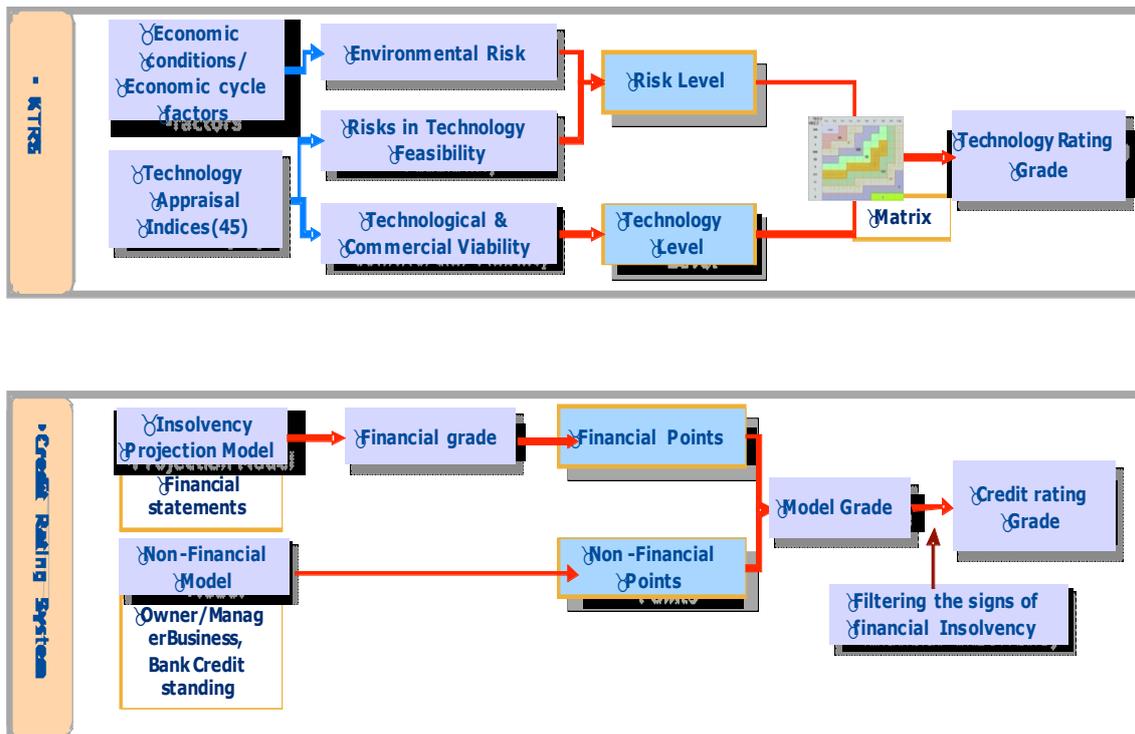
With enough data-set cumulated through years, experts in Kibo and a team from Yonsei University co-developed a rating system consists of matrix combination of two dimensions, Tech Level and Risk Level. Success Probability is determined as grades in Tech Level based on variables centered on technological competency and commercialization potentials coming out of **AHP analysis**, and Default Risk associated with the technology is determined also as grades in Risk Level based on internal risks and environmental risk variables defined through **Regression analysis**. Two grades are combined in a matrix as below diagram.

Comparing KTRS with previous Credit Rating System Kibo used, the former assesses the future potential variables such as technology innovation and commercialization capabilities in combination with the risk of the technology computed only from technology input factors, not financial items while Credit Rating System forecasts companies' insolvency dominantly using financial factors of firms.

<Figure 3> KTRS Rating System

Tech.Level Risk Level	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10
R1		AAA								
R2		AA								
R3			A							
R4				BBB						
R5					BB					
R6						B				
R7							CCC			
R8								CC		
R9		CC							C	
R10										D

<Figure 4> Comparison between KTRS and previous Credit Rating System



To prove the effectiveness of KTRS, below table 2 shows the result of the recent statistical review test that reveals much better performance on default rate than former Credit Rating System for the same time period of three years.

<Table 2> Improvement of discrimination

(Unit: Cases, 100 Million Won)

Comparison on 3-year Default Rate	Cases			Amounts		
	Total	Default	Default Rate	Total	Default	Default Rate
KTRS	15,587	545	3.50%	8,688,709	221,405	2.55%
Former Model	3,815	486	12.74%	1,384,848	183,763	13.27%

Source: Kibo's internal report

Organizational Restructuring

Developing KTRS and using it for all appraisal activities were not the only efforts Kibo has placed. In parallel with the introduction of KTRS, Kibo hired more Ph.Ds and restructured its organization by changing all the branches to Technology Appraisal Centers. In each TAC, technology appraisal team and technology guarantee team coexist in close coordination. It also established a wide external advisory network with various research institutions and engineering & science professionals so that it can get immediate assistance when an appraisal involves a great deal of technical difficulties. Out of 1,084 total staff, Kibo currently has 109 Ph.Ds and 568 internally trained technology appraisal practitioners. It also manages a pool of 878 individual technology appraisal external advisors and 8 legitimate external research institutes. Regarding field specialty, Kibo divided to 9 different technology verticals; Techtronic, Information Technology, Electronics, chemistry, Textile, Bio-tech, Environmental Technology, and others – Design, Dot.coms, and Knowledge-based Service etc.

Kibo also operates two CTAls (Central Technology Appraisal Institutes) to establish the legitimacy of technology appraisal practices in Korea and by carrying out high-value added market-based technology appraisal services other than technology appraisal guarantee scheme. The service of that area includes Business Feasibility Appraisal of various technology projects, Technology Value Assessment which shows the value of a certain technology as monetary amount and the valuation of stocks of private tech firms for varied purposes such as M&A, Technology Transfer, Capital Contribution, Investment Negotiation, and

Share exchanges between firms. CTAs also actively participate in various government projects.

Value-building Strategies, Using Web2.0, Bundling & Versioning

One of the major challenges in changing all the guarantees to be based on the technology appraisal was that the process became a little more complicated than that with the previous Credit Rating System.

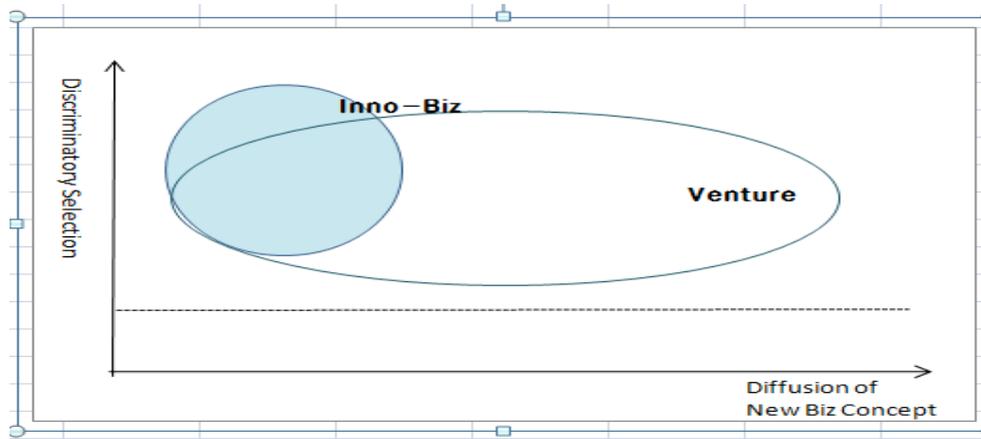
To offset such inconvenience rising from the client side, Kibo opened Cyber-Technology Appraisal Center to help clients by providing a useful glimpse of technology appraisal practice through simple self-testing. The Cyber TAC provides all the necessary information in user-participatory manner.

Kibo also bundled certification process and guarantee-purposed technology appraisal process into onestop process. Unlike other countries, Korean government operates Certification system for ventures and Inno-biz companies. Venture certification is bestowed to the firms, which has growth potential from new business ideas or technologies. The venture certification system was designed to prepare for the era of the knowledge-based economy by directing potential entrepreneurs' attention to such business models by providing consorted supports in accordance with 'Act on Special Measures for the Promotion of Venture Businesses (September, 1997)'. The purpose of the certification was to create an effective diffusion of a new concept of knowledge-based business by encouraging entrepreneurs to open and carry forward such businesses.

On the other hand, Inno-Biz certification was born to raise discriminatory power among many ventures or other technology SMEs, so that government can take choice and focus approach more effectively.

Currently, both certificates are in effect, Venture given mainly to start-ups with knowledge-based business items and Inno-Biz given mainly to growth-stage firms with to-a-degree proven business prospects and innovation capabilities. The relative composition estimates of the two certifications are as below figure 5.

<Figure 5> The relative distribution estimate of ventures and Inno-biz



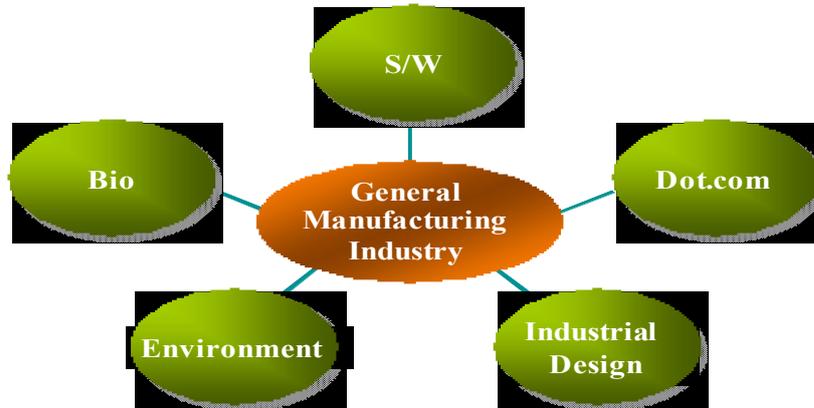
Source: Kibo's internal report on Green Technology Enterprise Certification

Kibo gained the status of certification practitioner institution for both certificates from the beginning of those systems. Before Kibo changed all the branches to TACs, certification process and guarantee provision were executed. When changing the organization, Kibo also made the certification process and the guarantee provision process as one-stop. By bundling certification service and guarantee provision service by doing one-process technology appraisal, Kibo enhanced the convenience and cost-effectiveness of technology appraisal practice. Recently, Kibo naturally stood out as the most preferred certification institution for both certificates by clients and Korean government acknowledged Kibo as the most effective certifying institution. In case of Inno-Biz certification, Kibo came to take the exclusive charge of certification activities under such acknowledgement - certifying institutions were originally three.

Enhancing the usefulness and the awareness of Kibo's KTRS-based technology appraisal by improving client's convenience and by eliminating procedural redundancy, Kibo has formed fairly stable external relationships with its various stakeholders.

In addition to those efforts, Kibo diversified its system to various different models deviating from the initial one-size-fits-all toward customization reflecting business model specifications and stage characteristics.

<Figure 6> Various Versions of KTRS by business classification



In addition to the six different business model based versions as shown above feature, Kibo developed KTRS-Startup version to best reflect the early-stage specificity and also created R&D evaluation model to take into account the specific characteristics of the R&D stage projects and firms.

Credibility Building – Institutional Marketing & Flexible Application of KTRS

1. Patenting KTRS & Building International Recognition

Kibo patented KTRS to secure its proprietary power in and out of Korea. It was first patented domestically in April 2007, followed by an international patent in Singapore in October 2008. KTRS is also currently patent-pending in Japan and China.

In November 2006, KTRS reached Semi-Finalist of Edelman Prize Award by INFORMS (The Institute For Operations Research and The Management). INFORMS commented it is an excellent innovation, yet, needs longer time to observe whether performance improvement of Kibo by using KTRS is permanent enough. After filing up performance data for the long enough time periods, Kibo will challenge once again for Edelman Prize.

2. Leading government's project - Ministry of Knowledge Economy

Kibo participated in a consortium that carried out the 'technology valuation method standardization project' ordered by Ministry of Knowledge Economy from March 2006 to May 2008. During the process, KIBO successfully led three other institutions in the consortium.

3. Sales approach to commercial banks - Technology Appraisal Certificate scheme

Kibo realized commercial banks were slowly attempting to transfer their collateral-based lending practice to future cash-flow-based lending practice for promising corporate sectors. Shrewdly carving out the niche, Kibo first introduced **TACS (Technology Appraisal Certificate Scheme)** in February 2005. Unlike TAGS (Technology Appraisal Guarantee Scheme), TACS does not provide any guarantee coverage to banks, but provides purely technology grades and detailed technology information to banks and banks lend to tech-SMEs referring to Kibo's such certificate packet.

The scheme was initially opposed by some staff of Kibo under the concern for potential cannibalization of two different schemes. However, Kibo has been steadily pushing the scheme under the faith that it is a market friendly enhancement method that taps different parts of tech-SME sector; TAGS for general Technology-based SMEs whose value is hard for banks to perceive and TACS mainly for promising Tech SMEs whose growth potentials are viewed strongly positive by commercial banks but not concrete enough.

Up until recently, Kibo has explored the scheme with two different lenders, **High-Tech Loan** with Woori Bank and **Leader-Biz Loan** with Industrial Bank of Korea. This paper would not provide the performance data here due to its confidential nature under the agreement with those banks.

4. Flexible usage expansion of KTRS – Matrix use of KTRS with Bank's Credit Rating System

Under Kibo's active initiative, Kibo, Woori-bank, and KRIA (Korea Robotics Industry Association) entered into an agreement in November 2008 to use the combination matrix of KTRS and Woori-bank's Credit Rating System in executing

Woori's special loan package - The Loan to the Intelligent Robotics Business. KRIA recommends good robot business entities with good potentials, and then Kibo and Woori-bank co-evaluate the company regarding technology factors and credit elements.

Miles to go – Remaining Tasks

For the Kibo's market-friendly transition to be ultimately effective, there are still several miles ahead to go. This chapter will discuss such remaining tasks for Kibo in accordance with two different financing methods.

1. Debt-financing: The introduction of ***Floating Guarantee Coverage Ratio*** & improving the front-level bargaining capabilities

Kibo currently operates TAGS (Technology Appraisal Guarantee Schemes) and TACS (Technology Appraisal Certificate Scheme). For TAGs, which takes the lion share of Kibo's activities, Kibo provides fixed nature of guarantee coverage which is 80%-85%. In an extraordinary situation such as credit crunches, it may release the ratio above 85%, but not the other way around even during good times.

Remaining uncertainties for commercial banks even after counting in Kibo's technology appraisal outcomes and their own credit assessment would be market risk and some of the undetected firm-specific risk. Although the accurate size of the remaining risks is not easy to calculate, Kibo and banks can at least best-estimate them. Once it is estimated and agreed by both sides, the degree of guarantee coverage should vary, which means **market players should take the risk of their parts depending on the reasonably judged degree of uncertainty**. The risk-sharing practice with floating guarantee coverage ratio will make a fair market-friendly practice that enhances the smart functioning of the market. To do so, front-level bargaining capabilities together with government's market-harnessing policies that adapt commercial banks to a new custom must be prepared.

Each appraisal case would require the similar level of efforts and time regardless of variations in guarantee coverage ratios. If the performance of Kibo employees is to be measured primarily based on total net guarantee amount newly supplied, the scheme will not be activated in effect.

2. Equity-financing: Assisting Equity & Quasi-equity investors - lifting the veil

At the seed/start-up phase, information asymmetries are the greatest in general. For high-tech SMEs, it is even worse because of their usual untested business models and uncertain prospects for success. In addition, for growth-oriented technology SMEs, technological product development requires the huge amount of capital. One estimate is that the amount of finance required to develop and launch a technology-based product is on average ten to twenty times greater than the initial R&D expenditures⁴. For conventional traditional means of finance such as bank lending, credit guarantees are only of limited relevance to these growth oriented high-tech firms. Sergio Arzeni, Director of the OECD Centre for Entrepreneurship, pointed out high growth firms are ill-suited for debt finance, at least until the middle or later stages of their life cycle.

With the absence of critical mass of highly competent Venture Capitals, equity-financing or quasi-equity financing would not be sizable enough. Kibo's distinguished appraisal capabilities should provide assistance to Venture Capitals especially in the area of early-stage deal sourcing. Kibo may provide not only information, but also structured loan guarantees, whose interest payment occurs after a certain period, to be syndicated into an optimal funding packet with VC investments.

Kibo may also provide a certain portion of guarantee to mezzanine financing products to facilitate risk-taking of investors. With the newly enacted law in 2009, Financial Investment Services and Capital Markets Act, many other equity investors than VCs will arise. Kibo's technology appraisal certificate packet in combination with its fine functioning of deal sourcing should be of a great help in assisting various investors **to find equity-suitable business ventures**. This veil-lifting and market-friendly enhancement of Kibo in the extremely difficult yet attractive asymmetric economic sector **should allow investors to better meet**

⁴ The financing of technology-based small firms: a review of the literature, Feb 2001, Bank of England

their risk appetites and thus enabling innovative firms to look for more adequate capital structure for their costly business models.

In order to perform such function successfully, Kibo will need to continuously hire qualified experts and adequately train its existing staff for high-quality appraisal service and deal-sourcing capabilities.

Concluding Remarks

Rather than just infusing a great deal of liquidity to entire SME sector, public SME supporting entities in the new market-friendlier era could facilitate the efficient market functioning **by reducing the size of SME specific information asymmetry and by sharing the pertinent level of risks from remaining portion.** Kibo has proactively taken steps forward by introducing Technology Appraisal and by posing strategic steps pertaining to the new Breakthrough that reduces the magnitude of uncertainties specific to the tech-oriented high-growth SMEs. It is a sensible practice to complement efficient market players because it would be prohibitively costly for each of them to build in-house tech-appraisal capabilities: an efficient market player would not mean entities performing well by bearing costs higher than their own benefits.

Kibo's activities also make sense in the course of market complementing because Kibo, unlike market players, operates not for the shake of profit-maximization but for the mission of enhancing common benefits for market with the sense of optimally targeted expense. Also, financial institutions ordinarily contribute the largest portion of Kibo's capital, replacing the government as you see from the below table. Thus, it would also make sense to serve the capital-contributors' benefit that Kibo acts as a technology information intermediary, professionals and appraisal capabilities pooled for multiple contributors.

<Table 3> Contribution, Capital Funds, Leverage Ratio

(Unit: 100Million Korean Won)

	2008	2007	2006	2005	2004
Guarantee Outstanding(A)	125,935	112,459	111,508	115,013	135,084
Contributions	5,959	6,082	8,092	9,678	8,550
From the government	1,575	2,000	6,000	3,500	6,190
From the Financial institutions	4,384	4,082	2,092	6,178	2,360
Capital Funds(B)	17,397	14,462	11,503	7,981	7,773
Leverage Ratio(A/B)	7.3	7.8	9.7	14.4	17.4

Source: Kibo's Internal Data Analysis

Kibo's proactive transition efforts have some useful implications for improving information efficiency although it still has miles to go before completing the journey.

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Informal Workplace Learning and Support System in Korea

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1. Introduction

It is worthwhile to review how the process of skill development changed through the history. SMEs play a main role in supporting workers' living by maintaining jobs as they conduct half of the nation's production. It is essential for SMEs to develop workers' skills in order to survive in the expanding global market economy. The way in which SMEs develop the skills is quite different from the larger enterprises because SMEs depend on informal learning within the workplace, rather than formal learning.

It is worthwhile to review how skill development changed through the history in order to understand the nature of skill formation in SMEs. Informal workplace learning has been the path to skill formation throughout most of human history. Apprenticeship has long been an original type of informal workplace learning. Industrialization has an impact on how people develop their skills. The nature of skill formation became formal, as much of the industrial revolution transformed the workplace of the large enterprises, with workers repeating routine jobs for mass production. The skill development system changed to customize the mass production. However, informal workplace learning is still playing a major role in skill formation in SMEs and professional excellence development.

SMEs do not rely on formal education and training as much as the larger enterprises because SMEs have different ways of developing skills. It takes too many resources for SMEs to maintain a formal skill development system that separates learning from the workplace. The workplace learning essential for skill formation could take place when they work together or share their experiences within their workplace.

The government training scheme, which is designed to help SMEs, mainly supports formal training separated from workplace learning and does not fit the nature of SME skill development in Korea. Therefore, we need to inquire as to why the gap widens between the governmental scheme and the SME's needs. It is argued that we should reevaluate the role of workplace learning playing in SMEs skill development and determine how to facilitate workplace learning by using different policy measures. Skilled workers know that informal workplace learning has not been recognized as a valuable process in which shop-floor workers develop their skills by both working and learning. Through informal workplace learning methods, such as on-the-job-training, mentoring and coaching, skilled employees would transfer core skills to novices while working and thinking together within the workplace. This informal workplace learning has been ignored by the government skill development policy in Korea because of the prejudice against informal workplace learning. They say that it is critical to identify learning from working within the work setting; otherwise the government might compensate workers through the skill development fund. The government system focuses on the process control (number of hours) of learning, which is similar to the school system in meriting output rather than improved skills.

This mismatch problem and the scheme oriented school-like system might increase the skill gap between SMEs and medium and large enterprises instead of reducing it. In this regard, it is reasonable to inquire into the real nature of how SMEs genuinely develop workers' skills, and the discrepancy between the nature of skill formation and the government skill development policy, as we expect a better one.

2. Overview of SMEs in Korea

SMEs are composed of more than 99% of all business enterprises in Korea. The percentage of SMEs in Korea is larger than the average percentage in other countries.

<Table 1> SMEs by Employee Size in Korea

Employee	%
5-9	50.1%
10-19	25.8%
20-49	16.4%
50-99	4.7%
100-299	2.5%
Total	99.4%

MOL, 2005.

Overall, over 88% of jobs came from SMEs (KOSBI, 2006). After the economic crisis in 1997, most jobs emanated from SMEs instead of the larger enterprises. The SMEs' job portion increased from 81.9% in 1999 to 88.1% in 2005. It is expected that most jobs will increase in SMEs (SMBA, 2005). The number of SMEs' jobs increases by 1.5% yearly within 2000-2005, but the overall number of job decreases 0.5% in the same period.

<Table 2> SMEs's portion in GDP

Year	1999	2002	2005
Total	479.7	628.3	851.9
SMEs (%)	227.9 (47.5)	319.0 (50.8)	357.3 (41.9)

* 1 Bil. Korean Won is proximately 1.1Mil. US. Dollar

The output of SME's production comprises 42% of the total national production, but it is decreasing. The gap, in terms of quality of life and individual income, between the larger and the SMEs is increasing. The increasing gap damages job creation capability of the Korean economy.

This problem is related to decreasing SME's job capability. The increasing gap would mean that SMEs, which are in charge of 88% jobs and almost all job increases, are losing their competitive ability in the global market. The gap between individual income and quality of working life rapidly widens, as well. A reason for the gap is the increasing lack of skills, and the inappropriate, inadequate governmental support scheme for skill development in SMEs.

3. Skill Formation of SMEs in Korea

1) Preferred job skill development methods

SME's skill development is quite different from the larger enterprises' (Ashton and Sung, 2003) because of the latter's powerful business environment; contrasting skill needs; and the nature of SMEs' learning. SMEs prefer informal workplace learning with different styles, rather than formal learning based on the school like system. The results of a research survey provide insight into how SMEs develop skills.

Below <Table 3> addresses the question as to whether formal education and training are necessary.

<Table3> Needs of Formal Education and Training

Answer	Employee			
	5-9	10-49	50-99	100-299
Necessary	41	81.8	88.0	90.5

Not Necessary	59	18.2	12.0	9.5
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*KOSBI, 2007. Conducted by surveying 2,059 SMEs.

Only 41% of SMEs with 5-9 employees answer that "Formal education and training are necessary" but 90% of SMEs employing over 50 employees answer that "Education and training are necessary". This result might indicate that the process of skill formation is somewhat different between micro and small enterprises and medium or large enterprises. Large enterprises heavily rely on formal education and training, while SMEs do not rely on it as much as. This result does not imply that SMEs' management fails to understand the importance of skill development, or that it does not wish to invest in people, should management choose to develop staff through informal workplace learning.

<Table4> Percentages of education and training

Size	% of Enterprises	% of Employees
1-4	1.4%	2.8%
5-9	6.8%	5.4%
10-29	14.5%	4.8%
30-49	29.3%	4.3%
50-69	40.1%	4.9%
70-99	58.1%	8.3%
100-150	62.7%	8.4%
Less than 150	6.0%	4.0%
150-300	91.1%	15.2%
Over 301	100%	30.0%

MOL, 2004.

In terms of the size, it seems true that the smaller enterprises, the less educating. For only 1.4% of Micro and Small Enterprises (MSEs), 2.8 percentages of employees undergo formal education and training and training in Korea. Micro and small enterprise generally comprise organizations that less than 10 employees. This clearly contrasts s with organizations comprising over 301 employees, where 100% of large enterprise have 30% of employees that engage in formal education and training. <Table 4> shows that there is a huge gap between the ratio of enterprise under 150 employees, 6.0% and the ratio of over 150 employees, 91.1%.

<Table5> Formal Training by Employee number

Answer	Employee				
	5-9	10-49	50-99	100-299	S-total
Yes, We need, conducting	12.7%	53.5%	70.8%	77.8%	45.3%
Yes we need, but not conducting	46.3%	28.2%	17.3%	12.7%	30.9%
No we do not need, not conducting	41.0%	18.2%	12.0%	9.5%	23.8%

<Table5>Needs for formal education and training by enterprise size, **KOSBI, 2007.**

In <Table 5>, 46.3% of micro enterprises (5-9) answer that they need education and training, but they do not provide formal learning opportunities for various reasons. 41% answer they do not conduct education and training because they do not need formal learning opportunities. 12.7% answer that they conduct training. 46.4% of SMEs do not perform formal training. But, over 77% of larger enterprises employing more than 100 offer formal training.

From the above results, SMEs tend to rely less on formal learning for skill development than the larger enterprises. Therefore, they utilize more informal workplace learning for their employees' skill development because the nature of SMEs skills might be different.

<Table 6> Satisfaction of learning methods (5 point scale)

No. of Employee Method	5-9	10-49	50-99	100-299
Informal Workplace learning	4.19	4.07	4.05	4.09
Formal Training	3.17	3.78	3.67	3.69
E-learning	3.25	3.88	3.57	3.37

KOSBI, 2007.

Above <Table 6> indicates that micro and small enterprises have the highest satisfaction with informal workplace learning. When the size increases, the satisfaction of workplace learning decreases. This partially reveals a micro enterprise's preference on workplace learning.

Larger enterprises experience greater satisfaction with formal education and training than SMEs. When the size decreases, satisfaction with training weakens. E-learning is showing quite similar patterns with formal training.

Table 6 shows how MSEs prefer workplace learning as they develop skills of new employees with less disruption of operation by using less resource. At the same time, informal workplace learning is cost-effective, and suits their working environment. SMEs need to utilize a skilled workforce which performs over a long period of time. Therefore, the skills formed through workplace learning are more likely to be clear, specific, and not readily transferred to another workplace. This might discourage the tendency of workers to seek other jobs after they undergo training. The "training after leaving" syndrome can be described as such: SMEs' management says that it does not want to develop the employees' general skills. After improving skills, the employees want to leave SMEs for large enterprises in which they can have better rewards. Instead of developing general skills, it is necessary for SMEs to strengthen clear and defined skills, imbedded in the firm culture and distinctive production system, by means of informal workplace learning,

<Table 7> Reasons as to why SMEs do not participate in education and training.

No. of Employees Reason	5-9	10-49	50-99	100-299
Disrupting operation	48.8	40.4	47.8	20.8
Employee's ignorance of learning	12.9	14.7	17.4	12.5
No appropriate training programs	7	18.7	17.4	25
Leaving after skill upgrading	11.1	5.8	2.2	4.2
No information on T&D	18.5	15.6	15.2	37.5
etc.	1.7	4.9	0	0

The most critical deterrent to training in SMEs is that training causes disruption of operation. SMEs cannot continue operations when some of the employees participate in formal education or training at different places. Employees' ignorance of formal education is the same, whether in small or large enterprises. The larger organizations have difficulty in identifying appropriate training institutes or programs. Only 7% of micro enterprises have not identified appropriate formal training institutes or programs. Most MSEs have enough information on education and training. This trend implies that most SMEs know what they need to learn and how to go about it, but they cannot afford to educate their employees.

It is noticeable that 11.1% of micro enterprises worry about employees leaving the workplace. After-training-leaving-for another-job syndrome matters to SMEs. Only 4.2% of enterprises over 100 employees worry about that syndrome. Given the above results, the following

lessons can be drawn. Training and education separated from the workplace is not conducted at about half of SMEs, therefore workplace learning is necessary for them in to develop their skills within their environment; also they can keep skilled workers without poaching. Poaching high skill employees from SMEs by MLEs is a serious deterrent to the participatory training and development program which develops transferable skills to others. In Korea large enterprises hire over 70% of new employees from SMEs because they do not want to pay for the skill development of new employees, but they want to save time for training. A certain food chain of skilled workers has formed. When SMEs improve skills by relying on formal training, the employees who possess transferable skills want to be taken by the large enterprise which can offer better rewards. Some SMEs' managements say that they do not help their employees improve skills, as they want to keep the employee for a long time. In a sense, the larger organizations do not pay for the skills formed at the small enterprise's expense for learning opportunities. When high skilled employees leave SMEs, they bring all of their intellectual assets to the larger one. This is most devastating to the SMEs (KOSBI, 2006). It is necessary to protect SMEs from poaching highly skilled employees, rather than providing governmental subsidies for formal training. The government should pay more attention to the high skill eco-system in which SMEs can invest in skill development, without worrying about poaching, and they should abide by the fair rules which ensure that SMEs and large enterprises cooperate side by side. This issue has to be addressed by a different policy approach which would appreciate informal workplace learning, the most important learning measure of SMEs.

4. Issue of Governmental Scheme of SMEs.

Since 1996, the Korean government has established employment insurance in order to help enterprises develop skills. The employment insurance fund (EI fund) consists of three elements. First, the employment security provides employment retention subsidies. Second, the unemployment package offers job-seeking benefits and employment promotion allowances. Third, the vocational skills development, package allows the Ministry of Labor to provide financial support for training and education programs from the EI fund. The policy has three items: support for employees' training; paid learning leave, with training facility and equipment; and an in house qualification certification program; this program supports workers who want to take individually training courses, a paid learning leave, or a loan for training, and it also supports SMEs with training consortiums between large and SM enterprises and their learning organization program.

<Table 8> Support programs from the EI fund.

	Pay for expenses		Loan	
Employers	Training and education by Orgs.	Paid Learning Leaves.	training facilities or equipment	In-house Qualification Certification
Employees	Taking classes at college or vocational training institutes	Preparation for qualification certification	higher education and training	
SMEs	Training Consortium	Learning Organization program		

As the enterprises conduct training and education according to the guidelines of MOL, they may ask the government to pay the training expenses by using EI funds which have been collected from each enterprise.

Most MOL's guidelines reflect formal education and they are training-oriented, as seen Table 8, because formal education and training can be easily measured. MOL monitors the process of training programs in order to enforce policy. The guidelines specify the place where the employees are supposed to take course and their training methods. Only a small portion of T/E have a workplace learning program in which structured OJT can be included.

SMEs in which skill formation significantly rely on informal workplace learning cannot exploit the support programs from the EI fund, even though they fully pay the EI for their employees. It is a structural problem of skill formation and its support system in Korea. There is a discrepancy between how SMEs form skills and how they are supposed to train their employees because of both a poor understanding on the nature of learning in SMEs, and their unquestionable belief in formal training.

<Table 9>Participation and Budget for Vocational Ability Development Supports

(Reference: Mil. Won, %)

	Sub-Total	Less than 50	50-150	150-300	300-500	500-1000	More than 1000
Enterprise(A)	111,419	74,652	16,419	7,754	3,446	3,690	5,458
Workers(B)	2,350,509	233,136	116,134	177,984	111,141	196,765	1,515,349
Budget	236,495	30,490	12,203	17,333	11,774	18,928	145,767
All Enterprises(C)	1,148,474	1,115,195	21,127	6,019	2,001	1,362	770
All Workers(D)	8,063,797	4,037,038	1,215,624	703,024	387,332	503,378	1,217,401
Participating Enterprise ratio(A/C)	9.7	6.7	77.7	128.8	172.2	270.9	708.8
Participating Worker ratio(B/D)	29.1	5.8	9.6	25.3	28.7	39.1	124.5

MOL, 2005

Only 6.7% of SMEs with less than 50 employees take advantages of the EI fund. This figure seriously contrasts with 708% of large enterprise with more than 1000 employees (708% means that one large enterprise uses the EI fund for education and training more than seven times).

<Table 11> Paid Learning Leaves

(Reference: Mil. Won)

	Total	less than 50	50-150	150-300	300-500	500-1000	over 1000
Enterprises	415	59	63	58	31	46	158
Workers	5,468	819	95	98	74	181	4,201
Budget	7,887	1,386	117	170	125	293	5,796
% of Enterprises	0.0	0.0	0.3	1.0	1.5	3.4	20.5
% of workers	0.1	0.0	0.0	0.0	0.0	0.0	0.3

MOL, 2005.

Most SMEs do not take advantage of the paid learning leave program. About 20.5% of large enterprises exploit the program. For the SMEs, the paid learning leave program is not feasible.

<Table 12> Employment Insurance Budget Allocation

	Participants/%	Budget/%
On-Job-Training	2,000./ 0.1%	1Bil./0.5%
Learning Organization	30 thousand//1.5%	7Bil./3.5%
Mail communication	238 thousand./ 10.1%	22Bil./ 9.2%
Internet E-learning	1034 thousand./ 43.9%	50Bil./ 21%

MOL, 2006.

In 2005, 244 billion dollars from the EI fund were used for employees' job skill development and 2,355 thousand employees participated in the various job skill development program funded by the EI.

About 98% of participants and 96% of budget of the EI were allocated to formal education and training, upon review of the budget allocation. Only 1.6% of participants and 4% of budget were allocated to workplace learning. OJT as a workplace learning is limited to only the unemployed who already took more than one month formal training . There is almost no room for workplace informal learning in the supporting system with the EI fund. There is a critical discrepancy between the way in which the employees of SMEs want informal workplace learning, and the supporting system, which recognizes only formal education and training as job skill development.

<Table 13>Payment and Allocation Ratio of the Employment Insurance for Training

	Payment / %	Allocation / %	Allocation/ Payment	Allocation /Payment Ratio
Less than 5	20Bil./2.9%	4Bil./1.7%	0.2	0.59
5-9	18Bil./2.6%	5Bil./2.1%	0.28	0.81
10-29	41Bil./5.9%	9Bil./3.7%	0.22	0.64
30-49	19Bil./2.7%	5Bil./2.2%	0.26	0.81
More than 1000	333Bil./47.7%	160Bil./65.8%	0.48	1.38

Furthermore, the budget from the EI might be seen to increase the skills' gaps between the micro and the large enterprises. Table 13 shows that about 20% of the amounts of EI from the SMEs were used to improve the skills of SMEs' employees, but 48% from the large enterprises were used for the large enterprises' employees. The remaining amounts were used for public purpose. 47.7% of the EI fund came from the large enterprises and 65.8% of it was used for the large enterprises. 2.9 % of the EI came the micro, but was used only 1.7%.

MOLs have tried to alleviate the gap. For example, expenses of training and education, including e-learning, can be reimbursed 100%; but in the allocated 80% for the large enterprises, it does not seem to decrease the gap.

The system has been blind to informal workplace learning which plays a pivotal role in improving skills in SMEs. Workplace and workplace learning have not been recognized as learning place and learning activities in the government scheme. This problem is related to the conceptual framework in which learning should occur within formal education or in the training setting (separated classroom, teacher, textbook, lecture and theoretical text and test, etc.). In this context, workplace learning is seen working, not learning.

Shop Floor managers tend not to rely on candidates' qualification certification when they select new employees. The qualification certification system is more theoretical than practical because participants should take formal education and training rather than practical learning through real workplace experience in which they understand work settings and watch how their seniors work.

It is necessary to recognize the importance of workplace learning and understand how workplace leaning takes place, when we try to empower SMEs to improve employees' skills through workplace learning.

The supporting system of job skill development should be changed to serve the workplace informal learning as long as formal education and training. There are some technical issues in how we see workplace learning and measure its results. It is not difficult to see formal education and training because of its process formality. It is needed to focus on the change of skills within learning, rather than formality.

5. Learning Organization Program as an alternative plan

In 2006 MOL introduced the learning organization program for SMEs in order to encourage employees' self-directed learning. This program was conducted to encourage SMEs to be learning organizations in which the workers can work and learn at the same time. The enterprises' participating learning organization program (LOP) can improve skills through various workplace learning and some formal training which they can arrange according to their desired goals. LOP is composed of 10 sub-programs in three categories: a consulting service for building a learning system; constructing a training room; and building a learning team, with mentoring, OJT. In practice and paid learning leaves, the knowledge management system (KMS), celebrates and shares its role after active consultation with management. HRD KOREA is in charge administering LOP. Each enterprise chose what sub-programs they took and from the ten sub-programs the participants could design their learning. Only a learning team was required for all enterprises.

The main sub-program is the learning team in which the participants can make almost all decisions on their learning: what to learn, how to learn, when they learn, where they learn, and how to transfer their learning to their work. HRD Korea, who administrated this program, paid all learning expenses, such as, books, stationary, snacks, some specialist assistants, etc. When they begin LOP, they make a learning contract with HRD Korea. There are some requirements for the learning contract. Both management and labor union should sign a consent form for cooperation for active participation in LOP. About 130 SMEs applied in 2006 and 112 firms were chosen.

The impact of LOP on the participants and their organizations is positive. The fact that 102 out of 112 enterprises want to continue LOP indicates that LOP was successful. As we reviewed, 4% SMEs conducted training courses as the EI fund fully paid the expenses for training. Furthermore, 300 SMEs want to participate in LOP, but 100 SMEs will be selected for LOP. LOP becomes competitive because it offers not only the valuable support package, but also it fits SMEs' nature and environment. As we reviewed, SMEs know that they need to develop skills and learn more informal ways. It is not useful for SMEs to take advantage of formal training oriented support. They can design their learning by using a combination of technical and financial support while exercising control over their own learning through facilitation services. These are the key success factors of LOP in Korea.

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IRELAND AND FINLAND: SHARED HISTORIES BUT DIFFERENT APPROACHES TO INNOVATION POLICY

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While the histories Ireland and Finland may have strong similarities, the approaches that they have taken to innovation policy have shown many marked differences. In Ireland the focused nature of entrepreneurship or start-up related policy is significantly different to that of a very broad based government approach to innovation, which covers all stages of business (from start-up to maturity). Innovation policy in Finland is explicitly top down and narrow since it is primarily targeted at potential innovators. Indeed, it has been and continues to be dominated by a focus on technological innovations while a minor focus has been placed on other innovations.

Track: 3. Entrepreneurship and Public Policy

Policy to Activate the Succession of Family

Business for Stable Economic Growth

By Sang Cheol, Shin

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1. Introduction
2. Status of Inheritance·Gift Taxes in Korea
3. Survey on the Succession of Family Business
4. Tax System related to the Succession of the Major Economies
5. Conclusion

This paper investigates the measures to facilitate the family business succession based on the current tax systems, surveys, etc.. It suggests the policy implications regarding the right direction of tax reform related to business succession by researching the status of current inheritance tax system and the size of tax revenues, the comparative analysis in inheritance tax system, and the estimation of succession cost for preliminary companies which expect the business succession. In the concrete, it proposes the introduction of discount evaluation system on succeeding business assets and the deduction system for inheritance tax according to performances of family business.

1. Introduction

Korea is one of the highest aging societies thorough out the world. It has belonged to the aging society in 2000 and expected to become the aged society in 2018. The aging society comes with the aging of CEOs and companies. This means that a shift in generations for economic growth has been transferred from the establishment generation to the established generation.

<Table 1-1> A Trend of Aging Workforce Over 65

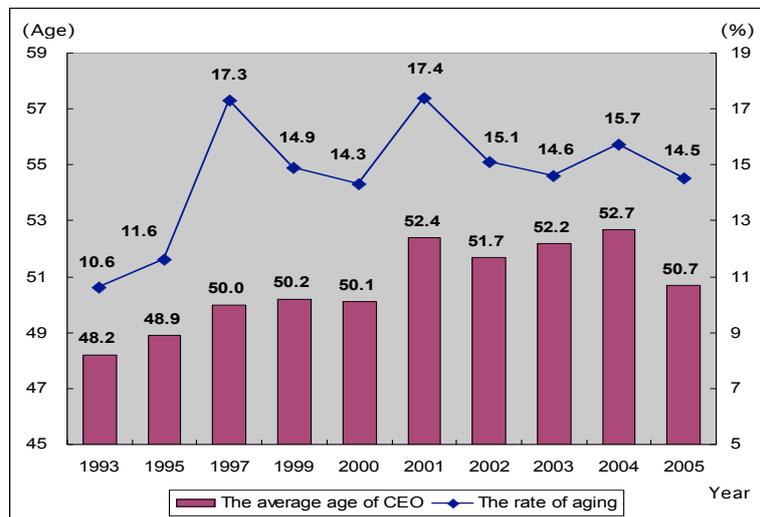
(Unit: thousand, %)

	2000 (aging)	2010	2018 (aged)	2020	2026 (super-aged)	2030
Population	47,008	49,220	49,934	49,956	49,771	49,329
Over 65	3,395	5,354	7,164	7,821	10,357	11,899
Ratio	7.2	10.9	14.3	15.7	20.8	24.1

Data: KNSO (Korea National Statistical Office)

The average age of CEOs in SMEs was increased from 48.2 in 1993 to 52.7 in 2004. The rate of CEOs over 60 was also increased from 10.6% in 1993 to 15.7% of 2004. Especially, the aging was more particularly prominent in medium-sized enterprises (54.5) rather than in small-sized enterprises (50.4). While the rate of CEOs over 60 and 70 has been still increasing, there is the depth of the problem due to the decreasing rate of CEOs below 60. From now on, the aging of SME-CEOs would be rapidly increasing within 5 to 10 years. Consequently, the obstacle of the business succession is expected to be quite significant in terms of society and economy.

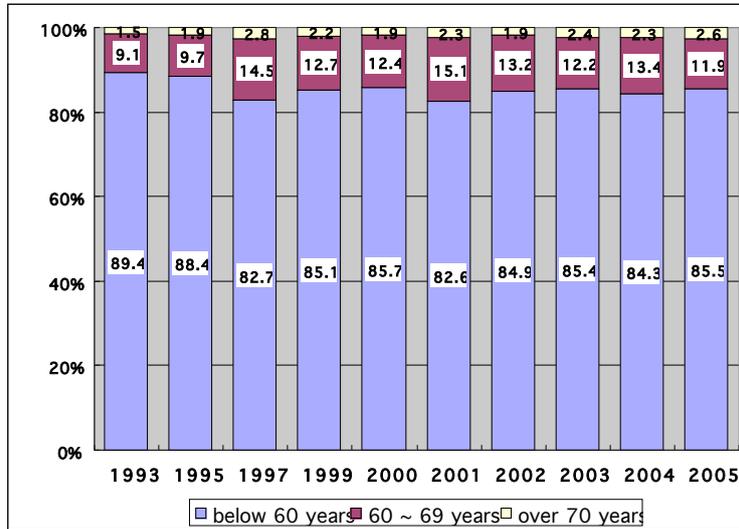
<Figure 1-1> Ratio of average age and aging for SME-CEOs



Data: Small and Medium Business Administration (SMBA)

As the population of 60~69 already exceeded 14% in 1997 and recently approached to 12% among SME-CEOs, the aging ratio of SME-CEOs has been rapidly changed for the worse.

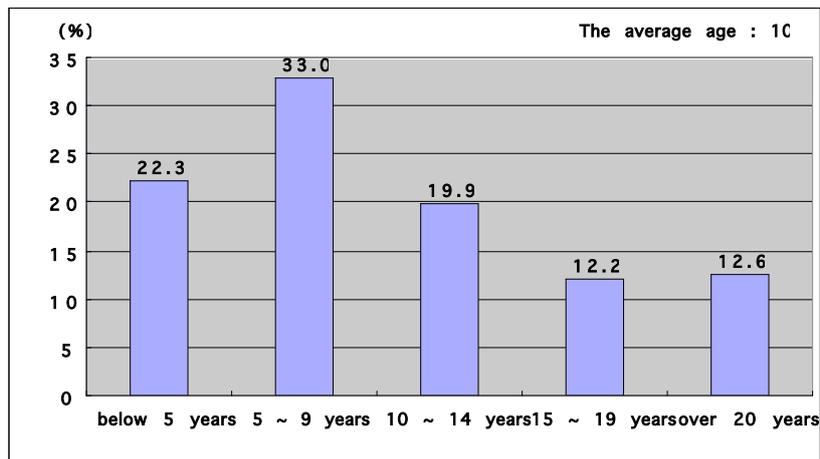
<Figure 1-2> Ratio of CEOs by age



Data: Small and Medium Business Administration (SMBA)

On the other hand, the average age of SMEs is 10.6 and that over 20 years only account for 12.6%. This shows that many SMEs have short lives as failing to survive for a long time in the growth stage.

<Figure 1-3> Rate of SMEs by age



Data: Small and Medium Business Administration (SMBA)

Korea is not the only country which suffers the social and economic problems caused by aging. EU expects that 1/3 of total companies will withdraw their businesses in the next 10 years. As a result, it is estimated that 690

thousand SMEs and 2.8 million jobs will be affected in every year. It was also estimated in Japan that 290 thousand SMEs were closed down in 2005 causing 200 ~ 350 thousand jobs to be disappeared. The following table shows that European countries and Japan face with the difficulty in succession by aging. Although Korea has the incomplete statistics regarding this issue, it is assumed that the situation would be similar to above. Since 2005, EU has promoted the policy which creates the environment activating the business succession to keep up with the changes in this rapid economic structure.

<Table 1-2> Status of Business Succession in Major Countries

Country	No. of Enterprises facing the Succession
Germany	354,000 in next 5 years
France	600,000 in next 10 years
Italy	40% of total in next 10 years
Austria	23% of total in 2004 ~ 2013
Britain	1/3 of SMEs
Japan	290,000 are closed down for a year producing unemployment around 200,000 ~ 350,000 in each year

Data: EU, 2006

As mentioned, the aging tendency in Korea would be the major challenge in the business succession for Korean SMEs which most are considered as the family-owned business management.

In the process of pursuing the continuous growth by corresponding to the business environment, the vast investment is absolutely required to keep and raise improvement on the competitiveness. The accumulated investment in the growth stage imposes a heavy burden of the excessive inheritance tax on the owner when it comes to business succession. It also results in a falling shareholding ratio caused by the succession and brings about a task regarding how to coordinate a management control. It is indicated that the current tax system related to the business succession produces a tax burden which produces difficulties in smooth succession of business. According to a document (Statistical Yearbook of National Tax in 2005) of tax authority, it shows the payment of inheritance liability as stocks was increased from 22 cases (17%) 31 billion (36%) in 2001 to 253 cases (90.3%) 281 billion (93.6%) in 2004. This

indirectly implies that there is a difficulty in paying the liabilities in cash equivalent when the business succession comes about.

Korea is inclined to favor the business succession by family member and relatives due to the patriarchal Confucian culture, the underdeveloped social security system, etc. On the other hand, there is a negative connotation to the business succession as an unfair 'hereditary wealth'. However, it is necessary to change a social recognition which views the business succession for SMEs as strengthening the competitiveness of SMEs, stabilizing and creating the employment, and initiating into intangible assets.

The strict tax system causes not only the compliance cost related to succession is increased to descendent but the social problem as of unfair succession cases is also occurred. Especially, SMEs not linked with the financial market are in danger of a shrinking investment or a financial crunch by the excessive inheritance tax. There is even a case that the operating business is practically impossible to keep in business due to the excessive inheritance tax. The tax system should be revised so that SMEs in a growth stage can concentrate on managing their businesses without temptation of inappropriate transfer of inheritances. The government should recognize this situation and correspond to revise the related tax systems by driving a social consensus on business succession.

If the business succession is achieved smoothly, the companies can promote the sustainable growth. If not, it is highly likely that SMEs can experience difficulty in management or in the worst case, it is likely faced insolvency. In that case, discontinuity in business might affect individual companies, job security of employees, and even stability of national economy. The business succession would be the key issue and challenge to the SMEs facing the business succession.

The purpose of this paper investigates and analyzes the current status of SME's business succession and related tax system. It also proposes the improvement of tax system that can ensure the sustainable growth of SMEs.

2. Status of Inheritance·Gift Tax in Korea

A gratuitous transfer of wealth is made by one's death or a gift between survivors. Assuming the forms of inheritance, bequest, gift contract effective as of death, and gift, and the governments generally impose an inheritance tax or

gift tax on a gratuitous transfer of wealth. The Korean government imposes an inheritance tax on the above three forms and a gift tax on the form of gift.

The type of inheritance tax is classified into an 'estate tax type' and an 'inheritance tax type'. Estate tax type imposes the tax on the total amount of an estate for an heir and inheritance tax type imposes on the acquisition cost of an inheritance for an heir. Korea takes an estate tax type as an inheritance tax and an inheritance tax type as a gift tax. In consequence, an inheritance tax calculates tax basis and the tax amount by an heir's perspective as applying the progressive tax rate on the total amount of an heir's estate without separating assets inherited.

According to the tax system of inheritance and gift taxes, for an inheritance, a tax basis is calculated by subtracting deductions after adding up the adjusted taxable gifts from the value of assets inherited, i.e. gross estate. In case of a gift, a tax basis for a gift tax is calculated by subtracting deductions after adding up the adjusted taxable gifts from the value of assets gifted. The final tax liability is determined after multiplying total taxable transfers by a statutory tariff and subtracting a tax credit. The calculating process of inheritance and gift taxes is very similar as the tax ratio has been simplified since 1997. (See below for <Figure2-1>)

For calculating a tax basis for an inheritance tax, the value of assets inherited is determined by adding the deemed inheritance, such as the life insurance proceeds, trust, and income in respect of a heir as retirements pay, to the original cash equivalent inheritance, and subtracting the inheritance of non-taxable and exclusion. The value of assets inherited is produced after subtracting utilities, funeral expenses, and obligations from an inheritance price and adding up the additional charge on assets gifted in advance, 'pre-gifted asset'. A tax basis for an inheritance is yielded by subtracting the inheritance deduction, such as family business deduction, farm business deduction, financial assets deduction, disaster losses deduction, and deduction for appraisal fee etc.

When a tax basis (total taxable life and death transfers) for inheritance is determined, tax amount is estimated by multiplying a statutory tariff according to taxation sections. At this time, 30% of extra tax is added for generation skipping inheritance. The determined inheritance tax is produced by subtracting every tax credit and adding up the surtax tax. The final tax liability to be noticed is decided by subtracting gift tax prepaid etc.

In 2007, 124,074 people paid 3.1 billion dollars for inheritance·gift taxes

covering 1.76% of tax revenue in total(173.7 billion dollars). The size of inheritance·gift taxes was increased from 682 million dollars in 2002 to 3.1 billion dollars in 2007. Both taxes of national tax revenue were also increased from 0.82% in 2002 to 1.76% in 2007. In 2007, 2,603 paid 1.1 billion dollars for an inheritance tax accounting 0.66% of tax revenue. For a gift tax, 121,471 paid 1.9 billion dollars accounting 1.1% of tax revenue.

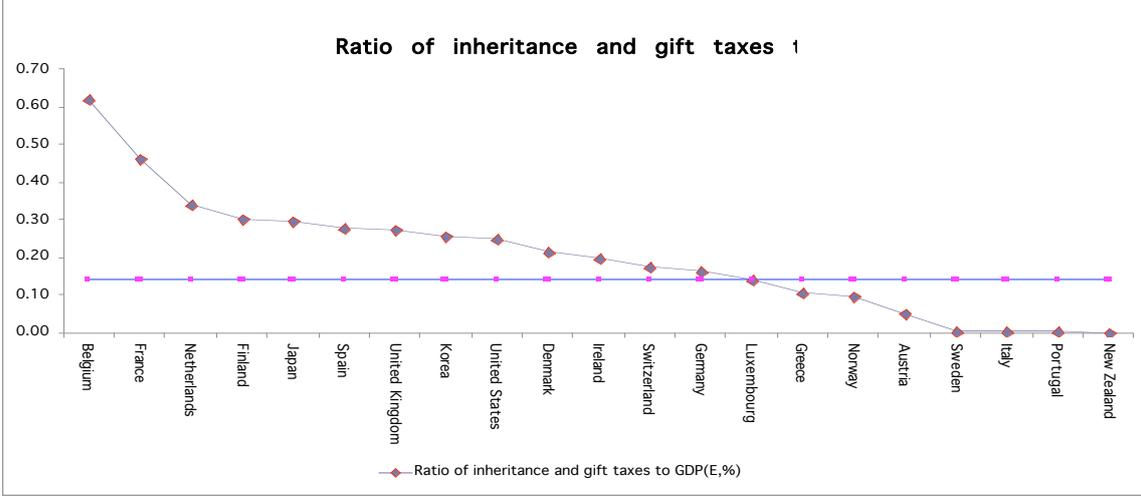
<Table 2-1> Payment for Inheritance·Gift Taxes

Classification	Year	2002	2003	2004	2005	2006	2007
National Tax (million dollars, A)		82,872	96,207	102,992	124,474	144,553	173,717
Inheritance Tax	Payment (million dollars, B)	317	407	514	686	909	1,140
	Taxpayer	1,661	1,720	1,808	1,816	2,221	2,603
Gift Tax	Payment (million dollars, C)	365	696	979	1,144	1,594	1,919
	Taxpayer	55,059	54,441	103,024	62,925	88,279	121,471
Inheritance·Gift Tax	Payment (million dollars, D)	682	1,103	1,493	1,829	2,502	3,059
	Taxpayer	56,720	56,161	104,832	64,741	90,500	124,074
Ratio	Inheritance Tax (B/A, %)	0.38	0.42	0.50	0.55	0.63	0.66
	Gift Tax (C/A, %)	0.44	0.72	0.95	0.92	1.10	1.11
	Total (D/A, %)	0.82	1.15	1.45	1.47	1.73	1.76

Data: Statistical Yearbook of National Tax

An inheritance tax in national tax has been constantly increasing since 2000. As 1.20% of an inheritance tax to total tax revenue, the portion of an inheritance tax is relatively high (Gale&Slemrod, 2001), compared to 0.44% of the average ratio from OECD. For OECD countries, the rate of inheritance·gift taxes to GDP is 0.139% on the average while Korea has a quite high ratio as 0.19%.

<Figure 2-1> Ratio of Inheritance·Gift Taxes to GDP



3. Survey on the Succession of Family Business

The survey (2007.6.1~2007.6.10) was conducted with SMEs (1,897 enterprises) expected to slate business succession. Those are on the DB of Korea Information Service Ins. as of more than 30 years of company age, more than 20 years of company age & older than 55 CEO (2005.12.31) to compile the preliminary data. That is necessary, I think, to establish the policy idea for facilitating the family business succession for SMEs.

<Table 3-1> Small- and Medium-sized Corporations

① KIS-FAS		69,243
② Insufficient information of representatives	(32,080)	37,163
③ More than 30 years of company age	(2005.12.31 basis)	844
④ More than 20 years of company age & 55 years older CEO	(2005.12.31 basis)	1,486
⑤ Targeting Companies for Survey	(Exclude the repeated from③+ ④)	1,879

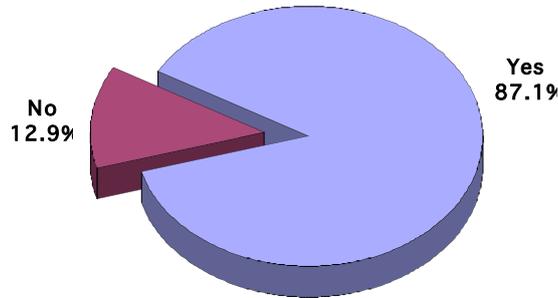
Followings are the characteristic of each respondent. By the type of CEO, the founder (58%) covers the largest proportion followed by 2nd generation (35%). The ideal retirement age is more than 66 years old accounting for 62%. Reflecting the aspect of aging society, it is indicated that the retirement age has been relatively getting high due to the economic growth the advanced medical care.

<Table 3-2> Characteristic of Survey Respondents

		No. of Cases	Ratio
		(persons)	(%)
Total		1,871	100.0
CEO Type	Founder	1,093	58.4
	2 nd Generation	659	35.2
	Professional Manager	83	4.4
	M&A(Merger & Acquisition)	36	2.0
Ideal Retirement Age	Under 65 years old	363	19.4
	66-70 years old	548	29.3
	71-75 years old	610	32.6
	76-80 years old	317	16.9
	Over 81 years old	33	1.8
Intention of Family	Succession	1,630	87.1

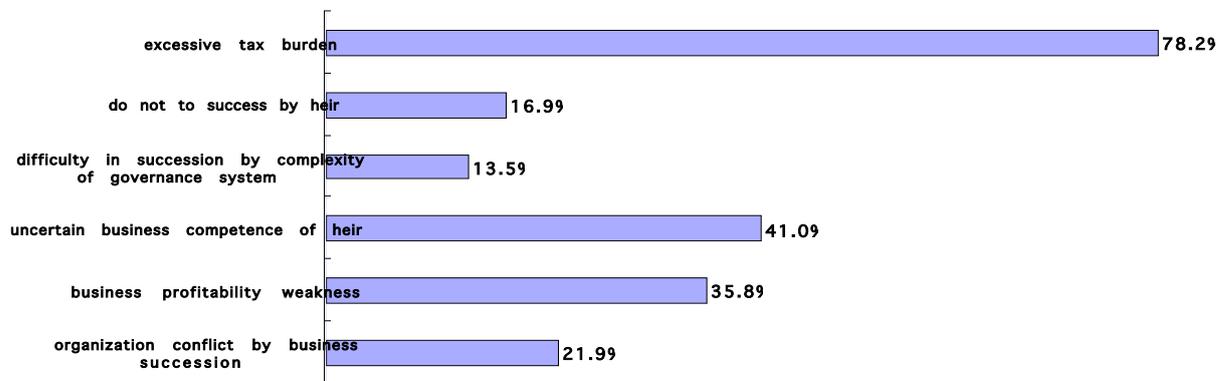
Business Succession	No Succession	241	12.9
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<Figure3-1> Intention of Family Business Succession



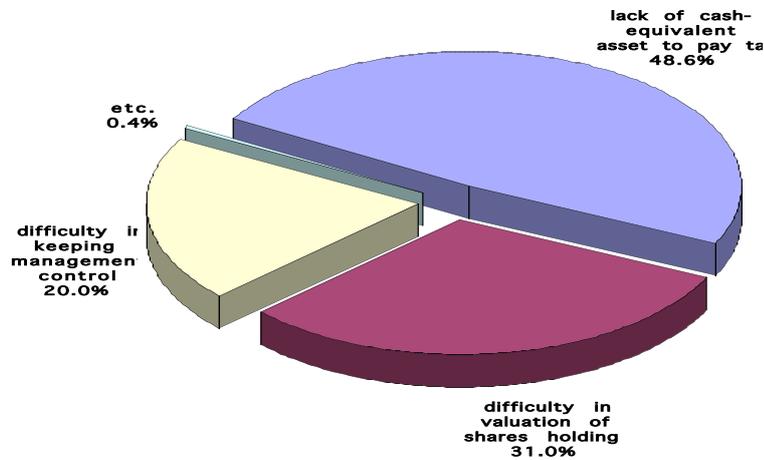
For an intention of family business succession, 87.1% of respondents say 'yes' and only 12.9% say 'no'. It is also more highlighted for the founder (94%) as the type of CEO and in late 60's (66-70: 90%, 71-75: 95.2%, 76-80: 94%, over 81: 100%) as the ideal retirement age.

<Figure 3-2> Obstacles to Business Succession



As obstacles to business succession, 78.2% of respondents choose the excessive tax burden related to the succession followed by the heir's uncertain business competence (41%), the profitability weakness by management (35.8%), a conflict within an organization by business succession (21.9%), an unwanted succession by the next generation (16.9%), and a succession difficulty by complexity of shareholder structure (13.5%).

<Figure3-3> Difficulties to Pay Inheritance and Gift Taxes



The difficulties in paying inheritance and gift taxes when it comes to business succession, 48.6% of respondents select lack of cash equivalent assets, followed by a difficulty in fair estimation of value of stakes(31%), and a difficulty in keeping management control when paid by stocks owned by heirs(20%).

The comparative analysis is conducted between two cases. One case is that companies ahead business succession would close the business after paying inheritance tax. One case is that maintaining a business with sort of tax exemption. Second case would keep pay corporate tax and earned income tax of employee. The estimated amount of inheritance tax amount paid is similar to the aggregate amount of corporate tax and earned income tax after 3 to 4 years. The table shows that the companies stay in business by a sort of inheritance tax exemption.

<Table 3-3> Estimation of Inheritance Tax, Corporate Tax, and Earned Income Tax of Grade A

(Unit: 100 million won)

Type of Listing	No. of Enterprises	Average Shareholding Ratio	Inheritance Tax	Accumulated Corporate Tax			Accumulated Earned Income Tax		
				5 years	10 years	15 years	5 years	10 years	15 years
Total	1,511	48.0	4,897	4,356	9,855	16,796	2,033	4,684	8,140
Unlisted Enterprise	1,282	51.9	3,269	2,830	6,404	10,915	1,499	3,455	6,003

Listed Enterprise	229	26.8	1,127	1,525	3,450	5,881	533	1,229	2,137
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This shows that it is desirable to levy inheritance tax is not desirable in the long term perspective considering the possibility for loss of a long-term tax revenue if an inheritance tax, paid by assets or liquidity related to business, hinders the SMEs sustainable growth.

It is estimated that a burden of inheritance tax in Korea is relatively heavy compared to major economies. The estimated amount of inheritance tax in Korea is about 4 times more than that in Germany and 5 times more than that in France.

<Table 3-4> International Comparison of Estimated Inheritance Tax

(Unit: 10 thousand won)

Country	Korea	Germany	France	Japan
Estimated Inheritance Tax	1.9 billion 6,695	0.6 billion 4,431	0.4 billion 5,162	1.7 billion 3,549

The analysis was conducted with 1,511 of the standard companies regarding the shareholding ratio and the capital structure such as assets, liabilities, etc. The exchange rate of 2005 was applied after assuming that values of assets inherited for major economies and Korea were same.

4. Tax System related to Succession of the Major Economies

EU and other countries recognize the importance that the sustainable growth through succession and influences to the national economy. They plan to enhance continuity of companies by preparing the active policy to establish the good environment of business succession. In some countries, the tax system is reformed to reduce a tax burden or is abolished taxes related to business succession so that the compliance expense occurred in process of business succession does not hinder the SMEs' growth.

At present, 21 countries either abolished an inheritance tax or took special measures to ease a tax burden and 18 countries implemented a deferred tax system to alleviate a financial stress for tax payment. Those countries

abolished inheritance·gift taxes are Australia, New Zealand, Canada, Island, Italy, Sweden, Estonia, Portugal, etc. Those countries implementing exemptions on inheritance·gift taxes to help keep growing of business are Spain, England, Finland, France, Germany, Japan, etc.

1) Japan

Unlike Korea, Japan does not impose an extra tax burden on a business control regarding the succession of business assets. Japan recently seeks the policy alternatives to reform a tax system such as reducing an inheritance tax to activate the regional economy and SMEs by facilitating the business succession. The highest rate of an inheritance tax was dropped from 70% to 50% and was abolished the SMEs' income retention taxation by excluding SMEs from the scope of taxation ('07). When the SME-owner over 60 years old (current 65) conducts a stock transfer to his children on purpose to succeed business, the tax exemption was up to 30 million yen (current 25 million). If it exceeded, a progressive tax was not imposed but reserved so that it can be calculated at the time of succession in order to expand the tax adjustment system ('07). It has been allowed to pay an inheritance tax in installments for 20 years and lower the interest rate from 5.4% to 3.6% since April, 1999.

For the stable business succession, the particular measures to protect the voting right are carried out. With the revised company law, stocks without the authority of managerial decision was issued to protect a management control of heir by stocks without voting power ('06. 5. 1). After changing the contents of shares, a common share can be transferred to an heir after the owner's death and a share of limiting the voting rights to that without an interest in business. The stock evaluation has been also improved. The system for defending a voting right has been complemented by imposing a 5% discount on succession for a non-voting stock of preferred dividend or veto stock ('07. 4).

<Table4-1> Code Promotion Process

Date	Content
2001. 06. ~ 08.	Small & Medium Business Administration initiates activities on 「Research Society for Business Succession · Second Generation Business」 .
2005. 10.	Founds the Business Succession Council.

2006. 09.	Establishes the Business Succession Fund.
2007. 03.	Organization for Small & Medium Enterprises and Regional Innovation reports investigation results of the actual conditions of Business Successions.
2008. 02. 05.	Cabinet ministers votes on the 「Law concerning Business Succession」 and submits it to the Congress.
2008. 04. 09.	Business and Industry Committee of the Congress reviews and votes on the bill.
2008. 04.010.	Congress (The House of Representatives) passes the original bill unanimously.
2008. 04. 18	Congress (The House of Councilors) passes the bill.
2008. 10. 01	Enforces the law.

<Table4-2> Key Contents of Change

Exemption of the Civil Law	<ul style="list-style-type: none"> ● Exclude stock gifted when calculate the inheritance reserve ● → Prevent the distribution of shares by inheritance ● Request for the proper procedure by the heir
Exemption of Financial Support	<ul style="list-style-type: none"> ● Define special clauses for SME representatives to support financing need by the owner's death, etc. ● Exemption of Small Business Credit Insurance Law ● Exemption of Finance Corporation Law and The Okinawa Development Finance Corporation Law

The government promotes to support a succession by proposing a tax code revision to the National Assembly for the fiscal year 2009. It is based on establishing a grace period of inheritance tax for unlisted stocks to strengthen necessary measures for the fiscal year 2008.

To ease a burden on an inheritance tax, the reduction rate is drastically increased from the current 10% to 80% on the condition of continuing business in five years as well as maintaining the employment for an inheritance tax of unlisted stocks, etc. It is allowed to apply retroactively to succession after enforcing a legislative bill (scheduled on Oct. 01, 2008) by the law revision for the fiscal year 2009.

<Table4-3> Revision of Inheritance Tax

	Current	After Revision
System	Reduce by 10% for related to treasury	A grace of tax payment by 80% for related

	stocks	to treasury stocks
Requirements	<ul style="list-style-type: none"> • Companies under ¥2bil of issued stocks • Maximum range of reduction: among inherited stocks, a smaller amount between 2/3 of issued stocks or ¥1bil of the highest estimate 	<ul style="list-style-type: none"> • SMEs defined by Small Business Act ※ Abolish the requirements for the aggregate value of shares • Abolish a ceiling of shares for reduction ※ Maintain under 2/3 of stocks for voting rights

Data: 中小企業における□□の承□の円滑化に□する法律案(□要)

<Table 4-4> Inheritance Tax related to the Business Succession of Major Economies

Country	Tax Rate	Business Related	Installment System
US	<ul style="list-style-type: none"> • Tax Rate : 18~45% • Highest tax rate : over \$2.5mil • Tax exemption limit : \$0.7mil 	<ul style="list-style-type: none"> • Deduct up to \$1.3mil when family business is succeeded 	<ul style="list-style-type: none"> • Up to 1 year
Japan	<ul style="list-style-type: none"> • Tax rate : 10~50% • Highest tax rate: over ¥0.3bil 	<ul style="list-style-type: none"> • Unlisted stocks – reduce by 10% for SMEs 	<ul style="list-style-type: none"> • Up to 5 years when exceeds ¥ 0.1mil
England	<ul style="list-style-type: none"> • Tax rate : 40% • Highest tax rate: over £ 0.242mil • Tax exemption limit: £ 0.242mil 	<ul style="list-style-type: none"> • Reduce controlling stocks <ul style="list-style-type: none"> ➢ 100% for unlisted companies ➢ 50% for personal assets used for business 	<ul style="list-style-type: none"> • 10 years for a transfer of assets
Germany	<ul style="list-style-type: none"> • Tax rate: 7~50% • Highest tax rate: over €26mil 	<ul style="list-style-type: none"> • Business succession <ul style="list-style-type: none"> ➢ After €0.256mil deduction ➢ Deduct 35% of the balance 	<ul style="list-style-type: none"> • Real estate for business <ul style="list-style-type: none"> ➢ 10 years for the same business
France	<ul style="list-style-type: none"> • Tax rate : 5~40% • Highest tax rate: 	<ul style="list-style-type: none"> • Reduce by 75% for business 	<ul style="list-style-type: none"> • 5 years for business

	over €17mil	assets	succession
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2) Germany

An inheritance tax in Germany applies the progressive tax rate of 7 ~ 50% to a tax brackets (Steuerklasse) with 3 levels according to the closeness of decedents and heirs. In Article 15, Section 1, of the law of inheritance and gift taxes, a tax rating is divided by the following 3 stages. The 1st rating group includes the parents and their previous generations in case of an acquisition from spouses, children and adopting children, descendants of children and adopting children, and death. The 2nd rating group includes the parents and their previous generations who do not belong to the 1st rating, brothers and sisters, the first descendants of brothers and sisters, adoptive parents, son-in-law and daughter-in-law, parents of spouse, and divorced spouse. A tax rate is 7~30% for the 1st rating, 12~40% for the 2nd rating, and 17~50% for the 3rd rating. An inheritance tax of Germany is not considered as a federal tax but a state tax. As reaching up to 4.1 billion euro in 2005, it covers 0.7% of total, 2.75% of state tax, and 10% of business assets for taxes related to inheritance.

<Table4-5> Current Rate of Inheritance Tax for Germany

(Unit: %)

Taxable Value of Assets Earned (€)	Tax Rate		
	I	II	III
Up to 52,000€	7	30	30
Up to 256,000€	11	30	30
Up to 512,000€	15	30	30
Up to 5,113,000€	19	30	30
Up to 12,783,000€	23	50	50
Up to 25,565,000€	27	50	50
Over 25,565,000€	30	50	50

To support the business succession, Germany has allowed the discount evaluation on business assets since 1994. Payment of an inheritance tax is relieved by 25% discount evaluation on business assets. The scope of tax exemption is widened allowing the relatives and employees to be succeeded in consideration of

the increasing case that designated someone other than direct descendant as one's heir in 1996. The maximum tax rate advantage could be applied for an inheritance tax which is classified by an intimacy with heirs. After deducting 225,000€ on an inheritance tax related to the current business assets, 35% of the remaining balance is deducted. The requisites for recipients include holding over 25% stake and business assets that can be sustained for 5 years after the succession. The duration term of share holding before the succession is not provided.

<Table4-6> Promotion Status

Date	Content
2006. 10. 25.	A bill to facilitate business succession is before the Congress
2007. 01. 31.	Urge to reform the Constitutional Court's ruling against several clauses of inheritance tax and related laws
2007. 01~12	Negotiate the revision and constitute a committee to prepare the revision by the Christian Democrats and the Social Democrats
2008. 01. 04.	Submit the legal revision regarding inheritance tax and evaluation to the Senate
2008. 02.15	Review a Senate revision
2008. 01.28	Submit the legal revision regarding inheritance tax and evaluation to the House
2008. 03.05.	Hold the hearing of the House finance committee
2008.11.27	Bundestag Passed
2008.12.05	Bundesrat Passed

Revised tax law lets the heir of business assets can choose the one out of two alternatives. Once the decision is made, he can not change the decision after then. In first case, satisfying the condition which demands 7 years keep going in business, the tax exemption up to 85%, and an inheritance tax equivalent to 15% of assets inherited is imposed. In the second case, after 10 years from the succession, the enterprises exempt from the inheritance tax. Labor's total wage during 10 years should not be less than 1000% of labor wage at the time of succession. In addition, the property of non business purpose properties (Verwaltungsvermögen) should not be more than 10%.

3) United States

Legislation to alleviate an inheritance tax gradually was carried out in 2001 for the smooth succession of SMEs and family business. The higher inheritance tax seemed to be a heavy burden to SMEs which have a small cash equivalent compared with the scale of business assets. An inheritance tax is selected as the main cause of failure by 9 of 10 heirs who become bankrupt within 3 years after the owner's death of family business. If the burden of payment of an inheritance tax gets relieved, the sustainability of family business would be maintained by succeeding to the next generation without the discontinuity in business or disposal the business asset to pay the disciplinary

tax to the federal government.

The key contents of tax reform act related inheritance tax is that inheritance tax rate is lowering 1% each year until 2009 and generation-skipping transfer tax, which a grandfather succeeds to his grandchildren, is expected to be nullified in 2010. It also increases the amount of tax exemption from the unified tax credit of an inheritance tax and generation-skipping transfer tax until 2009. At last, the highest nominal tax rates are to be gradually reduced in phases.

As the particular tax system for supporting the business succession in the United States, there is 'QFOBI' (Qualified Family Owned Business Interest exemption). Introduced in 1997 to reduce the burden of inheritance tax related business, it is the system to reduce up to 1.3 million dollars on an inheritance tax as the tax exemption by court decision. The recipients of these benefits should qualify the following conditions. First, an unlisted company should exceed 50% stake (stay unlisted in 3 years before the succession). Second, the heir should be practically in business over 5 years out of 8 years before the succession. Third, the heir should be practically in business over 5 years out of 8 consecutive years after the succession. At last, business assets should exceed 50% of heir's total assets.

4) France

France carries out the exemption of reducing an inheritance tax regarding the business succession. In terms of creating employment and strengthening the competitiveness, an inheritance tax was reduced by 50% by the introduction of tax revision measures in 2000. After alleviating the condition in 2001, the reduction rate was increased up to 75% in 2005. As major requirements of reduction, first, business assets should be maintained before 2 years of the succession (holding over 34% of shares for unlisted companies). Second, the heir continues to keep business assets for 6 years after the succession (a promise of contracts, etc.). Third, the heir should run business for 5 years after the succession (remaining the position of managers of unlisted companies). The tax office confirms the requirements after the succession by using the data submitted annually. Support of an inheritance tax in France is different in grade depending on the intimacy with heirs. The tax rate for brothers and sisters is higher than that for spouses and children with small amount of tax credit.

5) England

England carries out BPR (Business Property Relief) when business assets are succeeded to next descendant. Introduced in 1976 (30% reduction), it was drastically increased in 1992 in perspective of promotion of SMEs economy.

The tax on the stocks of unlisted companies and property for business of individual employer are reduced by 100%. Tax reduction is also applied to privately owned land, building, and plant and machinery by 50%. As requirements, a clause indicates that heirs should have maintained business assets for 2 years before the succession. However, tax code does not require the business continuation by the heir.

In case that heirs survive over 7 years after the succession, PET (Potentially Exempt Transfer), exempting a gift tax, is implemented. An inheritance tax accounts for about 0.9% of the entire national tax.

5. Conclusion

1) Perspective to improve inheritance and gift tax System

It is time to change the way of social recognition that the business succession for SMEs is to strengthen the competitiveness, stabilize employment, transmit and apply production equipment and business know-how. In addition, the comprehensive policy should be prepared regarding the business succession to stabilize the economic growth and enhance the SME's continuous growth and competitiveness. The business succession can be successfully promoted by making the self-help efforts of every industry, improving social recognition, preparing the government's policy, and supporting from related institutions.

It is difficult to establish the stable business environment after the succession due to the excessive burden of inheritance and gift taxes. The other countries ease or abolish an inheritance tax as part of efforts to enhance a boost of SMEs for smooth succession. For those such as Germany and Japan, SMEs accumulate their own know-how in specialized fields for more than three generations and develop their own technologies. Given these efforts are certainly contributed to the SMEs competitiveness, it is not desirable that there is a difficulty in succession by the excessive inheritance tax. Consequently, the current tax system regarding the business succession should be revised so that

SMEs can have the stabilized management with perpetuity. In Korea, the change of policy is also required in dealing with the global trend of business succession. Accepting the change of the times, so-called economic globalization, and the problems regarding inheritance and gift taxes should be treated from the global perspective.

For the improvement of inheritance and gift taxes, it is necessary to establish the tax system of succession-friendly for supporting the sustainable growth. An inheritance tax should be reformed in direction of minimizing the negative effects that can influence the sustainable growth. It is not desirable to incur that the tax system hampers the succession and produces debts for the payment of taxes or sells a business in practice. SMEs without a connection with the financial market should have full consideration for a danger of investment contraction and financial stringency.

The tax policies on an inheritance tax aims at stability and creation of employment. The process of succession in a company's life cycle is the crucial step for the sustainable growth after the stage of establishment and growth. Since the system is not prepared to help succeeding the management control in a stable way, the social problem has been incurred by improper cases of succession such as increasing the compliance cost. The government should provide the system that can establish the environment of eradicating illegal wealth transfers so that the owners can succeed their business smoothly on the legal level from a burden of excessive inheritance and gift taxes.

2) Evaluation on the government's tax revision

As the tax reform of 2008 deals with the improvement of an inheritance tax to support the sustainable growth of SMEs, the national perception on the succession of family business has been changed. The perspective on the business succession is converted from the negative view which is so-called a transfer of wealth to the positive view which is the sustainable growth and the stability of economy and employment.

The basic direction of an inheritance tax reform aims at supporting the sustainable growth of SMEs which can inherit the business succession without any difficulties. This is regarded as a significant progress that reflects the government's determination to promote the policy for the sustainable growth of SMEs. The contents of tax reform also includes to reduce inheritance and gift

taxes to the level of income tax, to expand the deduction rate and the limit of business succession, and to ease the requirements of business succession. Since the high rate of taxes can incur an outflow of national wealth, inheritance and gift taxes are reduced to the level of income tax so that the international trend can be reflected which abolishes or operates an inheritance tax with income tax at the same level. Followings are the revised contents related to the business succession of SMEs. The deduction rate is expanded from 20% to 40% and the deduction limit is also increased from 3 billion won to 10 billion won. In addition, an heir can be in an office only for 12 years from 15 years and a representative director can take office within 2 years and 6 months from 6 months after the succession.

The systematic base is now provided so that companies in the process of growth are able to succeed family business without falling into illegal transfer wealth schemes. SMEs without any connection with the financial market have a danger of investment contraction and financial stringency. For example, those have experienced a failing management due to the excessive inheritance tax. This does not seem to have a positive effect on the economy.

It is necessary to approach the tax matters from the international view point corresponding to the global trend of economy. The efforts to improve the taxation system of an inheritance tax are continuously required since Korean SMEs have a burden of an inheritance tax on business assets compared to major rivals such as Japan, Germany, France, etc. Japan enacts a special law to support the succession for SMEs. Germany deliberates on a legislative bill of reducing an inheritance tax over the 10 years for companies which meet the qualifications such as employment, growth, etc. As a result, the policy regarding the system for the business succession is needed to be changed in order to be equivalent to the trend of major economies.

3) Points to be considered

The tax reform supports the business succession for SMEs from the various perspectives such as reducing the highest rate (reduce by 33 %('10)), expanding the deduction limit of business succession (10 billion won), easing the requirements, rationalizing the condition of post-management, etc. Since the government declares its determination of the sustainable growth for SMEs, it is estimated as the dynamic progress compared to the previous. The reform reduces

inheritance and gift taxes by a high of 67% and a low of 35% which can seem to have a dynamic effect on a transfer of wealth. However, there is still a limit to eradicate a burden of inheritance and gift taxes through many generations in the aspect of business succession. For the sustainable growth in the long term, business assets should not leak out rather is used for their own development.

The purpose of reform on the inheritance tax system is to enhance the survival rate by reducing the cost related to succession, promote the sustainable growth, and ensure a job creation. The tax reform should be discussed in terms of public interests reviewing the overall effects on the entire economy. To reform the inheritance tax system in terms of the long term, preferential taxes are applied for business assets classified with non-business assets and an inheritance tax is reduced on security of a company's continuation and growth. As the systematic basis that can develop a distinguished long-lived company by supporting its sustainable growth, the plan such as the discount evaluation on business assets or the deduction system of an inheritance tax by a company's performance should be introduced after adapting to the actual conditions in Korean economy.

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**Factors Influencing Innovativeness
in Polish Small and Medium-sized Enterprises
in 2005-2007**

Introduction

As is suggested in numerous reports published so far, at the moment of joining the EU Polish enterprises were characterised by low innovativeness compared to that of other European Union countries [Pangsy-Kania 2007, p. 264-272]. According to data by the Polish Agency For Enterprise Development [Report... 2006] only 17% of small businesses in Poland implemented innovations in 2002-2004, whereas in the EU-15 it was 39%. Out of small enterprises based in Poland, 40% made an effort aimed at innovation versus 60% in the EU-15. The empirical study encompassed manufacturing enterprises from the region of Wielkopolska, which is one of the most competitive and enterprising in Poland. The presented results show the standard reached in Poland, which, however, must be considered as outstanding.

The purpose of the study undertaken was to examine the innovation activity of small and medium-sized enterprises representing traditional industry branches of Wielkopolska in years 2005-2007 as well as factors determining this activity. It was a special period, just after Poland's joining the EU on 01.05.2004.

This paper sets two study questions:

- What changes occurred in innovation activity in years 2005-2007 in comparison to the preceding years?
- What factors influence and what factors hinder innovation activity?

This paper employs survey data collected in 2008 from 73 small and medium-sized enterprises in Wielkopolska. The results were compared with results of earlier, cyclic studies performed by the author, which concerned innovation activity and factors that determined it during the system transformation [Mizgajska 1997, 1999, 2002, 2004]. The material was processed using elements of descriptive statistics and correlation calculation.

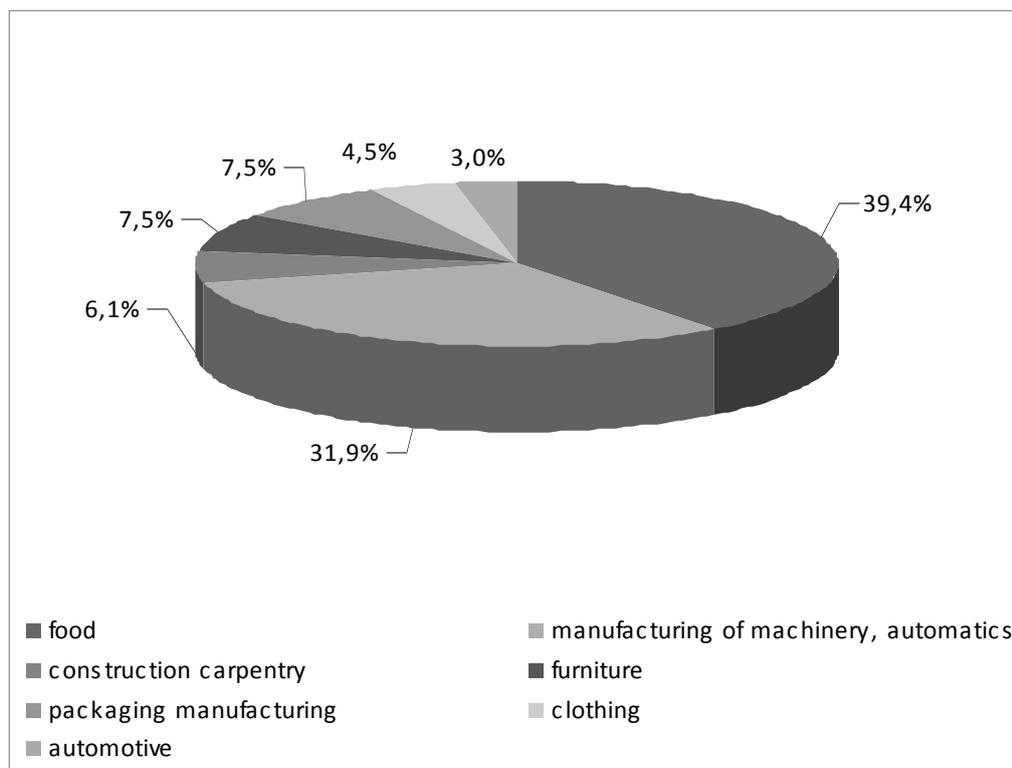
1. Changes in innovation activity of SMEs in Wielkopolska in 2005-2007

Profile of enterprises being studied

The average age of business is 15 years, which means that the majority of the 73 enterprises studied were established during the system transformation period. Most of the

enterprises are run by natural persons, the second largest group are companies, part of which came into being through privatisation. A small number of cooperatives were also studied. The ownership structure of businesses does not diverge far from the structure of small and medium-sized manufacturing businesses in Poland. Out of all participants in the study the largest group were small (45.2%) businesses, then medium-sized businesses (30.1%) and the smallest group constituted microenterprises (24.7%).

Figure 2. Businesses according to branches studied



Source: Author's study.

The businesses studied represent areas in which SMEs play a leading role. The competitive advantage of those traditional sectors of economy is based on low labour costs. An average owner or manager of the enterprises studied is male (87.7%), aged about 49 and has a technical university (45%) or secondary technical school education (39,7%).

This paper assumes, taking into account the specificity of small and medium-sized business, that the innovation activity of small and medium sized enterprises encompasses

activity inside and outside the enterprise, and its aim and result is to introduce new and streamlined products, processes and organisation and to capture new markets [Mizgajska 2002, p.48].

The enterprises studied were divided according to the number of implemented innovations (new products and technologies) into enterprises which had not implemented any innovations, implemented 1-3 innovations, 4-10 innovations and over 10 innovations. Such division was made in order to obtain results comparable with prior studies of the author [Mizgajska 2002, 2004; Mizgajska, Komorowski, 2008].

Table 1
Changes in innovation activity of enterprises in 1994-2007

Years	Innovative enterprises		Enterprises with 1-3 innovations		Enterprises with 4-10 innovations		Enterprises with over 10 innovations		Enterprises without innovations	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
1994-1997	298	86	132	38	152	44	14	4	48	14
1996-2000	115	97	48	40	62	52	5	4	4	3
1998-2001	103	97	36	34	61	58	6	6	3	3
2001-2004	144	88	49	30	85	52	10	6	19	12
2004-2006	24	89	9	33	14	52	1	4	3	11
2005-2007	69	94	24	33	28	38	17	23	4	6

Source: Author's study. [Mizgajska 2002,2004]; Mizgajska, Komorowski[2008]

Table 1 suggests that as many as 90% of small and medium-sized enterprises implemented at least one innovation in the period studied. These results are significantly higher than those given in official statistics. It is a consequence of the method applied, according to which also slight changes in products and processes were classified as innovation.

The changes in innovation activity of businesses of Wielkopolska after joining the EU do not make a uniform picture. The index of activity of the entirety of innovative enterprises remained unchanged but the percentage of highly innovative businesses increased significantly and the share of enterprises without innovations fell.

The study showed that the most frequent innovations involve new products on the enterprise level (89% of businesses), 40% of businesses declared introducing new products on the national level, and only 7% on the international level. The domination of

product-related innovations remains but in the 1990s it resulted from obsolete machinery and shortage of funds, and at present it is primarily connected with the latter. The introduction of new products stems from the strategy businesses adopt, i.e. searching for novelties on the market in the form of products or services which are new to the businesses themselves, improvement of design quality, application of new components, colours and functionality to ensure their advantage on the market or secure their position.

2. Factors influencing activity of small and medium-sized enterprises

In this paper the study is limited to internal factors, namely factors dependent on the business itself. These characterise:

- competence of manager/owner (education and age),
- organisational features (size and age of business)
- manner of managing innovations, including own research and development activity, and funding method, modern machinery, financial result, having a business strategy, presence on foreign markets.

The study established a relationship between selected profiles of businesses, treated as potential innovation factors, and different measures of innovation activity. To examine the strength of the association between particular pairs of variables, gamma rank correlation was used in STATISTICA. The results of calculations and the level of relevance is presented in table 4. Statistically relevant correlations ($p < 0.05$) were highlighted in bold. The gamma index expresses the assessment of data ordering similarity for two variables measured on the ordinal scale and assumes values within the range of $\langle -1, 1 \rangle$, where: 1 means full consistency of ranks, 0 – no consistency, and -1 complete opposition of ranks [Stanisz 2006].

Table 4

Correlation between selected factors and innovation activity for enterprises studied in years 2005-2007, measured with gamma rank correlation

Factors	Number of implemented innovations	Number of new products	Number of new products on national scale	Number of new processes	Share of new products in sales
Owner's/manager's education level	0.125 p= 0.245	0.109 p= 0.297	-0.242 p=0.006	-0.160 p=0.184	-0.161 p=0.184
Owner's/manager's age	0.061 p=0.476943	0.047 p=0.576	0.221 p=0.031	-0.058 p=0.547	-0.188 p=0.029

Number of employees in 2007	0.180 p=0.034	0.205 p=0.0145	0.132 p=0.197	0.020 p=0.831	-0.007 p=0.931
Business age	0.062 p=0.473	0.086 p= 0.317	0.148 p=0.160	0.046 p=0.642	-0.251 p=0.004
Number of research and development employees	0.386 p=0.0001	0.307 p=0.001	0.308 p=0.008	0.126 p=0.257	0.086 P=0.386
Revenue from sales earmarked for research and development	0.307 p=0.001	0.224 p=0.021	0.285 p=0.011	0.347 p=0.002	0.099 p=0.315
Degree of satisfaction with financial result	0.043 p=0.698	0.091 p=0.405	-0.056 p=0.669	-0.096 p=0.406	-0.092 p=0.366
Average age of manufacturing equipment	0.224 p=0.028	0.288 p=0.004	0.213 p=0.085	-0.096 p=0.406	-0.092 p=0.366
Share of exports in sales, %	0.121 p=0.202	0.145 p=0.127	0.255 p=0.022	-0.071 p=0.584	0.066 p=0.552
Business employs medium- and long-term planning	0.384 p= 0.001	0.373 p=0.0004	0.198 p=0.117	0.267 p=0.026	0.290 p=0.008

Source: Author's study.

The results obtained are in part comparable to the previous study cycles [Mizgajska 1997, 2002, 2004]. They permit to establish whether after Poland joined the EU there was a change in correlation between the level of education, size of the business, age of the business and degree of satisfaction with the profit, and the number of implemented innovations.

In a study performed by the author in Wielkopolska for small and medium-sized enterprises in years 1994-2004, the factors that had impact on innovation activity were: education of the owner/manager of the enterprise, size and age of business, growth of business, and type of business. In the periods studied, the largest number of innovations was implemented by enterprises run by owners with university or secondary-level education. Larger businesses implemented more product- and process-related innovations, which has been confirmed by subsequent studies conducted by GUS (i.e. Polish Central Statistical Office) [Innovation activity... 2008]. Moreover, enterprises which increased employment were more innovative than the rest. Innovation activity of businesses operating on the market for over 10 years was more intensive than in those newly established. A negative correlation between the business age and innovation

activity in the years studied can be explained by a high percentage of businesses which came into being before the system transformation. Those businesses were larger and, unlike newly established enterprises, had their own research and development resources. In the study performed manufacturing businesses were more innovative than manufacturing and service, and service businesses. In the studied period encompassing subperiods between 1997 and 2000 no relationship between the profit and innovation activity of the businesses was noted. It was only in years 2001–2004 that the innovation activity grew with the degree of satisfaction with the profit made by businesses.

The influence of some of the factors was measured for the first time in the study on innovation after Poland joined the EU, and those include: age of the entrepreneur, number of employees working in the research and development division, revenue from sales spent on research and development, average age of manufacturing equipment, share of exports in sales, application of medium- and long-term planning as an element of the business strategy.

The study proved that in years 2005–2007 there was no significant correlation between the owner's/manager's education and innovation activity or the degree of satisfaction with profit and the innovation activity. A lack of a significant correlation between the education of the owner/manager of the business and the innovation activity does not confirm previous results obtained from studies for the region of Wielkopolska or results of studies by other researchers from Anglo-Saxon countries [Venkatraman, Price, 1990; Blackburn,, McClure, 1998]. The owner/manager of a small or medium-sized business usually participates in making decisions on whether to implement innovations or not. Frequently he or she is a source of ideas and inventions. The fact that no such relationship was observed in the current studies may mean that the decision on innovation implementation is connected with other, unmeasurable qualities of the entrepreneur, as for instance the openness to change, ability to take risk, competence, managerial abilities and entrepreneurship in its wider sense.

The degree of satisfaction with profit is not related with any of the innovation activity indicators either. In the opinion of entrepreneurs, the lack of relationship between financial results of the business and its innovativeness may constitute a barrier to innovation implementation. In particular in the context of high costs of implementation and adverse fiscal policy of the state, being the crucial barriers hindering innovation implementation. In the literature on the subject the influence of financial results on innovation activity of small and medium-sized enterprises does not make a clear picture.

Papers by Wynarczyk and Twaites [1997, p. 168-188], Gunasekaran, Forker and Kobu [2000, p.1-14] show that businesses which achieve better results are more innovative, whereas Clarysse and Uytterhaegen's study [1998, p. 359-390] does not confirm this tendency.

The study confirmed a positive relationship between the number of employees and the number of implemented innovations and new products on the enterprise level. The results of the study confirmed the results of studies by GUS concerning Poland, i.e. that larger enterprises are more innovative. In relevant Anglo-Saxon literature there are many analyses of the impact of the business size on innovation activity. Such analyses are provided in papers by Acs and Audretsch [1990], who established that small industrial enterprises have the same share in creating innovations as large. Further, Rothwell and Zegveld [1982] found that it was impossible to establish whether it is large or small businesses that are more innovative. Other studies suggest that small enterprises are more innovative than larger [Utterback, Abernathy, 1975 p. 639-656]. According to Baldwin and Scott's study results [1987] large businesses are more innovative because of a more diversified product range and a higher manufacturing capacity connected with the economy of scale. That study was confirmed by other researchers [Gonzales A., Jimenez J., Saez F.J.,1997]. Nyström [1990] pointed out that results depend on the method of measuring innovation activity.

For the first time in a study performed by the author, younger businesses were more innovative, which is indicated by the negative correlation between the business age and share of new products in the sales. Those results confirm the main hypothesis proposed by Przedpelski [2007] that enterprises which are new in a particular sector of economy are more inclined to implement innovation through creating new customer needs than those long present. Similarly, in Anglo-Saxon literature on the subject innovation activity has a negative correlation with the business age. In general, younger businesses are more innovative [Huergo, Jaumandreu 2002].

The age of the entrepreneur has a negative correlation with the share of new products in sales, and a positive correlation with new products implemented on the national level.

The size of the research and development division measured by the number of personnel shows a significant correlation with the number of implemented innovations and products implemented on the level of the business and nationwide. This is supported by the results obtained by other researchers, according to which running own research and development is a measure of the innovativeness of the enterprise [Mairesse, Mohnen,

2001]. There is also a significant relationship between the proportion of revenue spent on research and development funding and the aforementioned innovation activity measures. The study also confirmed a common thesis that export businesses are more innovative [Mairesse, Mohnen, 2001] than others. Also, businesses whose strategy is based on a medium- and long-term planning are more innovative.

The most unexpected finding is the positive correlation between the machinery age and number of innovations and new products implemented on the level of the enterprise. It means that enterprises did not invest in new machines. According to entrepreneurs obsolete machinery is only ranked ninth in the list of factors hindering innovativeness of enterprises. Hence the conclusion that the increase in innovation activity of the enterprises studied was not caused by the modernisation of machinery as is suggested a study by the Polish Agency For Enterprise Development [Report on the condition..., 2007, p. 250] but by conducting own research and development.

3. Factors hindering the implementation of innovations in businesses

Another task within this study was to establish the significance of various factors hindering innovation implementation. In order to ensure the comparability of results with those obtained in 1997 [Mizgajska 2002] the same 5–point Likert scale was used [Frankfurt-Nachmias, Nachmias, 2001]. A factor assessed as hindering innovation activity the most was given 5 points, important factor – 4 points, of average importance – 3 points, little important - 2 points, unimportant – 1. The factors which according to those surveyed hindered innovation implementation in 1997 included: high taxes, no funds, too high loan interest rates, high costs, high risk, obsolete machinery, strong competition, lack of market research and no support from the government.

Table 5

Factors hindering innovation implementation in enterprises in Wielkopolska

Factors hindering innovation implementation	1994-1997	2005- 2007
Obsolete machinery	3.02	2.68
Difficult access to external financing, including loans	3.69	3.09
Insufficient staff qualifications	2.46	2.54
High implementation costs	3.53	3.73

High implementation risk	3.28	3.42
Lack of pro-innovation policy of state	2.74	3.22
Excessive taxes	4.28	3.44
Vague regulations	.	2.94
Lack of own funds	3.76	3.22
No demand for new products	.	2.53
Strong competition on the market	2.92	3.23
No information on the market	2.62	2.33
No information on new technologies	2.36	2.45

Source: Author's study, Mizgajska [2002].

In 2007 the hierarchy of factors changed. The role of bank loans, which had high interest rates and were hard to get, and obsolete machinery as factors hindering innovation implementation decreased. In the opinion of entrepreneurs none of the factors studied hinders innovation activity of businesses in an important and significant manner. In comparison to the previous situation, the importance of factors hindering innovation activity of businesses flattened. The most important hindering factors are: high cost and risk of implementation, which are linked with the implementation process funding, strong competition on the market as a result of Poland's joining the EU, fiscal policy unfavourable to innovation and lack of pro-innovation policy of the government.

Significance of financial limitations

The strong influence of financial limitations results from the change of attitude of Polish entrepreneurs towards innovation implementation. In years 1994-2007 entrepreneurs were not mentally prepared to implement innovations. They thought that obstacles to undertaking innovation activity were high taxes, poor availability of bank loans, lack of own funds and obsolete machines. In consequence, some entrepreneurs did not start any innovation activity. At present, entrepreneurs perform implementation but they encounter difficulties at the stage of the very implementation process related with high costs and risks.

Introducing a new or modernised technology or product in manufacturing involves increased spending: on buildings and structures, purchase of machines and devices connected with innovation implementation and on research and development, purchase of documentation and licences, etc. Lack of funds in enterprises stems from financial problems of SMEs caused by little profit and payment gridlocks, and is also related to poor availability of external financing sources. The main source of innovation financing in the enterprises studied are still their owners' own funds (67%) and loans (25% of answers). According to the enterprises studied, they do not use financing sources such as extra-banking sector loans or venture capital funds.

The financial sector, as in other OECD countries, has a very careful attitude towards funding innovation activity, particularly in respect to newly established enterprises. A capital type that plays an important role on developed markets is the venture capital, which is invested in innovative undertakings that are characterised by high risk but also high rate of return, if successful. It is supplied by venture capital/private equity funds. The weakness of the Polish venture capital sources results from, inter alia, legal restrictions for retirement funds' with respect to investing in this market segment, and in other countries those funds constitute the fundamental source of long-term capital for SMEs. Likewise, venture capital funds established by local and regional self-government institutions play a minor role, mainly because of limited possibility to recapitalise them. In 2004 the Polish Private Equity Association (*orig. Polskie Stowarzyszenie Inwestorów Kapitałowych*) consisted of 28 venture capital/private equity funds but none of the funds invested in a new enterprise. Perhaps this situation is going to change as a result of the government's decision to earmark 18 million euro to establish 6 seed funds [Overview... 2008].

To increase bank financing availability for small businesses it is indispensable to provide sureties and guarantees. The system of loan sureties functioning in Poland includes the National Economy Bank (*orig. Bank Gospodarstwa Krajowego*), and regional and local funds. In 2007 5312 loans were granted, and the value of sureties amounted to approx. 589 million zloty. However, the structure of sureties indicates a slight role of the existing surety system in innovation development. In 2007 most sureties concerned liabilities used as circulating assets (73% of all liabilities) and only 24% of all liabilities were investment loans. Analysing the structure of loan takers, it is striking that most loans were granted to trade (34%) and manufacturing (15%) enterprises, and the fewest were given to construction enterprises [Report... 2008].

One of the elements of financial help are tax incentives. Polish legislation provides only scarce fiscal solutions in the scope of innovation support. Micro, small and medium-sized enterprises may deduct only up to 50% of expenses on new technologies from the taxation basis. The depreciation period for completed development work was shortened from 36 to 12 months and a 22% VAT rate was imposed on research services (act of 29 July 2005). In Poland there is stronger emphasis on implementing already existing technologies than running own research and development activity. Even though governmental regulations permit deducting expenses on research and development during the same year, it is an insufficient form of support as expenses for research and development are accepted as qualifying for deduction from the annual revenue before gross income.

Governmental pro-innovation policy

In the opinion of most of respondents an important factor hindering implementation in businesses is a lack of pro-innovation policy of the government. Pro-innovation policy may be defined as, inter alia, a process consisting in the support of innovation activity and motivating for intensified innovative attitudes. One of its goals is to decrease the difficulty level of undertaking and implementing innovations, reduce the risk and uncertainty and assist enterprises implementing innovations in making the optimum choice [Pangsy- Kania 2007].

The governmental policy towards small and medium-sized enterprises was defined in another document adopted by the Council of Ministers entitled *The government's lines of conduct towards small and medium-sized enterprises from 2003 to 2006*. An important purpose of the above programme was to take action aimed at increasing the innovation activity and technological development. The government's lines of conduct included a range of declarations of financial support and development of institutional environment for innovation support. What was particularly underlined was the promotion of the existing support channels, e.g. a network of innovation transfer centres and consultancy in the scope of creating innovation centres, and technology and industrial parks which aid the implementation of new technologies.

Most of the enterprises studied (75%) co-operated in years 2005–2007 with institutions accompanying business. Most of them contacted training and consultancy centres (42.5%), loan and surety institutions (32.9%) and trade associations (31.5%). Most often businesses made use of training courses and consultancy (57.5%), legal and

fiscal consulting (52%) and aid in acquisition of funds (35.6%). Only a small number of businesses used the service of technology parks (2 businesses), technology transfer centres (1 business) and the so-called business incubators (4 businesses). More and more businesses make use of general support forms while only few avail themselves of forms aimed at innovation growth. This means that government's declarations do not translate into action of business-accompanying institutions in the region.

4. Conclusions and recommendations for the future

As a result of the study on innovation activity of small and medium-sized businesses in Wielkopolska, the following conclusions were drawn:

- in 2005–2007 the percentage of highly innovative enterprises among businesses representing traditional sectors increased,
- product-related innovations still prevail over those process-related,
- innovation activity is higher for larger businesses, those performing their own research and development, and those with significant share of exports in sales
- increase in innovation activity of the studied businesses of Wielkopolska is linked with the growth of their own research and development base, and is not a result of investment in machines or devices,
- innovation activity is not linked with the level of owner's/manager's education or the degree of satisfaction with the profit,
- the businesses studied did not co-operate with research units,
- the high cost and risk of implementation, strong competition and lack of active pro-innovation policy of the government are the main factors hindering innovation implementation,
- the enterprises studied made use of general business support forms but did not use innovation support instruments because they were too few.

Taking into account the study results, the innovation policy of the state should be focused on spurring innovation activity, and especially on the growth of process-related innovations connected with implementing new technologies. The innovation policy of the state in this area should include:

- drafting and carrying out a long-term strategy aimed at improving conditions for business development. This requires reducing the regulations, simplifying the fiscal system and a more stable policy of the government,

- the regional authorities should create in co-operation with scientific centres, including numerous universities, a strong basis supporting the development of technological businesses by setting up academic business incubators, technology parks and spin-off businesses,
- assistance in establishing small and middle-sized enterprises, particularly in sectors which will remain competitive in the process of integration with the European Union,
- provision of financial help for entrepreneurs consisting in improved access to technological loans and capital instruments through the development of loan sureties and guarantees, and development of venture capital funds,
- stimulate own research by introducing tax reductions for research and development.

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Technological Innovation and Its Significance for SMEs

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The impact of technological innovation on SMEs has revolved around increased capabilities that technological innovation brings to the smaller firm, the cost of the new capabilities, the effect on productivity, the impact that the new technologies have on economies of scale, the cost of access to the new technologies, and the impact of technologies on the way firms can operate. This paper will review the supporting policy of Korean government for technological innovation, and its impacts on the performance of SMEs. According to the recent trends, the new basic technologies will not only lead to fundamental changes in the structure of industry, new industries will emerge and existing ones will change their face. There will also be a need for an adjustment of concepts for action at enterprise and government level so that industrial production and innovation processes may be organized efficiently. The new paradigm for technological innovation will be examined based on the evaluation of supporting policy and its impacts on SMEs.

Track: 6. Innovation in SMEs

An economic impact analysis of Public R&D support program on firm's growth and innovation activity: Evidence from Korea Materials & Component industry

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The purpose of this research is to evaluate the impact of the program on the selected firm's growth and innovation activities. Methodologically, reliable policy evaluation should solve the selection bias problem, which implies that public funding may be allocated to proposals judged in advance with a high probability of success. To deal with the selectivity issue, we adopt propensity score matching estimators. The results show some positive impact of R&D support program on firm's size, R&D activity and financing ability. However we could not find evidences that the program affected positively to the growth of sales, export activity and net profit of selected firms.

Track: 6. Innovation in SMEs

A Process Model of Development & Diffusion of Architectural Innovation: A Case of Vibration Motor at Korean SME

by Hee Seung Kim, Young Jin Kim¹

Architectural innovation is innovation type that gives effective explanation for the reason of the rise of newly entered small and medium sized enterprises(hereafter, SMEs) which are not sufficient in financial resources. The purpose of this study is to understand the whole process of architectural innovation by small sized component manufacturer by observing the longitudinal process up to development and diffusion of custom-made components. In-depth case study including interviews with key informants and participative observation of one of the researchers was carried out for building up of a process model focused on small manufacturer that newly joined the vibration motor component in the cellular-phone industry. In conclusion, following implications have been presented through this case. First, even technology-based SME, which is generally understood as having more flexibility than large sized firms, has difficulties with change of mental model for architectural innovation. Second, even after the first stage success of architectural innovation, it is that stabilization stage for this type of innovation (i.e, Development & Manufacturing II) could be required.

1. Introduction

Architectural Innovation has been one of the main research area of innovation researchers for a long time(e.g., Henderson & Clark, 1990; Christensen, 1992b; Bozdogan et al, 1998). When this innovation type was introduced for the first time, one of the interesting concerns was the rigidity of problem solving pattern of established leading firm related to simultaneous change of component and system(i.e., simultaneous improvement of component efficiency and architectural efficiency; Christensen, 1992b). In many cases, architectural innovation results from the simultaneity of improvement of component efficiency and change of linkages between components (Henderson & Clark, 1990). The rigidity of technological belief on such problem solving pattern is connected with

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difficulty of changing mental model about product architecture (Senge, 1990; Noda & Collis, 2001, p.901). And according to Henderson & Clark, established leading firm having its own settled problem solving pattern on product architecture within industry goes through more difficulty than the entrant companies. But the another research shows that even the small-sized entrant firm with relatively low organization inertia (Prahalad & Bettis, 1986; Burgelman, 2002) in emerging industry, goes through the difficulty in the process of architectural innovation after breakthrough innovation of newly introduced innovative product (Kim, 2008). This could specifically mean the following things. Mtekvision which used to be a small firm in Korea at the initial stage of camera phone industry was faced with unavoidable technological situation requiring both simultaneous change of camera control processor (component) and camera-phone platform (system architecture). In this case, Mtekvision could not be successful in the architectural innovation before changing its own mental model from the viewpoint of component efficiency to one of architectural efficiency (Kim, 2008). This type of innovation is repeatedly known as having significant influence in the growth process of firms within the industry (Henderson & Clark, 1990; Tushman & O'Reilly III, 2002; Schilling, 2008, p.46; Kim, 2008).

Architectural innovation, having significant effect on the rise & fall of firms could be needed to be explored specifically at the level of individual firms that are newly entering the emerging industry. However, the process study providing a longitudinal understanding on the overall process from start to diffusion of architectural innovation having such effect seems very rare (e.g., Kim, 2008). While the study of Kim (2008) is a case which took place between component manufacturer and the cellular phone maker, such phenomenon seem to be able to be observed in a similar logic even inside its own innovation field of the component manufacturer narrowing down unit of analysis because of difficulties of change of mental model.

We are trying to contribute to the understanding of this field by presenting the conceptual framework on the longitudinal process from the beginning to the diffusion of such architectural innovation through in depth case study. JAHWA Electronics which used to be one of Small & Medium sized enterprises in Korea was faced with the situation of architectural innovation after introduction of breakthrough innovation of vibration motor, which is component attached to cellular phones at the initial period of the vibration motor industry. JAHWA Electronics overcame the performance limitations of vibration motor by redefining the component efficiency problem from the standpoint of vibration motor system architecture, and the diffusion of vibration motors by JAHWA Electronics was accomplished on a full scale after this project.

At the initial stage of industry, the companies that have succeeded in breakthrough innovation through fast entry at the industry would seem to have interest on the following problems related to architectural innovation when they are faced with technological performance limitations sooner or later. The research questions of this study are as follows.

1. How can the whole process from the start to diffusion of architectural innovation be classified when the stage concept is used?
2. What are the dimensions to be managed and the problem solving strategies within of each dimension of the classified stages?

As mentioned above, we are trying to present a conceptual framework on the entire process of architectural innovation using stage concept.

2. Conceptual Framework

2.1 Building of Stage Model

The conceptual framework on the entire process from the start to diffusion of architectural innovation can be simplified using the stage concept. Because the process of innovation is complicated, the stage concept can become one of useful intellectual tools in simplifying the complicated processes (Lee et al, 1988). In using the stage concept, the stage classification of this study is basically related to the research-development-diffusion model. It has been extended and used by Rogers(1983, 2003) after being suggested by Havelock(1969) for understanding the process of innovation. Kim(2008) has transformed such research-development-diffusion model into 4 stages of accumulation, proposal, development & manufacturing and diffusion to observe the emerging problems and solving strategies in the processes of architectural innovation between component manufacturer and system maker.

This study is trying to classify stages as follows, based on the above studies related to the stage concept.

First is related to the accumulation stage. The before stage of the architectural innovation is called not research but accumulation stage in this study. This is because there exist different features between development oriented organizations focused on commercializing discovered scientific principle and the research oriented organization related to the exploration of scientific principle (Chesbrough, 2006). Accordingly, innovations taking place at the before stage of architectural innovation is related to accumulating development experiences prior to the architectural innovation rather than being the research activity. In the accumulation of such development experience, the attempt of breakthrough innovation is also included(Kim. 2008).

Second is related to the development and manufacturing stage. Details related to creation of architectural innovation are classified into development and manufacturing stages I and II. For the success of architectural innovation, the same interest toward manufacturing as well as development becomes necessary. Although Rogers(1983, 2003) referred this as the order of commercialization followed by development, the simultaneity of development and manufacturing fields for commercialization is something which is not rare in the most of development oriented organization. Also, trying to classify the development and manufacturing stage into stage 1 and II is because the additional stabilization of rapidly changed product platform before the diffusion of full scale innovation is an important issue in case of the architectural innovation requiring simultaneous improvement of component efficiency and architectural efficiency. The full scale diffusion is accomplished after the achievement of additional stabilization.

Third is the diffusion stage. Once the stabilization of a certain innovation becomes successful, the interest afterwards is the full scale diffusion of corresponding innovation. This is the part which also corresponds to the diffusion concept of Rogers (1983, 2003). Therefore, this study is trying to establish a conceptual framework by classifying the overall process of architectural innovation into accumulation stage, development and manufacturing stages I & II and diffusion stage using the stage concept. The additional stabilization and diffusion of architectural innovation have not been recognized as important until now.

On the other hand, what criteria must be used to classify the dimensions to be managed within the individual stage established as above? Generally, an enterprise as organization is creating performance through combination of abilities on fields of technology, market and organization while this is recognized as important also for the dynamic observation of research target (e.g., Henderson & Clark, 1990; Prahalad & Hamel, 1990; Burgelman, 1994; Christensen, 1996). Accordingly, We are trying to articulate problem solving strategies that are necessary in individual stage through 3 dimensions of technology, market and organization in observing problem solving strategies of 4 stages mentioned above. These problem solving strategies will be described in the building process of conceptual framework.

2.2 Building of Individual Stage

2.2.1 Accumulation Stage

Accumulation stage is the one of developing the new product for the first time while the innovation type at this stage is the new to firm or new to industry breakthrough innovation, at the initial period of industry(Garcia & Calantone, 2002).. In the accumulation stage, exploration learning(March, 1991) of architectural and component knowledge are required in the process of breakthrough innovation. . If the exploration is a learning pattern for the development of new knowledge, exploitation is understood as a learning pattern for improvement and expansion of existing knowledge(March, 1991). In organization dimension, an autonomous team which is not affected by path dependency is required in order to perform a breakthrough innovation which is not appropriate for the value and process of mainstream business(Christensen & Raynor, 2003). The market at this period gets to assign a foremost value on the functionality related to innovative feature of new product in the initial technological environment (Moore, 1990; Utterback, 1994; Christensen, 1997). The competition base of the market gradually moves its locus of value on reliability, convenience and price at later stages as the time passes by. In other words, one cannot compete only with functionality at a point when reliability becomes more important while it is difficult to compete only with functionality and reliability at a point when convenience and price becomes more important (Christensen, 1997).

2.2.2 Development & Manufacturing Stage I

In Development & Manufacturing Stage I, product features become more specific at the market after the 1st platform product of breakthrough innovation and the architectural innovation based on new architectural knowledge is performed in the process of aiming at the additional performance improvement of the product. Generally, it is because the time period in which the performance improvement of system product is difficult only by improving component efficiency arrives if the problem of inferior architectural efficiency of initial product is not solved(Christensen, 1992b). Such architectural innovation is often triggered by a change in a component(Henderson & Clark, 1990). Problem solving strategies in this stage are related to exploration learning on new architectural knowledge and the exploitation learning on the component knowledge accumulated newly from the previous stage(March,1991). In the organization dimension, a powerful heavyweight team(Clark & Wheelwright, 1992) having a technological conviction of solving rigidity of problem solving pattern

caused by existing product architecture(Henderson & Clark, 1990) and trying to explore the interaction pattern of new architectural knowledge must be organized. But a considerable pain follows in accompanying such change of organization and as mentioned already, it is because of the influence of mental model established by a company that has succeeded in a breakthrough innovation. Firm must consider the change of mental model in this stage and this results in replacement of project manager who had succeeded in the breakthrough innovation.

As a result, the 2nd platform product which has succeeded in the architectural innovation by change of mental model gets to compete in the market based on improved functionality.

2.2.3 Development & Manufacturing Stage II

Development & Manufacturing Stage II is the one in which the additional stabilization of 2nd platform product that has succeeded in the architectural innovation is performed through 3rd platform product development. The simultaneous improvement of architectural knowledge and component knowledge accompanied by change of mental model may develop a situation of requiring additional technological stabilization (Anderson & Tushman, 1990) even after the success of this innovation in contrast to other innovations. The product which was stabilized primarily at the Development & Manufacturing Stage I almost gets over the technological problem through additional stabilization in this stage. In some aspects, additional stabilization of designed technology could be a more difficult problem than the architectural innovation itself. In this stage, the exploitation learning(March, 1991), gradual improvement on architectural knowledge and component knowledge secured from previous stage are accomplished while lightweight team(Clark & Wheelwright, 1992) for coping with gradual innovation having no changes in the viewpoint of interaction behaves accordingly. In the market dimension, the competition is accomplished based on product reliability(Utterback, 1994; Christensen, 1997) related to technological stabilization as the requirement on functionality is satisfied to a certain extent in the previous stage. The reason why Development & Manufacturing Stage II is necessary in addition to the Development & Manufacturing Stage I related to primary success of architectural innovation is because early majorities having validation tendencies, who are not the early adopters having innovative tendencies strongly demand the reliability of product in addition to functionality (Moore, 1990). In case of the products having problems in reliability, it has a high possibility of getting dismissed in the middle without being able to reach the diffusion stage.

2.2.4 Diffusion Stage

The 2nd and 3rd platform products released through Development & Manufacturing Stages I and II show characteristics of base product for production of derivative product in some aspects. In the diffusion stage, the development of derivative products due to success of architectural innovation is performed (Meyer & Lehnerd, 1997; Roberson & Ulrich, 1998) and the commercial diffusion of products that have succeeded in architectural innovation is accomplished by fast speed on this basis. In this stage, the exploitation learning(March, 1991) on component knowledge for the development of various derivative products is accomplished while the development of derivative products based on the established architectural knowledge is accomplished effectively through lightweight team(Clark & Wheelwright, 1992). In the market dimension, the basis of competition is moved to convenience and price as it goes through the formation and consolidation of new features as well as securing

reliability by going through the accumulation stage and Development & Manufacturing Stages I and II mentioned above. The users who had been satisfied with functionality of new product itself and reliability in the past tend to demand convenience such as improvement of speed and responsiveness by shortening the product development process. Also in this stage, the price competitiveness of product appears as an important issue depending upon the circumstances of competitors.

The conceptual framework based on the above is as follows,

Table 1. Conceptual Framework



Stage		Accumulation Stage	Development & Manufacturing Stage		Diffusion Stage
			I	II	
Innovation type		Breakthrough Innovation (New to the Firm : 1st platform)	Architectural Innovation (2nd platform)	Incremental Innovation (3rd platform: stabilization of AI)	Incremental Innovation (derivatives of 2nd & 3rd platform)
Technology	Problem	- Not securing architectural & component knowledge	- Need for new architectural knowledge - Need for advancing component knowledge	- Refinement of architectural & component knowledge	- Need for securing component knowledge for derivative products
	Strategy	- Exploration of component knowledge - Exploration of architectural knowledge	- Exploitation of component knowledge - Exploration of architectural knowledge	- Exploitation of architectural knowledge - Exploitation of component knowledge	- Exploitation of component knowledge
Organization	Strategy	- Building of autonomous team	- Building of heavyweight team	- Building of lightweight team	- Building of lightweight team
Market	Strategy	- Functionality based competition	- Enforcement of functionality based competition	- Reliability based competition	- Convenience & Price-based competition

3. Research Method

This study attempts to understand on longitudinal process of architectural innovation through single case. One of the conditions suitable for single case study is an instance of having an important meaning in explaining the theory or situation which is already well known. When researcher is trying to confirm a well known theory, trying to challenge to such theory or trying to expand the theory, the single case study can satisfy the requirements for verifying such theory (Yin, 2003).

We are trying to describe the conceptual framework of architectural innovation by selecting a small & medium enterprise sample which is known to be relatively flexible in the establishment of mental model through single case. That is because it is estimated that even sample of small and medium enterprise considered as relatively easier to overcome the settled problem solving pattern in the process of architectural innovation, it would be difficult to completely avoid the negative influence of established mental model in the process of progress of technological path. Small sized firms are known to possess a range of advantage related to agility and rapid decision making even if there are resource constraints (Tidd et al, 2005, p71). Such approach is similar to the sample selection principle of theoretical replication according to the expression of Yin(2003). In other words, if the facts discovered from the existing research by selecting the samples in which such incident would not

seem to take place may occur repeatedly or more seriously, the explanative power of corresponding theory becomes more consolidated. Allison & Zellikow(1999) had explained this as if ‘a situation similar to fighting at the home ground of enemy team’. Therefore, that is because it is possible to recognize the difficulties that all companies expect to go through in general related to changing the mental model connected with rigidity of problem solving pattern.

The data that are necessary for case study were collected by the following method. Data is based on the case of development and diffusion of vibration motor attached to cellular phones by JAHWA Electronics Co., Ltd (established in 1981, incorporated in 1987) which used to be a small and medium enterprise of Korea(around 46.6 billion wons in sales during 1998) from August, 1997 to December, 2004. One of the researchers had played an important roles in the process of product design, component development and derivative model development of coin type- vibration motor by JAWHA Electronics Co., Ltd from November, 1999 to December, 2004 among the overall development period of vibration motors. This is a participative observation of an active or complete membership in which the role of participant devotes himself into the group, which is distinguished from the participative observation of peripheral membership participating restrictively in the organization activity(Yin, 2003). In case of active or complete type of participative observation, although researchers have possibility of protecting the position of the observing candidate or making inclined judgments on specific events than an outside observer, there are benefits in that evidences can be gathered under everyday environment while the reality can be recognized with the perception of an insider and being able to gather the data that are under various circumstances through an experience similar to controlling the experimental situation directly as the researcher participates in the case (Yin, 2003).

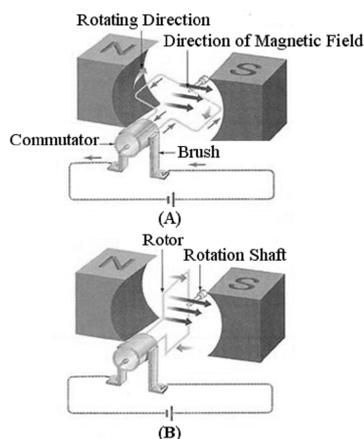
Thus, overcoming the inclination problem of researcher which becomes the most serious problem in participative observation and securing objectivity of research becomes an important issue in solving the reliability problem of case study. Accordingly, in addition to the knowledge secured by one of the researchers, we have tried to overcome the problem of biased judgment by document investigation and interviews of 3 key engineers from development team. One of interviewee(manager A) is one of four key engineers from the initial development of coin type-vibration motor by JAWHA Electronics, was performing development projects of 1st and 2nd platform of coin type vibration motor from August 1997 to December, 1999 and was responsible for duties of electromagnetic design and process technology development. One of researchers and remaining two people were key engineers of second development team 5 people were active as main axes. The second key engineer (manager B) had performed development projects of 3rd and 4th platform as well as the redesigning of 2nd platform from January, 1999 to December, 2005 while being in charge of duties in the field of electromagnetic design, process technology development and development standard management. The third key engineer (manager C) had performed duties related to vibration motor development from July, 1999 to March, 2008 when the interview was held. He had performed development projects of 3rd and 4th platform as well as the redesigning of 2nd platform in the scope of this study while being in charge of electromagnetic design, product reliability and customer relation duties. One of the researchers had performed development projects of 3rd and 4th platform as well as the redesigning of 2nd platform from November, 1999 to December, 2004 while being in charge of duties in product design, component development and development of derivative models . The interviews were performed on 3 key engineers who were considered as main interviewees among a total of 8 engineers (excluding researchers) who have participated in the development process.

A brief research procedure of this study is as follows. First, a written inquiry through e-mail was performed on 3 interview candidates for the preliminary investigation in February, 2004 along with literature review. Next, 1 hour interview was conducted on 3 interview candidates in March, 2008 while the analysis on product overview data, the data posted on homepage and public data has been performed. In this process, primary conceptual framework was builded and the additional telephone interviews were performed on interviewees. Finally, an in-depth case study was performed based on established framework. In the mean time, investigation on concept validity issue was performed by continuation through discussion with another researcher and the linkages between each stage have continued to form chain of evidences through extracts of details related to the architectural innovation (Yin, 2003). The interview was completed when the understanding on the overall process from accumulation to diffusion stage corresponding to the purpose of this study is judged to have reached a saturation level(Eisenhardt, 1989). As a result of coin type-vibration motor development projects, JAWHA Electronics Co., Ltd has recorded the vibration motor sales of 25.9 billion wons (total sales of 95.3 billion wons) and 48.3 billion wons (11.99 billion wons) in 2003 and 2004, respectively, through architectural innovation. Vibration motor sales were 5.2 billion wons (total sales of 81 billion wons) and 8.3 billion wons (86.4 billion wons) in 2001 and 2002, respectively(when the architectural innovation was failed), starting with vibration motor sales of 14.5 billion wons (total sales of 90.7 billion wons) in 2000.

4. Case Study

4.1 Summary of Vibration Motor Technology

Figure 1. Structure & Operating Principle of DC Motor



Source: The online version of Doosan encyclopedia

Figure 2. Subminiature Vibration Motor

a. Cylinder Type



b. Coin Type



Source: KETI(2003) report

Motor is a device which converts electrical energy to mechanical energy. If the driving principle of general DC Motor and main components is described briefly in Figure 1. If the magnet is placed inside the DC Motor to create magnetic field and the current is flow to the armature coil formed at the rotor, electromagnetic force is generated to create electric power by rotation according to Fleming's rule. While the power is supplied to armature coil through the connection of brush and commutator, the commutator formed by being divided into at least two parts rotates together if the inner armature coil rotates by certain angle and the rotated commutator changes the flow of current

periodically as the connecting part with brush gets changed to create a steady torque.

Because the scope of motor's application is very wide, it is being used as driving method of many products such as the windows and windshield wiper of automobiles, washing machines and zoom lens of cameras, etc. From the recent miniaturization of electronic devices, the technology of subminiature motors is also being developed continuously and the subminiature vibration motor² is also being applied to the device generating vibration in cellular phones. Figure 2 is the subminiature vibration motor applied to cellular phones; the cylinder type vibration motor is the same form as the DC Motor structure of Figure 1 and has been applied since the wireless pager products. The flat coin type vibration motor is the product that was developed after the cylinder type vibration motor to start being applied to cellular phones.

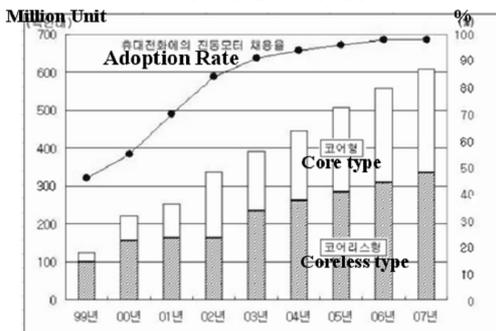
4.2 Accumulation stage

4.2.1 Development of 1st Platform ($\Phi 14 \times t 3.4$ Model)

1) Separation from Path Dependency

In 1997 when JAWHA Electronics Co., Ltd had started the development of coin type vibration motors for the first time, it was the time when the adoption of vibration motors for silent reception was being extended (refer to Figure 3). And most of JAWHA Electronics Co., Ltd sales were PCM³ and PTC Thermistor⁴ applied to CRT TV showing a negative future market prospects followed by appearance of flat panel display.

Figure 3. Adoption Rate of Vibration Motors in Cellular Phones



Source: KETI(2003) report

Figure 4. Inserting Coin Type Vibration Motor into Folder Type Cellular Phones



Source: Adapted from JAWHA's document

The coin type vibration motor released around 1995 after being developed for the first time at a Japanese company had created a high vibration power with less thickness than the cylinder type vibration motor to be preferred for heavy cellular phones. Also, as a form enabling easy attachment

² A device generating mechanical vibration applying the rotor having uneven mass to the subminiature motor. The vibration motor of common cellular phones has characteristics of rated voltage of 3V, rated current of Max 80mA, vibration quantity of 1G, and revolution of 12,000rpm.

³ PCM (Purity Convergence Magnet) is a Bonded Magnet composite. Three electron beams, red, green, blue in mechanical center are focused into conformity for color purity correction. This is to improve Color Braun Tubes screen quality, based on Lorentz Force principle.

⁴ PTC Thermistor (Positive Temperature Coefficient Thermistor) is BaTiO Oxide semiconductors. It is being used mostly for parts of CRT TV, refrigerator, heater and dish dryer, etc for the usage such as degaussing circuit, current control element and thermostatic heater, etc.

inside the cellular phone unit using two side adhesive tape in a form of flat coin, it was the time when the coin type vibration motor was being imported for the first time from a sole manufacturer of Japan as its application was simple to the folder type cellular phones in which the thickness of cellular phone was divided in half (refer to Figure 4).

Around 1997, the CEO A of small equipment supplier which had been designing and manufacturing production equipment to JAWHA Electronics Co., Ltd was performing exploration of basic standard through benchmarking by having interest on the coin type vibration motor which was newly developed and adopted in Japan. A had recommended development of subminiature coin type vibration motor to the CEO of JAWHA Electronics Co., Ltd and the JAWHA Electronics Co., Ltd founded based on magnet technology which is one main part of the motor was naturally having usual interest on motor products as it was supplying some magnet for driving motors to user companies.⁵ The CEO of JAWHA Electronics Co., Ltd who had trusted his designing and developing ability through the equipment supplied by A had accepted A as project team manager by making a positive decision on the development of cellular phone related parts which was rapidly growing in a situation where the sales were concentrated on the CRT display industry and JAWHA Electronics Co., Ltd begins to start on the development of subminiature coin type vibration motor for cellular phones by integrating the supplier into the company to organize a new autonomous team A.

The 1st development model is $\Phi 14 \times t3.4$ vibration motor, started since August, 1997 and the first development team A at the time had been organized by 4 members. The JAWHA Electronics Co., Ltd at the time had possessed the R & D finances accumulated from the existing business and the knowledge on magnet which is one main part of the motor while having the market reputation as consumer-electronics industry and component manufacturer. But the development of vibration motor was the product area requiring change in the profit margin path of JAWHA Electronics Co., Ltd while the product had required architectural knowledge, component knowledge and outside supplier foundation different from the products based on existing material technology. Even after the development team A was actually organized at the JAWHA Electronics Co., Ltd, there was presentation of many negative opinions on whether the development and market entrance of the product by JAWHA Electronics Co., Ltd were possible in the team manager conference within the company.⁶ But because the first development team was organized as an autonomous team which does not belong to any department, the development could be in progress without being influenced by the profit margin path and business value evaluation criteria of the company. The progress of work at the initial stage was performed under supervision and planning of team manager A who was getting active support from the CEO. The team manager A had a foremost understanding on basic architectural knowledge and the component knowledge through benchmarking of Japanese products and accordingly, the inner and outer activity as well as the decision for the development of component technology and process technology of coin type vibration motor which had weak foundation in our country at the initial stage of development was accomplished by team manager A for the most part. The team members had performed most of the detailed work according to the instruction of team manager A and the repeated experimentation through benchmarking of competitor's product and prototype production was the greatest method of learning. Also at the time, an insufficient technological specification could only be provided to part and equipment suppliers

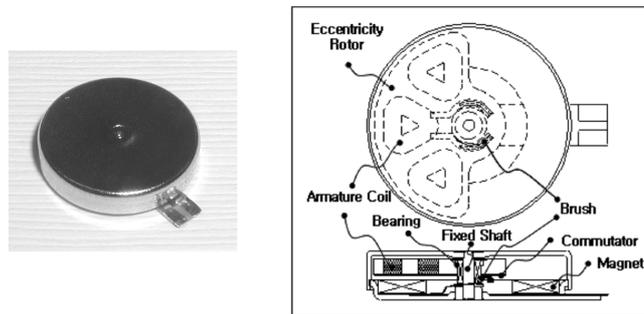
⁵ JAWHA Electronics Co., Ltd had also applied patent on a motor applying asymmetrical magnetization method even in 1990 when the actual motor development was not being examined although the patent had not been registered.

⁶ It is confirmed from the interview with Shin Il Kang (Manager) that the project team manager A at the time was having conflict with negative opinions of each team managers within the company on the development of vibration motor during the general conference in the company.

with technological environment of initial stage and it was the time when the knowledge on parts and equipment was learned through joint exploration with outside suppliers.

Although the learning through benchmarking and experiment of short time period had certain degree of limitation on basic technical learning, the initial development team A had released product by developing Rev1 model of $\Phi 14 \times t3.4$ vibration motor which is very similar to the product of Japanese competitor (Figure 5) as the first in our country for about 1 year from August 1997 to August 1998. Also, it had developed the supplier of initial production equipment and parts of coin type subminiature vibration motor which did not have foundation in our country. Going through the development and production process of the 1st model, the initial development team A began to play a more leading role than production or quality related departments even in the management duty of

Figure 5. $\Phi 14 \times t3.4$ Vibration Motor of JAHWA Electronics Co., Ltd



Source: Adapted from JAHWA's document

shipped products and component management.

In 1998, it was the time when the coin type vibration motor was at the initial stage of being applied to domestic cellular phones and the required performance standard on vibration motors by user companies was low. Not only the reliability evaluation standard was unclear⁷, but a high price was also formed. The problems such as low production yield (high defect ratio), inconsistent product performance and component reliability, etc could be absorbed with such functionality premium environment of market. The JAWHA Electronics Co., Ltd had started small quantity delivery by advancing to domestic user companies of rank 2~3 with relatively small scale at the time by placing a sales supervisor to the coin type vibration motor. Afterwards, the 1st model of vibration motor could advance to the European market by advancing to foreign user companies of innovative tendencies showing active interest on applying new components through agent. The $\Phi 14 \times t3.4$ vibration motor which is the first model had been exported to foreign cellular phone manufacturers as the key product until 2001 when the company could not have a variety of business connections.

4.3 Development & Manufacturing Stage I

4.3.1 Failure of 2nd Platform ($\Phi 12 \times t3.4$ Model)

1) Rigidity of Problem Solving Pattern

After August, 1998, the initial development team a gets to have lower level of concentration on the

⁷ It is confirmed during the interview with Shin Il Kang (Manager) that the product evaluation standard of user company at the time was lower than now and it was the time when the products without problems in operation were applicable as the focus was set to functional aspect than reliability.

development work by performing the work of two sections simultaneously as the mass production of 1st model and development of 2nd model was accomplished at the same time. Also, a steady supplementation of workers was in progress around this time period while the CEO begins to prepare the form of business section by directly accepting the business department head of executive level. As someone who is from the same company as the business department head from a large domestic corporation, the manager B and the manager of production technology team were recruited together. Also, the manager of production management team as well as employees of production technology team and business team have been recruited while 5 engineers were newly recruited in order also in the development team. These people had organized the business section with the initial development team A and the development team A gets to perform product development and production support work with the newly joined development workers.

The development period of 2nd model performed by initial development team A was from January to September of 1999 and the development model was $\Phi 12 \times t3.4$ vibration motor. The initial development team A had used a considerable part of architectural knowledge and component knowledge of $\Phi 12 \times t3.4$ vibration motor the same way which had succeeded in development by depending on the benchmarking of competitor's product. Using the brush which is one of key components commonly with the $\Phi 14 \times t3.4$ vibration motor, the mechanical reaction force of the brush gave a great influence on the drive of rotor.⁸ Also, as the magnet attached near the brush was reduced great deal, it could not overcome the life reliability as the spark discharge has increased during the switching of commutator and brush⁹ as about 50% more current than the previous model was used comparatively. The $\Phi 12 \times t3.4$ vibration motor which is the second model of development team A shows a vulnerable driving characteristics and condition of reduced life while the limitation of knowledge established through the 1st model which had depended on benchmarking and experiment had revealed. The initial development team A had pursued incremental change only at the technical foundation they had established due to successful profit margin experience at the $\Phi 14 \times t3.4$ which is the first model. Accordingly, they had different opinion in technical aspect or as they showed a very negative and different opinion on the different method of approach in the aspect of product architecture, they could not accomplish an effective cooperation with newly committed workers or team. They had tried to search for an incremental solution¹⁰ through other components even in the opinion on the change of brush which had shown an important effect on the product characteristics of the 2nd model and the development team A did not agree to the change in the aspect of experienced knowledge they had accumulated for the proposal to change high temperature cure and adhesive process in which the occurrence of defect had continued even in problems related to the process technology.

The user companies had gradually required excellent driving characteristics even for the $\Phi 12 \times t3.4$ vibration motor which is the miniaturized 2nd model as the learning standard of component technology had improved along with the increase of cellular phone shipment while presenting a specified life reliability evaluation standard. While the new knowledge which couldn't be established before and an improvement of process technology based on such knowledge were necessary in order to cope with this functionality & reliability based competition, the 2nd model developed based on initial development team A could not satisfy the competition base of the market. While the $\Phi 12 \times t3.4$ vibration motor obtains approval from some domestic user companies, it could not be connected to a

⁸ Increase of rpm and starting voltage, an intermitting drive failure occurs during operation

⁹ Refer to the details related to the contact between commutator and brush of Paragraph 1 'Summary of Motor Technology' in this chapter

¹⁰ Applying high grade magnet of high cost or gradual improvement through change of bearing, etc.

steady increase of shipment and could not perform a product approval on the greatest domestic user company. The development failure of $\Phi 12 \times t3.4$ was connected to the delay of product variety and main domestic cellular phone manufacturers from 2000~2002 get to complete the development of coin type vibration motor through their own group affiliated electronic part manufacturers to select them in strategy. By doing so, most of the sales by JAWHA Electronics Co., Ltd until 2000 were accomplished from the export of $\Phi 14 \times t3.4$ vibration motor which is the first model. But after 2000, the changes in the European cellular phone industry such as the Alcatel withdrawing from the cellular phone business, etc had started as European cellular phone companies was gradually connected to the times of business depression. As the business of European user company of JAWHA Electronics Co., Ltd at the time had also shrunk, the shipment of $\Phi 14 \times t3.4$ vibration motor had also decreased starting the year 2000. Since 2000, the initial development team A began to perform development of new product as it became separated gradually and the second development team B gets to perform development of vibration motor based on development team manager B and 5 engineers who were newly recruited in 1999.

4.3.2 Re-Designing of 2nd Platform ($\Phi 12 \times t3.4$ Model)

1) Change of Mental Model and Process

The second development team B had performed the development and production technology support duties by being organized as one development team manager B and 5 employees after recruiting one more employee in 2000. The second development team B gets to perform re-designing of $\Phi 12 \times t3.4$ vibration motor and development of subminiature $\Phi 12 \times t2.6$ vibration motor which is the 3rd model from January, 2000 to April, 2001 during difficult times when the vibration motor business of JAWHA Electronics Co., Ltd had shrunk all the sudden. They get to go through the process of learning new architectural knowledge and advanced component knowledge through re-designing of the 2nd model as well as this knowledge becoming actualized through the development of 3rd model.

Since 1999, the newly recruited team manager B and development team B engineers were free from existing architectural knowledge having a mental model of different technical belief from development team A. The team manager B had improved existing drawing with insufficient organization or unclear history and the BOM(Bill Of Material)¹¹ to be distributed to related departments. Also, the participation of quality department which had remained at a form consultation during the process of component approval had been consolidated while the authority and role of quality department was consolidated as development team had only played the role of presenting opinions even in the entrance and shipment inspection management. Even in the product development process, the development duties were managed through events by development stages of DR(Design Review), Mock-up, ES(Engineering Sample) and PP(Pilot Product) while consolidating quality control through knowledge transfer by sharing development process details and future plans with production technology team and production team. Because of team manager B, each development engineers were encouraged to lead the performance of activities such as internal/external component development and technical consultation, etc related to the duty each person is in charge of while the duties of production of sample for events by development stage, inspection, evaluation and organization of results as well as patent analysis were managed to be performed by joint effort to

¹¹ A document organizing by assembling stages for the raw material & subsidiary materials, component information and required amount, etc.

accomplish effective learning and collaboration.

Thus, the activity of development team B at the development and product stage I were accomplished based on team manager B. Team manager B had responsibility and access on duties of development team B members, acted as a leader of heavyweight team having the role of influence and idea adjustment on managers of other functional teams and the team members were devoted into the project with team manager B. Team manager B had improved the process of related functional teams to improve product quality and reliability while leading the team by directly participating in the product development. The development team B had explored new architectural knowledge based on the problems identified in developed products of the past by going through such process and could make further improvement by exploiting the component knowledge of the past.

2) Establishment of New Architectural Knowledge

As shown in Figure 6, an ordinary cylinder type vibration motor has a bearing inserted at 2 places at both ends of cylinder shaped case while the rotor gets mechanical support of bearing as the rotation shaft penetrates 2 bearings. One side of this rotation shaft is projected to have a tungsten weight assembled and the armature coil is attached at the center. At the opposite side of rotation shaft, commutator is placed at the cylindrical surface of rotation shaft and a pair of brush supplying power to this place is spring contacted by being tangent to the cylindrical surface of the commutator to supply power by having the minimum mechanical reaction force to the drive of rotor.

Figure 6. Structure of Cylinder Type Vibration Motor

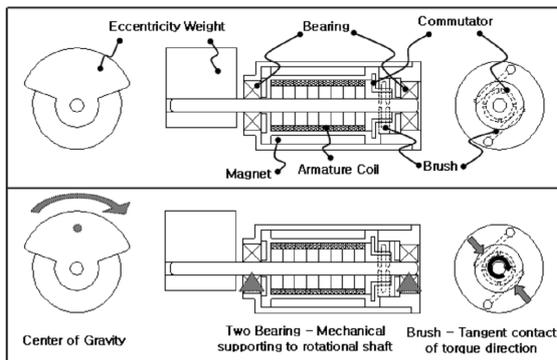
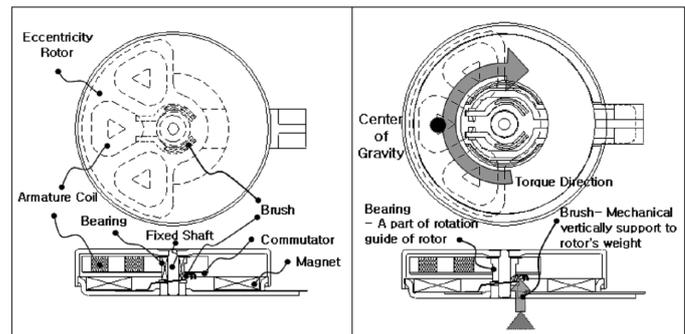


Figure 7. Structure of Coin Type Vibration Motor



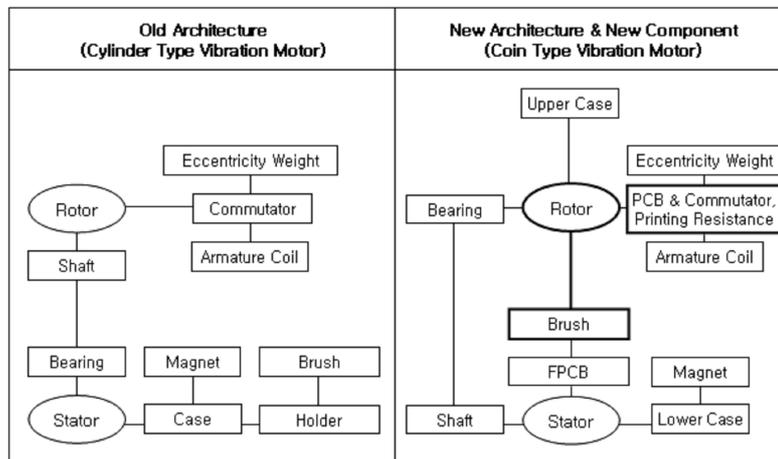
As shown in Figure 7, the coin type vibration motor is assembled as flat upper/lower case while the fixed shaft is fastened to the center of lower case by interference fit. The (FPCB: flexible printed circuit board) gets attached to the bottom surface of the lower while a pair of brush having spring characteristics is soldered to supply power to the rotor at the same time as it gives direct influence to the drive of rotor by mechanically supporting the rotor from vertical direction in structure. The rotor is injection molded in a form of circle or semi-circle by preparing 1 bearing unit and the rotation is guided by a fixed shaft inserted to the lower case. The rotor has tungsten weight placed on the (PCB: printed circuit board) in consistent angles for creating vibration with 2~3 driving coils in addition to the bearing while the commutator is prepared on the opposite side of this PCB. Finally, the rotor gets to rotate inside the motor as it gets assembled by applying pressure from the top of the upper case.

Thus, while the electro-magnetic roles on components of cylinder type and coin type vibration motors are similar, the role of brush and supporting structure of commutator are different in relation to the instrumental architecture of the product. The brush of coin type motor had required an architectural knowledge than can satisfy the conditions of different concept to have minimum mechanical reaction force to prevent interfering with rotation along with securing sufficient displacement and rigidity for supplying power while supporting the rotor vertically in the rotating

direction.

The initial development team A which had attempted development of 2nd model had only accumulated basic architectural knowledge and component knowledge of coin type vibration motor so that a fundamental architectural knowledge could not be learned completely. They could not

Figure 8. Comparison of Mechanical Architecture



Source: Adapted from Meyer & Lehnerd(1997)

understand the new mechanical architecture shown in Figure 8 in result by indentifying only the basic assembled structure of coin type vibration motor through benchmarking based on the understanding of common functional role of motor parts.

3) Improvement of Component Knowledge

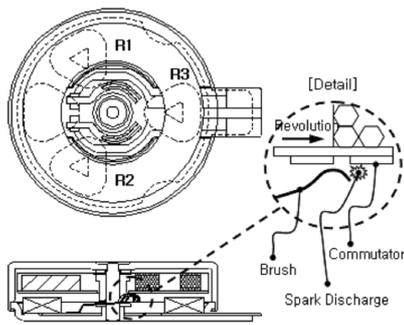
The vibration motor of $\Phi 12 \times t3.4$ had consumed higher current as the area of magnet was reduced and it could not overcome the life reliability as the condition of commutator and brush being combusted to spark as the surface spark discharge occurred during the switching of commutator and brush had increased (refer to Figure 9). The electrical and electronic engineers of development team B had confirmed the change of technology on such problem for the first time through benchmarking of product by foreign competitors and theoretically confirmed that the surface spark discharging energy can be dispersed and reduced during the switching of commutator and brush by attaching resistance by Δ -connection to each terminal of Y-connection as shown in Figure 10 at the electromagnetic circuit drawing of 3Coil 3 phase 4 pole. The foreign competitors were implementing wiring with printing resistance paste¹² inside the circuit of PCB considering the space of subminiature vibration motor without extra inner space. The development team B got to contact with H company which is the new domestic supplier than can supply such component and gets to complete the component development by determining the specification for the most suitable printing resistance paste by each model of vibration motor through production and evaluation of prototype using company H.

The development team B could secure driving characteristics and life reliability required in cellular phones based on new architectural knowledge and advanced component knowledge by performing re-designing of $\Phi 12 \times t3.4$ vibration motor which is the 2nd model. The re-designed and revised Rev.2 model of $\Phi 12 \times t3.4$ vibration motor is provided partially to the market in 2000 through domestic

¹² The method of forming resistance by curing after thin printing of the resistance of paste to the circuit board. It has the advantage of having no occupancy of additional space to the product by being formed on the PCB circuit..

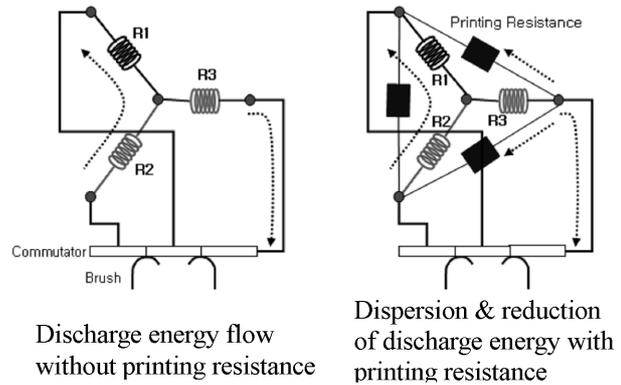
rank 2~3 cellular phone manufacturers which used to be user companies of existing JAWHA Electronics Co., Ltd, restoring the position once again at the competition base of the market lost once had required a lot of time and effort. This model gets to pass the approval evaluation of the greatest domestic user company for the first time among the vibration motor products of JAWHA Electronics Co., Ltd during the latter half of 2001.

Figure 9. Generation of Spark Discharge



2nd Platform(Φ12 x t3.4)

Figure 10. Effect of Printing Resistance



Source: Adapted from JAWHA's document

4.3.3 Development of 3rd Platform (Φ12×t2.6 Model)

1) Materialization of Architectural Knowledge

The development team B had launched development of ultra-slim Φ12 x t2.6 vibration motor from June, 2000 as the 3rd model followed by release of ultra-slim products by competitors and designing of slim cellular phones soon after the re-designing of Φ12 x t3.4 vibration motor.¹³ As this product had designed all components within thickness of 2.6mm, the product characteristics¹⁴ and product reliability¹⁵ had to accomplish the same standard as former models to be faced with problems followed by ultra slim design¹⁶. During this time, the foreign manufacturing site technical support duties along with product development were performed at the same time at a situation of the employees being reduced to 3 electrical engineers, 1 instrument designing engineer and 1 team manager B due to separation of some development team B employees.

Although the Φ12 x t3.4 Rev. 2 vibration motor of development team B was performed in a form of revising the product through re-designing, the Φ12 x t2.6 vibration motor which is the 3rd model had performed designing based on newly established architectural knowledge and advanced component knowledge from the beginning. The brush was designed by changing the form to minimize mechanical reaction force while having adequate displacement and rigidity to support the rotor while the circuit design had applied printing resistance paste with Δ connection to the Y connection 3 Coil 3 phase 4 pole electromagnetic circuit design the same way. By implementing the design of brush at a

¹³ The Φ12 x t2.5 model was released from a leading coin type vibration motor business of Japan at the time while Φ12 x t3.4 and Φ12 x t2.7 models are released in order from affiliated component manufacturer of domestic cellular phone manufacturer from middle of 2000 to year 2001.

¹⁴ Characteristics such as rated current, starting voltage and rpm, etc

¹⁵ Managed as product characteristic variation ratio around life, drop, thermal shock, low temperature, humidity and vibration tests.

¹⁶ The rotor deformation caused by slim thickness. Problems such as bearing separation during drops and deformation, etc while assembling the final product.

minimum area, the surface area of magnet attached around the brush is designed to be increased by 10% or greater than the $\Phi 12 \times t3.4$ vibration motor to improve electromagnetic torque. Also the form and size of driving coil facing the magnet was optimized and in order to minimize the decrease of vibration power, the area of eccentric weight was maximized to establish a more materialized designing standard.

Even in the process technology section, the change on technologies that had been applied since the 1st model had been performed. A non contacting soldering was applied for the process of soldering the brush from the soldering iron method to hot air method while the process of separating parts after the brush soldering had applied cutting method without inflicting shock from the method of separation by inflicting shock with punching press method of the past. These two changes of process technology have minimized structural deformation and lowered performance of the brush. Also, the adhesion process which had been operated as high temperature curing method was changed to flow production process enabling adhesion within several dozens of seconds using anaerobic adhesives and UV cure adhesives.

The $\Phi 12 \times t2.6$ which is the 3rd model has secured even more excellent electrical properties, vibration power and life reliability than $\Phi 12 \times t3.4$ vibration motor, completed development in April, 2001 and development team B could materialize their new architectural knowledge and advanced component knowledge through the development of ultra-slim $\Phi 12 \times t2.6$ model.

$\Phi 12 \times t2.6$ model has proven its functionality and reliability through expansion of market entrance on A, M and ST companies that are domestic venture user companies of innovative tendency in addition to existing domestic clients of JAWHA Electronics Co., Ltd while the entrance as mass market was attempted afterwards on full scale. $\Phi 12 \times t2.6$ model gets to obtain component approval as the second vibration motor of JAWHA Electronics Co., Ltd to the greatest domestic user company.

4.4 Development and Manufacturing Stage II

4.4.1 Development of 4th Platform ($\Phi 10 \times t3.4$ Model)

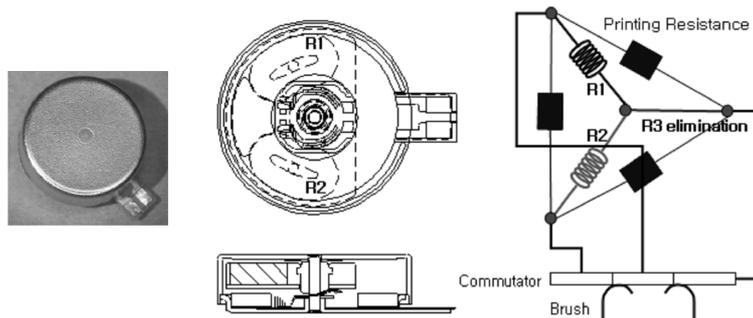
1) Stabilization of Architectural and Component Knowledge

Since the development of $\Phi 12 \times t2.6$ vibration motor which is the 3rd model, they start on development of $\Phi 10 \times t3.4$ vibration motor which is even more miniaturized 4th model from October, 2001 to October, 2002. The development team B at the time had increased distribution of corresponding duties by engineers in charge of users within development team as the approval on various user companies was attempted along with vibration motor development of $\Phi 12 \times t3.4$ Rev. 2 and $\Phi 12 \times t2.6$ while the customer correspondence process such as providing data and technical consultation, etc was improved gradually as the result. The team manager B began to concentrate on general duties such as overall business management within development team, correspondence with user company, making businesses and foreign production base support, etc while the development of $\Phi 10 \times t3.4$ vibration motor which is the 4th model was performed based on engineer in charge. The authority on important resource adjustment was at team manager B and the engineer in charge had received assistance through adjustment of duties with each engineer in charge as a middle employee possessing specialized technology although he had little influence within the organization. Under such lightweight team structure, the development of $\Phi 10 \times t3.4$ vibration motor which is the 4th model was performed in the development and production stage II.

In the market, the functional requirement on miniaturized vibration motor was steadily showing

along with miniaturization of cellular phones and advancement of functions. Despite the miniaturization of products, the characteristics and reliability of vibration motor was requiring equal or above standard compared to previous models. The $\Phi 10 \times t3.4$ vibration motor which is the 4th model had successfully implemented the miniature design through driving torque analysis as the electromagnetic design of 2 Coil 2 phase(modified form of 3 phase) 4 pole¹⁷ eliminating 1 driving coil was expressed concretely for the miniaturization of product in the design of existing 3 Coil 3 phase 4 pole as shown in Figure 11. In the instrument designing aspect, a maximum magnet occupation space was secured to improve the torque reduced from the miniaturization of product while implementing a miniature brush securing more stability through change of quality and shape. Also, in order to minimize the decrease of vibration quantity, specifications were determined by comparing and calculating the vibration power with previous models so that the weight of rotor could be designed as maximum. Followed by expansion of coin type vibration motor manufacturers and increased adoption of cellular phone businesses at the time, the price was lowered and quality was steadily improved as the supplier of various parts and raw materials appeared than the time of developing the $\Phi 14 \times t3.4$ vibration motor which is the 1st model. The engineers of development team B had steadily promoted development of new product using existing and new suppliers while the technology improved by part and raw material suppliers was applied through approval of new components and change of specifications to be also reflected to the product design of $\Phi 10 \times t3.4$ vibration motor which is the 4th model.

Figure 11. $\Phi 10 \times t3.4$ Vibration Motor of JAHWA Electronics Co.,



Source: Adapted from JAHWA's document

The $\Phi 10 \times t3.4$ vibration motor which is the 4th model had also brought a great change in the process technology of JAWHA Electronics Co., Ltd. As the coin type vibration motor was developed at an electronic part affiliated company with the group of cellular phone manufacturers, the establishment of large scale production line was in progress and the domestic company T which is a specialized equipment supplier having technical ability and experience had appeared. The JAWHA Electronics Co., Ltd had required production equipment of even higher precision from the miniaturization of product and contacted company T. The equipment of main process by new equipment supplier was organized by attaching a measuring instrument to enable more detailed revision than the equipment of JAWHA Electronics Co., Ltd. While the equipment of adhesion process had also enabled heating press to perform stable adhesion within short period of time. And the injection mold of rotor had separated core completely to be organized so that the injection process

¹⁷ To explain by referring to the electromagnetic design circuit of Figure 4-12, 3Coil 3 phase 4 pole designed previously is the principle of each 2 driving coils operating at each specific angle in a form of R1-R3, R1-R2, R2-R3 while the 2Coil 2 phase (modified form of 3 phase) 4 pole applied to $\Phi 10 \times t3.4$ which is the 4th model is the principle of each 1 or 2 driving coils operating at each specific angle in a form of R1, R1-R2, R3.

could be performed by effective serial operation using many cores. The development team and production technology team of JAWHA Electronics Co., Ltd get to actively select the part which is better than the existing equipment and process of JAWHA Electronics Co., Ltd by exploitation of process technology of company T. Through development of $\Phi 10 \times t3.4$ vibration motor which is the 4th model and establishment of production line, JAWHA Electronics Co., Ltd had established elaborate architectural knowledge and component knowledge as well as a stabilized process technology.

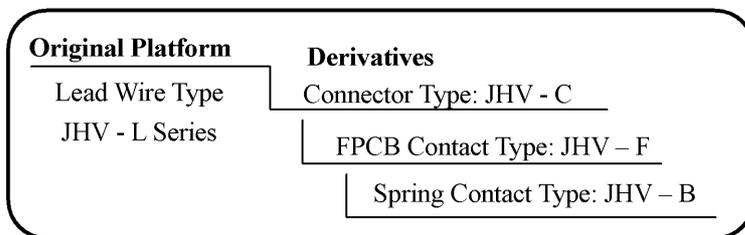
The development team B successfully completed the development of $\Phi 10 \times t3.4$ vibration motor which is the 4th model in October, 2002 and obtained approval within short period of time from the greatest domestic user company and foreign user company from second half of 2002 to beginning of 2003. They had obtained approval from the greatest domestic user company for all models developed up to $\Phi 12 \times t2.6$ and $\Phi 10 \times t3.4$ vibration motors starting with the $\Phi 12 \times t3.4$ model during the period from 2001 to beginning of 2003 while promoting the approval of newly developed vibration motor models by contacting cellular phone manufacturers in Taiwan in addition to existing European clients based on the platform of diverse vibration motors. Since 2002, the development correspondence on user company for product business and expansion of derivative product development along with product development activity become in progress together as important weight.

4.4 Diffusion Stage

4.4.1 Extension of Derivative Models

The vibration motor for cellular phones has gone through the process of being selected along with release of cellular phones by going through providing samples and evaluation for the duration of cellular phone development by contacting each cellular phone development team after passing the component approval process through quality department of the user company. Therefore, even after the usual component approval period of user company, the official diffusion of product was accomplished only after the cellular phone development period was used up in addition while the problem of development reactivity at the evaluation and selection process through this cellular phone development team of user company or the problem of vibration motor reliability was created to delay the selection or replace as vibration motor of competitor.

Figure 12. Derivative Models of Coin Type Vibration Motor



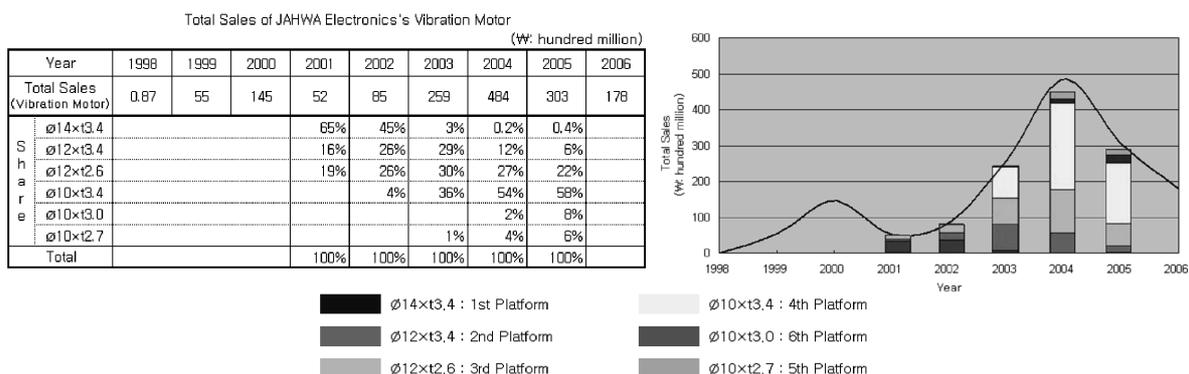
Source: The table was adapted from Meyer & Lehnerd(1997).

The photograph was quoted from JAWHA's Document.

The development team B began to participate in many new cellular phone development models after obtaining approval from the greatest domestic user company and foreign user company for the

3rd and 4th platform in 2002 while officially getting to perform development of a derivative model for user companies by doing so. The derivative model of vibration model was created followed by customized interface of customer specifications. For the effective use of inner space of cellular phones having various designs in which the parts are highly intensive, the connection method of various electric power was required and accordingly, various derivative models in which some specifications have been changed were developed as shown in Figure 12. Engineers who had performed development of $\Phi 10 \times t3.4$ model which is the 4th platform as lightweight team structure began to devote in coping with development of user company and development of derivative models in this stage while 2 newly recruited engineers of 2003 were committed to the development of next

Figure 13. Coin Type Vibration Motor Sales of JAHWA Electronics Co.,



Source: Based on internal data of JAHWA Electronics Co., Ltd

models ($\Phi 10 \times t2.7$ and $\Phi 10 \times t3.0$). The member of development team B had learned new functions of related parts and design specifications through supplier for the development of derivative models. The new material to prevent breaking of circuit was applied through existing suppliers for FPCB and spring connector type components had performed development through new suppliers that were supplying connector components of small speakers.

Based on such development correspondence on user company and development of derivative models, the development team B gets to accomplish technological diffusion of coin type vibration motors and sudden increase of sales. As it could be seen from the sales trend of Figure 13, the period from 2001 to 2002 was the time when the business was rapidly shrinking as the sale of 1st platform had declined rapidly without being able to follow the competition base of the market due to development failure of $\Phi 12 \times t3.4$ Rev.1 model which is the 2nd platform. The sales during this period when 2nd~4th platforms were being developed in order was reduced to 5.2 billion in 2001 and 8.5 billion in 2002 from being 14.5 billion in 2000 and for the detailed sales weight of such decrease in sales, the $\Phi 14 \times t3.4$ model which is the 1st platform was taking up 65% and 45%, respectively. But after the development and production stage of 2002, the sales become increased rapidly by more than 3 times from 8.5 billion of previous year to 25.9 billion won when it reaches the diffusion stage of 2003. The detailed weight of sales also gets decreased rapidly to 3% level for the sales weight of 1st platform while the sales weight of the product developed based on new architectural knowledge got to take up 97% and most of all, the $\Phi 10 \times t3.4$ model of 4th platform which has gone through the stabilization process of architectural innovation at development and production stage gets to accomplish the most rapid increase in sales.

4.4.2 Change of Competition Bases

During the time when development team B had developed the 4th platform and expanded to domestic and foreign user companies, many coin type vibration motor manufacturers that are able to satisfy functionality and reliability of product had already existed in the market. At the time, the greatest domestic user company was getting most of coin type vibration motors through the affiliated company of the group and some were getting supplied by vibration motor manufacturers in Japan. Even in the Taiwan market, domestic and Japanese vibration motor manufacturers are spreading an active business.

The development team B which had performed development by going through the times when business was suddenly shrunk because it could not keep up with competition based of the market from middle of 2000 until 2002 had coped very actively with cellular phone development team of user companies for the product diffusion. The development team of greatest domestic user company was gradually having a greater dissatisfaction in terms of development correspondence by depending on supply of coin type vibration motors through 1 manufacturer in actuality until JAWHA Electronics Co., Ltd had entered the market. The development team B of JAWHA Electronics Co., Ltd had actively accepted even the unreasonable prototype production schedule in order to satisfy the demand which is emphasized the most on the development schedule of cellular phones while also providing active cooperation by visiting the user company promptly when there was request for development of derivative products. Also, the internal development evaluation process of derivative product was replaced by evaluation history between development team of user company and JAWHA Electronics Co., Ltd to shorten the internal development process on derivative products to be transferred promptly to production technology team for mass production. Based on such effort of providing discriminated convenience, they could participate in many new cellular phone development projects and performed development of various derivative models by doing so. Even in the correspondence activity on foreign user companies, they provided faster development sample providing schedule and more active derivative product development cooperation than competitors to attempt promotion of selection by many user companies. The development team B could participate in new cellular phone development projects and derivative product development by providing convenience on development speed and reactivity to user companies accomplishing diffusion of coin type vibration motors they had developed.

Although the demand to lower prices by user companies is the condition shown every year, the domestic user companies that have increased in their part purchasing scale as they steadily extended the market share of worldwide cellular phone market get to promote a more active product cost decrease by securing many coin type vibration motor manufacturers. To cope with such change of competition base, JAWHA Electronics Co., Ltd also had spread various internal and external activities. It began to contact with many new component suppliers followed by overall expansion of coin type vibration motor market and the component price was gradually lowered by promoting local supply of components in stages through foreign business sites. Also, as the experience and data on production was accumulated after maintaining mass production of coin type vibration motors, the improvement of process efficiency was steadily in progress. The organization of processes that are unreasonable or can be shortened were changed, the process equipments and Jig & Fixtures were improved for more convenient usage by workers while the work standard and equipment operating standard have also become more specific. From the decrease of production cost through these activities, JAWHA Electronics Co., Ltd could cope with price based competition of the market.

5. Discussion & Implications

As a result of case analysis, the followings have been discovered in dimensions of technology, market and organization. First, in the process of architectural innovation, the importance of exploration and exploitation learning (March, 1991) on process technology has been confirmed as one of problem solving strategies. This is the part which had not been revealed well relatively compared to the fact that existing research on architectural innovation has been progressed in the standpoint of development.

Also, we can see that the competition base of the market in development and manufacturing stages I and II actually has functionality and reliability overlapped to a certain extent. Even if such phenomenon exists, the biggest priority of architectural innovation is basically the functionality in the development and manufacturing stage I while the reliability becomes a main issue in the development and manufacturing stage II. Even if the second highest competition base of each stage might be very important in reality, it is a supplementary issue at the standpoint of defined individual stage. In other words, pursuing reliability in a situation where securing functionality is the foremost issue is an additional work to make functionality more valuable and securing reliability performed without securing functionality in this stage becomes insignificant. Furthermore, in case of development and manufacturing stages II in which the reliability is recognized as biggest priority, additional improvement of functionality brings the effect of improving the value on reliability.

Moreover, there had existed procurement of resources related to procurement of outside human resource for the advancement into discontinuous vibration motor technology in the accumulation stage and the change and tuning of development process in each of development and manufacturing stages I and II. In the diffusion stage, a business that has succeeded in architectural innovation was assigned the priority within organization while the requirements on supply prices rises as priority also for vibration motor users than the requirements on functionality and reliability as they started to recognize the economic value of corresponding business on full scale. Also, the companies get to demand a re-arrangement toward the direction of clarifying economic margin ratio in the standpoint of the value network of user, manufacturer and component supplier. Gradually, user firms demand supply of components within the price range rearranged by users rather than the requirement about functionality and reliability. In other words, the locus of priority and organizational capability at the individual stage of innovation moves from resource to process and furthermore, to the value as time passes by (Christensen & Overdorf, 2000).

On the other hand, once entrant firms comes to succeed in a breakthrough innovation in emerging industry, it is easy for them to stick to the improvement of only component efficiency even in the development process of next platform – the rigidity of the established mental model just because they have succeeded in the breakthrough innovation, and an inevitable failure is accompanies by such success during the time period when the architectural innovation is required. Therefore at that time of architectural innovation (development and manufacturing stage I), the change of mental model (Senge, 1990; Noda & Collis, p.901) by development team is required and this tends to result in inevitable replacement of project manager and related team member who had succeeded in breakthrough innovation in the previous stage because it is difficult for the change of such mental model. The team manager B of development team b who had performed the development of vibration

motor at the development and manufacturing stage I had possessed technological mentality which is free from the existing vibration motor architecture.

6. Conclusion and Limitations

It could be identified that completely avoiding the negative influence of established mental model is difficult even in case of SMEs or technology-based ventures, which are known as having flexibility in general. It is because of the inertial attempt to improve only the component efficiency, even if the product architecture formed at the initial stage of emerging industry was inferior because a tremendous effort was devoted to the establishment of new product architecture.

SMEs or technology based ventures have a tendency of having more resource constraints than large firms, therefore, they could tend to incline to allocate the project manager again who had succeeded in the innovation of previous stage to architectural innovation project. This is furthermore because the goal of architectural innovation is reinforcement of functionality in the market dimension even after the release of breakthrough innovation.

We have tried to suggest implications about companies that are inevitably faced with architectural innovation at the initial stage of emerging industry.

The limitations of this study are as follows. it still has the problem of external validity by single case study and it must be needed broadening a detailed understanding on architectural innovation in the future by observing companies of various sizes falling under various industries. Furthermore, while the longitudinal understanding on architectural innovation was attempted through combination of stage model and problem solving model, we think it is necessary to suggest a more developed understanding on architectural innovation including interaction model between user firm, manufacturer and supplier that may function as the source of innovation respectively.

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A Proposed Technology Incubator Model for the MENA Countries

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ABSTRACT

The technology incubator is a flexible method of encouraging the development of new technological businesses and fostering local economic development. This paper presents the methodology and technique of establishing a technology incubator an applicable model to the MENA countries. The methodology used to establish, and operate the proposed technology incubator have four main steps: The first step of the research is the definition phase, which the main functions and players of the incubation process are defined, as well as the research output, i.e. "the incubator model". The second step of the research is the data collection phase. Short questionnaires, building on the definition phase outputs, were developed and the information was collected during direct interviews with the stakeholders. The third step of the research is data processing and analysis. During this phase, data collected is processed and specific composite indicators are built to measure and characterise the incubation process. The fourth step is to present the incubator model, which was introduced according to the results, findings, and the real needs of the community.

KEYWORDS: *Technology incubators, Entrepreneurship, SMEs development, MENA region.*

1. INTRODUCTION

Unemployment and technology gap are representing a crucial social and economical problem in the MENA countries. Incubators are facilities in which a number of new and growing businesses operate under one roof with affordable rents, sharing services and equipment, and having equal access to a wide range of professional, technical, and financial programs. Because most small businesses fail within their first five years of operation due to under capitalization and lack of proper management skills, incubator facilities provide an environment where public and private resources can combine to meet the needs of small businesses during their critical stages of development. The typical low cost of operating a new business in an incubator facility is conducive to a more rapid growth and maturity into a viable business enterprise. They are particularly valuable for the transfer of high technology and other production and management knowledge to firms.

2. RESEARCH PROBLEM and HYPOTHESES

2.1 Research Problem

Finding an appropriate incubator model for the MENA countries pertaining to the real needs and economical and social situation.

2.2 Research Propositions and Model

Mansoura University technology incubator, Mansoura, Egypt, is selected to be the model of the proposed incubator. The model is presented at the research to benefit for the spreading of incubation concept in the MENA countries.

2.3 Justification for Research

At the globalization age, comparing to the 4600 incubators worldwide, there are less than 20 working incubators in the 22 MENA countries.

The research aims to increase the awareness of the importance of incubation and their social and economical impacts.

3. METHODOLOGY

The methodology used to establish, and operate the Mansoura University Technology Incubation Center (MUTIC) have four main steps:

The first step of the research is the *definition phase*.

The main functions and players of the incubation process are defined, as well as the research output, i.e. “the incubator model”.

The second step of the research is the *data collection phase*.

Short questionnaires, building on the definition phase outputs, were developed and the information was collected during direct interviews with the stakeholders (including start-up entrepreneurs support institution, and existing SMEs) in Dakahlia governorate, Egypt.

Considering the selected methodology and the time and budget limitations, a sample of 30 start-up entrepreneurs 30 support institutions, and 60 existing manufacturing SMEs were selected in Dakahlia (the targeted region).

The third step of the research is *data processing and analysis*. During this phase, data collected is processed and specific composite indicators are built to measure and characterise the incubation process.

The fourth step is to *present the incubator model*. A model was introduced according to the results and findings and the real needs of the community.

3.1 Definition phase

MUTIC (the model) exists by three main pillars (players) as follows:

- 1- **The donor:** Social fund for development (SFD). A governmental fund, which was started in 1992, and aims to support SMEs in Egypt.
- 2- **The implementing agency:** Egyptian Incubators Association (EIA). An Egyptian NGO, which was started in 1995. It spreads incubators in Egypt as turnkey projects.
- 3- **The hosting agency:** Mansoura University. It accommodates the physical building of the incubator and offers its professors, mentors, laboratories and workshops.

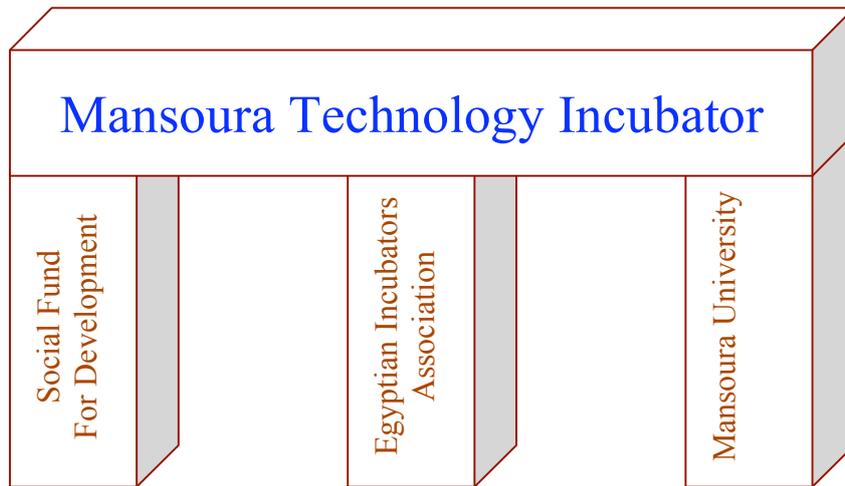


Figure (1) the main pillars of the model

3.2 Data collection phase

In considering how to create new enterprises to replace those that had perished, the authors understood that they needed to address the common reasons for failure of new ventures. In Dakahlia region, these reasons included (1) insufficient access to capital, (2) lack of managerial expertise, and (3) insufficient marketing expertise. This knowledge was the starting point for the practice of business incubation.

Lists of local start-ups support institutions and a sample of existing manufacturing SMEs were developed to identify the extent of problems and obstacles faced by entrepreneurs in Dakahlia governorate, and to help designing the model.

Startup entrepreneurs were classified according to the following criteria:

- ❑ Starting their businesses up to two years with number 6-50 employees (40% of total interviewed)
- ❑ Has already start the process of license, credit, selecting machinery but not start manufacturing (40% of total interviewed)
- ❑ Has got the idea but do not know the steps to implement it (20% of total interviewed)

The methodology includes an assessment study of entrepreneurs' needs and the available services provided by relevant institution in Dakahlia. The assessment is considered as a first step towards developing an effective potential technology incubator to know the type and extent of problems faced by startups in Dakahlia, also identify support services available and assess of such services. Collecting data for analysis and evaluation were implemented through specific questionnaires. A list of local support institutions was developed and classified according to its legal status. Common problems faced by startups and major instruments offered by support institutions are presented.

4. THE INCUBATOR MODEL

The goal of Mansoura technology incubator (MUTIC) is to provide a supportive environment, where new entrepreneurs receive training in business management skills and marketing, buffered from stiff market forces with below-market rent, reduced fees for services, and greater access to seed capital. MUTIC is a multi tenant facility with common office equipment and a shared conference room. There is also an on-site full-time manager to assist in the delivery of business assistance training and services. Some services commonly provided in an incubator include (1) business plan development; (2) accounting, legal, and financial planning; (3) aid in attracting investors; (4) marketing; and (5) common shared services, such as secretarial support and facility maintenance. Once a fledgling business is financially viable—and the individual entrepreneur has developed the necessary survival skills—it is hatched into the open market, where it hopefully hires new employees and begins to contribute to the local (regional) economy.

The incubation process: calls for prepared inputs in order to achieve required outputs, figure below. *Inputs* – these mainly consist of the inputs made by stakeholders (e.g. providing finance), management resources, and projects put forward by entrepreneurs;

Processes – the various inputs are brought together in the business incubation process through the provision of incubator space and a variety of value-adding services to companies;

Outputs – successful companies graduate with positive job and wealth creation impacts.

4.1 The input-output model of the incubation process

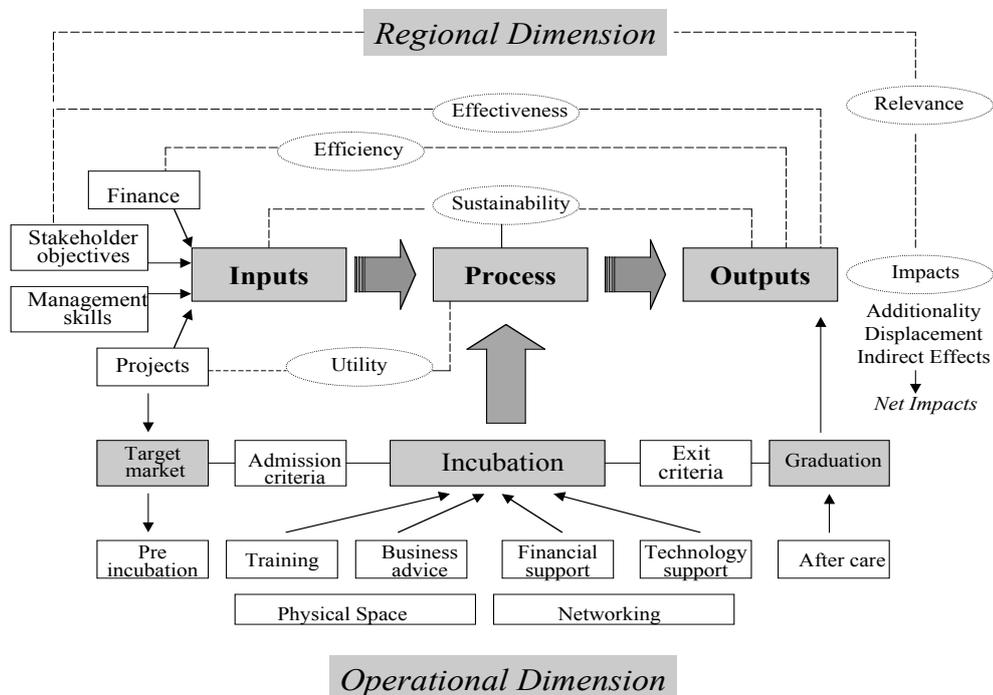


Figure (2) The input-output model of the incubation process

Seven services typically provided at the incubator can be represented as a pyramid Lalkaka, 2004 [2], the ones most often used being at the base, as in the *first generation* incubators. Management must make efforts to *move up the pyramid* towards the *second generation* and *third generation* incubators, with higher value-adding services:

Services on legal, IP issues, security
Seed equity capital, technology sourcing
Skills development, mentoring and counseling
Support on information & international networking
Synergy among clients through exchange of experiences
Shared office facilities, equipment, pre- & post-incubation
Smart space that is functional, affordable and on flexible terms

At the top of the services pyramid is help on legal and intellectual property issues. Tenants in MUTIC rarely apply for patents on their innovations due to lack of awareness of their value, the costs and complexities involved, and inadequate advice. The inputs and outputs in the incubation process depend on the incubators objectives, and their full costs are not easy to define. Some like the workspace provided and numbers of jobs created can be estimated, but the intangible services of networking (between tenants and externally with other organizations, e.g. universities, large companies) and facilitation, or the benefits of skills development and cultural change are difficult to quantify and are omitted in most planning and evaluation exercises.

Being a start-up business to serve start-ups, MUTIC itself must mimic the dynamism of entrepreneurial ventures, with the prospect of becoming self-reliant within 5 years of operations. However, deriving its income mainly from rentals and some from services, supplemented by state subsidies (referred to euphemistically as ‘infrastructure investment’ or ‘venture socialism’). MUTIC will not take equity in the client companies or make a royalty arrangement based on sales as some incubators worldwide take.

4.2 Objectives of the MUTIC

- (1) Assist nascent businesses and develop their research and tech-based product and service concepts into marketable goods.
- (2) Towards this purpose, provide a higher order of counseling, skills enhancement, marketing, book-keeping and legal support.
- (3) Stimulate synergies among the ventures within the facility as well as with others outside, in the region, nation and internationally.
- (4) Facilitate access to angel/venture capital, technical information and external professional networks.

It should be noted that incubator nurture entrepreneurs, who create enterprises, of which some would after leaving the incubator create direct and indirect employment, with incomes and assets, that in turn contribute to sustainable economic growth. Often the start-up entrepreneurs’ task may be to create jobs for themselves and conserve their limited funds; only when they graduate and leave the incubator that some may grow exponentially creating employment, incomes and taxes.

The implementation process involves a cascading of steps:

From Concept and business plan review

To Firm commitments on initial funding and building availability

Implementation agreement between SFD, EIA and MU

Opening bank account and legal structure to receive funds

Awarding renovation contract, with the needed high-speed telecom

Nominating and empowering the Managing Board

Selecting and training the incubator management team

Marketing the incubator and mobilizing community support

Tenants selection and processing their bank loans.

Installing equipment, finalize administrative process

To Starting operations

Monitoring and evaluation

Internationalization

Time needed to renovate the incubator building – an overall duration from concept to completion of 12 months. Typical funds needed for investment and initial operations is LE2.5 million (US\$ 450,000) , which funded by SFD.

Once the policies and infrastructure are in place, Incubators can start in many Egyptian cities through EIA efforts.

4.3 Defining characteristics

While types and purposes may vary, the distinguishing characteristics of MUTIC are as follows, and without these features it is strictly NOT an incubator:

- A careful selection of start-up or early-stage entrepreneurial businesses for entry, and a flexible process for exit by those who are successful (or who are not likely to be),
- Emphasis on provision of services for clients against payment of fees (often bundled with rents for space, or vice versa),
- An autonomous managing board and small management team to organize counseling, training, information, networking services and finance, promote synergy among tenants, and provide access to seed capital and to networks of external professionals,
- Provide access to technology sourcing/market information and affordable work space, in order to help overcome market failures,
- Operation in a business-like mode, not as a government or university department,
- Incubation must become a key component of the National Innovation System
- MUTIC hosted by Mansoura university, which facilitates their access to research, library information, faculties experts and graduate students,
- It is often the first building block of a future technology park, or may be sited inside an existing technology park or industrial estate,
- MUTIC facilitate access to risk capital, and indeed the new economy accelerators are driven by in-house venture capital and management consultancy capabilities,
- Pro-active boards and higher skilled management with some technical experience, total IT proficiency, and familiarity with intellectual property issues .
- MUTIC help produce higher-value products and services rather than traditional mechanical-electrical or agri-business goods.

4.4 Incubating the Incubator

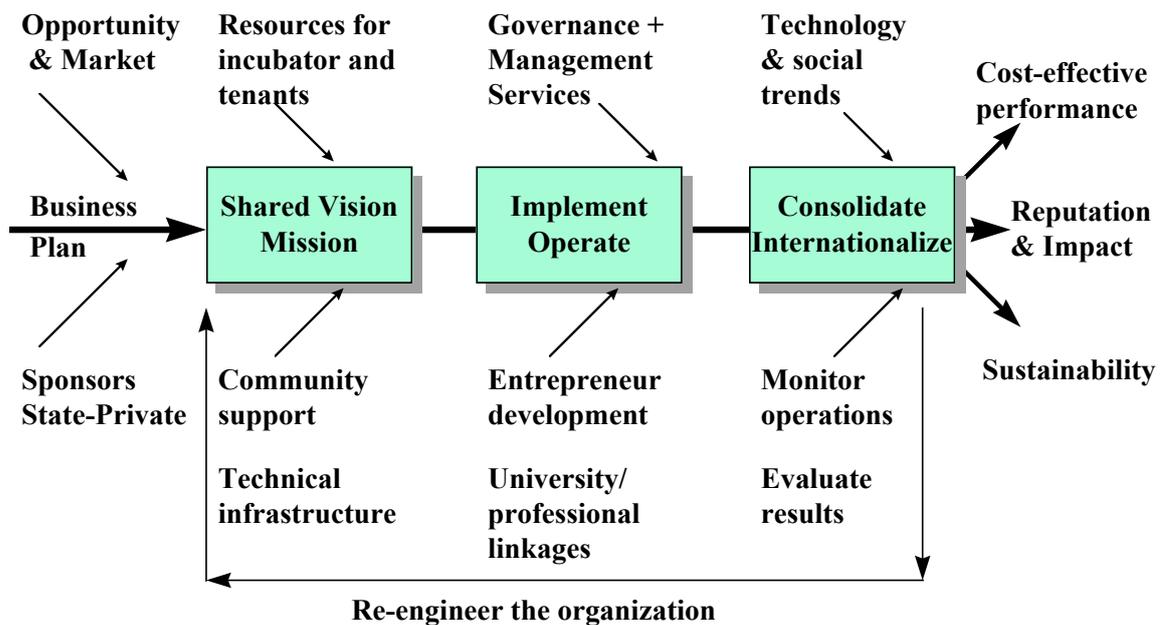


Figure (3) The constellation of forces in incubating the incubator

For MUTIC, the benefits can be many-fold:

For tenants: MUTIC enhances the chances of survival by three- or four-fold as compared to a start up outside the incubator, raises credibility, helps improve skills, creates synergy among client-firms, facilitates access to mentors, information, technology and seed capital,

For government: MUTIC helps overcome market failures, generates jobs, incomes and taxes, and becomes a demonstration of the political commitment to small businesses,

For research institutes and universities: MUTIC helps strengthen interactions between university-research-industry, promotes research commercialization, and gives opportunities for faculty/graduate students to better utilize their capabilities,

For business: MUTIC can develop opportunities for acquiring innovations, supply chain management and spin-offs, and helps them meet their social responsibilities,

For the local community: MUTIC creates self-esteem and an entrepreneurial culture, together with local incomes as a majority of graduating businesses stay within the area.

For the international community: MUTIC generates opportunities of trade and technology transfer between client companies and their host incubator, a better understanding of business culture, and facilitated exchanges of experience through associations and alliances.

4.5 The role of government

The role of the *government* is essentially to develop the technical infrastructure, policy framework and initial finance, in order to help catalyze the venture creation process and to enhance, not displace, the market. The conventional wisdom has been reversed, with sponsors and donors now seeking to subsidize the market of small enterprises rather than the supply-side of service providers.

In the Olympiad of venture creation, sources of success can be expressed as five inter-linked rings:

Public policy that facilitates ventures creation and provides the business infrastructure

Knowledge base of university and research

Private sector partnerships for mentoring and marketing

Professional networking, national and global

Community involvement to promote entrepreneurship

The resulting configuration is depicted below:

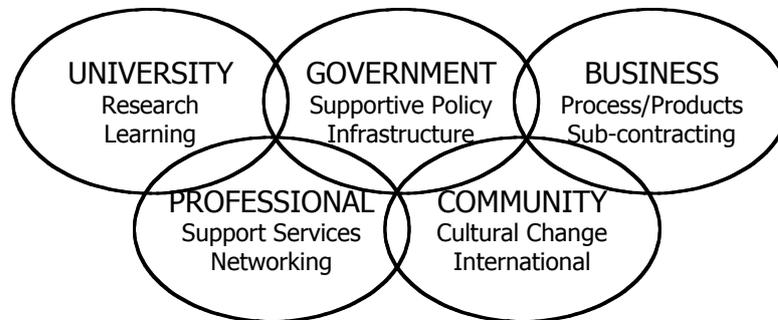


Figure (4) Interactions between government and stakeholders

In the developing country environment, the linkages in the chain are often unstructured and weak, and typically the weakest links are with the universities, research institutes and private sector.

4.6 Selection of tenants

The quality of a company's business plan and the qualifications of entrepreneurs appear to be the most important aspects taken into consideration by MUTIC in the selection of tenants. Focus on R&D proved to be very important, while ownership or license to use intellectual property (IP) rights was judged quite important.

MUTIC focuses on high-tech companies, and companies in the manufacturing and information & communication technology sectors.

The expected effects of Selection and Incubation

To have any real value there should be an impact of the following type.

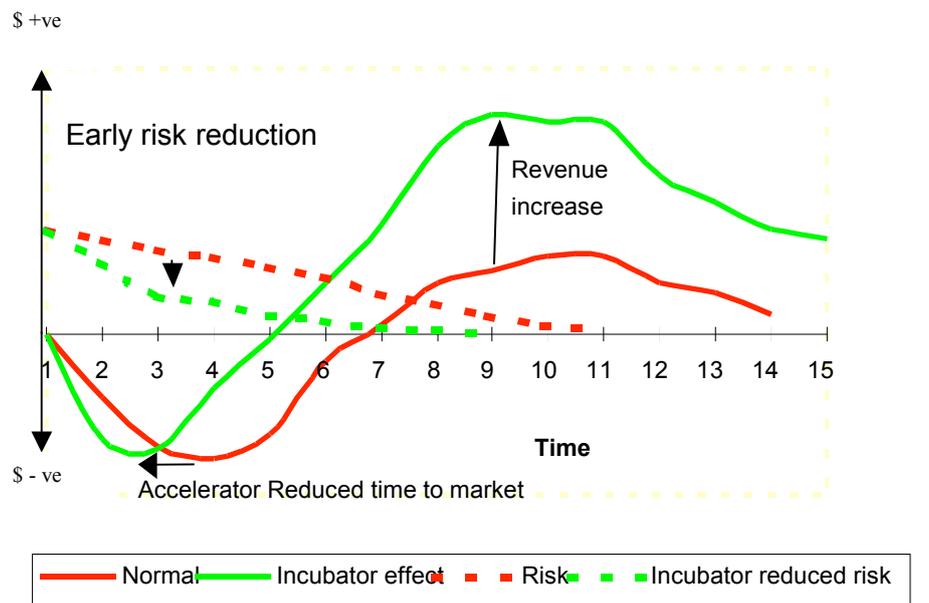


Figure (5) Expected Incubator Effect of Incubation and Selection

4.7 Scopes of Tenant companies

In a recent research by the authors [1], which surveyed 36 countries, the top of the main business sectors of the tenants there, was software industry sector, which represents 26%. The second largest sector was hardware industry, which represents 17%, bio technology, biomedical sectors and others sectors represented 9% each. In Mansoura area, sectors such as medical engineering, agricultural new technology and science application can be a emerging sectors according to the local environment and the competitive advantage of this area.

4.8 The Micro-Context of MUTIC: The Transactional Environment

Among the major goals of MUTIC, its ultimate goals are: economic development, commercialisation of technology, development of property assets, and entrepreneurship. The immediate goals of interest to the stakeholders are the temporary availability for use and sharing of premises and land, a variety of equipment, and administrative, commercial and technical services, as well as providing access to sources of funding, including venture capital and networks of 'business angels'.

MUTIC thus involves a wide range of directly interested actors, who converge in a context that may be termed transactional. Conspicuous among them are the traditional financiers and stakeholders, including Dakahlia governorates, local authorities, regional development agencies, Mansoura University, future science park and not-for-profit organisations

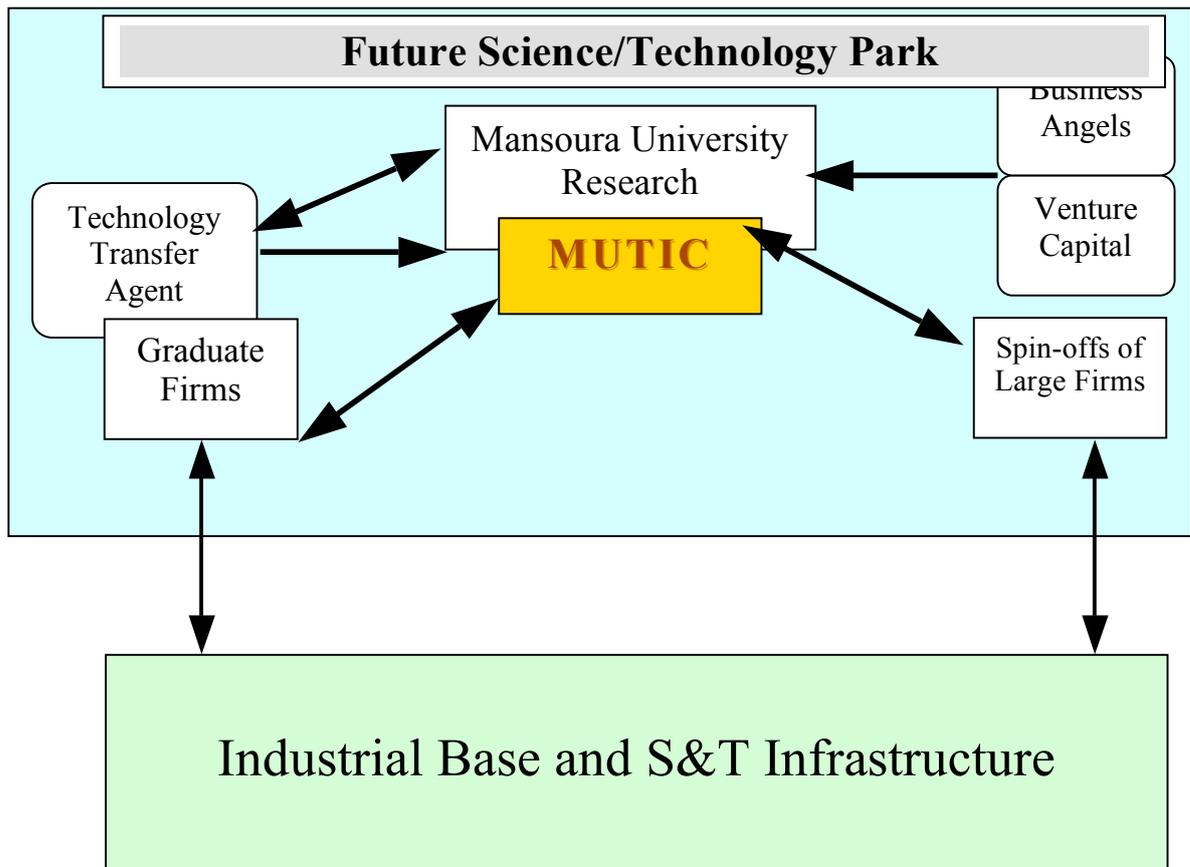


Figure (6) A model illustrating the Micro-context of MUTIC

Figure (6) shows a model of the micro-context for MUTIC, in which we can see the interested parties – stakeholders – and the network of relations and interactions generated among them.

5. CONCLUSION

Launching a national technology incubator program is crucial for technology innovation and exporting tech- based products, the technology incubator can form a catalytic component of a national innovation system. Comparing to the 4600 incubators worldwide, there are only 19 operating incubators in the 22 MENA countries. The need of launching hundreds of incubators in the MENA region is crucial. The research presented the methodology of launching incubators in the MENA countries vis-à-vis four main steps: The first step is the definition phase. The main functions and players of the incubation process are defined, the second step of is the data collection phase. A short questionnaire based on the definition phase outputs, will be developed and the information will be collected during direct interviews with the stakeholders, the third step is data processing and analysis. During this phase, data collected is processed and specific composite indicators were built to measure and characterise the incubation process. The fourth step was to introduce the incubator model. A model was introduced according to the results and findings and the real needs of the community. The authors strongly recommend adopting this model in the MENA level after medication according to the local environment and community needs of every MENA country.

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Knowledge Intensive Service Ventures – When Do They Survive?

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Keywords

Knowledge Intensive Service Ventures; Knowledge Intensive Business Services (KIBS); Service Entrepreneurship; Competence-based Theory of the Firm (CbTF); Absorptive Capacity; Customer Integration; Transactive Knowledge; Strategic Logic; Open System View.

Abstract

This paper deals with the still under-researched peculiarities of knowledge-intensive service start-ups (KISS) and their impact on the firms' competitiveness. It is argued that the value-added structure of KISS firms is different from other companies and involves particular uncertainties that challenge the venture in the phases of the establishment process. Thus, KISS firms face a high threat of survival. The paper employs the competence-based theory of the firm to explain the situation theoretically and to develop research propositions. Afterwards, case study research is conducted to explore the start-up process in more detail and to compare the findings with the propositions.

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Introduction

It is common sense that knowledge intensive business services (“KIBS”, e.g. business consulting, technical consultation, R&D services, software engineering – to name but a few) are vital to the economic development in particular of highly developed countries (Baumol 1986; Miles et al. 1995; Grimshaw and Miozzo 2006; Miles 2007). The reason for this is that among the production factors knowledge is of utmost importance since knowledge – in contrast to labor, natural resources, and capital – is neither a finite nor a regenerative asset but a so-called “generative asset” (Moldaschl and Fischer 2004). This implies that the use of knowledge does not decrease the value of this asset but, oppositely, by employing knowledge the available stock grows over time. Moreover, knowledge is the backbone of almost all up-front industries in the world. Every superior technology and every dynamic capability builds on the knowledge available – and to a large extent on the structure and embeddedness of knowledge. Knowledge undergoes a process of constant renewal in our society and is, once created, in many forms possibly available to everyone e.g. via modern ICT systems. Thus we can understand knowledge as a crucial driver of economic development. Moreover, availability and use of knowledge in markets matters as for the attainment of competitive advantages and the distribution of power to set standards in competition. Accordingly, knowledge intensive firms are of interest for the whole economy. Moreover, politicians and the society are well advised to foster the foundation of new knowledge intensive firms. In most cases these start-ups belong to the service economy. Aulinger 2005 reports that knowledge intensive service start-ups account for 14 percent of the total entrepreneurial activity.

However, the foundation of knowledge intensive service firms is in no way an easy endeavor and to keep the competitiveness after the start-up phase is often difficult since the knowledge base is highly volatile. Business models in knowledge intensive service industries outdate faster than in most of the other industries so that learning and exploration become challenges critical to survival. The reason for this is in particular the fast changing value-added architecture.

Despite the economic significance of knowledge intensive service start-ups (KISS) and their important role in entrepreneurship activity they have received only limited attention in research. An important reason for this is the fact that research on services and entrepreneurship research are up till now still rather disconnected. Although the number of papers tackling the management of primarily KIBS – and to some extent KISS firms as well – is vastly increasing in recent times (Alvesson 1995; Den Hertog 2000; Muller 2001; Stahlecker and Koschatzky 2004; Miozzo and Grimshaw 2006; Strambach 2008; Toivonen et al. 2008; Todtling et al. 2008; Stahlecker and Muller 2008; Hansen 2009), the basics of the service industry and service management are largely ignored. This paper is to fill this gap and to deal with the peculiarities of knowledge-intensive service start-ups (KISS) and their impact on the firms' competitiveness. It is argued that the particular value-added architecture of services in general and KISS firms in particular implies considerable challenges as for firm survival in all the phases of venturing so that the mortality risk is rather high. Hansen (2009) reports based on a literature review on empirical surveys in this sector that the mortality rate in the first five years after the start-up exceeds 50 percent significantly. However, we should not ignore the considerable opportunities available to KISS firms in the venturing process and thereafter as for structuring the markets and setting the standards.

Although the heterogeneity of the KIBS (and KISS) sector (Horgos and Koch 2008) is high we intend to identify *general issues* of the sector that go beyond the boundaries of single knowledge intensive industries. In this connection we refer particularly to *business services*. The reason for this is the fact that in case of business services we can more easily observe the value-added process and the transactions due to long, intensive interaction and adaptation processes between customers and suppliers.

This paper is guided by the general impression that the sustaining establishment of KISS firms is more difficult than in other economic sectors. Facing the considerable mortality rate of KISS firms, the *research question* of this paper is: *What are the critical factors influencing the sustaining establishment of KISS firms and how do these factors matter?*

Methodology, Research Design, and Procedure

The following research design responds to the above mentioned research question of this paper. To choose an adequate research design it is useful to describe the nature of the subject matter beforehand. The complexity of the phenomenon rests on at least two different factors. Firstly, the value-added system of KIBS and KISS firms is complex. The reasons for this are discussed in the next section of this paper. Moreover, the start-up process is a very complex and less predictable endeavor. Thus, the subject matter belongs to the category of the “complex phenomena” (Hayek 1964). Moreover, the peculiarities of KIBS and KISS firms are still under-researched. Against this background, we adopt a research procedure that is primarily explorative, since KISS firms are to a large extent idiosyncratic and for the process of establishing these start-ups in competition the same holds true. Insofar the question arises how to generate knowledge on this topic. Comparing different epistemological approaches in

this regard, Popper's (1959) *critical rationalism* and Lachmann's (1977) *radical subjectivism* are two extremes. Popper's concept of critical rationalism rests on formulating and testing hypotheses on cause-effect relationships for the purpose of falsification. The application of formal quantitative methods is useful in this regard. This, however, requires a solid grounding in research, based on previous explorative work, and cause and effect structures that can be generalized. For the time being, this is obviously not given regarding the subject matter of this paper. Lachmann (1977 and 1986) – as a protagonist of radical constructivism – argues differently. He points out the subjective nature of many social phenomena and strictly rejects the possibility of formulating general regularities and empirical assessments with the claim for external validity or prognosis validity. In this view, subjective phenomena cannot be reduced to objective formal modeling to forecast future developments with the help of past ones. It is at least questionable whether no similarities of KISS firms in their establishment process in competition can be found. Thus, a compromise between the two extremes is the concept of “*pattern predictions*” according to Hayek (1964). He characterizes complex phenomena as not analyzable in detail, since the circumstances on which they depend are typically so numerous that they can not be completely considered. Prediction, formulating precise hypotheses, and testing them is therefore unachievable for complex phenomena. Despite the idiosyncrasy nature, Hayek (1964) argues that all complex phenomena can be described and predicted in form of so called “patterns”. Since a pattern is an “explanation of the principle”, it does not aim to predict and to test the occurrence of individual events. This concept of pattern predictions seems to be an adequate epistemological approach for generating scientific knowledge on KISS firms in the context of this paper.

The concept of pattern prediction is a frame that needs to be filled with a research design adapted to the nature of the subject. We consider it useful to build on prior research and to

explain the available conceptual and empirical findings by employing a theoretical approach that fits to the epistemological understanding of Hayekian pattern prediction. Hayek was a protagonist of the Austrian School of market process theory (Hayek 1978). Market process theory is built on a set of antecedents (e.g. subjectivism, modeling human action according to the “homo agens” notion, moderate voluntarism, relevance of time) that matches the reality of service entrepreneurship and is, thus, highly relevant to an understanding of the evolution of KISS firms. In particular, the moderate voluntarism and the evolutionary character make market process theory an interesting candidate for understanding the peculiarities of the subject matter of this paper. Unfortunately, the Austrian School primarily focused on the macro level of competition but not the micro level of the firm. Thus, other scholars in this realm bemoaned this “missing chapter” of market process theory (Boettke 1994). In the meantime, however, progress has been made by other scholars who built a competence-based theory of the firm (henceforth: CbTF) based on market process theory (Foss and Ishikawa 2007 and Freiling et al. 2008). This CbTF belongs to the same paradigm of organization theory (the so-called “interpretive paradigm” according to Burrell and Morgan 1979) so that it fits perfectly to Hayek’s considerations. Therefore, we employ CbTF as the theoretical frame of this paper.

To understand, structure, and re-interpret the findings in literature is one purpose and the application of CbTF within the scope of the chosen epistemological concept already extends current research. However, we intend to go some steps further in the sense of “pattern matching”. Thus, we develop research propositions based on earlier findings and the application of CbTF. These propositions are the starting point of the empirical section of this paper. Once again, we have to be careful to employ a procedure of empirical work that is compatible to the chosen epistemological approach. Taking the arguments of idiosyncrasy

and complexity of the research phenomenon seriously and taking the early state of research on our topic into account, it deems useful to conduct explorative research based on qualitative empirical work. In this connection, a case study design helps us to understand the complexity of the problem and to analyze the evolutionary process of establishing KISS firms in markets with uncertain results. In this context, we employ case study research according to Yin (2003) to understand the evolution of the researched KISS in more detail. In sum, eight embedded single case studies of firms founded between 1999 and 2003 shed light on the propositions developed previously. Moreover, this procedure allows for the recognition of patterns. The empirical survey largely rests on expert interviews. All of them were conducted in 2007.

Having presented the research design of the paper, the question arises how far the paper extends the current state of research. Firstly, compared to previous contributions the paper connects service and entrepreneurship research more intensively and refines the results by adapting them to the particular situation of KIBS and KISS firms. Secondly, as briefly mentioned above, the paper employs a novel research design and extends the most recently developed CbTF by application and by introducing a refinement of the so-called “open system view” to locate the most important challenges of KISS firms in the realm of firm survival. Thirdly, the paper comprises an empirical survey based on a novel theoretical frame.

The paper proceeds by introducing the peculiarities of KISS firms in the next section. The follow-up section is to develop the theoretical foundations of the paper based on the CbTF. Next to this, the empirical results are presented and discussed within a separate section. The paper closes with some selected managerial and political implications.

The Value-added Peculiarities of Knowledge Intensive Service Start-Ups

Entrepreneurship research has to some extent ignored the peculiarities of service value-added processes. In this regard it is indispensable to outline the nature of services and service value-added processes. Despite the fact, that the intangibility of the product delivered matters (Dixon and Smith 1983; Parasuraman et al. 1985), it is to some extent myopic and misleading to reduce the service nature to intangibility issues. In this respect we should not ignore that e.g. the performance of KIBS firms can be made “tangible” in several ways (e.g. the report of a business consultancy, the technical description of R&D laboratories, or user manuals). But what is the very nature of services? It is argued that we are well advised to regard the steps of the value-added process to recognize the dimensions of services and service performance systematically. From the supplier’s point of view the value-added process consists of three dimensions: Firstly, the *input dimension* contains the activated assets ready to perform a service. It is obvious that preparing the asset endowment for a customer to come is already part of the performance and the degree of preparedness makes a difference in competition. Secondly, the *throughput dimension* focuses on the specific way how services are provided. We will see below that services are characterized by the simple fact that the customer himself or objects of his/her disposal participate in this process so that factors of the supplier and the customer are combined. In particular in case of personal participation of the customer it is rather obvious that the process of providing a service is already an important part of the performance. Thirdly, the *output dimension* refers to the package of different items provided to the customer. As for this dimension intangibility matters although we already noted that services are not necessarily perfectly intangible.

So far, we introduced the dimensions. Next, we present dimension specific criteria that feature not only services in general but KIBS in particular. Before we introduce the criteria in

more detail we specify what is meant when knowledge intensive services are addressed. Literature offers a broad and inconsistent range of definitions (e.g. Starbuck 1992; Alvesson 1995; Miles et al. 1995; Nurmi 1998; Windrum and Tomlinson 1999; Roberts et al. 2000; Tether and Hipp 2000; Muller 2001; Bettencourt et al. 2002; Wong and He 2005; Freel 2006; Miozzo and Grimshaw 2006; Smedlund and Toivonen 2007). Some of them follow simply the typical SIC classifications (e.g. Freel 2006), others adopt specific criteria of the value-added process for definition purposes. Among the most important criteria we find the dominance of knowledge and, in particular, creativity among the production factors of KIBS firms, the relevance of professionalization to conduct the business, the focus on problem solving processes, the high degree of customization of the service performance, the high degree of interaction between the customer and the supplier, the limited ability to standardize procedures, the high intellectual value-added to the customer by means of knowledge transfer, the rather intangible nature of the knowledge intensive service product, and the high level of uncertainty of the whole transaction. These, however, are important features that concern KIBS more or less. Based on the discussion in literature we define KIBS as those services provided to organizational customers that are characterized by a particular set of input, throughput, and output characteristics that involve a transfer of knowledge from the supplier to the customer. The input is dominated by available knowledge and experience that undergoes permanent transfer and development processes so that, based on professionalization, a considerable knowledge asymmetry exists between the supplier and the customer. The throughput is characterized by an intensive interaction between the customer and supplier for the purpose of a mutual exchange of information, a related high level of customer integration and, thus, a customization of the run of the activities. Finally, the output is – facing the knowledge transfer from the supplier to the customer – highly intellectual, contains a customized solution, and consists of an integrated bundle of different items

(package principle, see Lovelock 2001) that cannot be inspected and evaluated by the customer *ex ante*. This understanding of KIBS is not covered by literature completely. Therefore additional explanations are given in the discussion below where we introduce the service and KIBS nature according to the three dimensions in more detail. Table 1 portrays the criteria that are presented below.

- insert table 1 about here -

Input dimension. Alchian and Woodward (1988) suggest distinguishing among exchanges and contracts. An exchange is a transfer of property rights of finished goods. The customer can check the product before purchase. A contract, instead, is a promise of future performance in a situation when the product is not finished, yet. Thus, the customer makes a purchase before the final value-added process starts. In case of services and in particular KIBS exactly this situation occurs. More than that, this constellation is risky for both sides: the supplier faces the risk to deliver the specified solution in the right quality on time whereas the customer simply has to trust the supplier not to behave opportunistically. Obviously, the risk of service transactions is higher compared to other transactions – at least as for the contract criterion in connection with the fact that service firms sell promises, not products.

Since service firms do not sell finished products they have to prepare the value-added system of the firm for customers to come otherwise. To provide the value-added system with a certain level of preparedness facilitates the later run of the activities and, once given, reduces the uncertainty of the customer in the purchasing act. The degree of preparedness is the result of an endowment of assets that are well aligned and, therefore, conform to quality criteria. This alignment is to a large extent a consequence of a skilled workforce, knowledge available

and the professional use of experience. As for KIBS firms, knowledge and experience are the anchor-points of the whole business concept. Without a knowledge advantage the basis of the business concept would collapse. However, in case of KISS firms the fundamental problem is that the expertise is too a large extent bound to the founders since due to liabilities of newness (Hannan and Freeman 1984) no intensive alignments and knowledge transfer processes could have been taken place. Thus, these firms lack awareness in the market and reputation. This problem is principally unavoidable in very early stages of the venture process but needs to be fixed as soon as possible due to the uncertainty of the business. It transpires that the resource endowment in connection with expertise and reputation is in early phases of venturing the only cutting marketing vehicle of KISS firms.

Throughput dimension. Services cannot be provided without customer input. At least information is transferred from the customer to the supplier to specify and customize the value-added processes following up. This phenomenon is called customer integration or customer participation (Marion 1997; Lovelock 2001) and is a pervasive feature of services. It implies that the supplier can neither produce beforehand nor that he can completely control the production process. Instead, internal factors of the supplier are to be combined with external production factors of the customer. From the supplier's point of view it is difficult to anticipate the customer's problems and the factors to be integrated so that he faces considerable risks. Moreover, since the supplier disposes of the customer's property the situation is to some extent precarious, for mistakes of the supplier might affect the customer personally (in case of personal involvement in the process) of the customer's property. Different from internal production processes without any customer participation mistakes can be easily perceived and, if so, destroy the supplier's reputation. In case of KIBS customer integration plays a vital role for the customer's problem needs to be explained and discussed.

Thus, an intensive information transfer typically takes place. Moreover, customer integration in such cases requires an intense interaction process between customer and supplier personnel (Bruhn and Georgi 2006). These interaction processes uncover the strengths and weaknesses of the supplier due to many intensive contacts. In this context Carlson (1987) speaks of the so-called “moments of truth”. For KISS firms, customer integration is the root of many problems of the establishment process since organizational experience to manage these processes is typically not at hand due to the early stage of development. Neither can we expect a professional level of internal alignment nor can we assume that the firm is familiar with typical customer specific problems. Compared to established companies this can be considered a huge disadvantage. In sum, KISS firms face the problem that as for the value-added processes of the company due to the liabilities of newness no significant asset mass efficiencies (Dierickx and Cool 1989) could be achieved. Given a certain professionalism in the realm of human capital (expertise), KISS firms face problems of establishing their venture in input and throughput regards as well.

Output dimension. As previously mentioned, the output of KIBS firms is a customized solution dedicated to provide a comprehensive solution for the customer. This solution provision rests on a set of different product items. Shostack (1982) developed a so-called molecular model that indicates that service firms do not sell a single stand-alone service but a bundle of intangibles, tangibles and property rights – which appear to be intangible as well. It is vital for a service provider to be aware of this package and to bundle the items in a customized manner. The high degree of customization is not necessarily a pervasive feature of services in general. For KIBS, however, the customization is a general feature. The knowledge transfer from the supplier to the customer is a mandatory process that typically

implies a customization. Nevertheless, this customization is caused by the interaction processes and the customer integration we outlined in the process dimension.

Finally, services and in particular KIBS cannot be easily evaluated by the customer. Referring to the taxonomy of information economics (Nelson 1970; Darby and Karni 1973), we need to differ between the items of products which can be checked before purchase (search qualities), items of products which cannot be assessed before buying but after purchase and usage (experience qualities), and items of products which cannot be evaluated at all – neither before nor after the transaction (credence qualities). Since services are according to Alchian and Woodward (1988) contracts and not exchanges, search qualities can at best play a subordinate role. Typically the customer can find out the service characteristics during or after the usage process. It is not necessarily so that customers intend to find it out since this process can be inconvenient and time consuming. However, logically they have the chance to evaluate most of the services afterwards so that experience qualities seem to dominate. Once again, risks are rather obvious since the customer does not exactly know what he/she buys. This can mean that some transactions simply do not take place due to risks out of control. By the way, the primarily intangible nature of services implies similar problems of assessing the output quality. KISS firms cannot circumvent this problem. Moreover, at least in early steps of the venturing process, customers cannot transfer experience from former transactions to actual ones. Again, the KISS firms are confronted with barriers to a successful establishment in competition.

What do we learn from the above discussion? It is easy to find reasons why KISS firm survival is a challenging endeavor. Many barriers occur and convincing customers to buy services from newcomers can be rather difficult. Facing this situation, the high mortality rate

of KISS firms is not astonishing at all. Nevertheless, many examples of successful firms exist and we already learned that high skilled firms with a dynamic organizational learning process are favored. Against this background, we now compare our conceptual considerations with the results of empirical surveys on the subject matter. In this regard we review not only surveys that exclusively research KISS firms but also those studies where KISS firms are analyzed among others. We made this decision due to the fact that empirical research on KISS is in an early state and not much data is available. Before presenting the results of the literature review, it is necessary to point out the heterogeneity of the empirical research in this field. Thus, every meta perspective is confronted with the “apple and orange effect”, i.e. the findings can be compared only to some extent due to different research questions, measures, and methods (Krist 2009). Moreover, the question arises why an explorative research design of this paper is chosen although quantitative and qualitative data is already available. The reason for this is that, firstly, the surveys often address a much more focused topic than the one of this paper so that the ground is prepared in a better manner. Secondly, some of the surveys are descriptive and do not rest on a theoretical foundation as in the case of this paper. Thirdly, despite the availability of these surveys we still believe that in many cases a much more intensive exploration is useful and required to understand the phenomenon adequately.

Table 2 depicts the results of the review. Notably, the table contains a column for critical factors of success and a separate column for critical factors of failure. We consider it useful in the face of the results. Obviously and conform to our consideration, failure is a pervasive threat of venturing processes in the realm of KISS.

- insert table 2 about here -

At a glance, the performance indicators (in particular turnover, profits, profitability measures, survival) differ to some extent but are not so heterogeneous that no comparability is given. Among the critical factors as to firm survival or failure we find internal and external factors as well. This gives rise to the impression that KISS firms are to some extent on the one hand dependent on the business environment they chose implicitly or explicitly by defining their business. On the other hand, they have considerable discretion by providing a suitable endowment of internal assets that might help to structure the outer conditions along firm specific goals. Although internal factors are highly relevant we should not under-estimate the impact of factors such as the chosen industry and given market situation. Notably, (financial) capital available to the firms is a factor explicitly mentioned only in some surveys. The role of capital should not be neglected but obviously financial assets are not of utmost importance.

In this context it transpires that not all the factors mentioned in the studies range in the same logical level. Instead we can differ among more original and more derivative factors. Capital in this respect is more an “end of the pipe” factor. Other factors range on a more intermediate level, such as the strategy in use, the flexibility of the whole system. More basic are factors that belong to the human and social capital. Among these factors we find the entrepreneurial skills, the available knowledge, the (personal and organizational) expertise, and the network relations. Interestingly, this result is confirmed not only as for the critical factors of success but failure as well. Table 2 depicts some details on the surveys.

So far, the conceptual considerations and the results of empirical surveys provide us with first impressions on the research question of this paper about the critical factors of sustaining establishment of firms in the market. According to our research design we can now employ theory for the purpose of identifying cause and effect structures.

A Theoretical Explanation of the KISS Challenges

Before employing a theoretical approach we discuss criteria to make an adequate choice. We need a theory that is, firstly, evolutionary in nature, since we need to address the long lasting process of organizational *evolution* in the seed phase until the sustaining establishment in the market some years after. This process consists of events that are inter-temporally linked so that one event can only be understood in a historical context. Non-evolutionary approaches do not consider these interdependences. Evolutionary theories, instead, shed some interesting light on the idiosyncrasy phenomenon of KISS firms and their specific organizational evolution. Secondly, the theoretical frame should consider that the run of events in the context of establishment can be manipulated by entrepreneurial behavior of the firm – but only to some extent since the embeddedness of the firm (Granovetter 1985) requires adaptations to the given business environment. Thus, a framework that considers the possibility of pro-active moves and at the same time adaptive behavior would be useful. This constellation typically requires a *moderate voluntaristic view*. Thirdly, founding new businesses implies to consider the personal level of the founding entrepreneur(s) as well as the organizational level of firm survival in competition. It reveals that a *multi-level framework* is required to integrate personal, organizational, inter-organizational (networks), and market issues (competitive dynamics in the realm of new market entries by KISS firms). Finally, the theoretical framework should be able to *address organizational performance measures* – be it competitiveness or survivability, be it profitability or sustaining competitive advantage. In particular economic theories pass this test criterion.

Economic theories explaining the idiosyncrasy of KISS firms and their evolution typically belong to the cluster of organization theories that is called the “interpretive paradigm” according to Burrell and Morgan (1979). Among the interpretive theories in particular market process theory suits the profile, as mentioned in the chapter on the research design. Market process theory builds on a common set of core assumptions such as: subjectivism, radical uncertainty, human behavior according to Mises’ (1940) model of the acting man (“*homo agens*”), moderate voluntarism, and relevance of time (Freiling et al. 2008). Developed to explain dynamic market phenomena, market process theory is primarily devoted to the market and not to the organizational level. Since market process theory is able to address organizational and personal issues as well, Boettke (1994) claimed for a missing chapter of market process theory, namely, the explanation of value-added processes in the organization. Most recently, however, approaches belonging to the realm of the resource-based view were re-conceptualized as market process theories that represent theories of the firm (Foss and Ishikawa 2007; Freiling et al. 2008).

Against this background, we employ the so-called “competence-based theory” (CbTF) for our purposes. CbTF intends to explain the current and future competitiveness of firms based on the idiosyncratic distribution of competences and resources in competition which is highly relevant to our paper. Competences in this context mean a repeatable, non-random ability to render competitive output, based on knowledge and channeled by rules and patterns (Freiling et al. 2008). Availability and usage of competences are considered basic not only to withstand the challenges of firms in competition but to shape markets as well. Hamel and Prahalad (1994) noted that competences are the most prominent vehicles to structure the unstructured arenas of young markets by erecting a value-added system based on industrial foresight and organizational expertise. This organizational experience is fueled by the knowledge and skills

of the firm's agents. Building competences in this understanding is a pro-active procedure that intends to develop a strategic architecture that identifies the problems and demand conditions of customers in advance and contains a competence-based response ready to build new sources of sustaining competitive advantage. These entrepreneurial development processes most often run in collaboration with network partners to accelerate speed and power. Besides building competences, the effective leveraging and efficient utilization of competence is another core issue. Since competences are neither necessarily bound to a specific business unit nor static an alert competence-based management includes looking for alternative applications permanently. Thanks to the generative character of this asset category (Moldaschl and Fischer 2004) the value of competences can increase significantly by leveraging them to new applications.

The protagonists of competence-based research introduced different approaches to model the value-added system of firms against the role competences play (e.g. Sanchez and Heene 2004; Freiling et al. 2008). We refer to the Sanchez and Heene (2004) "open system view of the firm" since this perspective allows for addressing the value-added peculiarities of KIBS in the context of firm's embeddedness in markets. We extend the open system view of Sanchez and Heene according to Hansen's (2009) reasoning and align it with the particular situation of KISS firms. Figure 1 outlines the modified open system view.

- insert figure 1 about here -

Sanchez and Heene (2004) argue that the moves in organizations are driven by the mental schemes of decision makers. They call these cognitive frames "strategic logic". We adopt this consideration but modify the term to "entrepreneur's logic". In particular in case of new

ventures the run of events is largely dependent on the founding entrepreneur. The logic of the founding entrepreneur penetrates the venture and has an impact on other decision-makers as well. Since not all cognitive schemes are necessarily strategic we regard the entrepreneur's logic as the mental "steering unit" of the KISS firm. By the entrepreneur's logic prior knowledge and beliefs are structured in a condensed fashion. By the logic decision-makers select information and start interpretations to prepare their decision to be made. In a nutshell, the logic contains how decision-makers conceptualize the business and make critical decision on resource allocation (Prahalad and Bettis 1986). We cannot fully understand the entrepreneur's logic without referring to one of the most important factors of the establishment process of KISS firms, the human capital available. As figure 1 suggests, the entrepreneur's logic is constantly in flux. Decision-makers are influenced by external developments and new managerial concepts. Moreover, they get some feedback on the decisions they made so that self reflection can influence the logic as well.

The entrepreneur's logic in the open system model provides the whole value-added system of the firm with a sense of direction. These abstract mental structures get more concrete when decision-makers plan their activities and figure out what the outcome might be. According to figure 1, decision-makers prepare an action sequence by, at first, planning what to do, then anticipating the result, afterwards trying to synthesize the impressions within the scope of a mental model and finally concretizing it. It transpires that expertise is built the more these cycles were run over time. Having found a concrete and sufficient option, decision-makers move from planning to action so that things happen and produce a certain outcome that undergoes a process of reflection. Thus, as indicated in figure 1, between the logic and the action a recursive relationship exists. According to market process theory, every action produces new knowledge that can become part of a modified logic. The new knowledge

complements the old one. The more this learning process penetrates the firm and the more the knowledge gets embedded in mental structures of the agents involved, the more competence building takes place and differentiates the firm in competition. Relating these considerations to the empirical results presented in the previous section, many critical success factors (e.g. entrepreneurial skills, managerial know-how, planning – see table 2) are rooted in these two system elements (entrepreneur's logic and entrepreneurial action). Based on this dynamic interplay between logic and entrepreneurial actions the whole value-added structure will be activated.

The open system view according to figure 1 suggests that this system consists of the three service dimensions we introduced above in more detail (input = assets, throughput = processes, output = service product bundles). These three system elements are logically connected. No process can be activated without the underlying assets and no service product finished without value-added processes. What is special in case of KIBS is the permanent need to accompany and support the firm specific value-added system by the integration of external assets. In this context, the KISS firms can cooperate with external partners. However, most important is the phenomenon of customer integration, i.e. the customer provides the supplier at least with specific information but often integrates parts of the personnel and maybe even objects for the purpose of a customized service delivery. Since the integration of information and customer knowledge is vital in case of KIBS, KISS firms are well advised to build a so-called absorptive capacity (Cohen and Levinthal 1990) that fosters the smooth run of the integration process and, related to this, the whole value-added process. In this context the absorptive capacity includes the recognition, integration, and utilization of external assets, here in particular assets of the customer. Once again, many critical factors of success and failure (e.g. human capital, industry know-how, flexibility, network relations –

see table 2) relate to these three system elements. Competence building plays a twofold role in this regard. Firstly, the run of the value-added system consisting of assets, processes, and products produces new knowledge on effective and efficient ways to handle this interplay. Secondly, a growing body of knowledge on the customer and the assets to be integrated increases the supplier's capacity to identify valuable customer assets and to apply available assets to commercial ends. In both cases the knowledge gains help to improve the process structures as for effectiveness and efficiency measures. The knowledge becomes embedded in routines (Pentland and Rueter 1994) that can be improved and renewed by extending the knowledge base. Routines store available knowledge in the deep-rooted structures of an organization and facilitate the smooth and convenient, quasi-automatic run of activities. As for KIBS and KISS firms the knowledge processing procedure is vital. Without a considerable knowledge advantage compared to the customer no transaction will be made because in those cases the business customer will choose the "make" and not the "buy" option. Moreover, the supplier's knowledge condensation allows for achieving a differentiation in competition and often for achieving competitive advantages.

We already mentioned that the customer in case of KIBS has considerable discretion to influence the value-added system of the supplier. Therefore, customer integration refers to the processes and service products and to the asset endowment of the supplier ("dedicated assets") as well. The customer is insofar an integral part of the supplier's value-added system. Personally involved, the customer is so important that the logic of the customer matters in service transactions as well (Vandermerwe 1996). In this context van Ossel et al. (2003: 53) point out: "(...) because customers are participating in the production process, it is a much more intimate activity than simply buying an item of goods. A service company must find out the needs and the motivation of its customer." In case of KIBS we need to take the

customer's logic into account since the supplier depends on the knowledge and expertise of the personnel of the customer for the joint value-added process. Moreover, in the process of service provision the customer makes important decisions that influence the value-added and the learning processes. For the customer's logic the same applies inversely what we said above about the entrepreneur's logic. Extending the open system view of Sanchez and Heene (2004) by this customer logic paves the way to analyze mutual adaptations between the customer and supplier as to expectations and experiences. Just in KIBS transactions the relationships between the two parties are often so close that this mutual impact can be well observed. More than this, KISS firms adapt to the mental schemes of customers to overcome problems in connection with the liabilities of newness. Accordingly, based on the market process, the customer and the customer's logic have a considerable impact on adjustments in the whole system of the supplier. As figure 1 suggests, the feedback loop of the customer does not only imply the three value-added dimensions (input, throughput, and output) but the entrepreneur's logic as well. Insofar the supplier learns from cooperating with customers and may adopt the mental frames. The more the supplier is able to learn from this feedback, the better are the chances to build and reinforce competences since competences are fueled by knowledge integration and embeddedness.

Finally, the business environment influences the system elements of the firm as an open system. Figure 1 outlines that new concepts and ideas diffuse and penetrate the logic in use. Benchmarking or support by external consultants question and challenge the currently dominant logic. In particular in case of KISS firms the initial lack of business experience and the need for professionalism make entrepreneurs listen to "up-to-date" concepts and implement strategic change.

So far, we developed and employed an extended open system view based on CbTF that particularly considers the service characteristics. First cause and effect structures have been indicated. The next section is devoted to briefly present research propositions derived from the above considerations to prepare empirical work.

Causalities and Research Propositions

The open system view of CbTF offers a framework that serves to integrate the findings from empirical surveys we touched on in the review section of this paper. Insofar we can now connect the conceptual and empirical findings to develop research propositions that can guide further research steps. In the face of the high mortality rates of KISS firms we seek to explain the factors driving KISS firm survival in competition. The survivability is conceptualized by CbTF's competitiveness as a performance measure (Freiling et al. 2008). Achieving a state of sustaining competitiveness implies the successful establishment of the KISS firm in competition since competitiveness includes the ability to prove successful in market processes with the counter-party and to withstand the menacing forces of rivals or third-parties in competition. It is argued that due to the service nature outlined above the establishment process of KISS firms requires, firstly, enough *flexibility* of the supplier to adapt to the customer specific situation and to maintain his knowledge advantage over time. Secondly, *stability* is needed to ensure that service operations run in a smooth and predictable manner so that solution providing can be achieved. From the discussion of the two previous sections we can now extract the causal factors that explain KISS firms' competitiveness via flexibility and stability.

The explaining factors refer to the elements of the open system view. According to the open system logic of this perspective we only differentiate between the system and the external environment by addressing the exchange processes as to knowledge, products and property rights. For simplification reasons we refer to four system layers: the entrepreneurial logic, the asset endowment, the value-added activities, and products in connection with the market.

The first set of propositions refers to the *entrepreneur's logic* and the *entrepreneurial action*. The logic is made of knowledge that is embedded in the mental schemes and mindsets of the organizational decision-makers. We know from previous empirical research (see table 2) that experiential knowledge of the industry and of managerial issues seem to matter in case of KISS firms. Therefore, we formulate the according propositions. Firstly, industry experience is useful to understand the market as to opportunities and threats – and, therefore, to find profitable ways to move. Thus, we propose:

P1a. Industry specific experiential knowledge fuels the entrepreneur's logic and contributes to a higher level of flexibility and, finally, competitiveness.

As for managerial experiential knowledge the same applies. Whereas industry know-how refers to the external circumstances, managerial knowledge is vital for a sound set-up of the internal coordination system. Managerial knowledge helps to generate options how to erect and drive the whole system. Thus, it provides the firm with flexibility. More than that, managerial knowledge allows for a stable and reliable run of the management process.

P1b. Managerial experiential knowledge fuels the entrepreneur's logic and contributes to a higher level of flexibility as well as stability and, finally, competitiveness.

The effectiveness of the entrepreneurial logic depends to a large extent on renewal since trial and error processes in the market produce new knowledge on how to lead the firm in complex and dynamic environments, as e.g. given in case of KIBS. Challenging and renewing the entrepreneur's logic is, thus, a pervasive task to maintain the managerial flexibility. This, however, depends on the absorption of external managerial knowledge and to apply it within the logic in use.

Plc. The absorptive capacity as to entrepreneurial knowledge increases the flexibility of the KISS firm and contributes to competitiveness.

A second set of propositions refers to the *asset endowment*. In case of services, the asset infrastructure is manifold and different types of assets are decisive for the purpose of maintaining the competitiveness. Concerning KIBS the situation is different insofar as the knowledge available and in use is of super-ordinate importance. The literature review of this paper revealed that empirical evidence is given. We consider three causal elements basic to explain the relationship between the asset endowment and the firm's competitiveness. Firstly, besides the above mentioned industry and managerial knowledge of the entrepreneur the experiential knowledge of the staff matters as well. Whereas the entrepreneurial knowledge is often broad, as the "Jack of all trades" notion of Lazear (2005) suggests, the experiential knowledge of the staff can be much more focused. In the face of this fact, secondly, the firm needs connections and managed interfaces between the decentralized and often deeply embedded knowledge of the agents involved. To this end, the so-called "transactive knowledge" (Rulke and Zaheer 2001) is required. The term is used for the knowledge on the knowledge of other people in the firm and refers to the bearer of the knowledge, the content, and the situational context of the knowledge. Thus, transactive knowledge is basic for arranging connections of the expertise available to the KISS firm. Thirdly, constantly running

learning processes are required to keep the firm's knowledge advantage in competition. Without a considerable learning curve, it will be difficult for the firm to keep the competitiveness. Against this background, we assume a positive influence on flexibility and stability and propose:

P2a. Experiential knowledge of the staff reinforces the value-added system of the firm and contributes to a higher level of flexibility as well as stability and, finally, competitiveness.

P2b. Transactive knowledge enhances the options of internal coordination and contributes to a higher level of flexibility as well as stability and, finally, competitiveness.

P2c. Internal learning improves internal coordination and contributes to a higher level of flexibility as well as stability and, finally, competitiveness.

The third set of propositions touches on the *activities*. In this connection we need to consider customer integration and the related interaction processes. Customer integration implies the integration of external assets of the customer. Since the customer can be involved in "self service" solutions and provide important input customer integration can be very useful. In particular unprepared firms perceive customer integration differently and regard it as a certain disturbance of internal activities. Once again, the concept of the absorptive capacity (Cohen and Levinthal 1990) is useful in this regard since it describes the recognition, integration, and application issues of integrating external knowledge – be it of customers or of other value-added partners.

P3a. The higher the absorptive capacity as for knowledge relevant to value-added processes, the higher the flexibility as well as the stability of the value-added processes and, thus, the competitiveness of KISS firms will be.

In this regard, KISS firms are well advised to build informal structures that foster the unconscious and taken-for-granted run of activities in a goal oriented manner. Among these

informal structures we consider the above mentioned routines as structured stores of, in particular, tacit knowledge decisive. Different from the causal factors above, routines primarily contribute to stability.

P3b. Building routines, increases the stability of value-added processes and the competitiveness of KISS firms.

The last set of propositions tackles the *service products* and – inseparable from them – the *market conditions*. Three causal elements foster the establishment process of KISS firms by increasing competitiveness. Firstly, the knowledge transfer is decisive. In this regard, KISS firms have to find an optimum. Transferring not enough knowledge to the customer would cause insufficient solutions. Oppositely, transferring too much knowledge implies an assimilation of knowledge positions in competition. This can finally destroy the firm's competitiveness. Therefore, a precise regulation is vital. Secondly, regarding the liabilities of newness KISS firms face a particular problem of market awareness and reputation. Reputation can only be built in market processes. Once available, we can assume that reputation is a strong driver of establishment in competition. Inversely, without reputation a KISS business cannot be sustaining. Thirdly, market process theory reminds us that learning in the market process is necessary to question the current expectations and plans. Additionally, KISS firms have to be aware of any kind of customer feedback to modify and improve the whole steering and value-added system.

P4a. A regulated, optimized knowledge transfer maintains flexibility and stability and therefore contributes to the competitiveness of KISS firms.

P4b. Reputation increases stability and flexibility of KISS firms and, therefore, competitiveness.

P4c. The absorptive capacity of customer feedback provides the firm with additional knowledge, increases flexibility and stability, and competitiveness.

Figure 2 depicts the causalities and portrays a causal model that undergoes a first empirical examination in the next section.

- insert figure 2 about here -

Empirical Fieldwork

For the purpose of identifying patterns and explaining the basic principle in the Hayekian (1972) sense, an empirical survey was conducted. To scrutinize the process of organizational evolution from the seed phase to the establishment in competition, a qualitative approach is useful. To this end, we employed an embedded single case study design according to Yin (2003: 12) who argued: “A case study is an empirical inquiry that investigates a contemporary phenomenon with its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident.” Although we want to know more about the research propositions our design should be open for findings from business reality so that the causal variables are principally not *prima facie* restricted to the model (figure 2). To this end it makes sense to conduct semi-standardized interviews for our explorative purposes and to accompany the interviews by additional data sources (website, analysis of internal and external documents). In 2007, eight interviews – in all cases with the founders – in young German KISS firms (see table 3) founded between 1999 and 2003 were conducted. The firms were old enough to reflect the finished establishment process and young enough to be still aware of the details of the evolution process. We cared for construct validity issues (see for

validity Yin 2003) by relating all our questions strictly to the research question and critically reviewing the transcribed results with the interviewees. Internal validity received attention by only considering causal chains mirrored in the case studies. As for external validity we did not focus on only one case study. Instead, we focused on consulting services as a centerpiece of KIBS with four business consultancies and four other cases in similar businesses.

- insert table 3 about here -

Propositions on the entrepreneur's logic. Industry experiential knowledge (P1a) is considered a hygiene factor of competitiveness – sometimes implicitly, sometimes explicitly. Founder D puts it like that: “Intuition and understanding the rules of the industry is a ‘must have’. (...) I spend more than one third of my time for improving my knowledge on this – the industry is so dynamic.”

How important is the availability of managerial experiential knowledge (P1b)? Interestingly, the result was not very intuitive. Three founders reported that business skills do not matter so much. Being asked for the initial availability of these skills, founder E replied: “Null – and I really don't know whether this is a problem. I used my savvy – and this is what you need beside your ‘technical’ expertise. (...) What you need is to a large extent personality.” From other answers of this and other founders (e.g. founder F: “You don't need a big business plan in case of KIBS – the business is much too volatile.”) we can conclude that business expertise matters to some extent as a hygiene factor – but in case of KIBS not much more. The only exception is marketing experience that is considered indispensable in almost all the case studies. Founder G remarked: “Financial knowledge is not so important to me. (...) Marketing and sales, however, is top on my agenda. You need to position your firm – and

that's the crucial thing". In sum, we did not find strong and unambiguous confirmation from all our case studies.

Interestingly, the case studies reveal that the entrepreneur's logic is typically open (P1c) in earlier venture phases whereas in later steps the plasticity and, accordingly, the absorption decrease. Founder D points out that he had to learn managerial skills at once: "You simply have to concern yourself with these issues. You look how others do their business, you study literature, and after all we collaborated with a managerial expert". After attaining a certain managerial skill level the founders become more confident so that they do not depend too much on external advice and inspiration. As for the sources of external knowledge changing the entrepreneur's logic founder G stated: "About twice a year we organize strategy conferences for creative purposes. We invite external expertise to make some steps ahead. (...) Associations, conferences, and sometimes tradeshows are typical ways to get some fresh ideas."

Propositions on the asset endowment. There is no doubt that experiential knowledge of the staff is considered one of the most influential factors of competitiveness and survival (P2a). The founders work together with skilled and experienced personnel. For them it is a difficult decision to employ people due to the fixed costs. However, all the founders are aware of the fact that they need internal support during the establishment process of their start-up. Since KIBS value-added processes are knowledge sensitive, they need a reliable staff. Some of them provided cost saving solutions but were highly disappointed in the face of skill gaps so that they revised their decisions later on. Founder D reports: "If we spend two years to train the people, we'll get them skilled. However, in our business you often have no time. You get a big project and you need real experts to get things done."

The founders are aware of the fact that decentralized and disconnected knowledge is suboptimal. The relevance of transactive knowledge to competitiveness (P2b) is basically undoubted. Founder D explained: “We tell our employees: ‘You are encouraged to share the knowledge. Go to the one you consider most skillful when having a problem.’ Fortunately, our employees do so – more or less. At first they come to me to look for a solution. I tell them to ask the colleague over there. The second time, at the latest, the system works and they find the right person directly. (...) and everyone knows you burn money when you do things others can do better. Initially we designed a yellow page system. To date the knowledge of the yellow pages is internalized by everyone.”

It is a rather unquestionable fact that learning (P2c) is vital to maintaining the competitiveness of the firm. In every case study this impression was confirmed. The reasons for the relevance of learning and the ways how to learn, however, diverged. Founder B said: “At the end of the project we manage data processing and write a thick report about all the problems that occurred, how they got managed what they changed as for navigation etc. I read everything. Nothing leaves the door what I haven’t read. So I will be permanently kept on the loop (...).”

Propositions on the activities. As to P3a the founders argue that the absorption of external knowledge is absolutely vital. They differentiate between knowledge from partners and external factors of the customer. Founder E claims: “You need external support from experts. Without this expertise my service solutions would suffer considerably. (...) As for customer participation my eyes and ears are always open. I listen carefully and show my customers that I understand what they are telling me. In case of any interaction you must show that you’re

the right man. Moreover, we consider every single step we make together with the customer and adapt to his wishes.”

Among the founders, all of them are implicitly or explicitly convinced that routines improve the competitiveness the suggested way (P3b). Founder D stresses the necessity to build routines and to improve them over time. However, he is skeptical about perfect solution: “At the beginning everything is unstructured. You work all over the place and develop systems without a master plan. However, after some time things get skilled. I differ among five mastery levels. We reached level 3 and I am rather sure nobody can attain and hold level 5 for a longer time”.

Propositions on the service product and the market. The case studies revealed that a regulated knowledge transfer (P4a) is critical. KISS firms are well advised to share their knowledge with customers intensively. The founder of firm A reported: “It is like an old Chinese saying: If a man is hungry you can give him some fish to get him full up for one day. Otherwise you can teach him fishing. I am sold on the second and share my knowledge the best I can, hoping to learn a little from the transaction in return.” It transpires, by the way, that also learning from the customer (P4c) is a crucial reason for rather open knowledge exchanges. Knowledge diffusion to rivals in this case was no problem since founder A believed to learn faster than the competitors. In those cases an intensive knowledge transfer is less problematic due to the fact that no relative depreciation of the knowledge stock occurs. In other cases the founders did not perceive considerable threats of knowledge diffusion to competitors as well due to specialization reasons (e.g. founder F). Founder C perceives the knowledge transfer as a key marketing asset that helps to turn transactions into relationships “(...) because we’ve a strong USP. The customer knows: we are part of his know-how. Yes,

we make his know-how. If he wants to switch the supplier it takes a long time till the new provider is on level with our solution – even if we transfer the source code.”

As for reputation (P4b) the founders confirmed the relevance. Notably, the firms managed it differently to build reputation. Counter-intuitively, founder B confirmed that reputation building can take place by frankly confessing to be not the expert in certain issues: “Told the customer: ‘sorry, but no way – we are not able to do this.’ That was a thing where the customer gave us much credit for. We achieved a high credibility status that way.” The other way round, reputation building involves circumventing the barrier of lacking customer awareness in early venture stages. In later stages, references and testimonial letters support marketing and sales management. Before, KISS firms need to create an atmosphere of trust, as founder D points out: “You need a customer who is open enough to listen to you and to give you a chance. You need good arguments and you have to compromise. However, having once implemented a sound solution, this is a trigger for marketing by references and certificates. If you have a Microsoft certificate – your business runs of its own volition.” Founder E puts it similarly: “We got the order and took the chance. Our customer was delighted and gave us a reference. This set off an avalanche.”

KIBS firms have to be flexible to renew their business and to adapt it to the market requirements. This requires a feedback from the customers and related change procedures (P4c). It is a matter of course for most of the founders that customer feedback is pivotal to their business. They did not establish typical complaint management systems well known from other industries since KIBS imply direct and personal contacts to the customers. Nevertheless, a certain institutionalization of feedback and similar processes is considered

useful as founder G points out: “For me knowledge management is nothing else but collecting information on the customer. That’s what it is all about.”

Comparing the results of the case studies with the propositions, it transpires that most of them are backed up by the findings. However, in three cases we need to consider modifications of our basic model. Obviously, we over-estimated the significance of managerial experiential knowledge (P1b). KIBS are specialized services so that a certain expertise to provide them is absolutely necessary. However, this does not mean that a high proficiency in management is always required. Obviously, many non-managerial virtues matter as well (e.g. personality). This gives rise to the Jack-of-all-trades notion of Lazear (2005). The specific expertise relevant to the business is often provided by experiential knowledge of the staff. Furthermore, the absorptive capacity of entrepreneurial concepts and ideas (P1c) is by no means unimportant. However, the case studies suggest that a phase-differentiated modification of the proposition could be useful. In earlier phases of venturing more external input is required, in later phases less so. Finally, an extension of P4a is useful. We over-estimated the threats of knowledge diffusion to rivals. Obviously the markets are very fragmented and the expertise among rivals differs more than expected so that the knowledge transfer between the customer and the supplier can be more intensive than initially proposed.

So far, we introduced an overview of the findings. Next, we present final considerations.

Implications

Managerial Implications. The findings suggest that integrated handling of many causal factors drives the firm’s competitiveness. Against the background of the extended open

system view, this integrated management requires the availability and the constant renewal of organizational competence. It transpires that establishing KISS firms is a challenging endeavor since it is already difficult to manage these factors stand-alone. Obviously, human capital is not enough to attain competitiveness. Social capital matters as well. KISS firms need to build a network of corporate and personal relationships to access partners in times of trouble or simply to close competence gaps. This, however, requires transactive knowledge. Surprisingly, this factor received a very strong back-up in the interviews. Another issue is the relevance of marketing. The founders stated that general managerial knowledge is typically not the bottleneck. Without marketing and sales skills, however, the business will not run sufficiently in terms of competitiveness.

Political Implications. KISS firms belong to the backbones of modern economies. Our considerations reveal that the value-added structure of KISS firms is different from many other businesses. Public policy is interested in renewing the economic structures, in particular by new ventures. The mortality risk of KISS firms is high. It does not seem to be useful to influence the selection mechanisms of the market process since non-competitive firms have to leave the market for allocation reasons. However, what can be done is an “infrastructure approach”. To date the education system is not designed in a fashion it fits the demand of qualification programs in the KIBS realm. Thus, to improve this system would be useful since by an improved infrastructure KISS firms have the chance to reinforce the upper system elements of the open system view.

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Table 1. Service Characteristics and Service Performance Dimensions

Service Dimensions	Input Dimension	Throughput Dimension	Output Dimension
Criteria	<ul style="list-style-type: none"> • promise of future performance • contract transaction • preparedness of the asset endowment • expertise by accumulated knowledge 	<ul style="list-style-type: none"> • customer integration • interaction • customization 	<ul style="list-style-type: none"> • package of different items • intangibles and tangibles • experience qualities

Table 2. Empirical Research on Critical Success Factors in the Realm of KISS Firms

Authors	Survey Characteristics	Performance Indicators	Critical Factors of Success	Critical Factors of Failure
Stuart and Abetti 1987	n=24, US firms, focus: technology firms	quantitative (turnover) and qualitative measures	expertise, industry know-how	
Duchesneau and Gartner 1990	n=26 (13 successful and 13 failed ventures in the USA)	EBIT, income of the founder(s)	managerial know-how, flexibility, planning, external advice	
Roure and Keeley 1990	n=36, technological ventures	financial performance	founder, strategy, business environment	
Venkataraman et al. 1990	n=10, US software firms	growth, dependency		too much focus on corporate sponsors
Chandler and Jansen 1992	n=431, US ventures of different industries	profitability, growth	entrepreneurial skills, technical skills, industry know-how	
Terpstra and Olson 1993	n=115, fast-growing ventures in the USA	growth		capital access, product development, marketing, management skills, business environment
Chaganti and Schneer 1994	n=345, USA	financial performance	strategy, industry	
Cooper et al. 1994	n=2,944, US ventures of different industries	growth, survival in competition	human capital, industry know-how, capital	
Stearns et al. 1995	n=1,909, US ventures of different industries	survival in competition	industry, strategy, location	
Brush and Chaganti 1999	n=195, US trade and service ventures	growth, cash flow	human capital, organizational resources	
Zacharakis et al. 1999	n=8, US technology ventures	survival/failure		lacking know-how of founder, market situation
Stubner et al. 2002	n=129, German VC-based ventures	turnover, growth, goal attainment	external management support	
Lechner and	n=10, German IT ventures	growth (turnover)	network partnerships	

Dowling 2003				
Stahlecker and Koschatzky 2004	n=369, German KIBS ventures	growth	academic expertise, quality of network relations	
Lechner et al. 2006	n=60, German IT, biotech, service, media, and ecology ventures	growth (turnover)	network relations	technological networks in early phases of venturing
Baptista et al. 2007	n=9,110, Portuguese ventures	survival	education, industry know-how, entrepreneurial expertise	
Gilbert et al. 2008	n=127	growth (turnover), product innovations	spill-over of technological knowledge between firms	
Stam and Elfring 2008	n=121, Dutch IT service ventures	growth (turnover)	social capital, entrepreneurial orientation	

Figure 1. Extended View of the Firm as an Open System

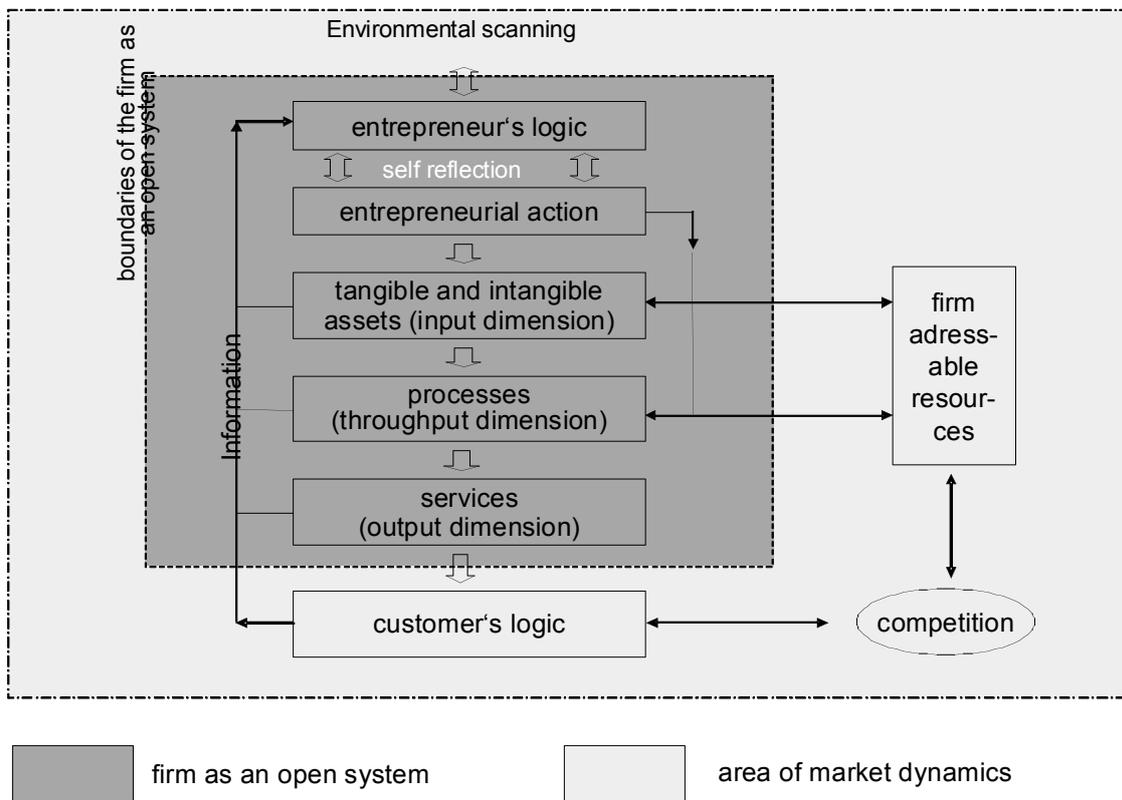


Figure 2. Cause and Effect Structures of KISS Firms' Competitiveness

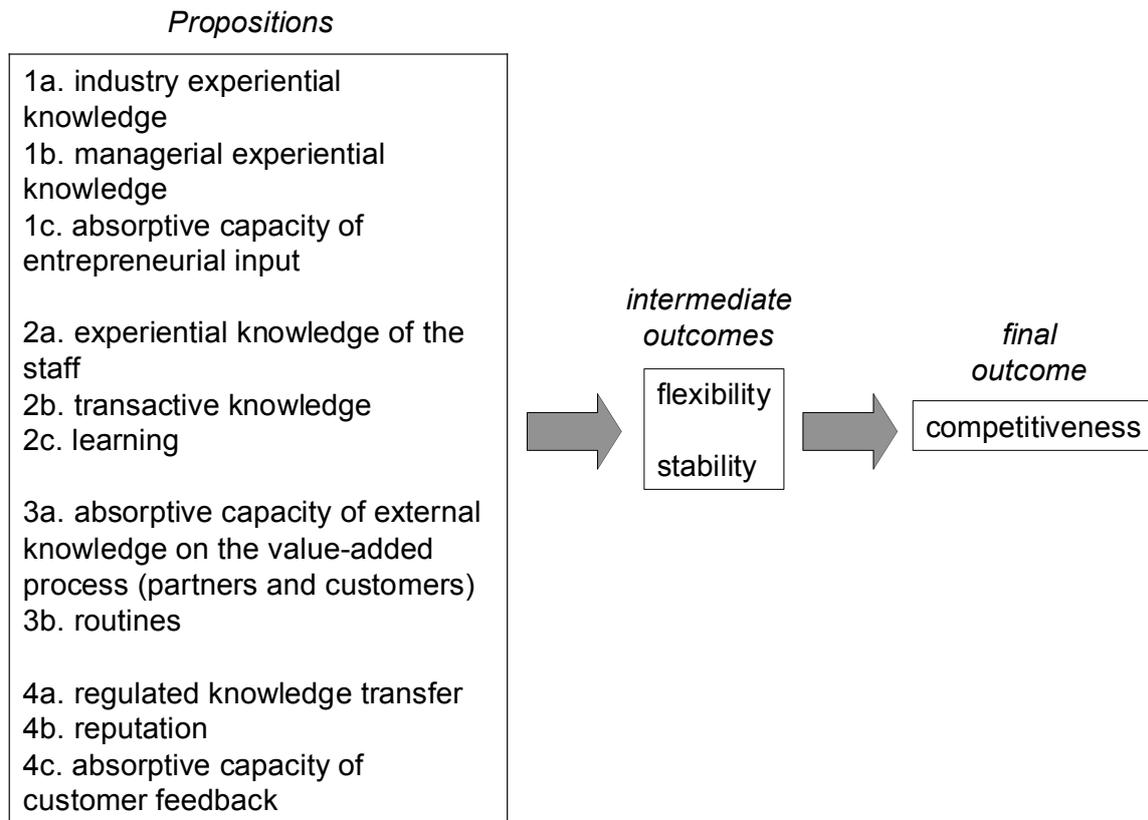


Table 3. Overview of the Case Studies

firm	industry	year of foundation	date of interview	recorded interview time (hrs.:min.)
A	business consulting	2001	8 Nov. 2007	2:19
B	scientific-technological services	2002	13 Nov. 2007	1:29
C	IT services	2001	17 Nov. 2007	1:47
D	IT services	2003	20 Nov. 2007	1:27
E	brand and design consulting	1999	29 Nov. 2007	1:22
F	business consulting	1999	1 Dec. 2007	1:38
G	business consulting	2003	9 Dec. 2007	1:31
H	business consulting	2002	11 Dec. 2007	1:49

Shifting the Centre of Gravity from SME Policy to Entrepreneurship Policy

Iqbal M. Khan

Message that emerges is Entrepreneurship Policy is more relevant to economic growth than traditional SME Policy. Its focused on stimulating entrepreneurship, enterprising culture, and education necessary to unleash energy for growth, development, enhancing innovation and productivity; developing entrepreneur as nucleus of the economy.

SME Policy is focused on SME enterprise, market failure, subsidy, a patchwork of measures that lack synergy; SME Policies can be seen as subset of entrepreneurship policies.

Paper highlights experiences of some countries, reviews, literature, and GEM's criteria for entrepreneurship development.

Paper recommends Ministry of "Entrepreneurship and Small Enterprises" and "Entrepreneurship Hub" as part of Entrepreneurship Policy.

Keywords: Entrepreneur as Nucleus, Entrepreneurship Policy, Enterprising Culture, Entrepreneurship Education, and Entrepreneurship Hub.

1. Introduction and Background:

Entrepreneurship and Economic Development

"I am not running a drug store; I have no pills to handout, no clear-cut solutions for any practical problems that may arise" Schumpeter.

And yet no one understood the concept of Creative Destruction better than him. He has identified it as the driving force of capitalism. He worked to fuel its dissemination into the wider context of economics linking the work across the canvas from the time of Jean Baptiste Say, Adam Smith, and J.S. Mill to Karl Marx. It was Schumpeter who championed the concept that innovation & entrepreneurship lead to Economic Development. Schumpeter, though not given to public remedies, started writing in the "German Economist" and incessantly pushed for vigorous measures to promote entrepreneurship. It was the period that coincided with the Great Depression i.e. from 1920 to 1935. Not many people noticed his recommendation then, but the interest in his economic remedies suddenly shot up in the 1990 decade. He was a first rate analyst who went straight to the heart of the economic problem (McCraw 2007). The concepts of entrepreneurship as propounded by Schumpeter have once again come back, permeating into the economic and social system as Entrepreneurship policy.

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2. Why are We Looking at this Shift in the Policy Paradigm:

H1. *The Hypothesis of the Paper:* What this paper is attempting to prove is that Entrepreneurship Policy is more relevant to Economic Growth than the Traditional SME Policy. It will prove that the acquisition of resources and the delivery of value to the environment – is fundamental to the entrepreneurial process (Rice and Habbershon 2007).

H2. That dynamic disequilibrium is the sign of a healthy economy (Schumpeter 1934).

H3. That new growth in economy comes from entrepreneurship and not from SME's (as is mythically believed).

H4. Entrepreneurs search for change and exploit it as an opportunity (Drucker 2002). Hence whereas SME Policy would put the house in a tidy order, Entrepreneurship Policy would launch the process of economic development. SME Policy is the provision of a support infrastructure, but Entrepreneurship Policy is the architectural design of the space we call economic growth, that is 'entrepreneurship ecosystem' which is a concept gaining recognition by a growing number of writers (Zacharakis, Shepherd, Coombs, Aldrich and Martinez).

Looking at the SME Environment:

Therefore this paper seriously draws the attention towards shifting the centre of gravity from SME Policy to Entrepreneurship Policy. Why are we looking at this shift is because of the way development is taking place. The policy that we are looking at is essentially entrepreneurial but moves with the Small Enterprise (SE) sector and there is plenty of evidence to support the shift and its benefits. In a paper presented at the OECD Workshop, Rudy Aernoudt defines an entrepreneurship policy on the criteria that it should make systematic analysis of new measures and a synergy for the new policy shift. But nearly two decades before him, Peter Drucker propounded the concept of an entrepreneurship policy to lift the economy to greater heights.

Aernoudt has examined evidence to prove that employment policy does not create jobs. In fact employment can be created by stimulating entrepreneurship. There are constraints on an SME policy. We can almost denounce it as not having any synergy. When it comes to implementing measures to support SME policy we notice on a universal basis that governments go about it half heartedly and politically rather than economically. Subsidy is usually indulged in and this is an easy way out and is usually contra productive. Some other effects reported are that such a policy is too complex, expensive and not popular among SMEs. An SME policy is focused on enterprise and overcoming its (SMEs) hurdles and attempts at working on the patch work solutions in the Business Environment. The SME policy is seen as legitimizing market failure, focused on Business environment and support through financial measures. In many countries business failures carry a stigma or legal penalty. Whereas in United States which is recognized as an entrepreneur friendly culture, where bankruptcy laws are applied to settle accounts when facing bankruptcy. Failure is not a stigma but a learning experience (Rice and Habbershon 2007). Such an environment is generated by Entrepreneurship Policy, not SME Policy. We will examine the same data when reviewing the recommendation to OECD by Aernoudt.

3. What then is the Difference between SME and Entrepreneurship Policy?

Storey (2006) points out that there has been enough research to distinguish what is a SME Policy and what is an Entrepreneurship Policy. Lundstrom and Stevenson's (2005) have come up with comparative analyses of both policies. According to them SME policy is conventional targeting industrial and sector based requirements of SMEs. It would include in its scope small

enterprise loans, grants or business advise. The SME policy has contributed to this sector in the shape of Business Development Services, Training Programs, special instruments of finance and organizations such as SMEDA, and small enterprise associations, and SME Banks.

On the other hand Entrepreneurship policy is focused on the creation of new firms and development of the individual as the properly equipped entrepreneur. Example of Entrepreneurship policy programs are “enterprise awareness” programs in schools, colleges and universities. There is an element of ‘nurturing’ in this policy towards the new start-ups. This policy also caters to the under privileged and marginalized sector of the society. It works toward converting tradesman into entrepreneurs.

To see the distinction between the two policies a table is being produced below from Storey (2006)

Element common to SME Policy and Entrepreneurship Policy	
<i>SME Policy</i>	<i>Entrepreneurship Policy</i>
<ul style="list-style-type: none"> ▪ Reducing red-tape and paperwork burden ▪ Access to capital/financing ▪ Provision of information services ▪ Export and marketing services ▪ Provision of training and consultancy ▪ Technology transfer 	<ul style="list-style-type: none"> ▪ Reducing red-tape and paperwork burden ▪ Access to micro loans and SME funds ▪ Provision of information about start-up ▪ Highlight entrepreneurs as role models ▪ Entrepreneurship education ▪ Facilitating networking services ▪ (Focused on individual as the Entrepreneurs)*
<i>Source Derived from Lundstrom and Stevenson (2005)</i>	

The table however shows that the difference between the two policies is very small, nonetheless it establishes the difference. Explaining this phenomenon Storey say that: “Entrepreneurship policy may therefore legitimately focus upon seeking to lower these barriers to starting a business. In contrast, SME policy, which focuses upon established businesses, may seek to reduce regulatory burdens such as employment regulation of established firm”.

He then proceeds to say that: “Nevertheless, although there is some overlap between SME and Entrepreneurship policies, the distinction made by Lundstrom and Stevenson does have validity. This is because taxpayers funding for policies can either focus upon seeking to ease the process by which business are started – entrepreneurship policy – or on enhancing the performance of assisted firms – SME policy”.

Stylized Facts about Effects of Small Enterprises (SEs) in Economic Development: This paper does not disregard the Small Enterprise Sector. SME Policy has it huge contribution. The Small Enterprise Sector does contribute to the sound development of the national economy if implemented with a focus on priority areas, (as in the case of UK below); prevents the concentration of economic wealth in a few hands; creates balanced ownership structures; creates regional balance; harnesses under utilized resources; provides a smooth transition to higher levels of technology; facilitates service sector and particularly banking sector development; and, provides people with fair and equal opportunities to engage in business. It provides jobs, reducing unemployment and poverty. It integrates the working of the large with the small through sub-contracting and through creating support institutions. Globalization has placed Small Enterprises directly in the limelight. Small Enterprises are increasingly a major force for

national economic growth. A lot of success of the small business has come about through the creation of clusters or Enterprise Districts (Khan 2004), (Gibb 1999). SME Policy has promoted the growth of entrepreneurs through support system such as Technology Park, Business Incubators, SME Financing Industry, SMEDA and host of other services. This transition towards entrepreneurship is the pull of the gravity.

4. Literature Review:

4.1 Peter Drucker in the chapter 13, of "*Innovation and Entrepreneurship*" (1985) talks of relevance of Entrepreneurship Policy. This review and analysis is being projected beyond the context of Peter Drucker's concept of an organization and is being used to show how and why it can be applicable to a country in devising an entrepreneurial policy. It's significant that by implication Drucker is hinting at an Entrepreneurial Policy. According to Peter Drucker, Entrepreneurial Management requires policies and practices in four major areas. In a truly philosophical sense he has propounded the policy for entrepreneurship.

First the society must be made receptive to innovation. This would mean that the society should look upon change as an opportunity. Hence policies have to be made so as to usher in a culture for entrepreneurial mindset and education which "underpins culture" would play a major role in initialing a climate for receptivity.

Second the implementation of the policy needs to be followed up by impact assessment and monitoring to see that the influence of other policies do not derail the process of enterprising culture.

Third Entrepreneurial climate requires the education process to produce entrepreneurs' and the teachers and trainers and coaches have to be prepared and groomed for disseminating the know-how of entrepreneurship. The teaching process may require real life examples of existing entrepreneurs and their experiences to be brought into the classroom. It would require to promote role model entrepreneurs as heroes and hence the concept of social entrepreneurs. People by large emulate the role of heroes which the society admires.

Forth the policy should be such as to include the ethical aspect of business and inculcate a climate of social responsibility, a responsibility to the environment and the society. He calls it the 'don't things not to do in entrepreneurial management.

The first category can be dilated upon to explain his policy and his philosophy of Entrepreneurial Policy.

He explains his philosophy by saying "Innovation must be part and parcel of the ordinary, the norm, if not routine". The Law or Policy should be beyond the legal binding. It should underscore the need to understand that it is dealing with human resources factors. To create the urge to go for the change, and to induce a thinking that "*innovation is the best means to preserve and perpetuate*" the nation. Instead of holding to the existing, to improve upon it and to innovate as a better form of living should be the norm. He philosophizes by saying, accepting change should be a sacred trust to the society. It should understand that there is a time for change. Hence Drucker suggests "a systematic policy of abandoning whatever is outworn, obsolete, no longer productive, as well as the mistakes (of policymakers) failure and misdirection of efforts (by agency such as SMEDA)". If the society can ask such a question

collectively “what do we have to do to stop wasting resource on this product, this market, this distributive channel, this staff (department) activity? This society would become a dynamic and progressive and highly economic productive society”. The purpose of policy is to make society progressive and productive and to utilize its resources most effectively. It is an on-going process and does not end with the passing of a law by the assembly or the executing body in the Government. “At least one limits further efforts and makes sure that productive resources of men & money are no longer devoured by yesterday”. He gives a very powerful analogy by saying

“Every organism (especially the economic system) needs to eliminate its waste products or else it poisons itself”.

He bases this analogy on the medical proverb: “Nothing requires more heroic efforts than to keep a corpse from stinking and yet nothing is quite so futile”.

To allow the society to innovate, a nation has to provide its capable performers to research: this of course means an environment and culture of research and it has to be funded by the state and the public and private sector. Again he philosophizes by saying research is the social and cultural hygiene. “It ought to be supported by the state as a policy’. The monitoring agencies should be able to determine; “how much innovation a given business requires, in what areas and within what time frame”. Hence his next recommendation is that policy should be such that innovation should take the centre place. The policy, to put in his words, should “make a business and its management greedy for new things; to make it perceive innovation as the healthy normal, necessary course of action. It enables us to turn innovative intentions into innovative performance”.

From this point on words Drucker emphasizes that given the environment to become receptive to innovation, what is required is to recognize opportunity. If opportunities are not recognized, opportunities will die of neglect.

So the policy focus will be to empower business to create receptivity to entrepreneurship which then leads to innovative alertness and the awareness to opportunities, the two hallmarks of entrepreneurship. It is the old formula of enterprise for success i.e. to recognize the opportunities and threats and be able to adopt itself to the change that has prospects for growth: To steer clear of hindrances and dangers that the threat present. But if making policy was easy, one is compelled to ask the question “why is it that these ‘utopias’ never arrive upon the map?”. Will Durante having asked this question, answers it by saying “Because of greed and luxury”.

The philosophical aspect of the Peter Drucker could be rightly taken as the foundation for Entrepreneurship Policy and we realize this through the above analyses.

4.2 While talking about the implication of SME Policy in a research undertaken by Aslund and Johnson (2004) it was found that countries hamper their own growth by not emphasizing on the taxation requirements and official activities of small enterprises. The difference in GDP contribution of developed and developing countries becomes evident while analyzing the degree of small enterprise involvement. The small enterprises in Developed Countries have much larger share of contribution to GDP than developing nations. Citing from the experiences of Russia, Italy and Czecholovia who have shown bias in favor of large firms

over small one's they says that these small firms are easily exposed to harassment by the authorities and unlikely to engage in collective action, as their costs are greater than their gains (Olson 1971). This shows that the collective strength of SEs is essential to gain favorable policy support; the policy should create an enabling environment for the growth of small enterprises and their entrepreneurs. Policy is the backbone of the small enterprise sector and hence the most essential element and it should be "tenacious enough".

According to the survey taxation is an important consideration; proportional taxation for all enterprises maybe a standard economic rule but the results are not absolute in nature. Thus equal taxation and regulation for all enterprises would be discriminatory against small enterprises. They point out that the three major costs involved in setting up an enterprise are: taxation, regulation and property rights. "The paper suggests that the objective of the policy makers should be; "to find one policy measure that excludes dangerous influences, is politically acceptable and is tenacious enough to boost the small enterprise sector over the critical hurdle". It also mentions how taxes and bribes are closely related in these economies, affecting the growth of small enterprises, owing to poor policy making. Weak property rights for small enterprises and being stuck in underground economy makes them vulnerable to organized crime and extortion as well.

4.3 Perhaps more forceful in its critique of SME Policy, than others, is the paper "*Public Policy and SME Development*" by Charles Harvie and Boon-Chye Lee

In both developed and developing economies the role of public policy has expanded in providing strategies for all enterprises rather than suggesting one aspect of it, that is, small enterprise sector.

However, the major aspect of the study categorizes the support policies of SMEs based upon the objectives behind policies under the following:

- ▶▶ Macro objectives
- ▶▶ Social objectives
- ▶▶ Correction of market failure/ inefficiency objectives
- ▶▶ Dynamic efficiency objectives

The paper critically evaluates the pro-small enterprise policies and subsidies provided to SMEs and how they are more a result of potential or social considerations than economic. The conclusions drawn are that such policies are not economically justified.

It can be argued that with the growth in the significance of SMEs, all governments started giving attention to the small enterprises and considered public policy as the most valuable requirement to remove the impediments in their growth, but cautions that SME policy should not be considered in isolation Lattimore et al, (1998). Storey (1994) observed that in Europe the government policies, tended to be incoherent and reintroduced on a piecemeal basis.

Revesz and Lattimore (1997), note that small firms, as sources of new jobs, are based on inconclusive data.

It is also true that subsidies play the role for development and stewardship of growth. But decline in relative importance of SMEs is seen at times when countries move up developmental ladder. However because of out sourcing by MNC the opportunities available

to SME will grow.

The paper also attacks the ‘jobs creation’ function of venture creation by calling it “arbitrariness in favor of job creation”. It raises the support to prevent “jobs destruction” by large firms in time of recession. SMEs have significance and policymakers cannot ignore them, but this does not mean policies favoring SMEs over large firms be implement. Storey (1994). In fact this argument is unfavorable towards SMEs policy and a pull in the direction of Entrepreneurship.

‘Job creation’ is targeted to rapidly growing firms, and that policy makers will have to choose winners to make this policy successful (Lattimore et al 1998).

Storey (1994) has critically observed, that, in the context of European countries “public policies have been developed, jettisoned, and often reintroduced on a piecemeal basis”. This hints at political incorrect treatment of SME policies and certainly not suited to SME development. Hallberg (2001) has indicated that the key difficulty in developing countries arise out of dealing with diverse groups when making policies. The findings hint at failure inherent in SME policies. “Thus, the test that a policy or program favoring SME must pass is that it not only must have a sound economic rationale but also, given the costs of design and implementation of such programs and the possibility of distortions to business incentives, demonstrate that it is capable of delivering net welfare benefits to the society as a whole” Storey (1994).

Government assistance can be a double edged sword. It can de-motivate firms to become large firms as the assistance would be shutoff. These arguments are grounds to dissuade assistance to small enterprises through public policy.

Under social objectives the consideration that is cited is poverty alleviation and equitable distribution of income. This seems to be true in many ways and merits consideration and research to determine the facts.

Under market failures and Inefficiencies should SME support policies be allowed? The paper apposes the idea. They take a middle path by saying “can be approximated by a judicious mix of market oriented policies and government intervention”. They go on to argue that government policy in favor of Small enterprises must demonstrate market failure and that taxation and distribution is equitable. Market failures have always been used as an argument for government support. But when dealing with small firms the cost benefit analysis of the exercise gives us a macro picture and demands that this aspect should be looked at from the macro policy level. The support policy towards market failures and inefficiency by nature would be macro policy and go to support all sectors by removing the source of disadvantage and leveling the playing field for small enterprises.

Under information imperfection Lattimore et al (1998) have identified that small firms experience greater difficulties in accessing export markets; this argument has been refuted by the authors of the paper as sufficient ground for support policy. In fact promotion of export related activities is essential in this era of globalization and liberal trade. Justification of support for small firms is to gain competitive advantage, which can be lost if we wait and allow other countries to pass us by. It is more pragmatic to be proactive rather than reactive. However, Lattimore et al (1998) do make a significant point in favor of knowledge spill over

in exposing small through support to enter export markets.

What has been observed is that most of the disadvantage is the result of government policy that have created a competitive disadvantage for smaller firms. Even the cost of regulatory compliance is monumental for small firms. Many aspect of regulatory compliance has forced the governments to propound policies simple and have eliminated inconsistency in regulation.

Despite some favorable policies for small firms to access finance from formal sector, there has been decline in utilization of such funds.

However, the entire paper has critically examined the role of government in providing the support to SMEs. It is critical of SME policies as being implemented today and as they are in practice. In essence the paper considers all SME Policies as politically biased, economically incorrect, and not suitable for SME development. It finds that these policies have no influence on entrepreneurship development.

4.4 *The Global Entrepreneurship Monitor (GEM)* was established in 1997 and become operative 1999, measures 14 components in a country supporting or hindering entrepreneurship growth & development. It is the largest undertaking of a regular annual study and reporting of the status of entrepreneurship in selected countries which are monitored by GEM. Currently there are 42 members under GEM including Pakistan. It covers over 2/3 of the worlds population and over 90 percent of the world GDP. It has identified that entrepreneurship exists in every country and almost 9 percent of adult population is actively attempting to launch a new venture at any given time. It was started by Babson College and London Business School.

The three major objectives of this undertaking were: -

1. To define the level of entrepreneurial activity and its consequences
2. To identify and uncover factors that determine the emergence and sustenance of entrepreneurship
3. To identify policies that lead to entrepreneurship achievement. This provides the most practical guidelines for designing a countries' Entrepreneurship Policy.

(For the components evaluated please see GEM 2006 Report)

This in itself is the best guidelines to draft Entrepreneurship Policies. Most countries now use this guideline as the benchmark of their policies.

GEM study defines entrepreneurship as: "Any attempt at new business or new venture creation, such as self employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals or an established business."

GEM explores the reasons for varying levels of entrepreneurship in an economy and how they can help policy makers to develop policies on that basis. It is aimed to create an annual assessment of entrepreneurial activity across the globe.

The Monitor establishes a link of entrepreneurial activity with the GDP per capita; the lower level of GDP per capita in turn leads to a high level of an entrepreneurial activity.

GEM also mentions the importance of motivation in different economies. It states that “the necessity of entrepreneurship is relatively more common in middle income countries than in high income countries”.

GEM states that the entrepreneurs operate in political, legal and economic environments and they directly affect the course of economic development and the level of activity. It states that effective policies need to be tailored according to the local context as well as the entrepreneurial portfolio the economy wishes to enhance.

4.5 UK: *Evolution from SME to Entrepreneurship:*

There are some overlaps between SME and Entrepreneurship policies, and distinctions have been made by Lundstorm and Stevenson (2005). Whereas, broadly speaking, SME policies are focused upon existing businesses, their loaning requirement or business advice, on the other hand Entrepreneurship policies are focused on influencing the creation of new ventures and the entrepreneur. But it has been seen that different ‘countries make different choices about this balance of policies’ (Storey 2006). From this we derive that policymakers have options based upon their objectives. There are also examples where countries have changed their focus at various times. One such example is that of UK. David Storey has analyzed this shifting the centre of gravity in UK and has relied on the work by Greene et al (2004) who has identify three periods of Enterprise policy in UK. The 1980s was a period of boost to the Entrepreneurship policy. It was a period when the objective was to direct the unemployed towards venture creation. ‘Job providers’ was the most popular tagline for policymakers. However, the 1990s saw the pendulum swing the SME way. The purpose of the policy was to help the small enterprises and the merits of SMEs were highlighted specially the role in reducing unemployment. Hence small enterprises were provided help to grow. Now the situation is back again towards the entrepreneurship and the change is called the “Third Way”. One notices that the justifications are different from the decade of 1980s. It was facilitating venture creation, but in the current decade it is based on the social and economic justification. The social justification is support of disadvantaged social groups such as the minority, the young and the women and reducing the entry barriers for them. This justification has been based on economic factors, as more new entrants enter the market they will drive out the inefficient, hence, enhancing the productivity in the economy (Storey 2006).

The government was able to demonstrate clear policy coherence and priority areas were identify with measurable targets. The seven key priority areas – called ‘strategic themes’ for UK policy were:

- i. Building an enterprise culture
- ii. Encouraging a more dynamic start-up market
- iii. Building the capacity for small business growth
- iv. Improving access to finance
- v. Encouraging more enterprise in disadvantaged communities and under-represented groups
- vi. Improving small businesses experience of government services
- vii. Development better regulation and policy

Having identified these priority areas, the UK policy look a significant turn for Entrepreneurship Policy. The current evidence is that a lot of successful agendas have been achieved. Milestones have been covered that support the case for shifting the centre of gravity from SME Policy to Entrepreneurship Policy. The caveat being that SMEs plays its role as a

subset of the Entrepreneurship Policy.

4.6 *Denmark: A vision of Better Education:*

A review of the education policy of the Danish Government gives a fairly good idea of the degree of importance the Danish Government attaches to Entrepreneurship Education. The policy paper on Education emphasizes flexibility in educational offering, but both education and training should be of high proficiency and competence level. Qualification and education must be relevant and must meet the business sectors and the public sector qualification requirement level. What could be more important in this context than the need to focus on Entrepreneurship? To meet its target it has identified five areas: qualifications and competence, flexibility, innovation, freedom of choice, and output management. Denmark is preparing its next generation for this century and the challenges of Entrepreneurship.

Therefore it becomes imperative to support a change of attitude towards a culture of innovation and entrepreneurship. This alone gives a very proper direction in planning entrepreneurship policy. While recognizing the importance of the business sectors ability to hold its own against international competition, and also recognizing the need for research and to take the idea from birth to a commercial venture, it feels responsible to support this through policy of small enterprises and entrepreneurship development.

The Danish Policy goes on to say that while they have developed an environment of entrepreneurship, it still lacks in achieving a targeted number of entrepreneurs through education. It is now focusing on educational tools to enable the entrepreneurs to become talented and growth enhancing entrepreneurs. To be the best among the best the policy recognizes a highly educated employees and an enhanced entrepreneurship culture. “The government wants better opportunities for and a positive attitude towards innovation and entrepreneurship in the education system” (Better Education” Chapter 1 & 2 Ministry of Education 2002 Government of Denmark), (National Executive Report 2000).

4.7 *Gaining from the Experience of OECD*

Prof. Rudy Aernoudt is a strong proponent of a shift towards an Entrepreneurship Policy. Having presented his concept a number of times to the European Commission, he has established guidelines for the adoption of an Entrepreneurship Policy. His point of view has been that Entrepreneurship Policy is an ‘Evidence Based Policy’. He defines policymaking based on systematic use of analytical data and analysis of existing measures and new measures that would create synergy as Evidence Based Policy. He has identified the Constraints (Referred to earlier also) of an SME Policy as being Patchwork, lacking synergy and employment policy without the stimulus to create employment, tainted by subsidy measures which are complex and unfavorable by recipient SMEs. It is focused on SME Enterprises and business environment. He explains through evidence that it addresses market failure and uses financial support to address their problems. Accordingly he proposes that SME Policy will be more efficient as a subset in an Entrepreneurship Policy.

His support of Entrepreneurship Policy is based on the following context and creation of an environment. Beginning with employment aspect he says employment can be generated by stimulating entrepreneurship and by encouraging entrepreneurial thinking. The policy as such is focused on the individual entrepreneur, the human resource factor and by creating for him entrepreneurial culture.

He identifies these salient features in the entrepreneurship policy, that is, to give prominence to the entrepreneur by evolving an enterprising environment and entrepreneurship culture and these should be done by using non-financial measures. Once the awareness of entrepreneurship sinks in, individuals will consider entrepreneurship as a career option, firms will learn to value human capital and the society will feel involved as it will provide a supportive environment where innovation, initiative and risk-taking will be appreciated. Failure will not be condemned. However, the policymakers will have to have an holistic approach because ‘entrepreneurship determinants’ cover a wide range of issues. The oft repeated cultural change has different connotation in different environment and level of economy. In the European context he has identified the emergence of lifestyle companies such as Gazelles, the change in the mindset of bankers to go for payback capacity rather than demanding collateral. Venture Capital and Business Angels be encouraged and promoted. The cultural change is also essential in the political institutions and subsidy culture be abandoned, rather the favorable option should be financial engineering. At the education level he proposed, case study approach, professors be encourage to go for venture creation and these should be supported by seed capital or spin-off fund. Finally students should not consider business as a second choice.

The sophistication of the European Economy has it merits for the entrepreneurs but from the observation of the American experience, Europe has to go a long way in establishing an entrepreneurship culture. But for the developing world there is a world of experience to be gained from Aernoudt proposal to EU.

5. *Some Countries Policy Review*

5.1 Japan:

The Japanese policy has been responsive to the changing needs and requirements of its economy. The agency was setup in 1948 and to this date it functions purely to modernize and promote SE development .The Japanese policy is built on the grounds of high levels of state involvement that play a very significant role in their development.

The Japanese policy objectives are as follows:

1. *Facilitation of fund supply and enhancement of equity capital*; the state should intervene to strengthen the functions of financial institutions and play key role in development and enhancement of credit and lending for SMEs.
2. *Promotion of business innovation and startups amongst SMEs*: again the state is supposed to play a major role to depict the significance of small enterprise in the economy. It is also responsible for providing information, enhance training and fund supply for start ups.
3. *Strengthening of SME management base*: the paper mentions that the role of state is that it should encourage exchanges among SMEs, develop organizations to improve internationalization and subsidize projects jointly undertaken by SMEs. It also aims to protect the subcontracting companies by regulation of unfair trade by parent companies. Thus the state aims to promote subcontracting in the economy.
4. *Smoothing adaptation to changes in economic and social environment*
5. *Measures for small scale enterprises*: the state should help improvement in competitiveness by improving resource utilization.

The policies have depicted vigorous growth in SMEs, as the state facilitates adaptation to the

changing economic and social scenarios. The model and works of the agency (SMEA) clearly indicates the state involvement in the improved economic condition in Japan. Kohata (2006). This paper is however not very clear about a transition from SME to Entrepreneurship Policy.

5.2 Korea:

Early 2000 the reorientation of entrepreneurship and SME policies brought about significant ‘institution–building’. Korea announced in 2004 its shift toward an innovative policy for entrepreneurship and to create a positive environment for SMEs. Four main policy areas were identified “enhancing entrepreneurship and facilitating start-ups, easing access to finance and venture capital markets, promoting technology and increasing innovative capacity, and strengthening human capital”. SMBA is the main player in the field of Entrepreneurship and SME policy. In 1998 a Presidential Commission on Small and Medium Enterprise was setup.

The agency was setup in 1996 compared to those of Japanese and Americans who had started way back in the ‘50s. However the law for SMEs was enacted in 1966. The policy making was transferred from the ministry of industries to this agency after ’98. The salient features of the policy are:

1. *Facilitating startup and enhancing entrepreneurship*: the SMBA offers services to facilitate the startup activities and is facilitating the environment reducing procedures and regulations that hinder start up businesses.
2. *Providing effective financial service*: the agency aims to support start-ups that lack collateral and technology to require financing. They aim to provide direct and indirect financing so that the creative SMEs don’t fail. KCGF and KOTEC both are accessible for funds under the above given conditions.
3. *Ensuring stable supply of human resources for SMEs*. The agency aims to respond to the rapidly changing environment. It’s consideration is to make policies that raise capabilities of SME employees and managers to increase competency levels.
4. *Enhancing the market access of SMEs*. The aim of the agency is to facilitate the export of SMEs products and their access to customized services. It also aims to strengthen SMEs by making the governments agencies to purchase SME products.
5. *Building technological innovation capacity of SMEs*. Improvement in policies to access technology and improve competitiveness of the SMEs.
6. *Promoting venture businesses*: by ensuring that all efforts mentioned above improve the quality of SMEs rather than the quantity.

5.3 Thailand:

Thailand is rated as one of the highest level of entrepreneurial activity country in Asia. Its Total Entrepreneurial Activity is 20.1 percent. It also has one of the highest rates of women entrepreneurship activity among GEM countries and was at 18.5 percent in 2002. 26 percent of Thais aged 18-24 start new business ventures and 21 percent own business (Brain Hunt 2007). Various elements that promote entrepreneurship are; social and cultural norms derived from the Confucian philosophy. It is further augmented by Buddhist psyche of tolerance to failure. The other very useful element is the support from the Government through Policy measures.

The Department of Industrial Promotion (IDP) under the Ministry of Industries is the leading agency of the government to promote SMEs in Thailand. The policies for the national plan state the following features:

- ▶ Encouraging the dispersal of urban industries to rural areas

- ▶▶ Encouraging investment in SMEs
- ▶▶ Establishing industrial networks
- ▶▶ Promoting investments in highly potential industrial sectors and enhance the competitiveness of Thai industries
- ▶▶ Enhancing the competitiveness of export oriented industries

The Credit Guarantee Corporation is setup to help small enterprises obtain more loans from financial institutions and enable them to be more innovative and productive. One successful initiative by the government was the creation of “One Tampon, One Product” policy- which brought small industries to every village.

International organizations like UNIDO, DIP and JICA have also studied the industries in Thailand and proposed a master plan that entails besides other measures policy and legislation support. The government has played the role of mentor supporting the flourishing enterprises with growth and productive rewarding policies. The Office of Small and Medium Enterprise Promotion (OSMEP) was setup to promote SMEs. Along with this a host of financial institutions were setup to promote SMEs.

The growth of small enterprise in Thailand has been exponential. The development of tourism has basically given a boost to small enterprises and businesses. However, the transition to Entrepreneurship Policy has not been as conspicuous.

5.4 The Multilateral Agencies

Whereas multilateral agencies such as UNIDO and ILO have supported Small Enterprise Development policies, these have been promoted and propagated generally from the experiences of the European or American or the Developed World. Such concepts do not take into account the developing countries level of technology, or environment or standard of governance, nor the absence of a supportive infrastructure for SE development. Hence many developing countries have come up with their own types of SE development. And some have achieved spectacular success, leading to the enforcement of the concept of entrepreneurship ecosystem that attracts entrepreneurs and resources that are suitable to a region.

This does not mean that the experiences of the Developed world be ignored. The advantage of networking in a global economy is that we can pick from the experience and regional wisdom of other countries and adapt to local environment. But we must learn to develop our own Entrepreneurship Policy, in line with our own endowments and requirements, and ‘ecosystem’ in order to maximize on the benefits from this sector. To test efficiency of these proposals & putting the lessons of experience in one concept the author has developed a concept of Entrepreneurship and Small Enterprise Hub that contains the elements of various policies experiences and initiatives around the world. This concept could be further developed and implemented. But ownership of the concept will give a sense of confidence and desire to improve and learn from experience. A constant improvement will be beneficial and provide sustainable growth & development.

There is a world of difference between the ways the developed countries and the developing countries have approached the unleashing of the Entrepreneurship and Small Enterprise potential. There are lessons that can be learnt from the experience of both.

6. *The Concept of Entrepreneurship and Small Enterprise Hub for Developing World:*

Enterprising Culture and Cultural Change: This would touch many aspects of society and the economic environment. It would touch education policy, industrial policy, financial policy, internationalization policy and technical training policy.

The Financial Sector would be required to develop new instruments of financing and the use of guarantee for collateral free lending. The Banks would be required to consider payback capacity rather than collateral.

The universities and educational institutions would be required to consider a case study and activity based pedagogy based upon real life examples of real entrepreneurs. These entrepreneurs would be the bridge between the industry and academic linkage and “Young people in the future are more likely to and (therefore) should be working in organizations closer to the entrepreneurial mode” (Allan Gibbs). We must therefore evolve a process of educating our younger generation in an entrepreneurial mode.

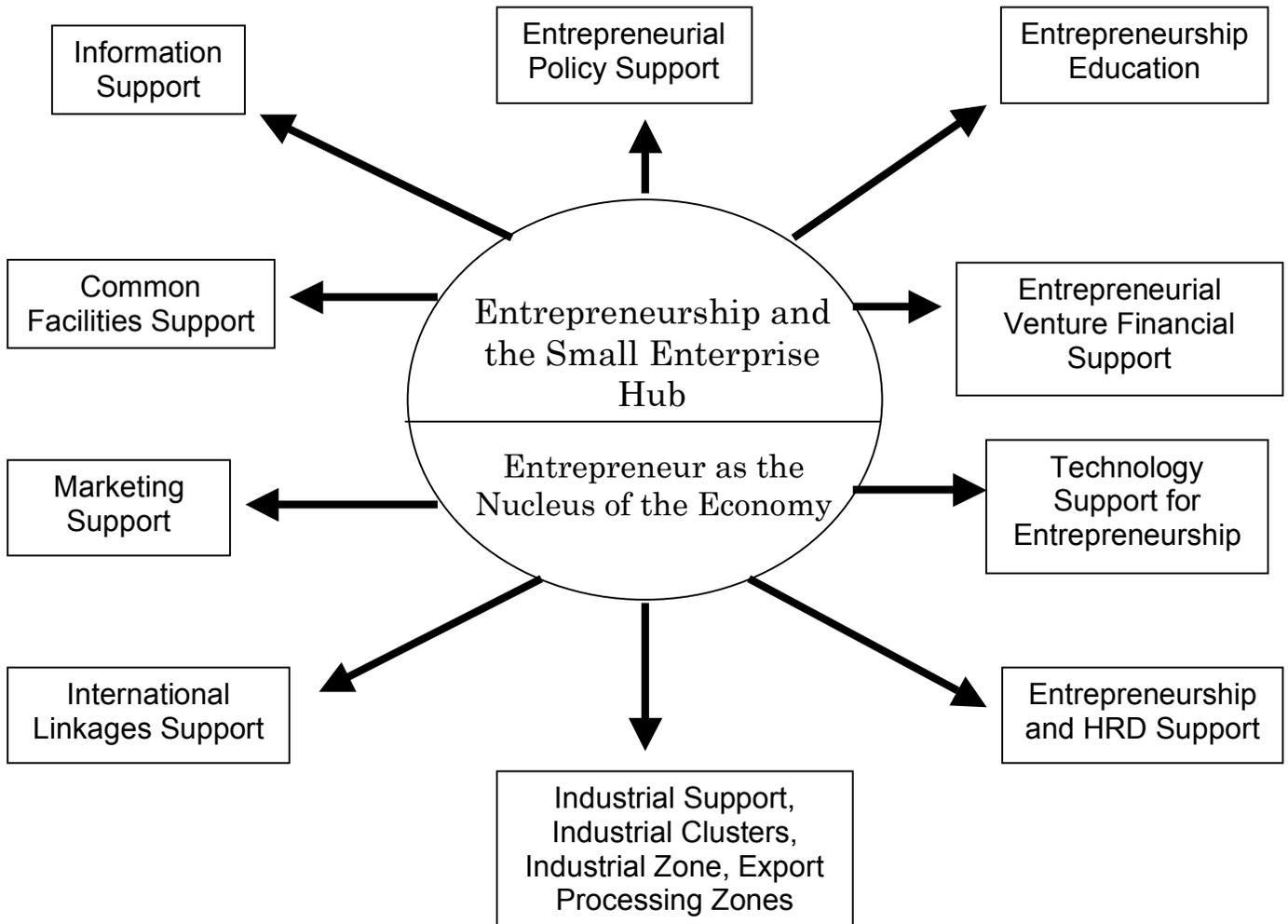
Therefore we need to have such support institutions as: -

- 1) Policy Advocacy Support.
- 2) Education Policy Support.
- 3) Financial Support Institutions.
- 4) Technology and Business Incubators.
- 5) Entrepreneurship and HRD Support.
- 6) International linkages and networking.
- 7) Industrial Support.
- 8) Marketing Support, and internationalization.
- 9) Common Facilities.
- 10) Observatory and regional networking.
- 11) Self-Help Organizations, associations, chamber of commerce.

These requirements can be met through a policy initiative, which can create an environment and culture for the development and growth of Entrepreneurship. All this can only be cultivated with an education policy that should introduce Entrepreneurship Education. Since developing countries do not have the infrastructure of support system for small enterprises, a model of Small Enterprise Hub could be introduced; Khan (2000) with modified features for transition to “Entrepreneurship Ecosystem” such a Hub could be called the Entrepreneurship and Small Enterprise Hub.

This Hub should be a learning organization flexible enough to put in place all learning acquired from Best Practices. (Please see the concept paper of SEH in the publication Lahore School of Economic Journal 2000 No 2), Khan (2000) and to be ultimately called the Entrepreneurship Hub.

Generic Model of the Entrepreneurship and Small Enterprise Hub 2000



A Revised version of SEH Generic Model to be called the **Entrepreneurship and Small Enterprise Hub 2009**

7. *Conclusion, Observation, and Recommendation That Emerge*

1. The 'entrepreneur' is a visualiser an economic resource, an innovator and this combination leads to economic activity. 'Entrepreneurship' is his dynamism; it requires a media, a mode of transport, which we recognize as the 'enterprise' which is his ship. And the enterprise operates in an environment, meeting its objectives by mustering resources effectively, bringing in change through incessant "creative destruction". He needs an entrepreneurial environment to thrive in. This process sets in motion the entrepreneur, who combines with optimality the factors of production. Therefore the entire game plan is about Entrepreneurship.
2. This necessitates the policy aspect. The policy therefore has to be an Entrepreneurship policy to unleash the synergy of enterprising culture, through education. It thus relates to mobilizing the entrepreneur as the nucleus of the Economy. With this background what we realize is that entrepreneurship policy is more relevant than the traditional SME Policy as we have seen from evidence cited above.
3. Once again to enhance the relevance of the Entrepreneurship Policy, I would like to support this position by quoting Maria Minniti who said "All individuals are potential innovators, seeking new and better ways to do things. This entrepreneurship is a characteristic of human behavior consisting in the identification of new 'end-means' framework. People are the core of Entrepreneurial phenomenon". (Minniti 2007)
4. From our analysis of various theories propounded by learned sociologist and economist and public policy analyst, we learn the merits of some policies being implemented in different countries. It is our observation that good practices from various countries could also be put in one policy recommendation. It is also our observation that various concepts developed in research work done in some countries could be put in this conclusion. Finally we will attempt to put forth some policy measures we think could be most important from a developing country context.
5. The first conclusion we draw is that the policy has to be Entrepreneurship Policy, though government policy in support of small enterprises is significant and is required to navigate the growth path. The purpose to monitor this SME policies aspect is to prevent a competitive disadvantage for smaller enterprises through government policy. This does not negate the SME Policy but recognized its importance as subset of Entrepreneurship Policy.
6. Purpose of Entrepreneurship Policy must be to introduce entrepreneurial environment and a culture of research and innovation. In the words of **Peter Drucker** it should create an environment of "greed for innovation". This should be such as to stimulate an 'enterprise spirit'. It should also empower the financial sector to become pro-entrepreneurial financial sector.
7. Efforts should be made to usher in a climate for entrepreneurial education mind-set and to initiate a climate of receptivity. The entrepreneurship education produces entrepreneurs, teachers, coaches and mentors to promote constantly improving climate of entrepreneurship.
8. The emphases in this is to create an urge for change and induce thinking that innovation is the best way to preserve and perpetuate national outlook. Its purpose should also be to make society productive, progressive, innovative and to be able to make the best use of and preserve its resources. Here it would be pertinent to cite from Drucker the medical adage that 'Every Organism (especially the economic system) needs to eliminate its waste products or else it poisons itself'. This objective can be obtained by developing a serious research oriented culture and "turn innovative

intentions into innovative performance culture”, which should lead the society to ‘alertness to opportunity’. With this as the Philosophy of our Entrepreneurship Policy we can look at the practical side of the policy.

9. We have also observed from the wisdom and experience of the Newly Industrial Countries of Asia that they have paid serious attention to improving financial assistance, utilizing resources effectively, establishing financial markets for small enterprises, improving the HR area and entrepreneurial competence, international standards acquisition, promoting research and development, promoting linkages and networking, promoting cluster, intellectual property rights and market access for the small enterprises. On the other hand the most outstanding feature of the policy in the West had been education focused i.e. to be the best among the best, enhanced entrepreneurship culture and Entrepreneurship has been the centre piece of their Education Policy. The West relied on strong orientation for innovation, research and development, and an entrepreneur friendly environment where failure is not condemned.

7.1 Lesson

The recommendations of the OECD Workshop meant for the European Commission are lessons of experience. They have gone through long period of steady implementations and have seen the hurdles and pitfalls. These recommendations can be replicated even for developing countries. Some of these are most suitable and strongly relevant. Policies can be drawn around local environment by learning from their experience. The OECD is experiencing the transition by observing the evidence on both sides. The conclusion drawn is that the difference should be recognized and a judicious mix of the two policy be adopted with the waillage being on Entrepreneurship Ecosystem.

Lesson from the Danish Government Policies

The lessons from Danish policy paper on Education, gives the sense of realization the developed countries have of the Entrepreneurship & Small enterprise policy. Entrepreneurship is now the centre piece of their education policy. It is recognized across all the developed and developing countries that small enterprises & entrepreneurship has to be supported by strong meaningful measures through policy. Policy has been a missing link in most developing countries. There has been lip service to entrepreneurship and small enterprise sector and no thought has been given to the entrepreneurship culture. In societies such as Pakistan, which are culturally power centric, it is essential to have strong policy and strong Ministry (Preferably a Ministry of Entrepreneurship and Small Enterprises) support.

Lesson from the Korean Policy

The features of the Korean model are most relevant & suitable for adaptation and very useful and relevant to the developing countries conditions. However the state’s role is evident in improving the domestic market. It may not be easy to change the mindset soon enough. But what would make the difference is to go for policies that are “tenacious enough” which can then be implemented. As mentioned in the lessons from Danish Policies, it is important to recognize the Small Enterprise Sector and to give it a powerbase by introducing the Small Enterprises and Entrepreneurship Ministry. Given such structural changes the scope of the sector can be made productive & developmental.

“The knowledge based economies are determined by their competitiveness and innovative skills”. The proposed model should take into account the importance of entrepreneurial, managerial and technical training and education that would help enhance such requirements!

Lessons from Thailand

This alone suggests that the need for policy development in the small enterprise area is huge and in the advanced world it remains the key feature for the economies to sustain and modernize. Taking a step ahead towards policy formulation would still mean the developed countries are decades ahead and the fierce competition will drive anyone out until the state does not nurse the ailment! Thailand has succeeded in motivating the rural sector to participate. Thai policy has also succeeded in inducting demographics to full advantage. The integrating tourist industry with small enterprises has been another achievement.

These are the best practices in terms of practical experiences. It may be appropriate to see how the concept developed by the author can take these into account and the model of a policy as proposed and propounded could be suitable for a Developing Country.

Recommendation

The *First* and most important conclusion that has emerged is backward integration with education. That is, Education Policy should be developed with Entrepreneurship as the Centre Piece. Entrepreneurship should be taught from school level to the Tertiary levels: That a stream of entrepreneurs should be produced along with the professionals that the countries are currently producing. (Job Providers not Job Seekers) That Entrepreneurship Development Institutes (EDI) be developed extensively in all parts of the country for further research and development in the area of Entrepreneurship and for the purpose of developing market oriented contemporary entrepreneurship curriculum. Developing innovative entrepreneurs, to be the best among the best, and who will be growth enhancing entrepreneurs, enhancing entrepreneurship culture and meet the numbers targets, should be the Goal and Mission of this Entrepreneurship Education Policy.

On the other hand the forward integration should be to develop and popularize Business Incubation Centers and the Technology Parks for nurturing new streams of entrepreneurs better prepared to survive and complete in the environment.

The policy should also consciously go for backward integration by involving the Vocational Development Institution. The tradesmen produced by these Vocational Institutions should be encouraged through education and incentive policy to become micro-entrepreneurs. In this way integration with educational institutions (where entrepreneurship should be taught in schools right up to Tertiary level), the skill and vocational training should also be oriented towards entrepreneurship.

The *Second* (Policy related) most important suggestion based upon this research and observation of culture and environment is that the government should introduce an additional ministry in its fold. It should be an independent Ministry of Entrepreneurship and Small Enterprises. This would strengthen the cause of development of Entrepreneurs & Small Enterprises. It will give clout to the sector which can influence its policy and its economic goals. The other purpose of doing this as a policy measure by the Government is to serve the cause and attend to the society's cultural impulse. Power centric cultures tend to respect a properly defined (or perceived) power or authority. In this case the Minister of Entrepreneurship and Small Enterprises fits in the bill.

The *Third* Suggestion or recommendation would be Banking, Finance and Venture Capital Related: That the Government should go for creating provincial Small Enterprises Development Banks (SEDBs). These specialized banks should be supported by the Provincial Small Enterprise Credit Guarantee Banks in every province of the country. It would do well to pass this responsibility to the Provinces so that there is more responsibility to safe guard their funds. In pursuant to this policy the Governments should make it mandatory on all banks to demand that their small enterprises customers and the borrowing entrepreneurs should undergo a short business management training program—a mini MBA— (say three weeks), so as to create an awareness of what it takes to run a business. Such a scheme could be called the “Training Prior to Lending Scheme”.

The Banks should also establish links with the academia to develop for the banks, instruments of financing entrepreneurial ventures small enterprises without collateral. And also how to induct Islamic Instrument of Financing for the small enterprise. This will be an additional credit potential for Entrepreneurship Ventures. The financing for this research and development should be borne by these banks. Furthermore the induction of Venture Capital Firms be encouraged and to be launched so as to increase the sources of financing New Ventures and Entrepreneurial Ventures.

The *Fourth* Suggestion is related to Policymaking for the Entrepreneurship Small Enterprise sector. First it should be declared that the policy is meant for the small enterprises and not the SME. Thus bifurcating the “Small” from the “Medium”. It should then define the small enterprises to be adopted across the board in all quarters of the economy and financial sector.

The *Fifth* Suggestion is to adopt the concept of the Small Enterprise Hub or the Entrepreneurship Ecosystem Hub. This will become the most important implementation agency of the Government. Each province must have its Entrepreneurship Small Enterprise Hub (SEH) and a regional Hub for the entire country. In turn the Regional Hub could collaborate with similar Hubs in the other countries and internationally, wherever such scope exists. This will bring in new market trends and new technology within the reach of the entrepreneurs and small enterprises.

Finally the follow through of the policy would be to introduce motivational schemes such as publishing the top 100 entrepreneurship cases on a yearly basis and create an enterprising culture by writing case studies on the entrepreneurs of Pakistan, and to use these cases and themes for teaching in schools, colleges and universities. The role of the entrepreneur will be elevated to the status of an hero and the younger generation will emulate this example.

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Entrepreneurial Success Evaluation: What does it mean for German Women Entrepreneurs?

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Due to the limited capital requirement, female founders frequently face misapprehension of their activities by credit institutions and financial consultants as of limited interest for investment. Interview techniques as main method in practice reveal the success forecast is biased by subjective factors (Bruns et al. 2008). As expected our interview study with consultants and finance experts show as favourite method the interview/talk to obtain a subjective, overall picture of the founder supported by self-made instruments without validation. Furthermore in the internet and entrepreneurship literature 43 German available instruments were found but most of them were offered without any previous evaluation. The instruments are clearly focussed on male entrepreneurs. Main content of the instruments is the founding person and the intended business. A standardisation of situations of success prediction as well as a gender sensitive perspective (i.e. by a biographic questionnaire) is indispensably.

Developing an Effective Industrial Cluster from Strawberry

Farms: A Case of Dahu Township in Taiwan

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Dahu, a small township in northern Taiwan, is famous for its produce of strawberries. Near Dahu, there are some attractions such as hot springs, native Taiwanese tribes, and a national park named Shei-pa. In this research, we investigated 200 strawberry farmers to examine forming factors of the cluster, and effects of cluster on organizational performance. The findings are firstly, capital resource is regarded as the most effective forming factor of the cluster. Secondly, institutionalization, interaction mechanism, and knowledge flow positively intermediate the clustering effects on organizational performance. These findings have important implications for the local government and the businesses as well.

Keywords: industrial cluster, organizational performance

Introduction

Dahu is a township of Miaoli County at northern Taiwan. Miaoli has a soft sand beach along the west coastline, hills in the center, and lush mountains of 3,000 meters to the east. Miaoli has various agricultural industries and products. As to the people, Miaoli has Hakka, Fukien, Atayal and Saisiat. With such diversified natural and cultural resources, the Miaoli County government has been inspecting local agricultural, fishing, manufacture, accommodation and catering industries, and tries to utilize their

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advantages to form a successful recreational tourism industry. Nowadays, Miaoli County Government proactively promotes “One Town One Product” to make the county distinguished by local specialties, and Dahu Township is famous of its strawberry. Strawberries were introduced into Taiwan by Japanese as early as 1934. At first, Japanese tried to plant strawberries at the high-altitude and cooler areas around Yangming Mountain. Afterwards, Dahu residents started to plant strawberries in the Dahu area since 1958, and until 1983 a common transportation and marketing system was developed. With the suitable climate and dryness of land, as well as the hard working of farmers, Dahu Township now has become so-called the “kingdom of strawberry” in Taiwan. Today, Many Dahu farmers run their strawberry farms as tourism orchards. The opening of strawberry farms for tourism fruit-picking not only brings higher sales margin to farmers, but also growth to related peripheral industries. For example, visitors to Dahu Township would like to go to nearby historical monuments and other neighboring areas like Jhuolan Township famous for its abundant and various fruits, Taian Township famous for its hot spring, Shei-pa National Park and Malaban Mountain. This research is aimed to help the local government promote an industrial cluster of agriculture and tourism based on the well-developed strawberry farms. A model of industrial cluster and organizational performance will be developed as a framework of this investigation and research.

Conceptualizing the Model

Industrial cluster is a phenomenon of the agglomerate economy. It is also defined as an industrial connection among economic developments of different industries that clusters a variety of companies in a specific place, aiming to generate benefits to each other. Weber (1929) explained the advantage of industrial cluster, based on perspectives of the clustered companies, from “internal economics” and “external economics”. The theory is regarded as the fountainhead of related theories of industrial cluster. Hoover (1948) extended and elaborated Weber’s theory by delineating the agglomerate economy into three categories: scale economies, localization economies, and urbanization economies. In recent years, the famous scholar Michael E. Porter viewed the industrial cluster as a foundational concept in industrial development. Other scholars like Czamanski and Ablas (1979) also indicated the industrial cluster can show geographical centralization in their studies, and regarded the phenomenon as the industrial complex. According to studies of Anderson (1994), Rosenfeld (1995) and Feser & Bergman (2000), the industrial complex means the industrial cluster in specific geographic locations. In conclusion, we define the industrial cluster to be the connection among those companies who make similar products or have supply chain relationship. The connection often contributes to geographical proximity of their company locations. Geographical proximity is proven to be advantageous for clustered companies, such as exchanges of industrial information and share of local resources that are beneficial to enhance their competitiveness.

After the industrial cluster is formed, clustered companies then naturally build up a co-existence relationship. Feser and Bergman (2000) supported this concept as well. They think clustered companies of related industries are composed of one or several

relationships. The relationship may come from connection of importers and exports or suppliers and buyers, geographical proximity, resource sharing with business-related local organizations, and informal cooperation and competition. Anderson (1994) also raised his viewpoints that individual efficiency and competitiveness are comprised of three aspects: buyers and suppliers, partners and competitors, and the status of resource sharing. In summary, the organizational relations among clustered industries are geographic proximity, vertical cooperation among companies, horizontal competition among companies, horizontal cooperation among companies, and resource sharing. We use these concepts to measure the cluster level.

In Porter's famous Diamond Model (1990, 1998) there are four determinants of national competitive advantage, including factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry. The factor conditions can be regarded as forming factors of an industrial cluster, and the related and supporting industries means an industrial cluster.

In summary, we identify four forming factors of an industrial cluster, including high-quality human resources (Porter 1998; Olson 1998; Bahrami & Evans 1995; Porter 1990), technological knowledge (Porter 1998; Olson 1998), capital resources (Porter 1998) and basic infrastructure (Olson 1998; Porter 1990). In addition, we propose behaviors of clustered companies, including the interaction mechanism among clustered companies (Porter 1990; Feser & Bergan 2000; Anderson 1994), institutionalization (Uzzi 1997; Mohr 1994) and the knowledge flow system (Pouder and John 1996; DiMaggio and Powell 1983) mediate the cluster effect on organization performance. The conceptual framework is illustrated in Figure 1.

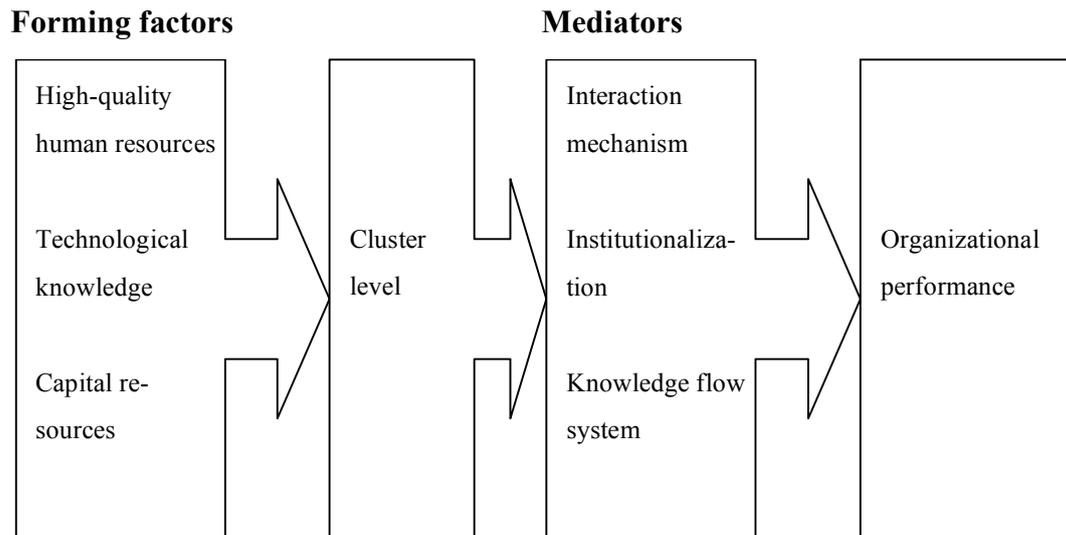


Figure 1 Conceptual Framework of Industrial Cluster and Organizational Performance

Methods

To measure each concept in the framework, we develop a questionnaire consisting of 68 questions of Likert Scale of 7 points. We distribute questionnaires to strawberry farmers in person to collect data. 200 farmers were surveyed, and excluding incomplete samples with unclear answers and incomplete data, we have 160 effective samples.

Then we conduct factor analysis to screen out those items with eigenvalue greater than 1. The absolute value of factor loading of the remaining item after Varimax rotation must be greater than 0.5. Each remaining item is regarded as a random variable and given a name.

Consequently, we conduct regression analysis to analyze the relationship among variables. There are three parts of analysis. Firstly, we analyze effects of forming

factors on industrial cluster. Secondly, we analyze effects of industrial cluster on interaction mechanism, institutionalization and the knowledge flow system. Lastly, we analyze effects of interaction mechanism, institutionalization and the knowledge flow system on organizational performance.

Results

After data reduction, we reduce our number of question items from 69 to 16. Each item is regarded as a variable and given a name. The variables and their belonging constructs are summarized in Table 1.

Table 1 Variable List

Construct	Variable	Accumulative variance	Cronbach's α	Eigenvalue
Forming factors of industrial cluster	Worker knowledge	66.628 %	0.80	3.415
	Basic infrastructure			3.081
	Capital resource			2.832
Cluster level	Vertical cooperation	86.712 %	0.75	2.601
	Resource sharing			2.267
	Horizontal cooperation			2.034
	Horizontal competition			2.953
Interaction mechanism	Geographical proximity	73.212 %	0.82	2.363
	Reliable communication			2.809
	Conflict resolution			3.780
Institutionalization	Mimetic isomorphism	69.994 %	0.80	2.802
	Coercive isomorphism			2.798
Knowledge flow system	Knowledge flow	65.439 %	0.92	5.350
Organizational performance	Operational performance	76.317 %	0.85	3.082
	Behavioral performance			2.495
	Innovation performance			3.581

As to the effects of forming factors on clustering level, we found capital resource is the most influential and significant factor. Its standardized regression coefficients for all aspects of clustering level are greater than those of worker knowledge and basic infrastructure, and more significant. The result is shown in Table 2.

Table 2 Regression Analysis of Forming Factors and Cluster Level

		Cluster level				
		Geographi- cal proxim- ity	Vertical cooperation	Horizontal competition	Horizontal cooperation	Resource sharing
Form- ing factors	Worker knowledge	0.254	0.127	0.568	0.731	0.812
	Capital re- source	0.693**	1.112***	1.370***	1.030***	1.109***
	Basic infra- structure	0.116	0.304	-0.582**	0.313	0.356
R²		0.146	0.316	0.309	0.273	0.348
F		13.188	35.506	34.462	28.95	41.098
P		0.000	0.000	0.000	0.000	0.000

Note: * significance level 0.1; ** significance level 0.05; *** significance level 0.01

Secondly, we analyzed the effects of cluster level on interaction mechanism, institutionalization, and knowledge flow system, the three mediators between cluster level and organizational performance. We found each mediator is significantly affected by at least two variables from cluster level; in other words, the three moderators are positively associated with clustering level. Among the variables of cluster level, vertical cooperation and resource sharing have most broad effects. They affect all of the three mediators. The regression result is shown in Table 3.

Table 3 Regression Analysis of Clustering Level on Interaction Mechanism, Institutionalization, and Knowledge Flow System

		Interaction mechanism		Institutionalization		Knowledge flow system
		Reliable communication	Conflict resolution	Mimetic isomorphism	Coercive isomorphism	Knowledge flow
Cluster level	Geographical proximity	-0.031	-0.097	-0.145*	-0.092	-0.067
	Vertical co-operation	0.2730***	0.238***	0.073	0.173**	0.263***
	Horizontal competition	0.146*	0.122*	-0.023	0.169	-0.029
	Horizontal cooperation	-0.128**	0.172**	0.078	0.045	-0.091
	Resource sharing	0.246**	0.212**	0.382***	0.184*	0.343***
R²		0.419	0.545	0.249	0.365	0.334
F		21.751	36.149	10.007	17.394	15.121
P		0.000	0.000	0.000	0.000	0.000

Note: * significance level 0.1; ** significance level 0.05; *** significance level 0.01

Lastly, we examine effects of interaction mechanism, institutionalization, and knowledge flow system on organizational performance. We found that organizational performance is affected by these mediators because each performance variable is significantly and positively associated with at least two variables from these mediators. Especially innovation performance is affected by interaction mechanism, institutionalization, and knowledge flow system, all of the three constructs. The regression model explained up to 64.6% of the variance of innovation performance score. The results are summarized in Table 4.

Table 4 Regression Analysis of Interaction Mechanism, Institutionalization, and Knowledge Flow on Organizational Performance

		Organizational performance		
		Operational performance	Behavioral performance	Innovation performance
Interaction mechanism	Reliable communication	-0.099	0.032	-0.011
	Conflict resolution	0.251**	0.324***	0.475***
Institutionalization	Coercive isomorphism	0.350***	0.044	0.241***
	Mimetic isomorphism	0.043	0.087	-0.045
Knowledge flow system	Knowledge flow	0.152	0.475***	0.324***
R²		0.271	0.613	0.646
F		11.210	47.761	55.065
P		0.000	0.000	0.000

Note: * significance level 0.1; ** significance level 0.05; *** significance level 0.01

Conclusion

Basing on results of regression analysis, capital resource is the most effective forming factor of the industrial cluster. Its influence on vertical and horizontal cooperation, resource sharing, horizontal competition, and geographical proximity is greater than those of basic infrastructure and worker knowledge. Therefore, in fostering the cluster, the local government may set its priority of efforts first in making capital resource more accessible to small businesses, and second to improve the infrastructure or worker knowledge of this area.

Secondly, we proved institutionalization, interaction mechanism among companies, and knowledge flow positively intermediate the cluster effects on organizational performance. In other words, businesses joining a cluster may enhance performance through interaction with other members, better sharing of industrial knowledge, and further institutionalization. For small businesses, since that the cluster helps to en-

hance organizational performance is evidenced here, participating in the Dahu industrial cluster is a smart decision.

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SOCIAL NETWORKING AMONGST SOUTH AFRICAN BUSINESS OWNERS AND MANAGERS

ABSTRACT

Social networking embodies the connection between people and therefore the management of businesses. These relationships are established by information technology and social relationship and enable the business to gain access to information resources, people and opportunities.

The aim of this article is to explore the social networking concept by providing more detailed information on social business networking practices. It involves an analysis of the current perceptions of 41 Gauteng business owners and managers by means of five focus group discussions and a structured questionnaire (35 respondents) which includes individual views on current networking practices and perceptions on networking practices.

KEYWORDS: social networking, networking, South Africa, business, managers, perceptions, mixed-method research.

1. INTRODUCTION

Networking is becoming more and more important in a constant changing environment where relationships offer some form of consistency. The technological innovations of the modern era does not recognise the importance of human interaction and people are forced to move out of their comfort zones by interacting with people that are different from themselves and can easily feel isolated (Zaczek & Bonn, 2006:84). There is more stress on people that they need to interact and share their experience with others to gather support and energy from others (Misner & Morgan, 2000:20-21).

The problem statement is to analyse the role of social networking amongst Gauteng business owners and managers. Aforementioned can include the business's ability to effectively allocate finances, knowledge and staff and to contribute to the establishment or maintaining and overall sustaining of a competitive advantage.

The Gauteng province was chosen on the criteria that it is the economic core of South Africa. Gauteng is regarded as the digital cluster of related businesses (Hunter, 2004) and has the highest economic contribution to the Gross Domestic Product with 38% of economic activity in 2002 taking place in Gauteng (South African Government Information, 2003).

2. LITERATURE REVIEW

Social relationships focus the relationship on socialising (White, 2004:5). In other words a social relationship can serve personal and commercial purposes. The commercial members can include people in organisations, such as, suppliers,

industrial, public and private organisations, as well as competitors and consultants (Jones & Tilley, 2003:188 and Berkshire, 2005).

Social networks are mainly divided into the following:

- Personal networks or connections which indicates the relationships that one has with other people in your personal capacity,
- Population networks and connections (Boe, 1994:9).
- High quality networks with a high number of relationships and the group is diverse in their contribution to the network, this includes motivation or support, generating ideas, information, finance and trust (Granovetter, 1983:203 and Stein, 2004:1149).

These networks includes different shared interests, such as sport, community services initiatives, interdepartmental developments or events, voluntary associations, charity events and fund-raising or profit teams. Not all shared activities or interests are equally important to include in building a network (Uzzi & Dunlap, 2005:6).

2.1 What is networking?

Networking is the natural tendency to treat others as one would like to be treated (Misner & Morgan, 2000:25). To be successful and live a balanced life an individual needs to be connected to other successful and balanced individuals (Lindsay, 2005:18). The nature of networking rests upon the motivation of the individual to acquire what he or she needs or wants from the other person and they network to obtain what they need or want. In other words, the main reason behind a person's decision to start networking is that he or she wants to optimise his or her own

position. This, in turn, has the impact that the value retrieved from the network will have to make up for the effort that one puts into the network (Visagie, 2006).

3. METHOD

The research was conducted from a phenomenological perspective and through a multi-methodological approach. The exploratory sequential mixed method approach was followed with focus group discussions to provide a broader and more in-depth understanding and analysis of the networking concept to arrive at a more holistic point of view for analysis and then structured questionnaires to provide individual information and to have information for quantitative statistical analysis.

3.1 Sample and procedure

The literature study concentrated on the role of networks in a business and available business networking strategies were studied. The very nature of networking prompted the research to include the qualitative (focus groups) and quantitative method (structured questionnaire) that provided data on attitudes, perceptions and personal views, as well as data for statistical analysis. The networking concept was studied from different perspectives to either confirm or contrast the focus group findings and lead to a better understanding and richer dimension of networking.

The focus groups were compiled by first using a purposive voluntary sample and then it was followed by snowball samples. Business owners and managers in the Gauteng province (Johannesburg, Midrand and Pretoria), in South Africa, were invited to participate and share their opinions on, feelings towards and their insight into networking practices. Their inclusion criteria stated that they had to be business

owners and business managers in the Gauteng province. In addition, they had to be willing to share their networking practices and had to be proficient in Afrikaans and / or English. In total, 41 participants took part in five focus group discussions. The same line of questioning was used in all focus groups to ensure the reliability of the findings.

Most of the contacts would not have been possible without an invitation by a specific person or connection. Therefore, the motivation for the use of a snowball sample and focus groups lies in that this particular target population is not accessible in any other way. Saturation was reached after three focus groups discussions, but the process was repeated two more times to ensure richness, saturation and representation of all relevant groups.

After the fifth focus group discussion a structured questionnaire was sent out. The 35 responses on this questionnaire provided insights into the view of each participant outside of a group context, as well as rich information of a different perspective. The questionnaire was sent by e-mail to the participants in the focus group discussions, as well as to the chairpersons of the different AHI chambers of commerce in the Gauteng region and the owner of INNERCircle, an electronic networking group.

3.2 Analysis

The theme approach (Creswell, 1994:153) was used in this particular study. A software package, Nvivo (Nvivo, 2002), was used at first to facilitate the analysis of the data collected (QSR International, 2002). Data analysis was conducted by open coding, whereby each transcript was divided into three columns. The researcher's

thoughts and own experiences were documented in the first column (fieldnotes), the text in the middle column (direct and item wording) and the themes in the last column (Greeff, 2006). Once the coding was completed, the large number of fragmented sub-themes had to be grouped and put into more coherent and focused main themes. Relationships were sought between the different sub-themes as well as the different additional themes (Daymon & Holloway, 2002:237) and were then grouped under the relevant main themes, sub-themes and additional themes.

Quality control and trustworthiness of interpretations was ensured through fieldnotes which was taken during the focus group discussions. The same line of prompting questions was also used for all the focus groups. Audio and video recordings were made for future referencing and an independent transcriber was used to transcribe the data verbatim. Each finding is verified by means of supportive literature and a direct quotation which reflect the participants' perceptions, opinions and feelings. Member checking or informant validation was also used to verify the findings.

The quantitative research analysis was conducted through various statistical techniques, including frequency analyses, effect indicator analyses, tendencies, as well as Chi-square statistics. The responses of the fourth section of the questionnaire were statistically analysed according to their practical significance (Cohen, 1988:223). The practical significance of the relationship between two questions, in this case current and ideal business or personal practices of networking, was analysed. In this analysis, effect sizes of 0,8 indicate a large practical significance, effect sizes of 0,5 indicate a medium practical significance and 0,2 indicate an insignificant practical impact or no impact (Cohen, 1988:222-223).

4. FINDINGS

The research findings are discussed according to the main themes which were identified and grouped according to the participants' *perceptions*. The findings are also verified by means of literature control by either supporting the findings, highlighting unique differences between literature and participants' actual perceptions or experiences (Greeff, 2006).

4.1 Networking is a social / human need

Participants mentioned that networking seems to be the inclination to be in the company of others and build relationships with other people are basic needs for humans. The following direct quotes supports this finding: *“The concept of networking as an informal, everyone-does-it, almost as a human need that you find in all relations and on all levels, that is the relationships that we build on.”* Supportive literature depict networking as a human need where people need to belong and be part of something more (Koniordos, 2005:3 and Kadushin, 2002:78).

4.2 Each network has a character of its own

Networking is a personal experience and therefore different businesses or personal situations will influence the character of the network. Shared experiences and changing circumstances can also influence the way people approach and build networks to achieve a specific outcome. Different opinions on the different elements that influence the forms of networks were recorded. The following is as quoted by the participants: *“Different networks, if viewed from outside, each one has a personality*

of its own.” and “... the character of the network is that it attracts people of a similar mindset together and the network may revolve around a person.”

4.2 Personal networks

Personal networks were viewed as personal gain networks that provided support and care and networks in which ideas or emotions could be shared. *“A personal network is a support base, it is friendships and you know the family of friends, but it is not as if I want to do business with them.”* This includes family, friends or shared interest groups and business networks (Armstrong & Yee, 2001:63-68). Friendship can be defined as peaceful relations, love or closeness between two people that is free of sexual desire (Kahn, 1989:207).

5.2 Social networks

Social networks are perceived as networks in which common interests are shared. The main objective is not immediate gain in the form of business or transactions, but rather to unwind, share and gain different perspectives in an informal and relaxed setting. *“Contacts are built when you like someone and you join the network.”* Networks involve different shared interests such as sport, community service initiatives, interdepartmental developments or events, voluntary associations, charity events and fund-raising or profit teams (Uzzi & Dunlap, 2005:6) which include connections that a person can count on to offer social support (Plickert, Côte & Wellman, 2007:406).

4.3 Referral networks

Referral networks are a rapport of a person's belief and trust in you: *"The people will be happy to use a reference and say well surely with a lot of work."* Personal and professional contacts are developed and nurtured to obtain referrals (Ball, 2005:36).

4.4 Business networks

Business networks embody connections (social, professional and personal networks as well as technical networking) that enable business transactions and the sharing of personal experiences: *"I think it depends on the network, it can be a meaningful network or maybe we should talk about a network in a business context, there are naturally other networks as well. It is not as if I want to do business with everyone. I know people that do business with everyone."* Management enhance their success rate by bridging structural holes and keep all role players informed and involved (Burt, 2000:48-49).

5. REASONS FOR NETWORKING

Each person will have his or her own way of networking. **Personal support systems** can be on an emotional level, but was also found to have a profound impact on the individual's access to opportunities, information and other valuable resources. The following quote supports this finding: *"You can get friendship or support out of your business or build up network."* Social ties such as family, friends and even some business relationships that have the nature of social connections may have a supportive quality (Frazier & Niehm, 2004:30) and can include strong personal relationships over a period of time (Granovetter, 1983:209).

Networking efforts towards **achieving specific objectives and goals** they wish to achieve become the main motivator to involve specific partners, and according to the participants include: *“References and other guys that phone you, knows you and if they talk about you.”* Literature suggests that business relationships are created to achieve goals and objectives (Gemünden, Ritter & Walter, 1998:201) and as a method by which new business can be accessed, to form knowledge on new opportunities and markets strategic alliances, to share experiences and exchange ideas, to obtain access to new or additional marketing channels and to find and develop alliances, associates and opportunities for collaboration (Bonner, Kim & Cavusgil, 2005:1375).

6. EXPERIENCES ON WHEN AND WHERE TO NETWORK

All participants were of the opinion that one needs to network and that one is never too young to start developing the necessary networking skills and to start building a personal network of contacts and relationships. Most participants (98%) indicated that they only started building a network later on and that several opportunities were lost because they did not realise the actual value of developing and maintaining existing networks or relationships.

The time frame during which participants actively started to build their networks as a conscious effort to improve their business or business skills was researched by including five time frames that participants could choose from. Most of the participants (42,86%) indicated that they started to consciously and actively network during their first job, which coincides with the focus group findings. However, 23% indicated that they started to network during their university, college or tertiary education. This result is supported by the focus group discussions. Another 23%

indicated that they only recently became aware of networking and started to actively drive the networking process.

6.1 People or connections included in the network

Different people or connections can be included in a network for very different reasons or motivations (Yuan & Gay, 2006). The majority of participants (97,14%) indicated that current connections with co-workers are the most valuable connections to have in your current network. Social connections are seen as potential networking members with eighty-six per cent (85,71%) of the participants including them in their network. With regard to former colleagues at previous employment, as well as alumni or professional association connections, 80% of the participants rated them as being very important connections to include in your network.

6.2 Places to investigate for possible network building

Participants indicated that they currently use different places to network and that, in some instances, this differs from where they would ideally like to network. Participants indicated that currently their businesses largely use trade organisation of their best customers and national trade shows, conventions and seminars to network. They indicated that they feel that these places can be utilised to a greater extent in ideal circumstances. This finding indicates a large practical significance as to the relation between these places as actual venues to investigate for network building.

7. EXPERIENCES OF NETWORKING IN DIFFERENT CULTURES

According to participants, different cultures influence the way in which people network. Different cultures view networking in different ways. Therefore, the impact

of a person's cultural upbringing and his or her approach to life play an important role in evaluating the person's networking approach. The following support this: *"There are some big differences that you have to take note of when you come here. Currently in South Africa these different networking styles must now merge, which is quite a challenge."* And *"The cultures of South Africa make networking very difficult because the exact thing that is polite in the one culture, destroys the network between (the) Afrikaans and black (culture)."*

"Another aspect of networking that is important is the different cultural networks in the world and how it works in different continents and different countries and it (involves) the whole cultural thing." Literature does not explicitly describe the unique South African perspective of how the different cultures living in this country differ in their networking effort and how the networking practices in the South African context are applied. The influence of the different cultures in terms of the African and other cultural differences is therefore an important contribution made by this study. The networked business models are however discussed in a multi-cultural, ever changing technological environment (Mansfield & Fourie, 2004:41).

The participants are united in their opinion that the South African environment in particular demands high networking skills and because of the diverse cultures this becomes all the more difficult. Business and entrepreneurial networks are not common to many cultures and therefore networking activities are not established (Mitchell, 2003). The African culture can be seen as an example of a culture that traditionally did not use networking for business purposes, but have developed immensely over the past few years.

8. CONCLUSIONS

Networking was found to be the result of the human nature or inclination to socialise and be part of something or the human inclination to seek the company of other people.

Each network has a character of its own and needs to include the right combination of people with ability and trust. Therefore, different forms of networks have developed and include personal networks, social networks, referral networks and business networks. Main reasons for networking include the establishment of personal support systems, to achieve goals, to access new or additional business opportunities, marketing channels and information, to share and exchange ideas and develop alliances.

It was found that networking should be proactively started as early on in ones live as possible. Most of the participants only started their networking efforts when they started their first job. Some of the participants does realise the importance of networking at university, or even high school level, as well as at professional trade organisations, cultural or community events, or other networking events.

Different cultures view networking differently and each other (the role players in the network) differently. South Africa with all the different cultures, are no exception.

10. RECOMMENDATIONS

Social networking is most often a starting point for further network development. Social networking should therefore involve sufficient communication between the relevant parties, continuous sharing of information is also important. Families should acknowledge the importance of networking skills when raising their children.

Practical implications for business owners and managers include that they need to be made aware of the power and benefits of a structured approach to social or other networking effort whether it is in their personal or business lives. Individual business owners and managers should make a conscious attempt in their personal lives, but also inform their employees of the importance of good networking practices. It is important that people understand the impact of successful networking and know how to apply the networking rules and steps when they enter a network.

Networking is a continuous process under constantly changing circumstances therefore the networking tools may equip a person to deal successfully with all the networking opportunities. The direct effect of networking should therefore be measured and a general process or proposed framework adopted to utilise in different circumstances and to adapt to specific needs.

The South African community is characterised by high diversity and this can only be bridged by developing and establishing common relationship goals and rules. Common ethical values among an equal society may lead to interdependence and successful networking. No one group of people should be supreme over another and trust should be earned among each other.

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Strategic Alliance Inhibitors in Chapinero (Bogota, Colombia)

by Alejandro Castaño Ramirez¹

Cultural inhibitions towards alliances among competitors as a market strategy turn around a basic principle, which is an interpretation of reality. The emotional responses that setup the imaginary and behavioral cultural pattern search for protection from a threatening reality. Therefore, protective attitudes that guarantee survival within danger are enabled. In Chapinero, this issue leads to have deeper inhibitions towards alliances among competitors and to be higher in some specific economic activities. Trust, equity, and authority are very important variables that have influence on business culture and foster strategic alliances within this context.

Perspectives about Alliances

Anthropology has been focused on the commercial relations held among humans. This analysis is the result of ethnography applied to ethnic groups and communities outside the Western world (Malinowsky 1922). Mostly, anthropological knowledge was used in order to control and regulate such communities. However, currently, anthropology has started to focus on commercial communities inside the Western world itself (Jordan 2003; Roca 1998). Within this new action framework, ethnography and other anthropology tools are being used to understand and study commercial social networks, such as strategic alliances (Briody 2008).

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Literature shows that alliance phenomena have been approached academically by several theories. Among them, we can find cost-transaction theory (Salgado 2003; Williamson 1981), agency theory (Kochhar 1996), or resource-dependence theory (Finkelstein 1997).

The purpose of this paper is not to fully explain these theories; however, it is important to mention that each one of them interprets alliance and gives elements such as efficiency, cost reduction (Williamson 1981), which rule alliances among companies (Gulati 1995; Salgado 2003) and that come from the need of sharing resources to compete or survive in a specific market (Finkelstein 1997; Sheth, and Parvatiyar 1992). It is also important the recognition of the way benefit is distributed among agents (participants) (Kochhar 1996).

Nevertheless, these theories are qualified as “traditional economic” approaches because they emphasize their understanding of alliance phenomena regarding the rational dynamic of profit and the maximization of resources, with an “atomistic” approach that displays its analysis from the company, leaving aside the understanding of the complex social network where embedded. Other authors argue that this same network motivates, conditions, and influences on the practice of alliances (Gulati, Nohria, and Zaheer 2000).

Other theories are also found in literature, such as the organizational learning theory (Gulati 1995; Teegeen and Doh 2002;), and the network and social bond theory (Kilduff, and Tsai 2003; Street, and Cameron 2007). The first one focuses on organizational learning and on the value creation companies have when sharing technological aspects, distribution chains, best practices, market information, data warehouse, etc., (Teegeen, and Doh 2002). The second one establishes that research on the behavior of commercial interaction among companies should be approached not only from the understanding of the economic value

creation, but also from the creation of satisfactory social relations (Saxton 1997). Therefore, it is essential to investigate the social context where patterns related to previous alliances among companies and to strategic interdependence arise (Gulati 1995; Gulati, Nohria, and Zaheer 2000).

Some investigations have also brought elements to ponder the way strategic alliances have been studied. Some of these are: adding approaches seeking to recognize the social ties in B2B relationships, within the interaction of cultural elements such as confidence, commitment, and equity, with technical elements, such as competence (understood as the ability of a company to function), and investment (Perry, Cavage, and Coote 2002).

Other approaches, especially from anthropology, search for the “continuous improvement” of workgroups involved in strategic alliances (Briody 2008). These investigations have brought specific variables such as internal cohesion and decision making, both related to confidence and authority respectively.

Other contributions from this perspective have shown implicit and explicit rules and norms that are “adequate” for an alliance to work effectively (Meerwarth, Briody, and Kulkarni 2005).

It is obvious that there are several approaches on alliances, but they seem to follow a path from administrative perspectives focused on the profitability towards the integration of social and cultural points of view that, when articulated with economic points of view, reach their understanding their presence.

Why is it necessary to do this?

Small enterprises and SMEs in Bogotá have an interesting behavior, calling the attention of the local government and other social agents, as well as of researchers and

entrepreneurs. This behavior indicates a high number of enterprise mortality within a year. In 2007, 43.804 enterprises were created (43.188 small enterprises) and 13.917 of them were closed (13.304 small enterprises). This indicates that small enterprises have over 25 percent mortality. This situation follows a historical pattern because in 2006, 44.571 enterprises were created (43.061 small enterprises) and 11.782 of them were closed (11.226 small enterprises), a very similar percentage (Economic Observatory of Bogotá, 2007).

The objective of the current investigation is the analysis and reinforcement of cultural basis around the practice of alliances in the district of Chapinero. It pretends to decrease this mortality behavior by promoting strategic alliances as a commercial growing strategy.

Culture and Business Alliances

The way people “organizations” are set, follow a cultural pattern close to people in a given cultural context (López, and Calderón 2006). Therefore, the organization is a subjective construction, and employees and participants give it its sense in straight connection with their cultural context (Trompenaars, and Hampdem-Turner 1998). The importance of culture on economic phenomena has not only been highlighted by anthropology, but some economists, as Michael Porter (1991), have linked the economic performance of a given country to its culture.

Literature shows some research on the subject, as Teegen and Doh’s paper (2002), in which they conclude that the outcome of a strategic alliance is influenced by cultural tendencies in the individualistic/collectivistic paradigm. The findings argued that the individualistic tendency on the American culture conditioned the way to assume responsibility on faults and mistakes, letting others free to make designations and to point

out errors. This cultural pattern collided with the Mexican culture, explained in the paper as collectivistic, with a tendency to oversee faults and mistakes in order to foster group internal cohesion by avoiding confrontation.

The variables that culturally affect a strategic alliance are discussed in the specialized literature and the most mentioned variable is confidence. A significant part of literature points out that confidence is the perception of the other's intentions (Sheth, and Parvatiyar 1992). For some authors, confidence perception sets up a pattern on the strategic alliance and is a reflex of the context where it occurs (Gulati, Nohria, and Zaheer 2000). Besides, it is also related to the success of alliance (Saxton 1997).

But confidence measures were considered non quantifiable, identifying in the confidence a "construct" rather than a variable itself. Accordingly, it has been analyzed as the reflex of situations related to the alliance behavior, in variables such as frequency of interaction and duration of interaction (Sheth, and Parvatiyar 1992; Gulati 1995; Saxton 1997). However, recent research, has been using quantitative measures of confidence as a proper variable, using surveys as the General Social Survey, developed by the University of Chicago or the Worldwide Values Survey, developed in Stockholm (Salgado 2005); or by organizational development tools as Mike Lombardo and Robert Eichinger's (2004), in which they have created behavior descriptors for confidence and trust at individual and group levels.

Confidence has also been studied as a construct reflected on decision making (Briody 2008). This decision making allows us to interpret an alliance (e.g. a high level of alliance involvement builds up confidence and corporate commitment (Sheth, and Parvatiyar 1992). But decision making is directly related to another construct frequently mentioned in literature: authority.

Authority is understood as the managing of alliance activities, on issues as decision making, strategy setting, influence of stakeholders, and the power of an enterprise within the strategic alliance. For Teegen and Doh (2002), an appropriate balance in authority, in which the enterprises involved are clear a fair on authority topics, is seen as a success condition. Those alliances with an authority unbalance tend to instability.

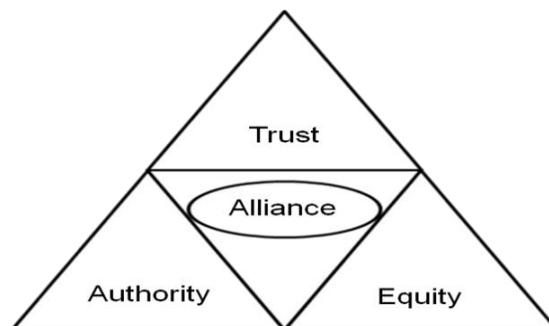
The constructs of confidence and authority are related among them, as long as it is argued that in higher levels of confidence there is less need to exert authority (Gulati, Nohria, and Zaheer 2000).

A third construct is identified as key on alliances in general and on strategic alliances in particular: equity. This construct has been identified by literature as fundamental in the construction of strategic alliances: “it is previous to confidence and commitment” and, therefore, is of main importance in the confidence setting up and the authority exertion (Perry, Cavage, and Coote 2002).

From the concept of culture, as well as from the variables that will be used to study commercial corporate culture, an analysis framework is proposed in figure 1.

Figure 1.

Cultural Analysis Framework on Strategic Alliances



The present research aims to reach holistically the phenomena, pondering internal as well as external dimensions of an enterprise in a social network. This goes in line with

anthropology principles, as long as it has reached economical phenomena observation on human communities as interaction systems (Mauss 2002 [1926]).

Methodological Framework

The fact of analyzing alliance phenomena from a cultural approach has been put in practice by economic sciences as well as by anthropology, being the formers the ones with more frequent works, assertive results, and statistical credibility. They are likely to use quantitative methodologies, including structured surveys and likert-scales measures (Bond 1988; Gulati 1995; Hofstede 1980; Perry, Cavaye, and Coote 2002; Salgado 2005; Saxton 1997; Sheth, and Parvatiyar 1992;).

But the present research, with a holistic approach, uses a qualitative methodology, talking to us from the heart of people and enterprises, about their experiences, formed habits, and memories as cultural members (Geertz 1992). Two examples of qualitative methodologies were a guide in the design of a qualitative methodology. The first one, the work by Meerwarth, Briody, and Kulkarni (2005), gathered qualitative information on the “musts” or rules and norms, as well as implicit as explicit, in a given strategic alliance. The information was processed following a content analysis, based on the principle: “linguistic characteristics, as the syntax, lexicon, and the way of speaking are keys for the meaning interpretation” (Meerwarth, Briody, and Kulkarni 2005). The second one, the work by Laura López and Gregorio Calderón (2006), analyzes the cultural dynamics within a cluster. This research used a semi-structured interview, as well as diary and desk research. The interview was applied to 30 “managers or entrepreneurs delegated by productive and sales companies, and to the directors of supporting entities”. The collected information was categorized and analyzed through content analysis methodology following some stages:

“first: the information cataloguing according to theory reference codes; second: the processing of codes and decomposing of material and, third: the inference and interpretation (López, and Calderón 2006).

The methodology applied was the case study methodology, combining qualitative interviews (Denzin, and Lincoln 2005) and quick ethnography (Geertz 1992). The information was gathered by qualitative interviews with different participants on each case. Qualitative interviews are defined by methodology specialists such as “exchange of ideas, meanings, and feelings about the world and its events” (Bonilla-Castro, and Rodríguez 1997). The interview was applied in a narrative structure, where the “questions are done around a fully-explored issue, without questions limiting the process” (Bonilla-Castro, and Rodríguez 1997). Through these interviews the history of each enterprise was reenacted around alliance phenomena, consolidating cases in which the experiences of entrepreneurs and employees have created meaning and behaviors on strategic alliances.

The sample was composed by 4 cases. Three of them work on real estate economic activities and one in educational activities. They had strategic alliance characteristics such as: an 8 member strategic alliance, a dyadic strategic alliance, and a third one with no alliances at all. The other case is an academic institution recently formed with no allies. The present investigates the content analysis methodology, following a procedure of: categorization, codification, and interpretation/analysis of gathered data (Bardín 1986).

Recruiting Process

The sample was recruited by two mechanisms: database and referrals. The database used was bought by the researcher to the Chamber of Commerce of Bogotá. And a penetration strategy was designed to invite the entrepreneurs and managers to participate in the research. The strategy was:

First: we sent e-mails inviting entrepreneurs to participate in the research.

Second: explicative letters were sent to the addresses in the database.

Third: a phone contact was established, where we identified the arrival of previous letters and invited entrepreneurs and managers to participate in the research.

Fourth: we visited the companies personally, searching for entrepreneurs and managers to invite them once more. But from a 58 register database, just 2 answered positively to the invitation after the fourth strategy stage. The low participation level is remarkable and shows the difficulty to consolidate research processes, especially among small enterprise owners and managers of the district.

To complete a minimum of 4 cases, we used a referrals strategy, searching entrepreneurs and managers within our own social network. This strategy brought to us the other 2 entrepreneurs who participated voluntarily in this research.

Results

The analysis of the information in the interviews shows an alliance formation pattern around highly emotional circumstances as the result of a basic cultural principle: the interpretation of a hostile commercial context, without price regulation and high opportunism.

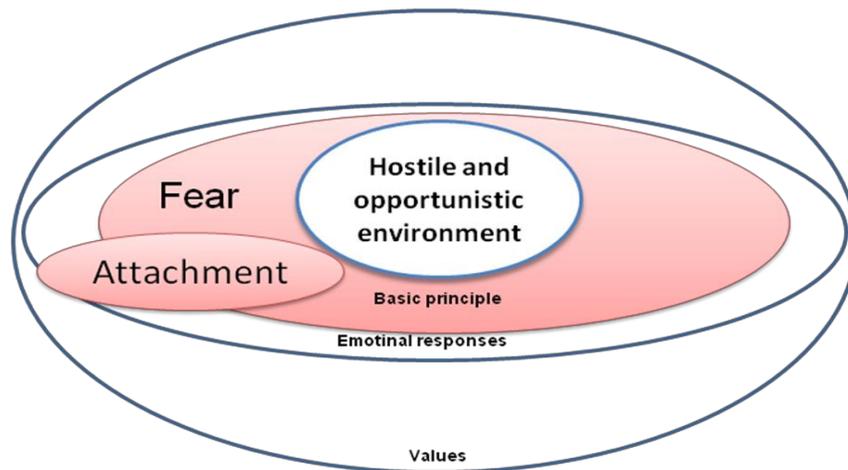
“I, personally, was watching in the last years more disloyal competition than I saw long time ago, in Real Estate. At the moment, in the group we are forming, we don’t want disloyal competition, competition will always be... in this business there are many lies, business and client stealing, and lot of that”. Manager, UNIÓN INMOBILIARIA

“At the same time that it is highly competitive, many people do not value their work appropriately. The only ones that maybe do so are lawyers because they have a regulation, they have a price list” Entrepreneur, CONTADURÍA MODERNA

The strong emotional ties of entrepreneurs with their enterprise are tied to survival or to opportunity. Emotional responses drive the entrepreneur behavior regarding social bonds. Emotional ties, resulting from the basic cultural principle are shown in figure 2: fear and attachment.

Figure 2

Cultural Inhibitions for Strategic Alliances



Fear

This emotional response appears repeatedly in the information gathered, correlating it with opportunism perception. The *opportunistic* myth, as we would call it, explains the constant imaginary of the opportunism behavior from the new partner.

“We met with a partner and he told me: “a group of firms need to update their accountability books. We went, introduced the proposal and, afterwards, near the office we were after the meeting, we said goodbye to each other and I went into one building and spent 10 minutes there and got out. What a surprise was for me to see him entering the office where we were with another person. I checked with the contact in the group and told me that their proposal was approved, for less value with another accountant.” Manager, UNIÓN INMOBILIARIA

From these personal experiences in strategic alliances cultural inhibitions grow.

“There is one thing in our culture: it is very frequent that there are people taking advantage from others. In our business culture there is always a winner, and if there

is a winner then there is a loser. If I win is because the other one is losing, it is basically the idea.” Manager, CORPOBELLA

Fear places into a cultural myth modeling the behavior, indicating, beforehand, that commercial allies will act opportunistically and will take advantage at their back. Therefore in a strategic alliance there is always losing.

Attachment

The creation of an enterprise starts by an idea conception. The idea is judged to be different, with powerful elements, result of the analysis made by the entrepreneur and able to take the effort to profitability and success. The idea is managed by the supposition of keeping the difference, as a strategy to create value. But there is another cultural inhibitor emerging from this: idea attachment.

“There is a threat, of which we are all victims, beyond that I would like to know: Where does fear come from? Why do we have this situation? Fear is basically because everyone has his own business vision, his own project, and, naturally, does not want to share it because it is vision that makes you different from the others. You believe you have a good idea and do not want others to take advantage of it, yes it could be that way.” Manager, CORPOBELLA

This is a structural dimension to the managing of strategic allies, because imaginary success is a lonely, self-sufficient path, where it is not pondered the strategic possibility of business alliances.

Small enterprise owners have strong emotional ties with their businesses, because they represent sacrifice to them. Therefore, to share their businesses with others is a threat to their emotions. The cultural basic principle and emotional responses associated drive entrepreneurs to value diffidence and distrust; to build up walls as cultural adaptation to a hostile commercial context (figure 3).

Distrust

Generalized distrust on others not necessarily means the absolute absence of trust, but that confidence has been converged on family and other social circles, forming long term and excluded relationships. But even long term relationships on these circles are influenced by the *opportunistic* myth.

“Experience has shown me that sometimes it is better to work alone or to really know who you deal with. You can’t work with classmates, sometimes it’s possible, but there are some that only seek their own benefit, not a common benefit”. Entrepreneur, CONTADURÍA MODERNA

Distrust drives to blindness about strategic alliances, leading to not explore alliance possibilities and benefits, such as the access to other markets, best practice sharing, and market regulation. This explains the low interaction among companies.

Deliberately, we can say that there is not approaching to competitors, even if alliances are seen at verbal level as needed to be competitive.

Valuing distrust is a straight result of lack of equity perception, which has been identified as a distributive negotiation (Ogliastri 2001).

“The not so positive part about alliances is that many times we end up working in the closing of a business without balancing the workload among the parts involved in the business”. Owner, LA TORRE FINCA RAÍZ

Wall Rising

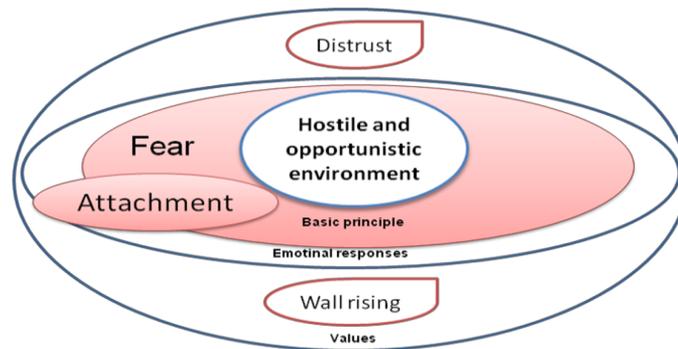
Small enterprise entrepreneurs look at each other as competitors, from whom they need to guard, thus, it is necessary to raise walls with egoism and individualist emotions. To protect oneself is the top one priority, as the attachment to their ideas is seen to be the key for survival.

“In a meeting, people were jealous about revealing their educative project. People raise walls to make things. There is a lot of egoism behind all that, they don’t want to reveal their own projects, concealing information that, theoretically, can be used by the competence”. Manager. CORPOBELLA

Another situation linked to egoism and wall rising is the self-sufficiency perception on entrepreneurs. This is the result of seeing the commercial context as hostile, highly individualist, lonely and isolated, identified in the literature as the Alamo syndrome (Culky, and Smith).

Figure 3

Values and Attitudes Resulting from Cultural Basic Principles and Emotional Responses as Cultural Inhibitors for Strategic Alliance Formation



Opportunism Discussion

It is considered that opportunism behavior sacrifices business opportunities, obtaining scarce benefit but concentrated on one person.

“Two allies said that each one was helping a client. We analyzed the case and understood that one was trying to steal the business from the other”. Manager, UNIÓN INMOBILIARIA

All the interviewed people reported to have experienced opportunism from others. This reinforces the perception of a hostile environment. To be successful in any strategic alliance need of both, “maturity” and good “reputation.” Once this has been obtained in an economic activity, it is assumed that the company or entrepreneur is loyal, respectful, prudent, with commercial clarity, and a win-win negotiation style.

“With loyalty and respect, those are the only formula to work with. If there is loyalty, it goes hand by hand with respect, that’s what we are trying to achieve”.
Manager, UNIÓN INMOBILIARIA

Alliances require that all decisions are documented, those decisions have a prior planning, not driven by impulsiveness, and the concealing of information until the strategic alliance consolidation.

It was highly curious to find that, even the always existing experiences and myths about strategic alliances are intuitive and guided “by the nose”. There is not a specific profile or social control device allowing the entrepreneurs to overcome fear and diffidence. There is no information allowing the entrepreneur to make informed decisions on prospective allies. Only strong alliances set up rigorous procedures to make a new ally, by evaluating the reputation and career history of a potential ally.

“It is many times a gut feeling more than anything else. There is empathy or that I see that he or she is working on certain properties for a fact, that they really have the market access they say or that I really believe that is a person to trust”. Owner, LA TORRE FINCA RAÍZ

Although the uniformity in the information gathered, all four cases show strategic alliances which are different. The UNION INMOBILIARIA is the case of a small business resulting from a fruitful alliance among competitors with outstanding careers in real estate in the district, but establishing strict procedures to enter the alliance resulting from the cultural pattern described. LA TORRE FINCA RAÍZ shows a disposition to set strategic alliances, despite the fact of sharing the cultural pattern, which may be the result of the German academic education of the owner. CONTADURIA MODERNA shows a negative tendency for strategic alliance, as well as CORPOBELLA, which can be explained as a direct result of the business culture in the district.

Conclusion

The results showed above, even if exploratory, allow us to conclude that the three constructs influencing business culture: confidence, authority, and equity are to be meaning threats for the entrepreneurs in the district.

Confidence is personalized and hardly granted, inhibiting business alliance formation among competitors.

The cultural landscape of confidence in small enterprises is its exact opposite: diffidence.

Individualism leads to low tolerance level of authority, inhibiting the strategic sharing among companies.

Emotions such as fear and attachment drive companies to an isolated behavior far away from integrative circuits of companies.

Negative experiences in opportunism lead automatically to value wall raising and diffidence inhibiting strategic alliance.

The work on business culture in order to foster strategic alliances must start by positively affecting these three variables and by modifying the social perception that leads to the basic principle of a hostile commercial environment.

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A Case Study on Smaller Manufacturers' Network -Analysis of factors to promote coalition business for the market development -

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This research focuses on smaller manufactures, which have a significant role in Japanese shop-floor (monozukuri) industries. Changes in economic structure have led to rapid changing from traditional business relationship and market development becomes very important for the smaller manufacturers. Whereas they don't have enough business resources, which let them organize a network in the market development to compensate for lack of resources one another.

Referring from the data of an inquiry survey to the smaller manufactures in Kansai area, we researched changes in market development approach for the smaller manufactures. Factors to promote coalition business for the market development have also analyzed from several case studies on smaller manufactures.

Track: 12. Networking, Alliance and Outsourcing

Implementing a holistic risk management in Small and Medium Sized Enterprises (SMEs)

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Abstract

Business management literature has largely neglected the theme of risk management for SMEs. This workshop sketches the outline of a holistic risk management system for SMEs to overcome the deficits and restrictions that have been detected in the literature. It also offers how such a system could be implemented step by step. All propositions pursue the aim of being practicable for SMEs. The presented holistic risk management framework takes care of the existing business planning and performance measurement instruments of an SME. Special emphasis will be given to business planning for a solid base of risk management. The underlying risk management framework is based on a larger empirical study into SMEs.

Keywords:

Business Planning, Holistic Risk Management, Project Risk Management, Risk profile, Small and Medium-sized Enterprises

1. Introduction

In the past Risk management was mainly concerned with managing single risks, for example financial risks. The development of company-wide (holistic) risk management systems was largely neglected. In the current academic literature there are hardly any practical risk management frameworks for small and medium-sized companies (Islam et al., 2008; Arnsfeld et al., 2007; Berry et al., 2007; Alquier and Tignol, 2006; Leopoulos et al., 2006).

According to the new Basel II equity regulations the lending bank has to evaluate the risk management system of an SME. The sophistication of the implemented risk management system will have a direct influence on the lending conditions. As a result of the recent financial crisis, banks are reluctant to give loans to SMEs. They are demanding more information and transparency on management accounting and risk management systems in SMEs (Merna and Al-Thani, 2008; Basel Committee on Banking Supervision, 2005).

The aim of this workshop is to give practitioners guidelines on how they can implement a sound risk management system in managing their operational and strategic risks. The suggested risk management approach does away with highly statistical methods. The presented holistic risk management framework takes care of the existing business planning and performance measurement instruments of an SME. Special emphasis will be given to business planning for a solid base of risk management. The underlying risk management framework is based on a larger empirical study into SMEs (Henschel, 2008).

This paper describes the main components needed to set up a holistic project risk management in SMEs. A special focus has been placed on the practical implementation. Examples are presented as to how the appropriate instruments should be structured (Section 2). In conclusion suggestions are given on the organizational implementation of the risk management project (Section 2.4).

2.1 Components of a Holistic Risk Management Framework

Figure 1 displays the special characteristic of risk management in project-based companies. The literature on project risk management states that the special feature in companies with project-based activity is the duality of the risk management levels (see Lachnit, 1994, p. 24; Guserl, 1996; Guserl, 1999, p. 426; Tah and Carr, 2000).

On the one hand, there is the identification and assessment of the risks at the overall company level. But, on the other hand, risk identification and assessment also have to be carried out for each individual project. Without single project risk assessment it is not possible to decide whether – given the risk situation resulting from projects already entered into – another project can be coped with at all. The special challenge for risk management in project-based companies is therefore combining the estimation of the overall company risk and the estimation of the project risks. The preparation of such an overall view of risk is much more difficult than for companies without any project-based activity.

Another challenge is the need to continuously update the estimates of individual project risk evaluations. As can be seen from Figure 1, a project can be divided into the 4 classic phases of conceptualization, planning, execution and termination. In each of these phases a risk review should be made.

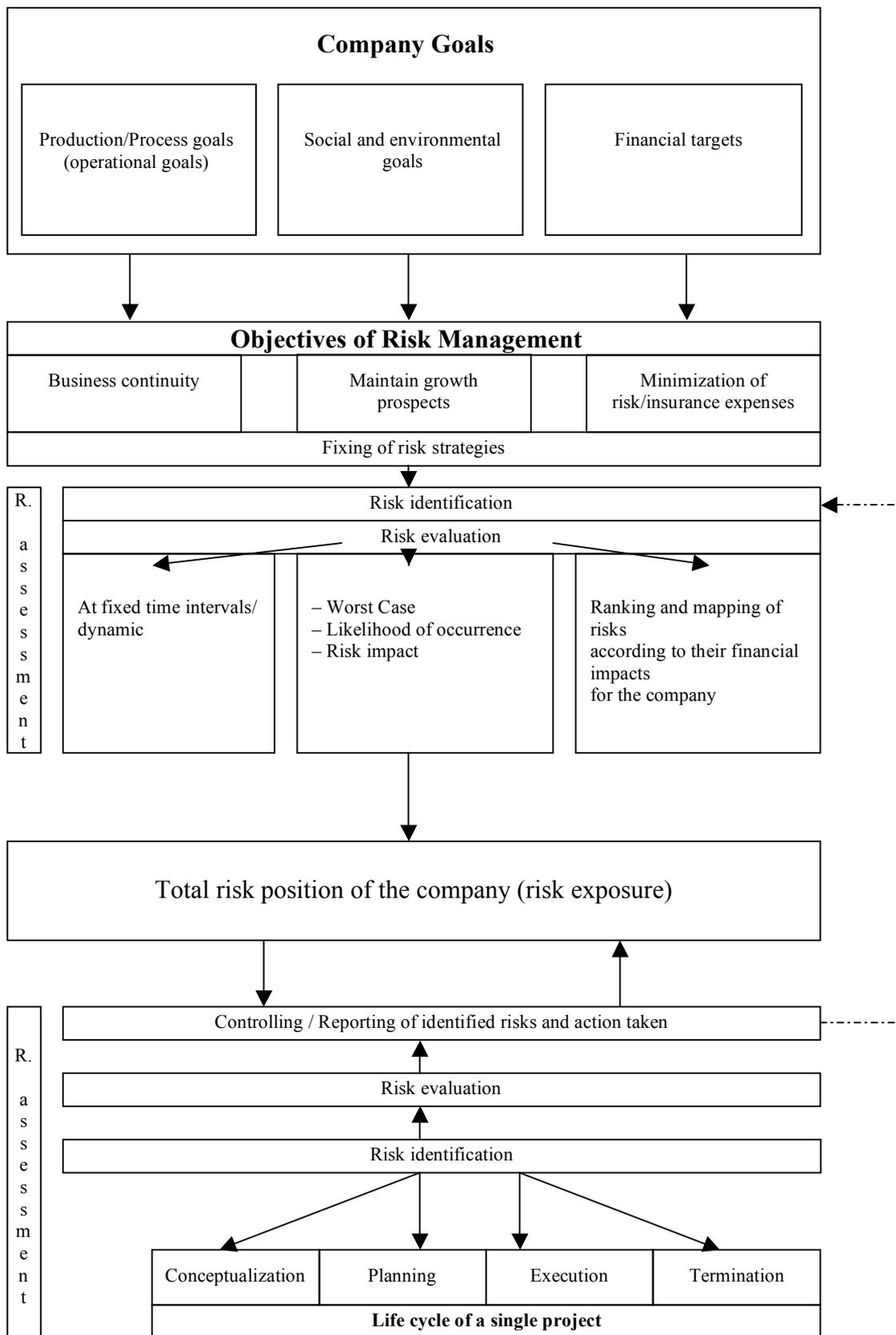


Figure 1 Risk Management Framework

Source: based on Guserl (1996; 1999) but heavily modified and extended

Given the complexity of building a risk management system, it is recommended that a modular structure be followed. The business planning should be developed into an integrated system (overall company planning module). Another module should be added in the form of a consolidation of single project plannings (project planning module). The project planning module must then be linked with the overall company planning. Such an approach leads to a simplified risk management. The existence of a profit and liquidity plan for each project means that the deviation between planned and actual situation can be studied. This already allows a simplified analysis to be made as to which risks led to the deviation between actual and planned situations.

Figure 2 gives an overview of the input and output modules which will be discussed in the following paragraphs.

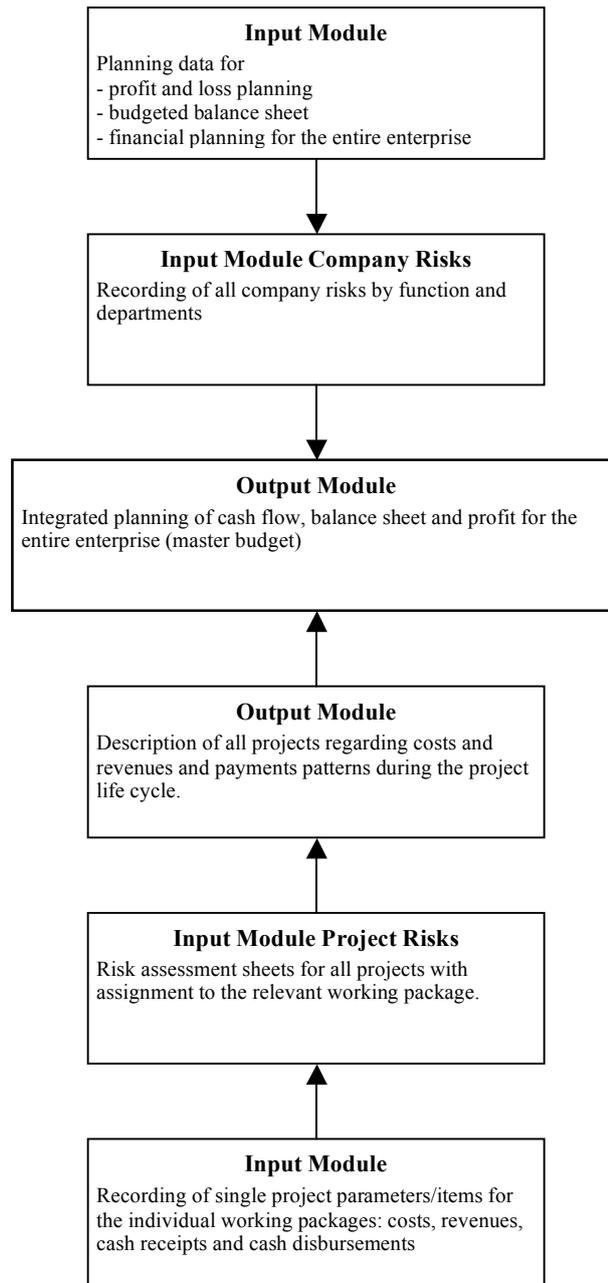


Figure 2 Input and Output Modules of the Risk Management Framework

Once the individual project planning module and the overall company planning module have been set up, the risk identification module should be established. The following notes explain how the input module should be implemented at the overall company level. The project risk module is then presented.

2.2 Risk Analysis at the Overall Company Level

With the input module “overall company risks” a common identification template is suggested with the following inputs, in order to ensure a company wide

systematic and complete risk identification along the various functions. The following overview delivers a summary of the essential elements subsequent which will be discussed below (Figure 3).

1. Number
2. Risk description
3. Risk type: financial, operational, organizational and management risks; external/internal and qualitative/quantitative classifications
4. Relation to master budget entries
5. Risk assessment for severity and probability of occurrence
6. Definition of ratio, measure for monitoring of risks
7. Definition of thresholds for early warning actions
8. Determination of risk strategy/actions
9. Responsible employee for risk monitoring

Figure 3 Input Module for Risk Assessment: Company level

To make easier the co-ordination of the risk assessment templates from the various functional areas, a standardized structure for the templates on the company level is proposed. This has the advantage that the responsible employees are always familiar with the templates and could take over without any problems the risk assessment in another functional area. Since just in SMEs the staff often are responsible for various functional areas the application of the risk assessment templates is strongly supported.

The risk assessment template on the company level qualifies a risk with respect to its source as external or internal. The categorization is carried out by the employee who is responsible for the assessment of these risks. A brief description of the risk and its qualitative and quantitative classification is added.

An estimation of the impact of the risk follows. A classification into risk classes or the amount of loss is preset in verbal manner, respectively. To illustrate the class descriptions percentage figures ranging from 0% to 100% are added.

For risks that are immediately quantifiable a possible loss (in Euros) can be filled in. Here it is suitable to ask for a 3 class estimation: worst case, base case, best case. This would make possible an easy going through risk scenarios on the overall company level.

In the next step it is determined which positions of the business planning an identified risk figure is linked with. If an identified risk can be associated with several positions of the business planning, its financial impact should be split according to the effect it exercises on the respective position. The main aim of this association is to make the impacts of risks on the firm's development obligatory and transparent.

After the identification of all relevant risks within the functional areas and the processing (by the controlling function, for example) of the completed risk assessment templates the discussion of the management with the heads of the functions on the identified risks and their relevance follows.

This provisional link of risk figures with the business planning also supports the determination of suitable indicators to measure and monitor risks.

The risk assessment is accompanied by the determination of the observable figure for measuring the respective risk. This monitoring should be carried out by the employee who is responsible for risk assessment. He is closest to the risks in question and can make suitable suggestions concerning their assessment.

If a systematic risk assessment is carried out for the first time, the estimation of thresholds for the ad hoc reporting as well as the fixing of countermeasures should be carried out in discussions between the management and the heads of the functional areas. In this way a common knowledge of the impact of the various risks can be achieved. Finally, the responsibilities for a continuous monitoring of risks as well as the time interval for risk revision is fixed.

As described in Section 2.1, a first formal risk assessment should be repeated after about 6 months, to make corrections. In future, the formal risk assessment should be carried out once a year.

2.3 Risk Analysis at the Individual Project Level

Enterprises that are project-oriented need a separate risk identification and risk evaluation for their single projects. As outlined in Section 2.1, the challenging task is the consolidation of single project risk assessments to result in an overall risk assessment. To support the consolidation procedure, a risk assessment template for single projects is proposed, being essentially identical compared to the risk assessment template designed for the company level. Figure 4 presents its contents.

1. Number
2. Risk description
3. Risk type:; financial operational, organizational and management risks; external/internal and qualitative/quantitative classifications
4. Assignment to the respective work package(s)
5. Risk assessment for severity and probability of occurrence
6. Relation to master budget entries
7. Definition of ratio, measure for monitoring of risks
8. Definition of thresholds for early warning actions
9. Determination of risk strategy/actions
10. Responsible employee for risk monitoring

Figure 4 Input Module for Risk Assessment: Project level

The first three entries of the assessment templates for the company level and for the project level are identical.

On the level of a single project it is important that the risks are assigned to work packages and the corresponding activities. If a project risk is assigned to several work packages a splitting should be fixed with the percentage share of each of the work packages involved. The impact of projects risks on profit is determined just as in the case of risk assessment on the company level.

In addition, the identified project risks should be linked with the corresponding positions of the company's business planning, which supports the consolidation of the impact of single project risks.

The remaining entries of the project risk assessment template are in accordance with the entries on the company level.

Project risk assessment templates should be prepared and cultivated for each single project. The assessment of project risks should be integrated into the project file and be monitored by the employee responsible for risk management. After the termination of a project essential risk information from the project risk assessment templates can be transferred to a project data base. Thus for future projects the knowledge and the experience how to handle project risks can be made exploitable to the staff.

The improvement in the direction of an integration of all single project risks into the business planning must be an iterative process. In a first step, to determine the

potential loss resulting from all projects the identified relevant project risks should be summarized manually. This may be in the form of summary tables, being essentially a condensed kind of project risk assessment template. The summary tables could be visualized graphically by a risk portfolio.

In a later step, risks from single projects can be consolidated to give the company's overall risk position. To support this procedure and to make the context for the staff easier to understand, project risk assessment should in any case include the assignment of project risks to the corresponding positions of the business planning. The standardized structure of the project risk assessment templates will support the later transfer of project risks into the company's planning system.

2.4 Recommendations for the Process of Implementation

The limited resources in SMEs mean that a phase concept is recommended for setting up a formal risk management. As mentioned in Section 2.1, this permits a phased introduction of the risk management components.

The introduction of the risk management should be organized as a project, in which the classic project organization criteria are applied. The project must be sponsored by the executive board in order to give it backing. It should be managed by the controlling function, if one exists. For companies without a controlling function the task should be mainly carried out by the personnel responsible for accounting.

The project team should also include the heads of the functions. In SMEs flat organizational hierarchies predominate. So the project team should normally consist of not more than 4 to 5 people. Most of the SMEs interviewed make use of external support through the tax advisor or chartered accountant. For that reason the latter should be involved as knowledge stewards at intervals during the establishment of the risk management. The tax advisor and the chartered accountant can make an evaluation of the risk management modules implemented so far.

The concept of a phased introduction is recommended on another ground as well. In SMEs initial success in terms of the newly established risk management must be present; otherwise SMEs rapidly lose interest in it and turn to other activities (see, for example, Hudson et al., 2001, p. 112; Münzel and Jenny, 2005, pp. 128-137; Hudson Smith and Smith, 2006, p. 5). Statements on the time required to introduce

such a risk management are difficult to make since this substantially depends on the size of the company and the pre-systems which already are available (such as business planning, quality management). Münzel and Jenny (2005, p. 129) point out that a period of at least 6 months can be expected for the introduction of a risk management system in medium-sized SMEs. In their project a controlling function was available which was largely responsible for dealing with the implementation. For companies without such a controlling function a much longer project duration can be expected.

The course of the implementation project and its main milestones can be taken from Figure 5, which also lists the personnel being responsible.

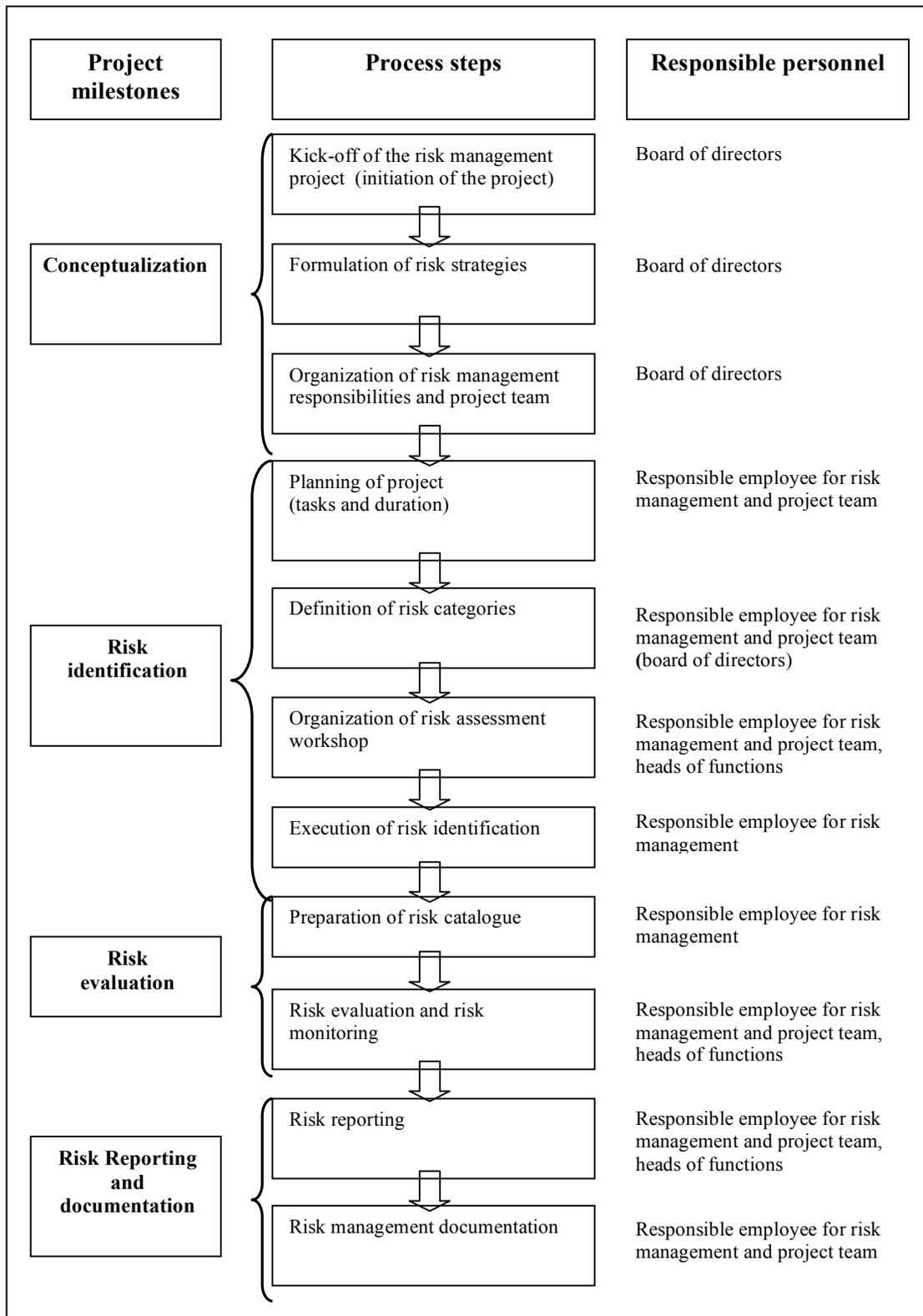


Figure 5 Phases in the Establishment of a Risk Management System

The project team should consist of the managing director and an employee from the controlling or accounting function. The controller or the accountant should be responsible for moderating the project.

It would also help the initiation of the “risk management” project if at least at the beginning the tax advisor or certified accountant should be involved for developing the concept of the risk management system.

The employee responsible for risk management must be appointed at the start of the project. After the general preliminaries there follows the preparation of the risk inventory for the whole company. Here the executive board and the controlling function first specify the main strategic and operational risk categories. A rough prioritization of the risk categories should then be made.

The identified risk categories are then analysed in a first workshop involving the executive board and the heads of function. The flat organizational structure of SMEs means that such a workshop should consist of not more than 4 to 5 employees. As the literature has revealed (see, for example, De, 2005, p. 198; Krämer, 2003, p. 92), SMEs are organized in a functional way. So the members of a workshop would be the personnel responsible from the purchasing, production and sales units.

In order to simplify the preparation of the risk inventory, the controlling function should prepare identification forms for each functional unit, taking as a starting point the risks developed so far with the executive board. The aim of the workshop is to check whether the main risk fields have been identified and which risks have yet to be added. Finally, a joint decision is made on how the risks are to be measured and on what the critical threshold values should be. Again the employee responsible for the risk monitoring should be appointed.

In a second workshop the results of the first one should be discussed and the final version of the risk catalogue approved. Finally, agreement should be reached on the measures to be taken if the critical threshold values are reached. The results of the second workshop could include developing the risk portfolio for the whole company based on the risk catalogue prepared. The identified and assessed risks are entered manually into a portfolio with the axis labels “level of damage” and “probability of occurrence”. It is done without drawing on mathematical or statistical procedures. A verbal description is sufficient here, with the levels low, average, high, threatening.

After having assessed the relevance of the risks, the classification of the risks in the risk portfolio for the overall company can be made. This allows to assess the present level of risk of the company. The process of preparing the risk portfolio

would have to be somewhat intensive if a continuous and thus current estimate of the level of risk for the company were to be made. It can only be simplified through the link between risk management and business planning discussed earlier.

The last step of establishing a risk management system is the definition of the risk reporting. The risk reporting process should be integrated into the general reporting procedure. An ad hoc report is provided for when the critical thresholds are reached. For SMEs it is sufficient if information on the risks is provided as part of the monthly reporting. SMEs can also apply the annual review to go over the risk inventory prepared. To make sure that no major risks are overlooked during the preparation of the first risk inventory and to check that the indicators specified for measuring the risks are appropriate, it is recommended that another review of the risk inventory be made after 6 months. A review can then be carried out at yearly intervals. The main rules for the risk management system introduced should be set down in writing. If a quality management manual is available the opportunity can be taken to include the documentation in it.

3. Conclusion

In order for a risk management process to work, it is also essential that there is a holistic integration into the existing business planning systems. Without this integration risk management would only remain mere “empty talk” and of no value for the firm. The employees would not see its benefit, they would only think of it as additional workload. If, in contrast to that, risk management were integrated into the standard planning process, acceptance would increase, leading to a more systematic and comprehensive risk assessment. Only in this way can risk management in SMEs be established to ensure practicability and low costs.

Management Accounting (controlling function) plays an essential role for organizing risk management in SMEs and for improving it. The managing director alone will not be able to establish and to maintain risk management. The results of the author’s own investigation have showed that firms having a controlling unit assign it to implement risk management. In firms having a controlling function the risk management process and the methods of risk assessment are significantly better established. There is a size effect with respect to having a controlling unit:

controlling plays a role only for medium-sized and for larger firms. In micro and small firms controlling tasks are carried out by the managing director or by a member of accountancy staff.

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Creating a Biotechnology Spin-off: an Ethno-dramatic Approach

by Heidi Rajamäki

This article explores the process of a multidisciplinary team creating a shared understanding of a business opportunity in the field of biotechnology. The purpose of this study is, through dramatic devices, to explore and examine the creation of a university spin-off from the insider perspective.

In this article the findings are presented in a form of an ethno-dramatic script. Following the words of Morgan et al. (2001) “we combine ‘natural script dialogues’ with dramatized scenes ‘crafted from field notes’ where the performance’s textual narrative [may] actually consist of a composite gathering and editing of data which are fragmentary, autobiographical, personal, and incomplete.” By adopting the ethno-dramatic approach the findings are attempted to be made equally accessible to a diverse audience i.e. practitioners, policy makers, biotechnology scientists as well as business scholars.

A Prologue

It was June 2008 and a university professor’s group was about to face serious challenges regarding the group’s funding. It was highly likely that the group would lose some of their talented and motivated researchers if the contracts of several researchers could not be renewed during the autumn. The professor needed to come up with some other solutions to the funding problems. He had long been considering starting a spin-off company but the university regulations required that they would need to write a solid and convincing business plan where they would explain the planned business in detail before they would be granted the permission to spin-off.

Prof: *Our research group has a big budget deficit and I need to find that money from somewhere. Otherwise our group’s finances will go all pear shaped and I might not find the money to pay your salary...*

Maria (a researcher in Prof’s group): *Oh*

Prof: ...so, it is extremely important that we get the business plan done quickly. I've had a few people writing it for a couple of years now but the project has not proceeded...

Maria: It looks more like a research report than a business plan.

Prof: Yes well, it isn't written exactly how it should be. Ask if Anna can give you any advice and see if you can make it any better.

Introduction

Few industries face such great expectations as biotechnology. It has been considered to be the most promising technological frontier for the coming decades. Biotechnology involves the use of living organisms or parts of living organisms with a molecular mass from 1-100kDa to alter living or non-living materials. The biotechnology industry is made up of companies which apply biotechnology techniques to produce goods and services as well as companies which employ the technologies, applications and products concerning industries such as health care, pharmaceuticals, environmental protection, agriculture, food production and industrial chemicals (Hall & Bagchi-Sen 2007, Pisano 2006, Hine & Kapeleris 2006, Rader 2005). Affecting such great variety of industries and areas of living, the biotechnological applications are expected to revolutionize the lives of individual people and influence whole economies and ecosystems. At this point, in the USA and Europe, the biotechnology industry has not yet delivered its promise of virtually unlimited commercial possibilities and many have lost their faith in the sector (Pisano 2006, Hermans, Kulvik & Ylä-Anttila 2005, Orsenigo 2001). In addition, in spite of increasing patenting activity, the rate of new company formation in biotechnology has been steadily declining throughout this decade in Europe and the USA (Critical I). This article focuses on the challenges of new venture creation, more specifically the creation of a university spin-off.

The biggest challenge for a new venture is transforming the founder's personal knowledge or idea into a crystallized idea of the business opportunity (Brush et al. 2001, West & Noel 2009). Furthermore, regarding the science-based business, the diversity of the social worlds of scientists and business practitioners raises significant challenges for translating the knowledge from the basic science into new technological innovations. Traditionally there has been a contrasting difference between knowledge produced for fundamental scientific interest and knowledge produced primarily for commercial gain (Powell & Owen-Smith 1998). Knowledge production in Pasteur's quadrant i.e. at the intersection of scientific achievement and commercial potential is essentially a characteristic of biotechnology business (Stokes 1998). Before the emergence of biotechnology business, science and business operated in separate spheres.

Working in Pasteur's quadrant where scientific and commercial opportunities converge involves several conflicts. It is well documented that people from different thought worlds use different meanings in their functional setting and cannot easily share ideas or may ignore one another's central ideas or reject them outright (Dougherty 1992). Nonaka (1994) suggests that what is required is the generation of "mutual understanding" where individuals can work through these semantic differences by making tacit knowledge explicit across a boundary. The purpose of this article is to explore the process of a multidisciplinary team creating a shared understanding of a business opportunity in the field of biotechnology.

In this article the findings are presented in a form of an ethno-dramatic script. Following the words of Morgan et al. (2001) "*we combine 'natural script dialogues' with dramatized scenes 'crafted from field notes' where the performance's textual narrative [may] actually consist of a composite gathering and editing of data which are fragmentary, autobiographical, personal, and incomplete.*" By adopting the ethno-dramatic approach the findings are attempted to be made equally accessible to a diverse audience i.e. practitioners, policy makers, biotechnology scientists as well as business scholars.

The rest of this paper takes the following route. Firstly, the theoretical approach is described. Secondly, a short overview of the data used in our study is given and the adapted methodology is explained. The findings will be then presented in a form of an ethno-dramatic script. Finally, the ethno-drama will be discussed and reflected on.

Theoretical approach

The focus of this paper is a multidisciplinary team attempting to create mutual understanding of a business opportunity and crystallizing it into a written business plan. Recent literature has identified several problems in the creation of university spin-outs. Firstly, they face a challenge to transform the initial idea, evolved in a non-commercial environment, into an established profitable firm. Secondly, the conflicting objectives of academics, venture capitalists, stakeholders and the management team may adversely affect the business (Vohora et al. 2004). In addition, science-based companies lack a clear market-oriented focus, as well as the commercial sense and skill to orient their organization as a business towards the markets. (Hermans, Kulvik & Tahvanainen 2004). The founder can myopically focus on science and disregard any recommendations of the managers intended to help to run the business (West & Noel 2009).

Planning in organizations is a critical event and concerns the forms and mechanisms of control which enable an organization to orient itself toward pre-established goals (Ouchi 1979).

Strati (1998) classifies different possible research streams to study organizational planning: plans as symbolic artefacts, plans as mental rehearsal, planning as auto-communication, planning and the symbolism of information, planning and organizational times as well as planning organizational skills. In a new venture creation, before the top management team has ever been assembled, the knowledge which guides further resource acquisition and the development of the venture must reside largely in the mind of the founder. New ventures come into being when the knowledge on the market opportunity is crystallized (West & Noel 2009). In university spin-offs, the first step of the process is to write the business plan to get a permission to establish the company. Thus, the research approach considering planning as a mental rehearsal is appropriate in this study.

Planning as a mental rehearsal focuses on the act of conceptualizing what is to be done. It is the point where the founder or the founding team is fantasizing about the organization that does not yet exist but is conceived by the planners as if it was already real (Strati 1998). It is a mental rehearsal in which the founders negotiate and evaluate different possible realities of the organization to be. Therefore the focus of the study is *“the linguistic enactments of the 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).

Methodology

This paper builds on the results of a nine-month empirical study focusing on the creation of a university spin-off company in the field of biotechnology, more specifically in combinatory chemistry. The team consisted of a university professor and some members of his research group at the pharmaceutical chemistry department, a university technology transfer officer and a business researcher who acted in the project as a commercial advisor. Hence, in the study, the author acted as an insider participant observer and actively engaged in negotiating the shared understanding of the business opportunity. The collected field notes consist of transcriptions of informal discussions. Telephone interviews have been transcribed as accurately as possible after every call. Also, the contents of personal one-on-one discussions have been transcribed as accurately as possible after every encounter. Skype chats and e-mails were saved as text files.

The analysis was conducted as follows. At the first stage the analysis was conducted by the author of this article and a scientist of the studied team. The analysis was started by reading the notes line by line and both researchers independently labelling the themes, issues, categories, activities and patterns found in the data, not based on some given framework or a set of pre-formulated propositions (Eriksson & Kovalainen 2008, 129). This was done independently by two

researchers to ensure that the voices on either “side of the border” would not be subdued in the study. These two lists of labels were then combined into one shared list of labels by negotiating each label until we had a list that we both agreed on.

On the next stage the labels were clustered by identifying connections between the labelled themes by drawing maps. Four clusters were identified: 1. competencies and capabilities, 2. stereotypes, 3. relationships, 4. business plan, the shared idea of the business. The data was then re-coded using these four extracted labels.

The recoded data related to the business plan was adopted in further analysis for this article. An ethno-dramatic script was created around the recurring patterns of the data related to the business plan.

Ethno-drama is a union of performance and ethnography, a genre of performance used for the interpretation and transfer of research (Alexander 2005, Rossiter et al. 2008) where the idea is to transform the ethnographically derived notes into theatrical scripts or performance pieces that are highly evocative and embodied (Smith & Sparkes 2008, Mienczakowski 2001). In the literal sense of the aphorism “walking a mile in someone else’s shoes”, the intent of ethno-drama is to allow both the participants and the audience an opportunity to an aesthetic understanding via a staged re-enactment of the lived experience (Alexander 2005, Mienczakowski 2001).

Ethno-dramas are theatrical performances (Rossiter et al. 2008) that can be interactive entailing the exits and entrances for audience members as well as for the cast (Rolfe et al. 1995). The positioning of audience members as agents in the production requires them to interact with the performance and to engage in the emphatic and embodied ways of knowing (Alexander 2005). Furthermore, the performance has potential to invoke change because it helps the audience, participants, and the researcher think critically about their world (Alexander 2005, Nimmon 2007). Even though ethno-dramas are theatrical the aim is to remain strictly faithful to the lived reality, primary research subjects and veracity of the data (Mienczakowski et al., 2002, Smith & Sparkes 2008). The creation of plausible accounts of the everyday world is one of the major objectives of ethno-drama as it seeks to perform the research findings in a language accessible to wide audiences (Mienczakowski 2001, Smith & Sparkes 2008). Interactive ethnographic performances go further still in experimenting with and disturbing the delineation between performers and audiences, texts and authors. Therefore, the genre of ethno-drama creates a space where multiple perspectives are activated and where truth becomes subjective and interpretive (Nimmon 2007).

In different social contexts such as scientists and business practitioners, the constructs are not expressed in the same way (Agar 2007). The aim of presenting the findings as an ethno-

dramatic script is to make the findings understandable and equally accessible to a diverse audience such as practitioners, policy makers, biotechnology scientists as well as business scholars.

The Ethno-dramatic Script: The Spin-Off

The professor had a problem. A few members of his group had been writing a business plan for couple of years but the outcome was more like a research report than a business plan. It extensively explained the research and scientific expertise of the group but they really did not know what to write there about the business. They had a good start on that part too though. They had written about markets, packaged services they wanted to offer, competitors, organization chart etc. The scientists had even read some articles on biotechnology business and quoted also those in the business plan. To get the plan finally finished, the professor asked a business researcher, Anna, who was studying biotechnology marketing, to help out in the process. The professor had read some of Anna's publications before and she was related to one of the scientists in professor's team. So, Anna joined the team that was responsible of the business plan.

The team consisted of researchers from very different social contexts. The scientists had a very clear picture and could specifically define the technology they wanted to use in their services. For Anna, it was incomprehensible, because she had no previous experience in chemistry. For the scientists, the business terminology was incomprehensible as well. However, the lack of competence in certain areas of expertise did not cause all the problems with the terminology. It turned out that although the scientists could describe the technology and Anna learned to understand it, there was no equivalent terminology in the business context or if there was, it was very ambiguous. The same term in the business context could have a totally different meaning in the science context.

Anna (business researcher): *I do not quite understand what markets the company is going to operate in.*

Prof: *The customer can say that they have this and this kind of a target, for example a certain part of protein where the drug will anchor. Then we will do the modelling for it to find the suitable molecules, and should the customer want it we can also synthesize them and optimize the activity.*

Anna: *Is it general service or specific illnesses only?*

Oscar (technology transfer officer): *I think that, even if your know-how is generally in the field of lead discovery and optimisation, focusing on particular diseases could be better in the start-up phase.*

Anna: *So, we would need here a sentence saying that the company is ... and then what it is, so that in one sentence we could say what the company does. The company is a xxx company specializing in xxx.*

John (researcher in Prof's group): *LDE is an academic spin-off company providing contract services in the identification of original drug hits, hit to lead optimisation and other tailored services for the pharmaceutical and biotechnology industries.*

Anna: *Well yes, it says that it is an academic spin-off company but that word doesn't tell anything about the business idea to the client. And the draft version is talking about clinical research, but that is not what LDE will be doing.*

Maria: *It is a wrong term, I think it should be something like drug research, pharmaceutical research or something of the sort ... contract research services are those who do clinical testing.*

Anna: *Is it combinatory chemistry what this firm does?*

Maria: *Well if combinatory chemistry is what was written in that one article then yes, you might even say chemistry related biotech or pharmaceutical biotech.*

Anna: *so well just change contract services here*

Maria: *you can't put contract research services either, because those are the companies doing clinical tests*

Anna: *ah yes, so I'll write here conducting drug discovery research?*

The reason why the company exists needed lengthy negotiations to reach a shared understanding. The purpose of the company meant very different things to different members of the team. The views of business researcher Anna, the scientists, and a practitioner-scientist Prof T, were very different. All in all, such things as customers and growth came up in discussion only when Anna specifically asked about those.

Anna: *Then we need a mission statement, it is a sentence about what the company wants to achieve.*

John: *The aim is to get one order during the first three years and to attract at least € 400.000 development capital by means of an equity investment in order to buy out our first round financiers. The company shares will be sold in 60 %, 20 % parts, 10 % will be owned by the university and 30 % by the founder who is the professor.*

Anna: *Well, we need to write here who will own it first; at this point we don't need to write how it will be sold.*

Anna: *I was reading the annual reports of the competitors...I wonder if your aims are a bit too low; these firms have quite impressive turnovers.*

Prof B: *We don't have to make all that much money with that company, even a million in a year will be enough.*

John: *We do not need that much, a three years budget of about € 482.000 would be sufficient for the employment of the research and management team, molecular modelling, synthesis and analysis expenses, safety, consumable supplies, in-vitro studies, equipment and general expenses.*

Prof T (a friend of Prof, has his own spin-off): *It is advisable to take advantage of some public support money, but I would actually not recommend getting involved with the sharks of the venture capital market.*

John: *Ok, I was planning to start looking for financing from a ministerial organization. I just need to know how much financing we need.*

Maria: *Lets see...according to the cash flow statement here in the business plan we would need 100.000 euros initial investment.*

Prof T: *I think you should promise a faster business development due to faster capacity building. In short, you may simply modify your business plan according to your intensions by in silico adjusting cash flows, investments and brake-even points without really changing the essentials.*

Anna: *But if you're thinking of selling something you won't need all that initial capital. Are you thinking of selling something or what will all these employees in the organisation chart will be doing?*

Prof B: *My friend in Star Pharmaceuticals said that they are starting to outsource their research. I said that I can put up a company, but then they will have to guarantee that they will start projects with us.*

The most often recurring theme in the project was to “talk to the big boss”. The scientists had been used to ask for advice from their professor who excelled by far their own scientific competence and thus usually was able to give insightful advice. In the making of the business plan, almost every encounter entails a section where the members of the team discuss that the problem at hand has to be taken to the professor. It was as much done to ask advice as to ask blessing for something that had been written in to the business plan. When it emerged to the team that the professor did not know everything about creating a spin-off they had a hard time accepting

it and claimed first that he just did not care about the project at all. Professors lack of business expertise caused serious frustration and desperation in the members of the team.

Anna: *Hi Oscar, I am filling in the financial statements for LDE. TTO said that you are in charge of the project. Is the company able to use university facilities free of charge or do I have to count some rents also?*

Oscar: *Mmm, I'm not quite sure I understand where the company is supposed to be situated. You should ask the TTO and the Prof. if you want to understand anything of this business.*

Anna: *Ok. It is a bit difficult for me because I do not know who is exactly in charge of what.*

Oscar: *I understand perfectly your point! It would be a good thing if Maria could speak with the big boss in person for the time needed to solve the entire thing.*

Maria: *On Monday I'm going to give him (the Prof) these tables to fill in the numbers, and I'll say that before it's filled we won't be doing anything else.*

Anna: *I think that we should fill them in ourselves and decide how many orders the company is going to get.*

Maria: *Let's fill it in then and I'll ask if the numbers we have come up with will do.*

To get the process started, we needed to comprehend who would be doing what in the company. The idea was that those people could bring into the business plan their views at least in those areas they were going to operate. The ideas of how the company would operate were very academically oriented and the academic ranks were a very important sign of seniority.

Anna: *Should we change the organisation chart a bit, why is it so hierarchic? What do these senior scientists do?*

Maria: *They do what the junior scientists do, except that the seniors have PhD and the juniors don't.*

Anna: *Do they supervise the juniors or something?*

Maria: *Yes, kind of, although for example the junior doing modelling knows more than the senior does, she just didn't want to do a PhD.*

Anna: *Does everybody in your group whose contract is ending going to be working in LDE?*

Maria: *Apparently*

Anna: *Why has John been chosen as CEO here?*

Maria: *Because he wrote this business plan.*

Anna: *Ah ok. Well, people who don't know anything about business can't be managers.*

TTO: *I agree, the main weakness of the project is the lack of management skills. So CEO won't be John, but someone else who has some experience, hired for the purpose and put in the management. John can be the Lead Scientist or the Scientific Officer, since he has no management background.*

Maria: *Anna could do it, you could move here. We would make a really good team.*

Prof: *Maria can be the CEO and Anna can be the outsider consultant, Maria will just have to ask for her help in his job.*

TTO: *I agree.*

Maria: *Well, it seems that I get to go back to school. I think I'm going to take one or two of the marketing courses at the open university or I can attend your courses Anna.*

Conclusions

In this article, we have presented our findings in a form of an ethno-dramatic script. Presenting the findings in this way, we have attempted to make them more accessible to a wider audience (Morgan et al. 2001, Leavy 2008, Mienczakowski 2001) than just business scholars. We hope that the article will generate insights of the lived experience and give a sense of “being there” with our multidisciplinary team creating a common understanding and our struggles related to integrating the two traditionally separate fields of expertise and translating knowledge from one world to another.

A well written and performed ethno-drama stirs the audience emotionally to evoke empathy and new understanding of the characters' lives and persuades the audience to critical thinking about the social and lived realities of the situation represented (Nimmon 2007). The ethno-drama presented in this article has not yet been performed, so for us it is difficult to estimate the impact of this particular ethno-drama on the audience. In addition, ethno-dramatic approach considers that the truth is interpretive and subjective. Therefore each member of the audience interprets the performance differently and allows the reader to make use of the ethno-drama in various ways. Paradoxically, this openness which might be seen as a limitation is in fact at the same time the strength of an ethno-drama. The openness makes an ethno-drama more accessible to a wider audience (Morgan et al. 2001, Leavy 2008, Mienczakowski 2001) than reporting the research findings in a traditional way where the explicit interpretations of the material are made compelling by the use of abstract definitions and theorems that provide an explanation of events (Carless & Sparkes 2008).

The results of this study show that studying a new venture creation from an insider view is a fruitful method for the identification of challenges that arise from integrating knowledge from two social contexts. In particular, presenting research findings in this way may open up an equally accessible ground where practitioners, researchers and scientists could negotiate shared understanding on a successful spin-off creation. This study also provides with evidence that the biotechnology industry essentially has specific characteristics and thus traditional management constructs might not be applicable to it as such.

An Epilogue

Prof T: *I just finished reading your business plan. Congratulations! It sounds absolutely convincing to me.*

Prof: *Oh good, I'm glad you think so*

Prof T: *What you need now are people with an IQ high enough to understand the message.*

Maria: *I don't know who the one is granting the permission. There's supposed to be an expert panel who reads the proposal.*

TTO: *I will recommend to the panel that they would grant the permission. It's profitable for the university as well to get this company up and running.*

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Business Idea Identification of Portfolio Entrepreneurs and the Role of Team Founding for Serial Venture Creation - Insights from a Cases-driven Explorative Study

by Christian Scheiner , Stavroula Laspita, Alexander Brem, Kai-Ingo Voigt, Tobias Johann, Madlen Schwing, Heinz-Klandt

In the last years the field of entrepreneurship has attracted a lot of attention from the broad public (Butler, 2004). Especially, the importance of entrepreneurship in mature economies like Germany has increased as it is argued that innovative business foundations can improve the competitive position of a nation. In addition, they are associated with job creation (Egeln, 2000). A phenomenon in the entrepreneurship area is individuals that found more than one business. In Britain for example those so-called serial-entrepreneurs are responsible for almost half of all small to medium-sized companies founded (Harris, 2005). Within this paper, cases of eleven German portfolio-entrepreneurs will be presented and analysed. Thereby, the business idea identification and evaluation will be analysed and the role of team founding further examined. Most of the ideas are based on products or services that are transferred in new markets (regions). The realised business ideas are characterised by a high homogeneity. Participants mainly followed a specific pattern in the idea identification, evaluation and realisation. For the majority of entrepreneurs, the idea evaluation is a structured process with specific decision criteria. The importance of team founding for portfolio entrepreneurs is acknowledged in this study, as most entrepreneurs in our sample have founded at least one of their businesses in teams. Some of the major reasons leading to team start ups are the lack of resources which gives significant emphasis to the view that supports that the formation of team start ups is a strategic choice.

Key words: Portfolio-entrepreneur, business foundation process, business idea identification, team founding

Theoretical Framework

Serial-entrepreneur

Similar to entrepreneurship, different and often only vague definitions exist for the term entrepreneur (Gartner, 1989; Bygrave, 1997). Wickham (2004) for example takes an organisational perspective in stating that “the entrepreneur is recognised as the person who undertakes the task of bringing together the different elements of the organisation ... and giving them a separate legal identity” (p. 9). Kuratko/Hodgetts (1998), however, use a person-related perspective by defining an entrepreneur as someone who is highly committed, uniquely optimistic, creative and possesses a sound judgment.

Bearing in mind the definition of entrepreneurship and the different entrepreneur definitions given, an entrepreneur is characterised within this paper as an individual that recognises a business opportunity, founds an own business to realise the business idea in order to create value (Bygrave/Hofer, 1991).

Entrepreneurs, however, are no homogeneous group, wherefore different criteria are used to categorise them. They can be categorised for example according to personality, status, behaviour (Mugler, 1998; Pichler, 2000), foundation incentive (Freiling, 2006) and the number of founded businesses (e.g. Taplin, 2004; Ucbasaran, 2001). For this study the number of business founded is used as the characteristics and specifics of entrepreneurs with several new venture creations will be analysed. Hence, entrepreneurs can be further divided into nascent, serial and novice entrepreneurs

Nascent entrepreneurs are planning to found new business and have started already with the realisation (Wickham, 2004; Taplin, 2004; Carter et al., 1996). Novice entrepreneurs, however, have founded already one company (Taplin, 2004; Westhead, 2005). Serial-entrepreneurs are defined as such individuals that have created already more than one venture (Taplin, 2004) and can be further distinguished into sequential and portfolio entrepreneurs (Wickham, 2004; Westhead/Wright, 1998, Taplin, 2004). Sequential entrepreneurs own in contrast to portfolio entrepreneurs only one business at each time, while portfolio entrepreneurs own and run at least two business at the same time.

To analyse the characteristics and specifics of serial-entrepreneurs within the business foundation process the aspects have to be described which will serve as basis for the analysis. Socio-demographic characteristics and traits were chosen for this purpose.

Socio-demographical Characteristics

In general, Jacobson points out that the validity of socio-demographic characteristics is in general limited. Nevertheless, they are appropriate to describe serial-entrepreneurs in more precise way. Therefore, socio-demographical characteristics will be analysed. Age and gender were identified within recent studies to have an impact on the business foundation (Jacobson, 2006; Klandt, 1984). Religious denomination and nationality are also often used in this context, but will not be further considered. Their correlation with the foundation is controversial discussed within the entrepreneurship literature and could not be proved. Nationality as another socio-demographic characteristic will be neglected within this study as all serial-entrepreneurs are German and hence, the use of it will provide no new insights. Family status as another possible socio-demographic characteristic will be addressed within the environment-related factors.

According to Jacobson (2004), Delmar/Davidsson (2000) and Klandt (1984) is the founding activity highest between the age of 25 and 40 years. This is in concordance with the theory of Lile (1974) who states that with increasing age self-confidence, working experience and competencies increase, what influences positively the willingness to start an own business. Simultaneously, the foundation of an own business on the other hand is perceived as more and more risky as the salary increases over time in an employee status and hence, enables to keep a family.

The majority of business foundation is realised by men (Jacobson, 2004; GEM, 2003). In Germany for example 77 per cent of the entrepreneurs are male. In the USA and Sweden the percentage is with 67 per cent only slightly lower. Several reasons could be responsible for the imbalance between male and female entrepreneurs. First, although the emancipation successes within the last decades the traditional role allocation is still prevalent. Second, an existing patriarch work of work could detain women from founding their own business (Delmar/ Davidsson, 2000). Furthermore, it could be argued that women do not want to belong to the male dominated group of entrepreneurs or are likewise not accepted by

men (Jacobson, 2004). Another reason could be that economic goals are less attractive for women to achieve than for man (Voigt/Brem, 2005) and they tend to be less willing to take a risk.

The work of Jacobson (2006) indicates that it is necessary not only to focus personal traits but also important factors like human capital and environmental aspects to be able to analyse the business foundation behaviour. Therefore, both aspects were included within this study.

In general human capital can be gained either by an apprenticeship, school, study or working experience. As Klandt (1984) points out, there is no unique opinion whether entrepreneur posses a low or high level of education. The majority of entrepreneurs has either finished an apprenticeship, a-level or a study. Hence, they have a higher educational level achieved than the average citizen. In contrast to employees on a similar level, however, their educational level is lower. In most of the empirical studies no correlation between business foundation activity and level of education could be proved (Jacobsen, 2006).

Working experience portrays the second important factor, as businesses are mainly founded in areas where entrepreneurs could gather knowledge and experience (Klandt, 1999; Jacobson, 2006). Thus, the entrepreneur has specific market and industry knowledge and had insights in operational procedures. Empirical studies regarding the correlation between working experience and business foundation found that in average entrepreneurs were 15 years in paid deployment before they started their own business (Klandt, 1984). Furthermore, management skills also have a positive effect on the success and survival probability of new ventures (Scheiner et al., 2006).

Environmental-related Factors

In the new technology based firms, team start-ups are the dominant form of founding. Surprisingly traditional entrepreneurship literature and research has neglected this form of founding for a long time as they mostly see entrepreneurship as an economic battle of a single person. “For a long time it has been a great myth that entrepreneurship implicitly describes the battle of a lonely hero against economic, governmental and social forces” (Cooney & Bygrave, 1997). Although economists have generally appreciated the significant role of start-ups founded by individuals, scholarship that has TVs (team ventures) as a focus is just starting to evolve (Forbes, Borchert, Zellmer-Bruhn & Sapienza, 2006).

According to Kamm (1990) and Klandt/Tröger (2001) an entrepreneurial team is defined by two or more individuals, who found a business together, in which they have invested own equity and aiming at the same goals. Within the team, criteria like consensus concerning norms, value, goals, an even balance of power should be given as well as complementary skills (Klandt/Tröger, 2001). Major advantages and disadvantages of the business foundation in an entrepreneurial team are shown in table 1.

Table 1: Advantages and disadvantages of entrepreneurial teams

Entrepreneurial teams	
Advantages	Disadvantages
• Comprehensive skills and competencies	• Longer decision making
• Shared risk	• Higher costs of coordination
• Higher degree of motivation	• Lower influence on the management decisions
• Bigger network	• Different goals

Schmude (2002) argues that the advantages of a foundation in an entrepreneurial team can also be achieved, if the entrepreneur has access to an adequate network. According to Aldrich/Brickman Elam (1997) a network comprises all individuals, that are linked with each other in one or the other way and create the access to resources that would not be accessible otherwise. The positive effect of such networks could be proved statistically (Kodithuwakku/Rosa, 2002).

In the team entrepreneurship (TE) literature whereas subjects like the team composition, conflicts, team cohesion etc gained the attraction of entrepreneurship scholars, the topic of team formation is rather under-researched (Cooper & Daily, 1997; Kamm et al., 1990). According to Forbes et al. (2006) there are two reasons for this situation. The first one is that venture teams can be identified after they have passed several stages of formation. The second reason is that most of the literature is concentrated on existing teams (success bias) and therefore ignores team formation. However as entrepreneurship involves aspects like emergence or beginnings (Forbes et al., 2006; Shane & Venkataraman, 2000), it is crucial to explore the factors that are related with the formation of team ventures.

According to Forbes et al. (2006) two explanations can be given for the entrance of a new member into the TV, in our case for the creation of a team start up by serial entrepreneurs. Firstly it may be that the economical and instrumental conditions could “demand” a new member. Secondly interpersonal relations could be a further drive. The first reason in other words means that the existing team seeks to fill existing resource gaps and this view has been followed by several scholars (Sandberg, 1992; Kamm & Nurick, 1993; Ucbasaran, Lockett). The initial resource profile of the venture could be vital for its success, it could lead its strategic direction and furthermore could offer a sustainable and in some cases inimitable competitive advantage. The choice of the initial resources could provide the venture legitimacy, could lead to superior performance and survival or it could lead to failure and dissolution. Human and financial resources are basic resources needed in order to launch a start up (Brush et al., 2001). Especially in the first stages of the organizational growth, human resources that are perceived as superior could help in reducing the uncertainty of the outside world, of stakeholders for example. (Florin, Lubatkin & Schulze, 2003). In most cases however, only these resources are not enough. Social capital or access to networks is also regarded as essential for success and is a prerequisite in accessing other sorts of resources (Wu, 2007; Deeds & Hill, 1996). Some ventures also need technical or physical resources. Obviously there is not a “one size fits all” solution for all ventures and assembling all the resources needed is quite often a ‘trial and error’ process (Starr & MacMillan, 1990). The second reason rooted in social psychology (Forbes et al., 2006) actually means that the new member is added as a manifestation of interpersonal attraction. Entrepreneurs search for other members whom they can trust and that have similar personal characteristics (Ruef, Aldrich & Carter, 2004). The selection of

team members for ventures can also be described as a “marriage”, therefore “chemistry and attraction” among the members becomes very important (Kamm and Nurick 1993). Attraction is multidimensional and includes not just personal attraction (Aronson 1984) but also financial attraction (Bird 1989). Personal attraction includes attraction to people with similar beliefs, particular competencies etc. (Aronson 1984). Financial attraction includes attraction to people that possess money to invest in the new venture (Bird 1989). Chandler and Hanks (1998) based on the results of their research argue that rather a small amount of teams look for heterogeneity in the functional area of expertise when looking for other team members. Rather they look for people that share the same interest in technology, excitement, independence or growth opportunities. The two views however cannot be seen as mutually exclusive (Forbes et al., 2006), they can rather be combined (Larson & Starr, 1993; Kamm & Nurick, 1993; Francis & Sandberg, 2000).

A highly influential factor concerning the business foundation decision describes the family that also can be seen as social network. The studies of Dyer (1994), Delmar/Davidsson (2000) and Klandt/Tröger (2001) came to the conclusion that children of parents that are entrepreneurs tend to be more likely as well an entrepreneur. Not only the family of origin but also the spouse or partner and children effect the business start-up decision. They can either foster the foundation by supporting the decision and giving strength and support or they can illustrate a hindering factor (Klandt, 1984).

Business idea generation and evaluation

In the area of idea identification, gender-related differences were found by DeTienne/Chandler in 2007, which will be introduced in the following. Thus, women are more focused on their business- and branch experiences to identify potential business ideas than men. For this, the systematic identification of customer needs, which are not accordingly satisfied yet, is one important factor. Another critical one is the fact that women tend to focus on product development, which are based on significant market innovations. In terms of the level of the innovations, no gender-related differences could be found (DeTienne/Chandler (2007).

Taking a closer look on the differences between portfolio entrepreneurs and novice-entrepreneurs, there are empirical results that show a higher number of ideas being identified by portfolio entrepreneurs than by novice entrepreneurs (Ucbasaran et al. 2003). Furthermore, portfolio entrepreneurs are using more sources of information (Westhead/Wright 1998) and are focussing more on specific sources (e.g. employees, consultants, etc.) than novice entrepreneurs (Ucbasaran et al. 2003). Other unique characteristics of portfolio entrepreneurs are the attributes that they are founding their business ideas more in the context of a specific problem and that they have a high fun-level in doing this (Westhead/Wright 1998). From this, the high level of "restlessness" can be explained.

Business Foundation Processes

To analyse the characteristics and specifics of serial-entrepreneurs it is necessary to choose an appropriate model of the business foundation process.

A process-orientated model of the business foundation was seen as most appropriate for this study as it is possible to subdivide the process into separate sections and to analyse the specific tasks of each section. Inherent problems of these models are that the business foundation process not always follows the ideal process with each phase and that it is often not clear, when the business foundation was initiated. Also the ending of the foundation process cannot clearly be determined. Freiling (2006) suggests in this context that the foundation process is completed if the company is established on the market.

For the purpose of this study the model of Klandt (1999) will be used as it covers the main parts in a concise way by emphasising the realisation phase. Klandt's (1999) business foundation process consists of three main phases: pre-seed phase, realisation phase, early development phase

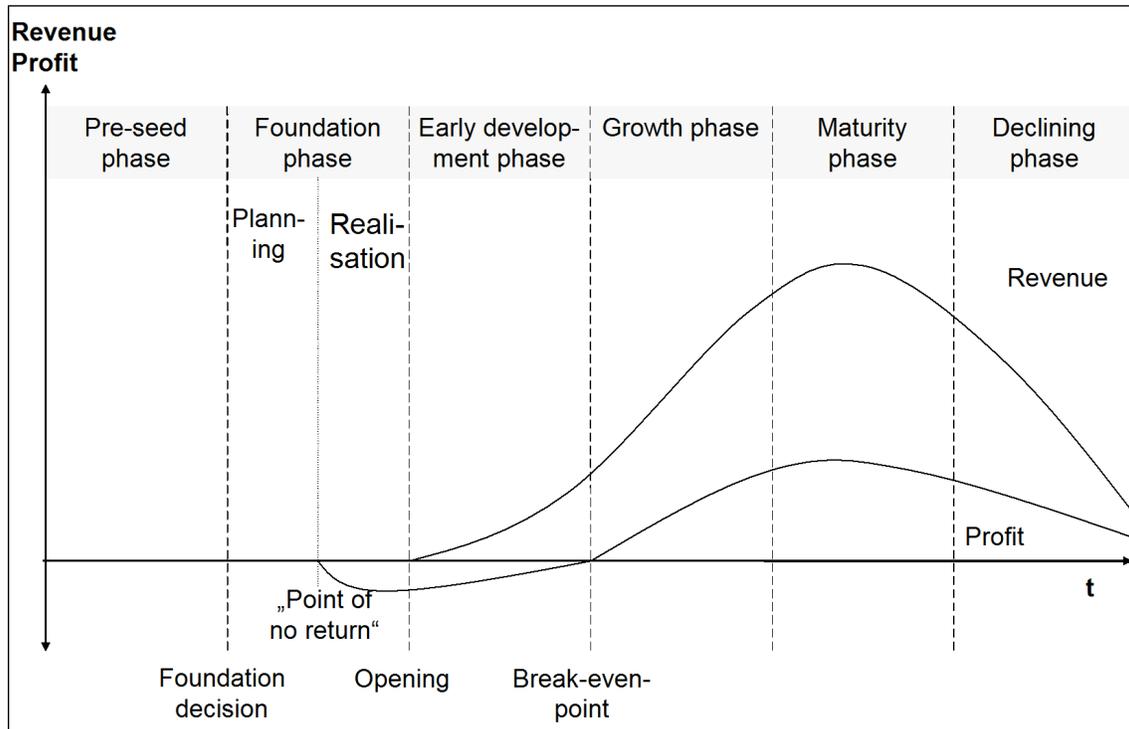
The "pre-seed phase" has in average a length of eleven month (Wenz, 1993). Inherent activities are the recognition of a market opportunity, the development and evaluation of the business idea and the preparation of a rough concept. The decision to found a business marks the end of this phase (Zacharias, 2001).

The "realisation phase" describes the second phase and is furthermore separated into the sub-phases "planning" and "realisation". The rough concept from the pre-seed phase serves as basis for further analyses, plannings and decisions. The most important analyses are in this phase the market, environment and competition analysis. Furthermore, legal status, location, human resource have to be chosen and the business plan has to be written (Zdrowomyslaw, 2005; Albert, 1994; Harms/Kraus, 2005; Schmude, 2002). Latest at the end of the planning phase the "point of no return" is achieved, from where the business intention cannot be cancelled easily (Klandt, 2006). Within the realisation phase the planning activities are realised. Hence, employees have to be recruited, additional capital has to be raised and an office has to be rented.

The early development phase is not paid much attention within the entrepreneurship research. However, this phase can be characterised by four specific factors. This phase begins with the creation of the goods and services and they are offered on the market for the first time. Hence, revenue is generated, but is not growing fast according to Szperski/Nathusius (1977). Finally, the courses of business are mostly carried out without division of labour and the employees begin slowly to specialise in a field of functions (Schefczyk/Pankotsch, 2003).

As characteristics and specifics of entrepreneurs in the business foundation process shall be analysed also the growth phase and the exit from the broader business life-cycle model will be considered and included within this paper. Although, according to Wenz (1993) the primary business foundation is completed with the growth phase. However, the growth phase is of interest for the purpose of this study as the new venture has not achieved an established state yet (Züchner, 2005). The decision to sell the business could overt whether serial-entrepreneurs are not interested in activities that have to be done within established firms. Figure 3 shows the business foundation process within the broader business life-cycle model.

Figure 3: Extended business life-cycle model



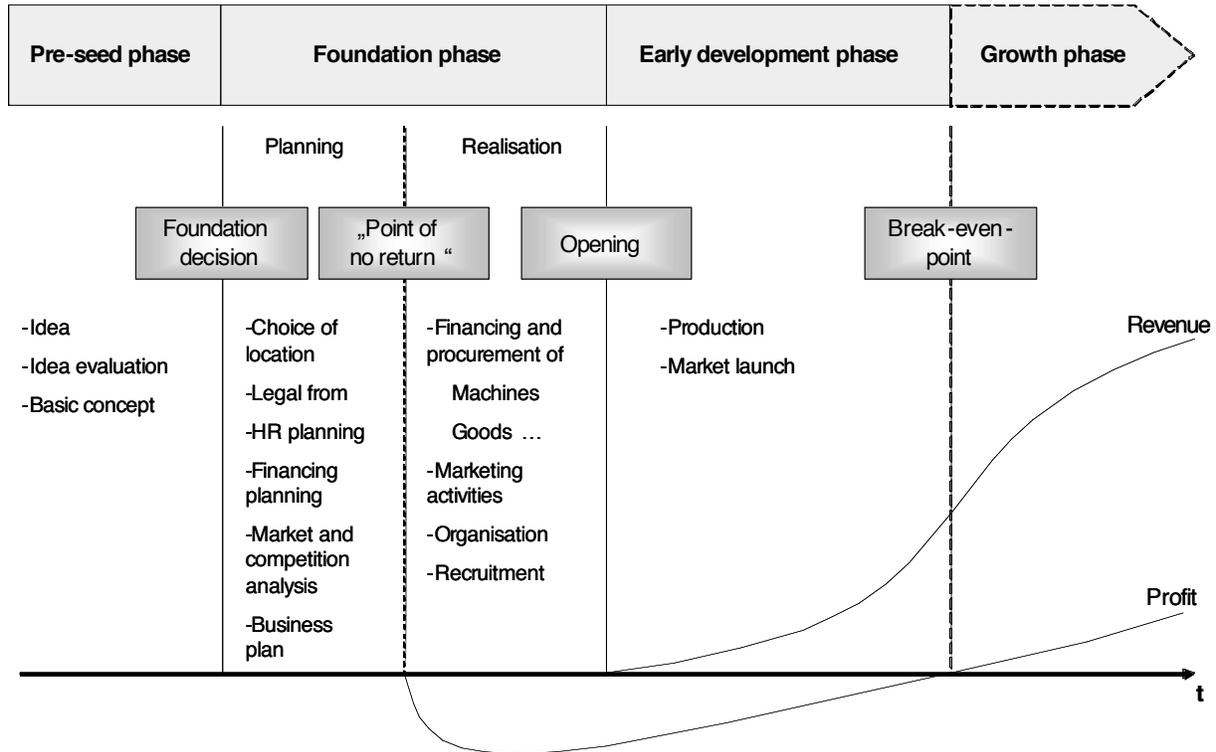
Research Design

Modelling

Primary data were used for this paper. Therefore, qualitative expert interviews were conducted to gather the necessary information. Experts are defined in this context as competent persons that are interviewed to their field of experience and views concerning the investigated topic (Berekoven et al., 2001). Often the expert himself is object of the research project (Bogner/Menz, 2002).

For this study the explorative interview was chosen. For this, a guideline was used. This guideline was designed in a manner to fulfil necessary requirements. In this respect it outlined the process along general lines (Berekhoven et al., 2001), without determining the course of conversation. Mainly open questions were used. Hence, it was avoided to narrow the answer possibilities of the experts (Böhler, 2004). Closed-ended question were only used if the question could be answered with “yes” or “no” (Hungenberg, 2002). The guideline consisted of five parts. The first part covered socio-demographics, skills and personal traits. Following, general questions to the founded businesses were asked (e.g. number of businesses founded, percentage of businesses in ownership, percentage of failure and sales, etc.). The third part focussed on the ramifications of the business foundation like goals and motives of the business foundations and the existence and importance of a business network. Within the fourth part the foundation process of each company was analysed and compared with each other. The phase growth and exist were also part of the investigation. To ease the answer of the question a diagram of an ideal foundation process was used in addition to the guideline (see figure 2).

Figure 4: Life-cycle of the business foundation



Source: Zacharias (2001); Klandt (1999)

Questions concerning the foundation management (e.g. use of a business plan, choice of location etc.) completed the interview guideline.

Sample

Before the interviews could be conducted, the relevant experts were identified. For this purpose the experts had to fulfil the given requirements of a serial-entrepreneur according to Taplin (2004). They had to have founded at least one business and had to have started at least the foundation of another one and it was not relevant if they were still in ownership of the so far founded business or businesses. Afterwards, ten serial-entrepreneurs were contacted of which eleven participated in this study

The interviewed persons were all male and had founded in average three companies. Two interview partners, thus, indicated that they did not found two of their companies, but bought them from other founders. One person reported that he inherited one of his companies. However, the serial-entrepreneurs can, in accordance with Westhead/Wrighth (1998), Wickham (2004) and Taplin (2004), be categorised as portfolio-entrepreneurs. They were between 25 and 60 years old. Table 3 portrays general characteristics.

Table 3: General characteristics

Expert Attribute	1	2	3	4	5	6	7	8	10	11
Actual age	37	26	43	55	39	60	40	26	26	25
Age at first foundation	32	22	24	30	28	26	26	18	22	23
No. of founded companies	2	1	3	2	4	2	3	5	7	2
No. of actual companies	2	-	-	2	3	1	2	5	7	2
Sex	m	m	m	m	m	m	m	m	m	m

Empirical Results

Personal Characteristics

The findings of this study are in concordance with corresponding literature, which states that the majority of foundations are conducted between the age of 25 and 40 years (Jacobson, 2004; Delmar/Davidsson, 2000; Klandt, 1984). Within this paper the first business was founded with 25 years in average (see table 3.) Because of the fact that all experts were male, no implications of gender dependence can be made.

Remarkable is the high level of education of the serial-entrepreneurs. All interviewees have at least finished an apprenticeship. Two have even achieved the PhD-degree and seven have completed a master study (see table 4). These findings tend to be, hence, in contrast to the characteristics of an other entrepreneurs as for them no proven correlation between educational level and business foundation activity could be identified (Jacobson, 2006). The interviewed serial-entrepreneurs, however, confirm that entrepreneurs possess a higher level of education than an average citizen (Klandt, 1984). Also concerning the working experiences a concordance of the conducted study and empirical studies (e.g. Scheiner et. al, 2006) could be found. Working experience tends to have a positive influence within this sample on the venture success as apart from three all other entrepreneurs have working experience of five years in average (see table 4).

Table 4: Level of education and working experience

Expert Attribute	1	2	3	4	5	6	7	8	10	11
Education	Study	Study	Phd .	2x Study	Phd .	Appren - ticeship	Study	Study	Study	Study
Working experience	10 years	No	NO	4 years	No	4 years	3 years	No	No	No

Team founding

Beyond the characteristics of the single founders, the private environment is an interesting research field, if and how these factors characterise a serial-entrepreneur (see table 6).

Table 6: Environmental-related factors

Expert Attribute	1	2	3	4	5	6	7	8	9	10	11
Team foundation	Always	Always	Sometimes	Sometimes	Always	Never	Always	Always	Always	Always	Always
Relevance of network	High	Medium	Medium	Medium	High	Low	High	n.d.	n.d.	n.d.	n.d.
Entrepreneurial family	No	No	No	No	No	Yes	No	Yes	Yes	Yes	No
Family status	Single	Single	Divorced	Married	Divorced	Married	Married	n.d.	Single	Single	Single

All of the business founders except just one have founded at least one company with partners. More specifically seven of them have founded all of their companies in teams and three of them had some times partners and some times not. The team size varied from two to seven people. Most of the interviewed entrepreneurs have stated that the business idea came first and then the team building followed which is also in accordance to their statement that their choice to found in a team was a strategic one based on the lack of resources. The lack of human capital (e.g. specific knowledge), social and financial capital seem to play quite an important role in the decision to found in a team. Specifically most of the founders found the lack of human and social capital as the most important and financial capital followed. The huge amount of work also urged some of the founders to seek for partners.

As far as problems in the team creation process are concerned, only two founders faced no problems at all. The others mention that they had a difficult time finding motivated, risk-taking partners that had an entrepreneurial spirit. Different performance and knowledge level and different degrees of commitment among the partners were also factors that made the team creation more difficult. Other negative side effects of the team creation were problems of ownership and potential future frictions within the team. One founder mentioned the fact that all founders saw the venture as only a part-time occupation hindered the founding process.

When selecting partners, most entrepreneurs look for partners that have complementary competencies that have industry experience that are risk taking. What is surprising is that most of them say that they select most of the time based on the instincts or on their good feeling about their future partners. The process of partner selection seems to be more of a trial and error process. Most entrepreneurs in our sample limit their search for potential partners to their personal network and only in two cases they also used more “formal” paths like for example online advertisements.

Lastly the entrepreneurs were asked whether their solo start-ups or team start-ups where more successful. Unfortunately this question was not applicable to all entrepreneurs since more than the half have of them have only founded in teams. However those entrepreneurs that have only sometimes founded in teams, stated that team start-ups were more successful in economic terms and in some cases also more fun!

Business Foundation Process – Business idea identification and evaluation

Almost all entrepreneurs made their decision to found companies long ago – some even always – and independent of a precise business idea. This is a strong evidence for their intense intrinsic motivation. In this step, particular correlations between the standardised business foundation process of Klandt (1999) and the foundation process of the researched cases will be shown. Table 7 displays an overview of the results regarding the pre-seed phase.

The opportunity recognition happened for the most parts accidentally or with an idea from abroad. In this regard, the current and former employment and the social environment play important roles as well to discover potential business ideas. This is in accordance with former research (e.g. Voigt/Brem, 2005). Most of the ideas are based on products or services that are transferred in new markets (regions). Especially concepts and business models from the United States were mentioned by the portfolio-entrepreneurs. The realised business ideas are characterised by a high homogeneity. Participants mainly followed a pattern by founding in the same industry with ideas that possess a high proximity to each other. Hence, experience effects could be used. As the majority of ideas have an imitative character the degree of innovation and the degree of complexity are mainly low. For most entrepreneurs, the idea evaluation is a structured process with specific decision criteria. Hence, four founders did not use any conceptual evaluation; they trust their business instincts and foundation experience. Still, they seek professional advice from external experts. Eight founders prepared a general and detailed business concept or business plan, what concurrently stands for the end of the pre-seed phase.

Therefore, almost all founders did a detailed market and competition research, whereby this overlaps with certain pre-seed activities. Further environmental research is often not conducted, maybe because the entrepreneurs mostly found again in the same industry or with a similar business model. Regarding the legal form of the companies, incorporated companies operate dominating. This can be traced back to the fact that most companies are within the high-tech sector or internet sector. The location choice is not seen as a very strategic one, because their goods and services are mostly independent of the company's location.

Human resources planning has no deeper impact within the realisation phase, what can be traced back to the prevalence of team foundations. Hence, the founders already meet the needs of staffing within the pre-seed phase. The most important planning instrument is without any doubt the business plan. All entrepreneurs used a business plan for the foundation process, mainly for internal strategy planning reasons.

Finally, the majority foundations are based on equity financing and sometimes to a small degree on public funding as well. Business angels play in two cases and venture capital for three portfolio-entrepreneurs an important role within the financing concept.

The last phase of the business foundation process is the early development phase. Herein, especially marketing plays a vital role as personnel and financial issues are already covered within the realisation phase. The majority founders quoted that marketing plays a role, five even say it has an important role on the companies' success. Still, it has to be ascertained, that marketing means mostly classical advertising efforts, but as well the attraction of customers and enlarging the customer base itself. Regarding financing, two companies state that they make use of external finance in this phase as well.

In general founders state, that the pre-seed phase is the most important and most interesting phase in the companies' development. Just two interviewees were really sad at the time of selling the firm, especially because of the employees. For all others the pleasure because of the sales revenues and the fewer responsibilities overwhelmed the sadness of selling their "babies". One participant emphasised

that selling the business was one of the major motives for starting the businesses. Asked after the intention of founding more companies in future, all eleven participants gave an affirmative answer.

Table 7: Business idea generation and evaluation

Expert	1	2	3	4	5	6	7	8	9	10	11
Attribute											
Idea source	Job	Abroad , accidently	Abroad , acciden - tily , environ - ment	Job	Job, accidently , Abroad	Job, acciden - tily , environ - ment	Environ - ment	Abroad	Abroad , environ - ment	Abroad , environ - ment	Systema - tic analysis
Business idea	Nische	New region , modified products	New region , imitative und inno - vative products	Innova - tive products , imitative product	Innova - tive products , New region	Imitative products	Innova - tive products	Innova - tive products , imitative product	Imitative products	New region , imitative und inno - vative products	Innova - tive products
Idea evaluation	No	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
Rough concept	Yes	Yes	No	No	No	No	Yes	No	No	Yes	-
Degree of innovation	High	Low	High/ Low	High/ Low	High	Low	High	Low	Low	Low	Low
Complexity	High	Low	High	High	Middle	Middle	High	Low	Low	-	Low
Idea homogeneity	2 homogen (industry) 1 heterogen	Heterogen	Homogen (industry)	Homogen (industry)	Homogen (industry)	Heterogen	Homogen (industry)	Homogen (industry)	Heterogen	Homo - gnes Vorgehen	Homogen (industry)
Founding intention	Since apprentice -ship	Since study	Always	Always	Since PhD	Always	Always	Always	Since study	Since 14th year	Since study

Results-comparison with recent literature

As indicated, the presented results are referring to the special type of portfolio-entrepreneurs. Following, the findings will be compared with the findings concerning portfolio-, novice-, sequential-, and nascent-entrepreneur drawn from the literature (see table 8).

Therefore, thirteen analysed attributes will be used which are illustrated in the left column of table 8. Following, the main differences will be presented. In contrast to entrepreneurship literature, the majority of serial-entrepreneurs in this study had a university degree. Regional differences in educational systems, especially in an international context, could explain this difference (Westhead et al., 2005; Delmar/Davidsson, 2000). Moreover, it is investigated in several studies that there is no significant correlation between business foundation activity and level of education (Jacobsen, 2006).

All portfolio entrepreneurs within the study conducted market research. In other studies it was found that also mainly portfolio-entrepreneurs and to a lower extend by novice-entrepreneurs conduct market reseach (Alsos/Kolvereid, 1998). The same is true for the writing of business plans, these results can not be supported by a study of Alsos/Kolvereid (1998), for instance. Within this research, just every second entrepreneur had an own business plan, and surprisingly from less portfolio entrepreneurs. Most probably this share has grown over time, but still the rate in this case is pretty extraordinary.

Almost all founders in our case chose the legal form of an incorporated company. This result is not in concordance with other research findings. This can be an effect of the fact that almost all shown companies are within the high-tech sector with a specific higher failure risk. Still, most sequential and

novice entrepreneurs choose private companies, incorporations are no real alternative (Westhead, 2005).

Regarding the interest in the pre-seed phase and the plans for future foundations, the case-entrepreneurs are significantly different to other ones. In literature, particularly portfolio entrepreneurs do not appreciate the pre-seed phase (Westhead, 2005) and the sequential- and novice-founders do not support the wish for further new start-ups.

The remaining factors are mostly coincident, whereas some factors have other proportionalities. For example, advertising efforts are made by all portfolio-entrepreneurs, but just from every second sequential- and novice-entrepreneur (Alsos/ Kolvereid, 1998).

The parents of most of the entrepreneurs were no entrepreneurs themselves. Just in the case of portfolio-entrepreneurs, certain evidence for a correlation can be found in literature (Westhead, 2005; Delmar/Davidsson 2000).

No differences could be identified between the study and literature findings concerning eagerness for independence and the gender of the entrepreneurs (Westhead, 2005; Westhead/Wright 1998; Delmar/Davidsson 2000).

Limitations of the study

The companies in this study operate mostly in the same industry. To be able to generalise the findings it is necessary to survey serial-entrepreneurs that founded businesses in different industries. Thereby, industry-dependent influences on the characteristics and specifics of serial-entrepreneurs in the business foundation process could be identified.

Table 8: Comparison experts with literature

Attributes \ Types	Portfolio (experts)	Portfolio (literature)	Sequential (literature)	Novice (literature)	Nascent (literature)
University degree	+	-	-	-	-
Market research	+	-	-	-	k.A.
Business plan	+	-	-	-	k.A.
Incorporated companies	+	-	-	-	k.A.
Pre-seed phase most interesting	+	-	-	-	k.A.
Planning of future foundations	+	-	-	-	k.A.
Foundation seen as challenge	+	+	-	-	-
Intuition for business ideas	+	+	-	-	k.A.
Marketing competence	+	+	-	-	k.A.
Age of 1. foundation between 25 and 30	+	+	+	-	k.A.
Parents no entrepreneurs	+	-	+	+	+
Eagerness for independence	+	+	+	+	k.A.
Predominantly male	+	+	+	+	+

In addition, the businesses were all founded in the southern part of Germany. The findings could, hence, be influenced by given macro-economical ramifications. To exclude a possible bias also serial-entrepreneurs from other regions of Germany should be interviewed or a German-wide survey conducted.

Therewith, all serial-entrepreneurs stem from Germany. The findings of this study, thus, cannot just be generalised on other serial-entrepreneurs outside of Germany due to cultural biases.

Furthermore, only male serial-entrepreneurs were interviewed, as identified female-serial-entrepreneurs did not participate. Further studies should include as well female entrepreneurs in the sample. Hence, gender-specific similarities and differences could be detected.

The findings of this study remain in an area of tendency statements, as they could not be proved on statistical significance. Therefore, quantitative survey with a broader sample should be conducted.

Another limitation concerns the comparison of the survey finding with the entrepreneurship literature. Within the literature not always the same distinction of entrepreneurs was use. The entrepreneur-types were, hence, in some studies conceptualised in broader way.

Discussion and Conclusions

Several, remarkable, basic differences between literature and researched cases could be identified as portfolio-entrepreneurs within this research seem to possess specific characteristics. In the context of idea identification and evaluation process it was found most of the ideas are based on products or services that are transferred in new markets (regions). The realised business ideas are characterised by a high homogeneity. Participants mainly followed a specific pattern in the idea identification, evaluation and realisation. For the majority of entrepreneurs, the idea evaluation is a structured process with specific decision criteria. In contrast to the entrepreneurship literature planning tools like a business plan were extensively used and market research analyses were conducted. But even more important can be seen that fact that the serial-entrepreneurs within this study posses a high affection to the pre-seed phase and an exceedingly positive attitude towards future foundations. Hence, "they found because of the founding". That distinguishes them not only from other entrepreneur-types but in particular from portfolio-entrepreneurs shown in scientific literature.

The importance of team founding for portfolio entrepreneurs is acknowledged in this study, as most entrepreneurs in our sample have founded at least one of their businesses in teams. Some of the major reasons leading to team start ups are the lack of resources which gives significant emphasis to the view that supports that the formation of team start ups is a strategic choice. However more research with a greater number of entrepreneurs is needed.

In summary, this research enables interesting insights into the characteristics and specifics of serial-entrepreneurs in the business foundation process on the basis of seven expert interviews.

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ENTREPRENEURIAL ORIENTATION AS A PREDICTOR OF SMALL BUSINESS GROWTH

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Abstract

This study aims to define a coherent theoretical framework of reference which will lead to a broader understanding of the entrepreneurial process of small firms and validate the way this process allows their growth. The results of the study allowed the identification of some factors that influence the growth of small firms. Explaining variables of multiple levels related to the life-cycle, the firm owner, the firm's strategy (strategic entrepreneurial orientation) and the environment were identified as essential to their growth. It was still possible to conclude that the firms which grew more are strategically entrepreneurial and they seem to detect opportunities and take advantage in the search for those opportunities. This posture reflects on the entrepreneur's attitudes, on the firm's strategic entrepreneurial orientation and on the environment's characteristics which the firms operate.

Key-words: Entrepreneurship, Firm Growth, Entrepreneurial Orientation

1. Introduction

Nowadays this area of knowledge known in the academic world by the Anglo-Saxon word – *Entrepreneurship*- deals with an enlarged range of theories and approaches and it has been studied in many different ways, with very different purposes. Researchers from all fields of social sciences – economy, sociology, anthropology, psychology, history, politics and several branches of enterprising science – have been giving contributions to this area of studies. The research field of entrepreneurship is considered to be the target of the most diverse areas of study and it is developing very fast (Ronen, 1983; Sexton and Bowman, 1987; Davidsson, 1989).

The area of entrepreneurship has even given origin to the creation of research programmes as a subject of study and it has been defined as an autonomous scientific field (Veciana, 1996; Fayolle, 1999). The arguments presented by Sexton and Bowman (1987) in the 80's and by others confirm the academic legitimacy of entrepreneurship. In spite of the

popularity of this topic, there is no universally accepted theory which defines accurately the field of activity of entrepreneurship, laying its genesis in the transversality of a group of approaches coming from the most diverse fields of studies (Virtanen, 1997). The theories and the methods used vary a lot; depending on the research area a study is done. The same happens with the level of analysis (individual, firm, industry, society) with the definition of entrepreneurship and with the role that it may assume as an independent or dependent variable (Davidsson and Wiklund, 2001).

Given the lack of consensus that surrounds the definition of entrepreneurship, its meaning becomes rather complex (Carland and Carland, 1984; Bull and Willard, 1993; Carland *et al.*, 1995). Bull and Willard (1993) state that the definitions are still problematic, since many researchers adopt their own definitions of entrepreneurship and create their own terms within the area. The first reference to the concept itself was done by Richard Cantillon, in 1725, who considered that the term - *entrepreneurship* – meant self-employment with uncertain income. Following the same idea Jean Baptiste Say, in 1803, (among others), enlarged this definition to include the concept of combining the production factors and adding that the entrepreneurs should have special qualities (Stevenson, 1984; Sharma and Christman, 1996; Kozan *et al.*, 2006). According to Carton *et al.* (1998) the definition that Schumpeter¹ gives of entrepreneur, involves several key elements which allow the separation of entrepreneurship from the management of a firm.

All these approaches have contributed to a gradual advance in this field of research. However, a fact remains unchangeable: the entrepreneurship is an unique process in the organisational and economic functions and it starts as an act of human will (Hofer and Bygrave, 1992). It is this intentionality which distinguishes the entrepreneur (Bird, 1998). If a person wishes to understand the entrepreneurial process, that person has to understand the role of the individual who stimulates the process. In this research there is a particular interest in approaching the entrepreneurship and the growth of small firms, having in mind the definition of a coherent theoretical framework of reference which will lead to a broader understanding of the entrepreneurial process of small firms and verify the way this process enables their growth.

This study contributes to entrepreneurship research in two respects. First, unlike the numerous studies, which place a major emphasis on explaining the complexity in the Entrepreneurial orientation and performance connection (Lumpkin, 1996; Wiklund, 1998; Wang, 2008); this study focuses on entrepreneurial orientation according to its dimensions. Second, this study attempts to give more in-depth understanding of how specific dimensions of entrepreneurial orientation have influence on small firm's growth.

The article is structured as follows: After the introduction is a section that summarizes the most relevant literature on entrepreneurship, entrepreneurial orientation and firm growth. Then comes a description of the research methodology used and it established the research hypotheses. In the fourth section, the main findings are set forth, with the discussion of such results. The article ends with a short draw of the final conclusions, the limitations and future lines of research.

2. Entrepreneurship as Entrepreneurial Orientation

It is essential, in the context of the current research, to identify the strategic variables which may reflect the practice, the process, the organisational methods and the style of decision-making that small firms use and that probably influence their growth. Nevertheless, the

¹ For Schumpeter an entrepreneur is a person who assumes responsibility for the realisation of new, combining factors, which can assume the form of new products, processes, markets, forms of organization or forms of supply. *Entrepreneurship* is therefore a process to put in action the new, combining factors.

strategy presents itself as a broad and large concept and there are many different definitions of strategy as well as typologies of possible strategic choices in small firms. To identify the most important strategic dimensions in small firms, we may consider, as a starting point, the typologies of firm strategies suggested by the theoretical authors about organisations. A variety of models in the developing of strategy can be found in literature. Well-known models include: (i) the generic strategies of Porter (1980); (ii) the strategic typology of Miles and Snow (1978); (iii) the construction of the entrepreneurial orientation of Lumpkin and Dess (1996). Each of these models relates a group of variables which do not depend on the organisational growth. Besides this the Miles and Snow models (Hambrick, 1983; Zahra and Pearce, 1994; Gimenez, 1999) and of Porter (Miller, 1983) were empirically tested to validate that relation.

Previous researches consider the dimensions of entrepreneurial strategy of great importance (Mintzberg, 1973; Miller and Friesen, 1984; Miller, 1987; Lumpkin, 1996; Lumpkin and Dess, 1996; Wiklund, 1998; Bhaskaran, 2006; Kozan *et al.*, 2006; Hmieleski and Corbett, 2006; Wang, 2008) and besides this some of them consider that an entrepreneurial strategy has a great impact in growth (Moreno and Casillas, 2008). Miller and Friesen (1982) claim that entrepreneurial firms innovate courageously and regularly while taking considerable risks in their product/market strategies. From the reviewing of published literature, Miller (1983) identifies the initiative of a firm concerning: (i) innovativeness; (ii) risk taking; (iii) proactiveness, as the essential dimensions of entrepreneurship. According to Miller (1983) an entrepreneurial firm is the one that commits itself into the innovation of product/market, undertakes actions which are slightly risky and it is the first one to come out with proactive innovation which beats the competitors. These three dimensions, which constitute entrepreneurship, have already been mentioned by Miller and Friesen (1982) as the three, of a total of eleven dimensions, of the process of strategic decision-making which confirms that Miller conceives entrepreneurship from a strategic approach. This definition, concerning the entrepreneurial strategy, focuses more on the entrepreneurship process, than on the actor behind it (Wiklund, 1998; Davidsson and Delmar, 1999), this is, it emphasises more the entrepreneurial process than the entrepreneur. This way, and according to Davidsson and Delmar (1999), the co-relations of entrepreneurship could be searched for in a vaster field than the one related to the individual.

This approach reflects, largely, the traditional definitions at an individual level. An entrepreneur is, frequently, considered as an innovative and creative person, suitable to manage a firm which emphasises innovation (McClelland, 1961; Davidsson, 1989; Miner, 1990; Miner *et al.*, 1994).

When studying the strategy of small firms and in particular the strategic choices, which can influence the growth, it looks pertinent to discuss about the dimensions of entrepreneurial orientation. Miller (1983) developed a measuring instrument to capture the dimensions of entrepreneurial strategy in empirical research. This measuring instrument has influenced, be it empirically or conceptually, the subsequent research. However, different designations or labels have been suggested, subsequently, in the characterisation of this measuring instrument. In Table 1 it is shown a collection of studies which have adopted the Miner's measuring instrument.

Although the same measuring instrument is used (or slight modifications of it), different designations are used to measure the same dimensions. Besides, there is little consensus about the type of dimension involved (Wiklund, 1998). Although different interpretations of the measuring instrument have been suggested, that does not prevent it from being a feasible instrument to measure the important aspects of the entrepreneurial strategy. Covin and Slevin (1991) support Miller's point of view by referring that organisations, and not only individuals, can behave entrepreneurially. They also defend the use of risk taking, innovativeness and

proactiveness, as the relevant dimensions of entrepreneurship. Nevertheless, they refer to this as a type of behaviour labelled as entrepreneurial posture.

In this context, and according to Miller (1983), an entrepreneurial firm is one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with 'proactive' innovations, beating competitors to the punch. The concept of entrepreneurial orientation is seen as a combination of three dimensions: (1) *innovativeness*, the development of new and unique products, services or processes; (2) *risk taking*, a will to pursue risky opportunities, taking the chance of failing and (3) *proactiveness*, an emphasis in the persistence and creativity to overcome obstacles, until the innovator concept is completely implemented.

Table 1- Studies of Entrepreneurial orientation: Measuring Instrument

<i>Study</i>	<i>Dimension Label</i>	<i>Type of dimension</i>	<i>Variables</i>	<i>Scale</i>
Miller (1983)	<i>Entrepreneurship</i>	Action of a firm	Proactiveness, innovativeness and risk taking	Items from scales used by Miller and Khandwalla in the -70's. Presented in Miller and Friesen (1982)
Covin and Slevin (1989)	Strategic posture	Overall competitive orientation	Proactiveness, inovativeness and risk taking	Covin and Slevin (1989) modification of Miller (1983) – 3 originals items
Covin <i>et al.</i> (1990)	Strategic posture	Competitive orientation and/or strategic	Proactiveness, inovativeness and risk taking	Covin and Slevin (1989) modification of Miller (1983)
Covin and Slevin (1991)	Entrepreneurial posture	Behaviour of firm	Proactiveness, inovativeness and risk taking	Covin and Slevin (1989) modification of Miller (1983)
Miles <i>et al.</i> (1993)	Entrepreneurial orientation	Underlying philosophy determining the nature and scope of activities and plans	Proactiveness, inovativeness and risk taking	Covin and Slevin (1989) modification of Miller (1983)
Merz <i>et al.</i> (1994)	Strategic orientation	Philosophy of business behaviour	Proactiveness, inovativeness and risk taking	Miller (1983)
Zahra and Covin (1995)	<i>Corporate entrepreneurship</i>	Unclear	Proactiveness, inovativeness and risk taking	Miller (1983)
Brown (1996)	Entrepreneurial orientation	Will to perform well in the behaviour	Proactiveness, inovativeness and risk taking	Covin and Slevin (1989) modification of Miller (1983)
Lumpkin and Dess (1996)	Entrepreneurial orientation	Processes, practices and decision making activities leading to new entry	Autonomy, inovativeness, risk taking, proactiveness, competitive aggressiveness	None measures. Miller's and Covin and Slevin work is the point of departure
Lumpkin and Dess (1997)	Entrepreneurial orientation	Processes, practices and decision making activities leading to new entry	Inovativeness, risk taking, proactiveness	Covin and Slevin (1989) modification of Miller (1983) – two original items
Ferreira (2004)	Strategic Entrepreneurial Orientation	Competitive orientation and/or strategic	Proactiveness, inovativeness and risk taking	Modification of Miller (1983)
Moreno and Casillas (2008)	Entrepreneurial orientation	Strategic entrepreneurial orientation	Proactiveness, inovativeness and risk taking	Items from scales used by Miller and Khandwalla in the -70's. Presented in Miller and Friesen (1983)

Source: Adapted from Wiklund (1998)

It is hard to imagine a small firm taking advantage of opportunity and having a considerable impact in the market without growing. If it is accepted the point of view that entrepreneurship

is a question of grade and it is not a dichotomised variable (Davidsson, 1989; Green and Brown, 1997), the growth seems to come out as an important demonstration of the entrepreneurial behaviour of small firms (Davidsson, 1989; Kozan *et al.*, 2006).

The growth of firms has become a very important topic in the field of research of entrepreneurship (Davidsson, 1989; Colvin and Slevin, 1991; Delmar, 1996; Davidsson, and Wiklund, 1999; Fayolle, 1999; Davidsson and Wiklund, 2001; Davidsson *et al.*, 2002; Moreno and Casillas, 2008). Davidsson *et al.* (2002) discuss in what conditions the study of the growth contributes effectively to the understanding of the entrepreneurship process. According to these authors, to say that *entrepreneurship* is the same as *creation of a new firm* is to reduce the field of entrepreneurship, since it does not reflect, in a complete way, its contemporaneous definitions. Then they suggest that the researchers in this field should see the growth of a firm as part a complement of the entrepreneurship process. Moreno and Casillas (2008) focused on EO-growth relationship in order to identify several simultaneous relationships between EO, strategy, environment, resources and growth.

The majority of firms never grow that much. According to *Observatoire des PME Européennes* (2003) approximately 95% of all U.S. (United States) firms have less than 5 employees. In Portugal, the SME segment (Small and Medium sized Enterprise) represents 99,5% of firms, being responsible for more than 73% of employment and 56% of volume of business realised. Even very small firms - until 20 employees - represent more than 85% of total partnerships and around 24% of employment. The Portuguese entrepreneurial structure has been showing an increase of the relative weight of the firms of a very small dimension to the detriment of other firm dimensions. Therefore it is unquestionable the importance of SME in the economic life in Portugal. However, according to MOPE (2001), bankruptcy continues to grow in Portugal, following the tendency in Europe.

In the process of reviewing the published literature about the growth of the small firm, Storey (1994) concludes that the process of growth in small firms results from a combination of three basic components which are: (1) the characteristics of the entrepreneur/manager; (2) the characteristics of the small firm; (3) the development strategies of the firm. These three components aren't mutually exclusive and they influence the growth of small firms in a combined way.

3. Research Methodology and Hypotheses

The approach of the current research had its origin in three specific questions of research:

(i) For what reasons do some small firms grow and others do not? (ii) Is it possible to identify crucial factors which increase or restrain the growth of small firms? If so, which? (iii) Does entrepreneurship influence in any way this growing process?

To provide an answer to these questions, it was conceived a stratified sample of small firms to study the differences, through a variety of dimensions, among small firms which show different growing patterns. The stratification criteria used were applied to the following three variables: (1) growth; (2) industrial sector; (3) size of the firm. The growth is measured having as a basis the data concerning the years 2001 and 2002 and calculated in conformity with the equation of the adopted model². This research opted for the application of a quantitative research approach (cross sectional) using an inquiry for questionnaire.

The criteria adopted by the European Union were chosen to define small firm and to select the sample of the current research (firms with a maximum of 50 employees). The

² Rate of employment growth = (total number of employees for the year 2002 – total number of employees for the year 2001) / total number of employees for the year 2001;

Rate of sales growth = (total sales volume for the year 2002 - total sales volume for the year 2001) / total sales volume for the year 2001.

sample was constituted from a small database, made available by the Group Coface³. The database has a total of 1470 small firms of manufacturing industry and the data refer to two consecutive years (1999 and 2000). From each level 825 firms were selected randomly to constitute the final sample. The number of firms by level was obtained bearing in mind their percentage weight; this is, proportional to the weight of each of the sub-industries of the manufacturing industry. A total of 168 questionnaires were obtained, corresponding to a response rate of 20, 4%.

The general aim of this research is the analysis and explanation of the growth of small firms, associated to the entrepreneurial process. There was a need to set out more specific objectives so that this general aim could be pursued. So, the following objectives were set out: (i) to characterise the small firms in the different growing patterns and to detect possible differences among those patterns; and (ii) to identify the factors which influence the growth of a small firm.

4.1 Research Hypotheses

Given the great variety of factors presented, as growth stimulators, it isn't possible to trace the development of a single theory concerning the growth of a small firm. Several approaches have been purposed in the attempt to research, adequately, the process of growth. The dimensions (group of variables) which seem to embrace the great majority of the variables identified in the reviewed literature about growth are: (i) life cycle; (ii) resources and capabilities; (iii) strategy; (iv) motivation; and (v) environment. These variables were used in the research model. The research hypotheses formulated aim at, firstly, achieving the designed objectives. This way, hypotheses concerning the dimensions used in the model were established:

Hypothesis 1 (H1): Life-cycle stages influence the growth of a small firm;

Hypothesis 2 (H2): Resources and capabilities of the firm have a positive influence on the growth of the small firm;

Hypothesis 3 (H3): Attitude of the entrepreneur, concerning motivation, influences the growth of the small firm;

Hypothesis 4 (H4): Dimensions of dynamism, heterogeneity, and environment hostility have a positive influence on the growth of the small firm;

Hypothesis 5 (H5): Entrepreneurial orientation has a positive influence on the growth of the small firm.

4.2 Measurement of the Research Model

Firm life-cycle: the stages model of life cycle bases itself in the description of the dimensions of the model adopted by Hanks *et al.* (1993) and Ferreira (2003). This dimension is measured based in the "self-categorisation", that is, the inquired firms are the ones who identify their stage of life-cycle. The stages model of life cycle consists on the following stages: (1) start stage; (2) growth stage; (3) maturity stage; (4) diversification stage; and (5) decline stage. The variables which constitute each of these stages are: firm's age, structure, formalisation, centralisation, firm' size and employment's growth.

Resources and capabilities: the dimension of resources and capabilities was devised taking into account the resources and capabilities: (i) of the entrepreneur; (ii) of the firm; and (iii) the entrepreneur's networks.

³ Coface Mope is a subsidiary of the French business Group COFACE.

Entrepreneurial orientation: it is the concept that will be used to characterise the entrepreneurial dimensions of the strategy of a firm. This entrepreneurial orientation is seen as a combination of three dimensions: (1) innovativeness, the development of new and unique products, services or processes; (2) risk taking, a will to pursue risky opportunities, taking the risk of failing; and (3) proactiveness, an emphasis in the persistence and creativity to overcome obstacles until the innovative concept is completely implemented.

Motivation: the theory of McClelland (1961) and the theory of Miner (1990) have been particularly emphasised because they are theories applied to the field of entrepreneurship. To evaluate the dimension concerning motivation, the task theory of Miner was used, as it is specifically developed to the domain of entrepreneurship (Smith and Miner, 1983; Miner, 1990; Miner *et al.*, 1994; Bellu and Sherman, 1995). The dimension of motivation was evaluated concerning: (i) the expected consequences of growth; (ii) the entrepreneur's aims; (iii) the favourite tasks of the entrepreneur;

Environment: to evaluate the perception of the environment, the three dimensions used by Miller and Friesen (1982) were considered: (i) dynamism; (ii) heterogeneity; (iii) and hostility. This multi-dimensional conceptualisation of the environment can affect the entrepreneurial perception and it can lead the firms to adopt certain entrepreneurial orientations, such as, innovativeness, proactiveness, and risk taking (Covin and Slevin, 1991; Tan, 1996).

Growth: the dimension of growth will be evaluated according to two variables: (i) the sales growth; and the employment growth. It was calculated based in the change of the number of employees which took place from the year 2001 to 2002. The growth variable is made up of four indicators: (1) the change of the number of employees from year 2001 to 2002; (2) the change in the amount of business from year 2001 to 2002; (3) the growth of the sales compared to that of the competitors; (4) and the growth of the market value compared to that of the competitors.

3.3 Statistics Analysis

Two types of statistic analysis are applied to this research: (1) a bivariate analysis and (2) a multivariate analysis.

bivariate analysis: the standard differences between the two groups of firms (low and high growth firms) are analysed based in the following criteria: (i) to the non-categorical variables is applied the parametric test of significance t^4 ; (ii) to the categorical variables is applied a cross-table analysis with an application of the non-parametric test of significance (Pearson test)⁵. The differences of the aggregated means are compared between the groups of high and low growth⁶.

multivariate analysis: in the multiple linear regression⁷ it is estimated the direct linear effect of a group of independent variables, in a dependent variable. Since the independent

⁴ The parametric test permits the testing of hypotheses upon averages of a variable of quantitative level in one or two groups, formed from a qualitative variable. For two independent samples the average of a variable in one group is compared with an average of the second variable in the other group (Malhotra, 1996).

⁵ Test Qui-squared compares categories of a nominal variable in two or more independent groups. When statistical significance is presented, it demonstrates the existence of differences among the groups (Malhotra, 1996, 2000).

⁶ Comparison criteria was the following: differences below 0,25 are rejected (Harper, 1996)

⁷ Test t permits the testing of null hypotheses of inexistence of a linear relation between Y (dependent variable), with each one of the X (independent) variables.

⁸ A distribution is mesocratic if $(Kurtosis/stdError) < 2$; is platycratic if $(Kurtosis/stdError) < -2$ and is leptocratic if $(Kurtosis/stdError) < 2$.

⁹ For values belonging to the interval of $[-2; +2]$, symmetry is not rejected (Malhotra, 1996)

variables are measured in different units, it is difficult to determinate the relative importance of each dependent variable based in the coefficients of partial regression, being preferable to examine the Beta partials, as they allow the simplification of the regression equation and provide a means to compare the relative effect, in the dependent variable, of each independent variable (Hair *et al.*, 1998; Malhotra, 1996). To find out which coefficients are significantly different from zero, t^7 tests are performed. The relative measures of the adjustment quality are: R^2 and R^2 adjusted squared. This statistic method is used to detect and explain the differences that each independent variable exercises on the dependent variable. To test the nature of the distribution the Kurtosis⁸ and Skewness⁹ measures are used. To test the adherence to normality, the Kolmogorov-Smirnoff (K-S)¹⁰ test was used, as well as the graphs called normal *probability plots*, *box plots* and *histogram*¹¹.

In some cases factorial analysis are performed. These analyses are performed to reduce the number of variables and increase the reliability of the measures. It is used the extraction method of the main components and the factors with *eigenvalues* bigger than 1 are extracted. The varimax rotation method is adopted to solve the original factor. In order to retain the maximum information possible of the original questions, the items which will present a high loading, in certain factors of the factorial analysis, will be condensed into indexes which correspond to the factors approximately. The test *Cronbach's Alpha*¹² is used to test the reliability of these indexes.

The Statistical Package for the Social Sciences (SPSS) was used as a support to all the statistic analyses developed.

4. Discussion of the Results

Firms sampled were divided, in two sub-samples (two groups), having as a basis the rates of annual increase of sales and the number of employees during the year 2000 and 2001. Firms that present an increase in the annual employment rate superior to 25% and/or an increase in the sales rate superior to 25% are classified in a group of "high-growth firms". Below these values are firms of a group designated to "low-growth firms". Objective being, to know the existence (or not) of significant differences between firms that exhibit distinctive growth patterns.

The answer to this question is unquestionably positive. The differences do not seem to be casual or caused by forces out of the control of the firms. The entrepreneur of the high-growth firms, for example, adapts the products so that they can enter new markets and the entrepreneurial quality of the entrepreneur has some importance to the growth. The entrepreneur of the high-growth firms use a strategy more directed to flexibility and to the change. They are more worried with the new market opportunities and/or have a better capability to react to new opportunities.

¹⁰Normality at 5% is not rejected when the significance (sig.) level of this test is superior to 0,05 (Bryman and Cramer, 1992).

¹¹ These graphics are going to analyse the observations that deviate of the normality (Bryman and Cramer, 1992).

¹² This test Alpha is especially helpful for investigate the reliability of scales of multi-items that use measures between intervals (Siegel and Castellan, 1989).

¹³ Inflation was not considered.

As for the stages of the life cycle, these did not show significant differences between the two groups of firms. Nevertheless, the stage of growth is mostly constituted by high-growth firms. When a firm grows, the entrepreneur has to assume partially a new role, involving more professional management techniques where managing work and the strategic development are the most important components.

The activities of the creation of new firms seem to be more frequent in the high-growth firms. Consequently, at least at an aggregate level, the creation and subsequent growth seem to be the result of similar processes. The entrepreneurs of this kind are also the ones who have the greatest aspiration for future growth, suggesting a bigger entrepreneurial capability. The slight differences related to experience and academic qualification are seen with some surprise, considering the results of other studies. It seems that the entrepreneurs of the high-growth firms do not have high levels of academic qualifications and experience, but generally, they have qualified employees and involve more people in the process of making decisions, through the use of bigger management teams/ using bigger management teams. This way, the level of total competence can become higher and better-used.

The original scale, developed by Miller (1983) was adopted and used in order to measure the concept of entrepreneurial orientation. This scale includes a total of eight items: (i) two items related to the risk taking; (ii) three items related to proactiveness; and (iii) three items to measure innovativeness. As the items of the scale centre themselves on several different aspects of strategic position, they were submitted to a factorial analysis so that their dimension or factorial validity could be established. As a result, four items were withdrawn.

This way, the reviewed measuring of entrepreneurial orientation is composed by four items (instead of the eight original items), included in one single index, with an Alpha value of 0,68. The interpretation of the reliability test and the consistency of the factorial analysis support the unidimensionality of the concept. That is, the entrepreneurial orientation is more a combination of grouped variables than of separate and autonomous variables. This position goes against the results of Lumpkin and Dress (1996), but it agrees with the results of several other researchers (Miller, 1983; Covin and Slevin, 1989; Caruana, *et al.*, 1998).

To sum up, there seems to be an association between the entrepreneurial process – entrepreneurship, and the growth in several aspects. Variables which, in different ways, report that entrepreneurial orientation, as well as product innovation, perception of business opportunity, aspirations for future growth and creation of new firms, distinguish the high-growth firms from the low-growth ones.

5.1 Factors that influence on firm growth

The effects of the different theoretical dimensions of research model – life cycle, resources and capabilities, motivation, entrepreneurial orientation and environment - under the growth will be analysed. The variables concerning each of the dimensions are used in individual models as prediction variables (independent variables) of the growth (dependent variable). This way, the contribution of the different theoretical dimensions can be determined. Besides that, the impact of the variables of the different dimensions can be compared and the factors which contribute more, in group, to the explanation of the growth can be determined.

A multiple linear regression was used to estimate how far the growth can be explained by the variables related to the theoretical dimensions of the model. The objective of the following analysis is to test the validity of the theoretical models in order to predict the growth. That is, to determine the estimation of the relative importance of the different dimensions to explain growth.

In this sense, all the independent variables were included in the linear regression model (table 2). According to the results, the *entrepreneurial orientation*, together with the

strategy variable (motivation dimension), is the variable that contributes more to the explanation of the growth, with a regression coefficient of $\beta = 0,25$. For example, the *resources and capabilities* dimension showed a small number of variables influencing the growth. In what concerns motivation, only the *independence* variable appears as meaningless in the prediction of growth.

Table 2 –Combined Influence of Factors on Growth - Results of the Linear Regression Model

<i>Variables included</i> ^(a)	<i>Beta Values</i> ^(b) (n = 165)
Life cycle	
Growth stage	0,18*
Maturity stage	0,16*
Diversification stage	-0,15*
Decline stage	-0,19*
Motivation	
Creativity	0,11*
Growth	0,18*
Independence	n.s
Marketing	0,19*
Strategy	0,25*
Production	0,12*
Resources and capabilities	
Founder of the firm	n.s
Training in management	0,13**
Size of management staff	n.s
Firm' size (number of employees)	0,12**
Firm' size compared to competitors	n.s
Professionals of the value chain	n.s
External networks	0,11**
Institutional professionals	n.s
Environment	
Dynamism	0,17*
Heterogeneity	0,16*
Hostility	-0,18*
Entrepreneurial orientation	
Reviewed scale (4 items)	0,25*
Control variable	
Age of firm	-0,12**
R²	0,35
R² Adjusted	0,25

Nota: * =p <.05. **=p <.10.

n.s: not significant

(a) Behaviour of *stepwise* method for the selection of variables to include in the equation of regression.

(b) *Pairwise* behaviour for the *missing values*.

However, the production variable has a positive influence, opposite to its influence on the strategic orientation (negative influence). The control variable (age of firm) has a negative influence on growth. The negative influence of the firm's age on growth suggests that younger firms grow more than older ones.

A particularly consistent result is the influence of the perception of the environment, especially at the dynamism level. The results indicate that the firms which show some growth can be found, frequently, in dynamic environments which are beneficial, not hostile.

As the industrial sector included in the study was not the target of any analysis, it is not possible to know the correlation degree that the industrial sector has on growth. Anyway, the results show a sign that some firms possess the capability to assume more favourable positions regarding clients and competitors than others. This fact corresponds to the conceptualisation of other researchers (Lumpkin and Dress, 1996; Smallbone *et al.*, 1995; Davidsson and Delmar, 1999; Bhaskaran, 2006).

At a more general theoretical level, it seems that the perception of the environment influences the firm's growth, but it also seems that the firm may have some influence on the environment where it operates. The association between the dynamism of the environment and the entrepreneurial orientation is also strong. Small growing firms show an entrepreneurial orientation. Their strategies are directed to proactiveness, risk taking and innovativeness. Particularly, the dimension of proactiveness shows the ability to detect new market opportunities. One way to explore them is to direct the firm to a more dynamic environment.

The analyses performed also allowed to test several of designed research hypotheses. Table 3 shows the results, synthetically, of hypotheses connected with the entrepreneurial orientation.

Table 3 – Results of the Research Hypotheses

<i>Hypothesis</i>	<i>Description</i>	<i>Result</i>
H1	Life-cycle stages influence the growth of the small firm	Confirmed
H2	Resources and capabilities of the firm have a positive influence on growth of the small firm	Confirmed
H3	The attitude of the entrepreneur, concerning motivation, influences the growth of the small firm	Confirmed
H4	The dimensions of dynamism, heterogeneity, and environment hostility have a positive influence on the growth of the small firm	Partial Confirmed
H5	The entrepreneurial orientation has a positive influence on growth of the small firm	Confirmed

The factors which clearly demonstrate to have a positive influence on growth are: (i) stages of growth and maturity; (ii) creativity and growth; (iii) functions related to the areas of strategy, marketing and production; (iv) entrepreneur's/manager's academic education in management; (v) size of the firm; (vi) establishment of external networks; (vii) environment (dynamism and heterogeneity); (viii) entrepreneurial orientation (proactiveness, innovativeness and risk taking).

A negative influence was obtained with the following factors: (i) stages of diversification and decline; (ii) hostile environment; (ii) age of the firm.

5. Conclusions

The results make it clear that entrepreneurial orientation and growth are positively related, although their relationship is complex. It was possible to conclude, with some consistency, that

the firms which have a higher growth are those which are strategically entrepreneurial, detect opportunities and obtain an advantage when searching for those opportunities. This attitude reflects on the motivation of the entrepreneur, on the strategic orientation, and on the characteristics of the environment where the firm operates. However, not all firms search for opportunities. A possible explanation could be the motivation concerning the entrepreneur's attitudes, that is, the desire to be independent and creative at work and the commitment to increase sales.

In what concerns to the issue of the influence of entrepreneurship in the process of growth of a small firm, it seems that the entrepreneurship has, in fact, an important role once the firms which grow perform better, have the tendency to develop an entrepreneurial orientation supported by a group of factors (proactiveness, innovativeness, and risk taking).

Based on the most important and consistent results, it was possible to identify the following factors which influence the growth of the small firm: (i) the last levels of the life cycle influence negatively the growth; (ii) the high-growth firms have a strategic orientation that can be classified as entrepreneurial; (iii) the perception of the environment of the firm has a great importance to growth. Small firms which face a dynamic environment have the tendency to present a higher growth pattern; and (iv) younger firms have the tendency to grow more than older ones.

Results support the necessity of explanatory variables of multiple levels, to explain growth. The setting of the entrepreneurial orientation as an indispensable variable to the growth of small firms seems to be conceptually pertinent.

These firms seem to share some characteristics of the type of adhocracy firms suggested by Miller (1990) and Mintzberg (1979). The adhocracy firms are characterised as being flexible, with an informal organisational structure and a strategy able to answer to competitors, customers and market opportunities. A key-strategic element to this type of firms is innovativeness. It is expected that the entrepreneur of an adhocracy firm will be flexible and adventurous. There is not only a consistency in the characteristics of the firms based on opportunities, among several dimensions (stage of growth, entrepreneurial orientation, dynamism of the environment, motivation and the relative importance of resources), but it also seems that this is the type of firm that grows more.

Nevertheless, any study has, inevitably, limitations. The limitations of any study vary depending on the choices, deliberately and unconsciously made. Firstly, it can be surprising to understand that the major limitation of all is the fact that the results do not come from the factual reality. All analyses were based on simplifications or conceptual models.

The present study indicates that it is possible to study the growth of the small firm. However, to determine the growth, the period of time considered was short. Behaviour differences are not possible to determine in a study of this nature (cross sectional), resulting in a non-perfect prediction. Future research must consider longer periods of time (longitudinal studies). Such research studies can be complemented by case studies using a reduced number of firms. Growth is an empirical and multifaceted phenomenon. Therefore, it is necessary the use of multiple indicators in order to reflect its entire dimension. It would then be possible to check to what extent the entrepreneurial orientation affects the various types of firm growth in different ways. A possible research approach would be to model it as a latent dimension with a range of indicators and submit it to structural equations. The use of structural equations has two additional implications and possibly more important: (i) the number of variables can be reduced without omitting information due to the structure of latent variables; (ii) the relations between theory and empirical results are directly evident from the output of the analysis (Hair *et al.*, 1998).

The entrepreneurship is seen, frequently, as something inherently good, something firms should make an effort to achieve. This vision is supported by the results of the research.

However, it is essential to examine the relationship between entrepreneurship and the success of the firms.

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HOW TO ENTER THE BRAZILIAN SMALL BUSINESS MARKET

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Entering a domestic market is quite a challenge to any entrepreneur. Entering an international market has all the same roadblocks with many other factors that could put even a seasoned entrepreneur at a disadvantage without the proper knowledge. Additional considerations could include, but are not limited to: language barriers, tariffs, strained political factors, lack of networking, and additional capital needs. With great opportunity for market gains coupled with the great unknown of the culture, an entrepreneur has the ability to gain or lose a great deal.

Track: 10. New Venture Creation and SME Growth

DO CHINESE INTERNATIONALIZATION STRATEGIES IN AFRICA CONTRIBUTE TO THE ATROPHY OF AFRICAN INDIGENOUS ENTREPRENEURSHIP?

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Chinese firms are in Africa to source raw materials and markets for their booming economy. But their strategies appear to generate fewer opportunities than threats to African entrepreneurship. This study matches published data from six-country case studies with propositions from process and new venture theories of internationalization, concluding that current theories explain the Chinese behaviour only partially. State political and financial support and tied aid stipulating the use of Chinese contractors and materials permit state-owned enterprises to outbid competitors, and subcontract to private Chinese firms to control overall supply chains including retail. Africa's integrated response must neutralize these strategies.

Track: 2. Small Business in Developing & Transition Economies

Relationship in Business is like a Family

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Abstract

While many SMEs fail, some SMEs achieve success in international markets through bonded relationships. Using a phenomenological approach within the qualitative case study research premise, this study attempted to find how Sri Lankan SME owner-managers initiated, built, and maintained successful business relationships. The lived experiences of ten successful Sri Lankan SME owner-managers are that they form relationships with business counterparts and such relationships are like a family. Thus commitment to do excellence in international business is ensured by extending love, care, family values and norms to business counterparts generating mutual advantages. The implications for theory, policy, and practice are given.

Key Words: SMEs, business relationships, internationalization, lived experience, phenomenology, Sri Lanka

Introduction

The concept of business relationship though is not a new phenomenon (Brown, 1950), the increasing body of literature shows that it is gaining attention as an important strategic component of internationalization of small and medium enterprises (SMEs) in today's dynamic global business environment. Business relationship is used as a synonym for friendships between business organizations or persons. A review of literature reveals that there are two dominant schools of thoughts about having bonded business relationships between SMEs. One school of thoughts suggests that business relationships/friendships between organizations bring many advantages over competition; thus, collaboration is emphasized as an important business strategy in today's global economic environment (Allan, 1979; Halpern, 1997; Johnson and Selnes, 2004; Reohr, 1991; Ohmae, 1989; Williams, Han, and Qualls, 1998; Zain and Ng, 2006). The other school of thoughts suggests that friendship in international business can possibly create conflicts

due to role expectations and cultural differences, thus citing culture, personal roles, and individuals' expectations are as hindering factors for cross-national business relationships (Grayson, 2007; Heide and Wathne, 2006).

Business relationship is also viewed as an outcome of both formal and informal network formation within and between businesses. In many instances, cross-national friendship formation has become a crucial factor for SMEs. Premarathne cites Rebellottie's claim (1995) that informal relationships are as "*solidarity networks* helping enterprises to survive beyond market forces would sustain" (Premarathne, 2002, p. 64). In the process of networking entrepreneurs have to enter into network relationships with other entrepreneurs/parties in his business as well as in his external environment because the main problem for small business is not being small, but being lonely (Premarathne, 2002; Rebellottie, 1995). However, cultural and linguistic differences, attitudinal or ideological mismatches, and lack of knowledge about other countries, products, people, and resources have become sources of friction, inefficiency, and waste of resources (Freidman, 2005).

It is noted that many researchers discussed relationships between organizations ignoring the person-to-person relationships between owner-managers of SMEs in internationalization process limiting their discussions to the antecedents and consequences of friendships of businesses-to-businesses. Previous research mainly used quantitative surveys and therefore it is doubtful about gaining a tacit understanding of the topic. More over, those research findings were limited to western countries and or multinational corporations. The emerging enthusiasm to study business relationships prompted me to further investigate this phenomenon using a phenomenological approach to explore deeply how business relationships are initiated, built, and maintained by successful SME owner-mangers in Sri Lanka. The subsequent sections of this

paper includes a review of literature, theoretical framework, context of the study and participants, and the findings followed by a discussion and implications for theory, policy, and practice with a guide to future research.

The Purpose

This research focuses on identifying how successful Sri Lankan SME owner-managers achieve success in international business to generate new knowledge of the best practices and effectiveness of human relations in international business. The primary purpose is to identify how bonded business relationships were initiated, built, and maintained and what values were more prominent in sustaining them. It explores the nature of relationships that made success in international business. Next, a comprehensive literature review lays the foundation for this study.

Literature Review

Business Relationships as a Positive Factor for Internationalization of SMEs

Those who presented positive aspects of business relationships used varying approaches and theoretical frameworks to enhance further understanding of this topic. SMEs that were limited to domestic markets are forced to be internationally competitive to sustain in today's rapidly changing global business environment because "previously protected infant industries are no longer receiving protection from direct competition with foreign products" (Zain and Ng, 2006, p. 183). The attention was drawn to the fact that while many SMEs are fading away, some SMEs are functioning successfully in today's global market by retaining international customers, suppliers, and collaborators (Beaman, 2002; Hewapathirana, 2008). In this endeavor, Webster (1992) stated that new organizations are now replacing simple market-based transactions over to business relationships; irrespective of the size of the organizations, business relationships have been viewed as an essential strategy for surviving in the global economy (Ohmae, 1989).

Resource based view suggests that relationships can impact on mobilizing resources among alliances. Williams, Han, and Qualls (1998) noted that SMEs find business relationships are important to share risks and resources to survive in today's dynamic business environment. Organizations form relationships when a firm needs additional resources that cannot be purchased via market transaction and cannot be built internally with acceptable costs (risk).

A knowledge based theory of business relationships suggests that inter firm collaboration between alliances provide the best context for creating value by exchanging or combining dispersed knowledge. "Firms that face high environmental uncertainty especially can utilize alliances to enhance and speed organizational learning, reshape their environment and reduce strategic uncertainty" (Hoffmann and Schlosser, 2001, p. 359). Bliezner and Adams (1992) emphasized that friendship in business encourages a safe environment for discussing concerns and issues, which facilitate the generation of new viewpoints that promotes understanding. Such an understanding developed through sharing honest opinions provides a conducive premise for cooperation (Krackhardt and Stem, 1988) and members in friendships can have greater influence to each other member (Bliezner and Adams, 1992). Their view is that when members are more cooperative, they can be more tolerant of disagreement among members (Torrance, 1957). Relationship is thus viewed as a way to avoid cognitive conflicts between partners.

In the same vein, inter-organizational relationship theory and trust perspective (Morgan and Hunt, 1994) suggests that knowledge gained through honest exchanges of viewpoints and collaboration enhance interpersonal and interorganizational trust and commitment. Trust established through personalized relationships leads to increased understanding of international business partners and building trust (Ohmae, 1989; Williams, Han, and Qualls, 1998). Likewise, knowledge building through person-to-person relationships is found to be the ground for establishing trustworthy relationships that has become the bonding glue for sustaining in international business.

A transaction-cost theory perspectives states that close relationships between SMEs keep the cost down because business dyads in relationships can help each other to reduce costs. Formation of business relationships between firms has been identified as a growing global trend to expand markets by word-of-mouth marketing through business dyads (Harrigan, 1988). The dynamics of the global business environment is forcing for collaboration rather than competition in order to survive by sharing risk and resources while cutting down costs.

A managerial perspectives of business relationships suggests that the success of cross-national business relationships is determined partly by the appreciation and understanding that each country partner has of the other's social as well as structural bonding requirements and expectations (Williams, Han, and Qualls, 1998). It is more likely that Asian-Pacific Rim are focused on establishing social requirements of relationships between the organizations as a prerequisite for establishing and maintaining business relationships while American firms rush to contractual agreements to establish business relationships. It is found that developing countries have business relationship success rate of 45% to 50% (Killing, 1983). Williams, Han, and Qualls developed a conceptual model based on social and structural bonding as antecedents to relationship performance measured by commitment. In their model, commitment is a manifestation of business relationships. Managerial approach is based on the notion that culture is an influential force in shaping managerial attitudes and practices of doing business (Williams et al (1989). Interpersonal orientation in business relationships and the role that culture plays in influencing these relationships is the definition of culture. Culture is an important force determining managerial attitude and practices; it influences the practice of management and is considered an essential tool for understanding the process of doing business. Williams et al (1989) used culture as a descriptive variable in business relationships to measure culture's

impact on relationships. Relationships generate both affective and task bonding (Scherer, 1972). Such friendships would promote interpersonal processes associated with desirable decision-making outcomes. Over time the association between friendship and the outcomes of interest is therefore likely to be reciprocal rather than unidirectional (Schweiger, Sandberg, and Rechner, 1989). Friendship, therefore is considered as an antecedent to effective decision-making in business.

Business Relationships as a Negative Factor for Internationalization of SMEs

Cultural distance and role conflicts have been argued to be the hindering factors for international business relationships (Gayson, 2007). Cultural distance is identified as an obstacle in successful performance in cross-national business relationships because the norms and values of two firms differ due to their separate national characteristics that exist between partners (Ford, 1984; Geringer and Hebert, 1990). Park (1991) noted that although a large number of cross-national relationships are structurally and contractually sound, they have been reported to be organizationally unstable and performing poorly. According to Hofstede's (1979) notion of individualism and collectivism which characterized how individuals interact with one another, it is critical to understand the role of culture in business marketing, and maintaining cross-national relationships (Clark, 1990; Rubin and Brown, 1975; Samli, Grewal, and Mathur, 1988). They further state that a society that values individualism is one in which the ties between individuals are very loose. A society that values collectivism is one in which individuals are expected to look after each other, thus, they are more people oriented. Similarly high interpersonal oriented societies are highly responsive to interpersonal aspects of relationships with others, whereas low interpersonal oriented societies are just the opposite.

Research Framework

Though some researchers pointed out that business relationship is usually occur between business-to-business focusing on organizations, Hewapathirana (2008) after researching a sample of ten highly successful SMEs doing international businesses in Sri Lanka found that initially, relationships are built between the owner-managers or the decision makers of SMEs. Once relationships are imitated, formed, and maintained over time, these personal relationships are transformed into their organizations. It is also found that in the Sri Lankan context; in general, the key decision maker is the owner-manager of respective SMEs. Therefore, based on the assumption that initiation of business relationships are fundamentally occur between person-to-person interactions, the following research framework is chosen. This research also assumes that interpersonal orientation of owner-managers influence cross-national business relationships. However, it is noted that a lack of research relevant to international business relationships between owner-managers of SMEs, it limits comparison of research findings in different geographic locations.

On the premise of social capital theory, interpersonal relationships are discussed in relation to the concepts of bridging and bonding (Halpern, 2005). Interpersonal bonding is seen as a positive outcome of person-to-person relationships. Bonding is conceptualized as structural bonding and social bonding (Williams, Han, and Qualls, 1998). Social bonding is used a synonym to social relations (affiliation, cooperation, socialability etc.) and structural bonding is similar to task orientations. Social bonding also refers to personal bonding (Turner, 1970). That means individuals in organizations are bonded based on personal and social relationships with their international business counterparts. In this process, trust and satisfaction play a major role in developing social bonding. Based on their bonded relationships, dyads become enmeshed in

social networks of the other and their relationships become more binding, stable, and predictable (Dwyer et al, 1987). Trust and shared values due to social bonding made dyads become interested and committed to providing satisfactory business activities. Dyads when they become bonded through social relationships, they tend to be committed to each other to maintain satisfactory relationships. Wilson and Mummalaneni (1986) argue that greater the stability of a relationship, greater the chance that the duration of relationship will be longer, thus, interpersonal orientation is discussed as the foundation for successful relationship building and maintenance. Williams, Han and Qualls (1998) stated that individual are more likely to commit to a relationship with another individual by interacting on an interpersonal level that leads to social bonding and thereby enhance their commitment to people and business organizations. Having this theoretical understanding, this study addressed a gap how bonded relationships were initiated, built, and maintained by the Sri Lankan SME owner-managers. It is my hope that this research enables us to understand the nature of relationships and the values that prompt them to maintaining winning business relationships with many dyads from western as well as eastern countries.

Study Context

This research is carried out in Sri Lanka, a developing country in Asia. Since there is no specific study that distinguishes fine differences in Sri Lankan culture, I used Hofstede's (2001) classifications of national cultural differences in creating background knowledge about the culture specific behaviors of Sri Lankan people. According to Hofstede's research, South Asian countries are classified as high context cultures that have hierarchical social systems and collectivistic relationship behavior. Sri Lanka been a part of South Asia, it is assumed that it has cultural characteristics similar to those of its neighbor—India. Sri Lankans generally are

considered a friendly and hospitable nation as they appreciate other cultures and are open to creating relationships with strangers.

Method

Based on the purpose and the nature of the research question, a phenomenological approach within a multiple case study method was chosen to find tacit data of lived experiences. The overarching research questions addressed in this study was “how were the international business relationships initiated, built, and maintained by the Sri Lankan Small Business Owner-managers? and what they value in business relationships. A case study research permits qualitative inquiry, which is particularly oriented toward exploration and discovery (Patton, 2002). Using an inductive analytical framework, general behavioral patterns, values, and lived experiences were studied.

Research Participants Selection

Ten successful SME owner-managers who have been in international business were chosen using a purposeful sample method that allows selecting information rich cases (Yin, 2003). The logic and power of the purposeful sampling is its ability to select information-rich cases to gain an in-depth understanding (Patton, 2002). Rigorous process of participant selection was carried out after an in-depth research of news paper archives, internet research, and consultations with business advisory and development organizations in Sri Lanka to ensure the selection of information rich participants. This process also used to maintain the validity, credibility, and reliability of the research. Thus, ten participants—five males and five females who apparently were the best fit for my selection criteria—provided extremely rich information.

The key determining factors were, they should have ongoing successful international SMEs either export/imports, or joint ventures in countries other than their own country of

residence, willingness to provide rich information, continuity of international business minimum of ten years because “time is an inherent feature of a relationship, and consequently time is a significant aspect when conceptualizing and empirically studying relationships” (Holmlund, 2004, p. 280). Because a business relationship is a dynamic multifaceted process, we should focus on long-term relationships instead of short-term episodes in order to understand the true nature of relationships (Holmlund, 2004). The other determining factors were each manager should have more than one international business dyadic relationships and have frequent interactions and English or Sinhala language ability to communicate with the researcher.

The participants ranged in age from fifty to eighty years. Their experience in doing international business varied from fifteen to forty years and employment from 30-3000. Each of them has experience in doing business with minimum of ten countries in Europe, Asia Pacific countries, and America. All of them have had sustaining international business relationships with their clients and business partners. All the participants have won the Sri Lanka’s Best Entrepreneur Award for their excellence in doing business within and outside the country. In addition, three of them have won the Best Exporter Award, and three women have won the World’s Best Woman Entrepreneur Award. One woman won more than twenty awards for excellence in her business. Thus, the selected ten SME owner- managers have all been socially recognized as successful and great contributors to the economy. All the participants played two key roles as the owner and the manager in their businesses. They have been portrayed as role models and leaders in business in numerous media within and outside the country.

Data Collection

Using a phenomenological approach to learn from lived experiences, I collected data from face-to-face in-depth conversations with each participant. After getting their consent, set

times to meet each participant at his/her own businesses and residents in a comfortable and confidential manner. The grand opening questions (Mores and Richards, 2002) were used to initiate conversations. The opening invitation began with “I am interested in what it like to have close business relationships with partners from other countries, please tell me about your experience.” Probing of unstructured spontaneous queries allowed the interviewer to follow the participants lead with clarifying questions. The interviews were audio taped with minimum interruptions and field notes of prominent points were written for later retrieval. Each interview lasted three to four hours during December 2006 and January 2007.

To ensure the rigor of this study, the research principles proposed by Lincoln and Guba (1985) were applied. The principles are credibility, transferability, dependability, and confirmability. To ensure credibility, the interviews were conducted in the participants home or business premises confidentially. References were made and participants were educated about the purpose of the research before hand to develop confidence within the participants. Friendly atmosphere during interviews was a remarkable signal for collecting trustworthy data that ensure the credibility of the study. The author’s professional experience functioned as a guide to keeping the phenomenon in focus by being aware and constantly asking analytic questions “what is the lived experience of business relationships.” Like wise Giorgi’s (1985) analysis steps were performed rigorously to maximize the credibility and dependability. Confirmability is ensured by using participants own words in the transcripts to illustrate the findings.

Analysis

All the interviews were transcribed verbatim and read several times to ensure the completeness. The initial analysis was performed using Giorgi’s (1997) phenomenological analysis method. Giorgi (1985) suggested four steps of analysis. First step was to gain an overall

understanding by reading and rereading the entire transcripts. The reader did it with an open mind without taking any direction to gain global understanding. The second step was breaking the text into meaning units. This process allowed generating several meaning units expressed by the participants' own words. It helped to remove the unrelated texts to the phenomenon studied. This procedure was performed to each participant's interviews. The meaning units were treated as expressions related to the lived experience of having close business relationships to understand the nature of relationships. The third step was to examine, probe, and transform each meaning unit of the participant's own words into the author's disciplinary language. This process helped separate essential aspects of the phenomenon studied. The fourth step was devoted to reveal the essential structure and to synthesize the essence of the phenomenon into patterns of the essences. Finally, a synthesis of all interviews was arranged to clusters of variation of the essences of the phenomenon. In this process, one main essence and three related essences emerged from the transcripts and later several constituents that illuminate the essences were found. Thus, the emphasis was to present the central aspects of the interviews and illuminate the lived experience that highlighted how they initiate, built, and maintained bonding international business relationships.

Findings

The major essence that gives a global understanding of how these participants initiated, built, and maintained business relationships is that "relationship in business is like a family." The three related essences surrounding the major essence: "relationship in business is like a family" depicts their values as "money is not the prime concern", "do the best, give the best, tell the

truth” and “continued friendship means continued business.” Each essence is described with examples drawn from participant’s own words with my interpretations.

Major Essence: “Relationship in Business is Like a Family”

The main essence related to the phenomenon “cross-national business relationships” was identified as “relationship in business is like a family.” There has been an established pattern of lived experience that all the participants have been doing business through established relationships with their clients and business partners. Those relationships were identified similar to family member relationships. In the literature, a family is seen as a nuclear unit that functions as a hierarchical organism with a set of family bound values and systems.

Family is considered as a nuclear system in which family members develop invisible loyalties and generational bonds due to genetic relatedness. Family, thus, develops hierarchy of obligations or a multigenerational balance sheet of merit and indebtedness, which has tremendous impact on individual members (Hartman and Laird, 1983, p. 80).

Though the concept of family is changing according to different cultural patterns over time, still in many cultures, the unit of family becomes a powerful authority in continuing relationships, sharing resources and values, keeping strong family bonds, love, and caring for its members while transmitting generational values and cultures (Hartman and Laird, 1983).

It is understood that intimate relationships within family members play a vital role in shaping the lives of its members. In the same manner, once each research participant has initiated contacts with strange business partners and clients, they made an effort to develop bonding relationships. Such desire for bonding friendships was apparent from the interview transcripts. Each one of them expressed their loving and caring nature to their employees, clients, business partners, and others. Every effort was made to strengthen bonds between business partners and clients as they believe such friendships will help their business success by avoiding opportunistic behaviors. It is the participants’ experience that friendships can bring mutual gains through deeper

understanding of each other and serving business encounters as family members or friends. This has been evident.

I experienced that personal friendship is the best way to get export orders. I had some friends from other countries. When they come to Sri Lanka, I invite them for dinners and take them around the country for site seeing... That is one way I built up relationships.

This has been further evident with participants' own words.

Who ever who comes to my door, I welcome them with a smile...I am a very friendly person and they...my friends, neighbors like it. Many people from other countries came to me through our website... When they come, I get friendly with them. I get very close to friends who ever who comes to me. When I go to France, I stay with my clients as we become very friendly as brothers and sisters.

Reciprocity and hospitality were identified as important constituents of the major essence "relationship in business is like a family." Business relationships were further strengthened through extending reciprocity and hospitality to their encounters. Once they initiate business talks with a new client from another country, many a time, they organized frequent meetings, fun activities, and enjoyable trips to extend their friendships. Relationship with business partners is considered a part of day-to-day lives and part of their family entertainments. Though business expansion was the ultimate outcome, each participant emphasized their concern about maintaining credibility and excellence in relationships. Reciprocity nature and appreciation of friendships were demonstrated by all the participants as they enjoy such mutual exchanges. Gift giving, hosting business partners' family members, and socializing with business partners from other countries were evident throughout their interviews. Such type of reciprocal behavior demonstrated their appreciation towards business partners, which draw partners more closely. Another described his experience:

When I go to other countries, my friends (business partners) take me around and invite me for trips and so on...In return I also organize things that make them

happy and enjoyable to do business with me. I always build up close friendship with my business partners... It is both ways, we help each other through personal relationships and family relationships... It is mutually inclusive.

Relationship is seen positively as important component.

Confidence building is the key to successful international business...through friendships we build up confidence...we became friendly...When we go to their countries they host us and take us to their factories and when they come here we host them and show our factories and places of interest and build up friendship... I stick to ethics and do the job properly, that is how we build up good relationships with international businesses. It is very important for us.

Their loving and caring nature towards employees, clients, business partners, and others lead to building bonded relationships. By extending invitations to their business partners from other countries to their homes and family events, these participants have combined self and family values for initiating in-depth relationships with their business partners. In the Sri Lankan context, hospitality is a societal value that is inherited over generations. All those different levels of values—self, family, and societal values—blended together in their relationships through their actions of hospitality and reciprocity. Another stated how her family entertained international business partners while gaining deeper understanding about them.

From my childhood I have cross-cultural experience and open mind to meet international people. Through friends ... We had many international visitors who came to my father's business. He used to take them around the country showing interesting places... We all go as a family with them... I had that exposure to outsiders...I developed contacts with them too... That way, I understood the other people and their circumstances and lives... We were very happy to take them around the country ... it was my father's hobby than a business...that way we had good relationships with many international people.

Family mentality in doing business is further evident through the following expressions.

My daughter visited the magic show in Las Vegas and found a friend... She participated in LA business show... She met the buyer there... Then he agreed to buy from us... We have exhibited a company in LA with that buyer... We have employed some people... We pay for his travel and he delivers to other buyers at

their door step for us... It became a family base relationship now. When we visit the US, they pick up us from the airport and help us to find accommodation and travel around... We have a good relationship now with our US buyer. We also supply to British buyers in the same way.

Family like relationships generated multiple effects: generated business ideas, deeper knowledge, resources, motivation, expanded markets, and cost savings over marketing efforts are some of them.

Because of our friendship with some of my husband's friends in other countries, we started our business. He got a loan from his friend and started the business (financial support, and ideas for business)... We do not need to meet the buyer directly every time because we have already established relationship and friendship... Our buying officers are already there and they know about us. (Knowledge creation and trust establishment). Our friends who know us give recommendations to their friends and their friends so that we get a lot of orders through word of mouth because we have friends who know us and our business and we have built trust with them. That trust and friendship can go as a chain that made success of our business... and our business is good and easy to grow or supply to different markets. Trust depends on the history and our behavior or supply to meet the needs of our friends in time. So it needs to understand the other party, their business, and needs.

Taking responsibility and accountability was emphasized in family like business relationships. All the participants demonstrated high level of accountability as they were responsible for their actions and decisions. Unlike in large corporate businesses, they did not have to wait to get approval to take decisions due to established friendships. Instant decision making ability is one advantage that SME managers have in dealing with international business dyads.

Empathy, affection, and caring nature towards business partners were important constituents apparent in family like relationships. The data analysis provided ample evidence that effective use of empathy in international business relationships was helpful in maintaining bonded business relationships. Empathy is understood as understanding and sharing of feelings

such as kindness, sincerity, authenticity, concern about others, and compassionate nature of persons lead to developing mutually beneficial relationships. Sri Lankans in general are known as hospitable, sincere, and caring people. Such national cultural characteristics were apparent within all the participants as they demonstrated their caring nature towards their families, employees, friends, neighbors, business partners and others. All the participants treat their international business partners cordially as close family members. Their day-to-day practices were that “we treat our business partners and clients as our family members.” “Friends are no different.” This caring nature facilitated deepening their understanding about the other parties which made them easy to deal with business activities.

Effective use of personal emotional characteristics (affective—feelings) in initiating and maintaining international business relationships was found as an important essence in relationship building. Affective feelings are considered a personal quality and an ability to feel and share in another’s emotions, thoughts, and feelings. Close friendship was developed being frank and honest with the other members. All the participants demonstrated their ability to understand another person's culture, perspectives, likings, and so on. Having greater understanding of the dyads, these participants were able to persuade easily about their products and businesses which lead to achieve business goals simultaneously by strengthening friendships.

“Money is Not the Prime Concern”

Money is not the prime concern was emerged as an important essence because earning higher profit is expressed as a temporary gain by the research participants. It was a global understanding that these participants viewed doing international business as part of their day-to-day family life rather than solely earning profits. Maintaining trustworthy relationships are given

priority and considered as a way to continuity of their international businesses. As a result, they tend to maintain friendships by adhering to unique business philosophies and ethics, maintaining credibility and quality in all aspects of business and life. Doing international business was considered a pride and higher social status for them. Helping others and getting help from others were some of the outcomes that further strengthen their business relationships and trustworthiness. These essences were apparent from their own words as given below.

Money should never be the prime concern. You must develop your own personality and help others.. my neighbors are my customers, my employees are my children...I treat equally to both my own children and my employees which made my success as they are committed to work...I also love my neighbors and I feel my business is secured that way. My neighbors are my customers and they are my marketing agents because they spread the good word about my products.

Each participant demonstrated eagerness to develop close networks with business partners by opening to different viewpoints and respecting others. Psychological readiness to adapting a holistic approach to relationship building with international business partners was a prominent personal attribute. It was the participants' idea that sustainable business relationships cannot be formed having only personal qualities or high quality products or a good business. It has to be a holistic approach leading towards relationship orientation. Business relationship is seen a totality approach and integrity in what you do is paramount.

Asian culture values networks and relationships; family background, knowledge, and credibility. Those factors are important for small businesses. However, there should be a face behind the brand helps a lot... A lot of small businesses go from word of mouth to build business...Every thing is critical unless you put the right things together, such as product; quality; marketing and all those things affect the success.

It was their understanding that relationship building although is extremely useful in business, it may not bring fruits if it is used in isolation. All other factors related to product quality

standards, timely delivery, packing, and many characters of personality need to be blended together to achieve success. Thus, a holistic approach to business and relationship building that intertwined with open-mindedness was observed among all the participants.

“Do the Best, Give the Best, Tell the Truth”

Another important essence of “doing business like a family” was apparent through their desire and commitment to maintain excellence. It was found that participants’ commitment for excellence has one of the major contributing factors for the sustainability of international business relationships that made their business partners satisfied with business transactions. High commitment to give the best, do the best attitude combined with caring personalities further strengthened their trustworthy relationships. The constituents such as high concern for quality in all actions and products and timely action was apparent from the interviews. All these participants demonstrated their keenness to maintain good image and reputation. They were concerned about their achievements and credibility rather than short-term monetary gains. Every one of them implied that they would like to maintain their self-respect as part of credibility. Each one of them created unique images for themselves as well as their products and services. Building positive social identity and credibility were apparent as key constituents that supported bridging partners. Their positive social identity, self-dignity, and ethical behavior blended together formed a unique flat form that strengthened their relationships with business partners. Their strong motivation, self-dignity, reputation, and image were apparent from their personal behavior and actions towards relationships. Maintaining personal and business credibility by supplying high quality products in time for a reasonable price and extending authentic friendship to their business partners were their norms. Such unwritten norms made them behave differently

and do things in such a way that dyads become confident. Their concern about maintaining positive image can be seen as

One thing is my product. It is the Sri Lanka's best brand name in batik today. I have been exporting to Germany, Sweden, France, UK, USA, and various countries.

The essence of “do the best, give the best” was further reflected in their high concern for maintaining quality. It was their effort to supply quality products as one of the key strategy required to succeed in international business. Quality is not limited to their business or products or services it is also linked to relationships. Such concern for quality in their relationships is evident by way of extending candid and friendly nature to their business partners. Such actions helped them to create unique brand names. For example, “my product is the Sri Lanka's best brand name in batik today.” He is concerned about maintaining the quality and brand name of his products just as he is concerned about his own credibility.

Taking prompt actions is identified as an important constituent of “do the best” because it strengthens the relationships between business dyads while ensuring future orders expanding their businesses internationally. They sent all the shipments as agreed maintaining confidence within the business partners. Their priority concern was that they do not want to destroy their good name of business as well as their personal credibility and relationships.

Another constitutes of “do the best, give the best, tell the truth” are honesty, and integrity that built confidence with new business friends. Each one of them acted with a clear vision of how to deal with dyads. Their inner values were displayed as:

“We conduct business with honesty and integrity with respect to those who are in relationship with us... We comply with the law and regulations in Sri Lanka with regard to exports...Assurance of quality, price, employee training, and their well being, and to conduct all business activities in an environmentally friendly manner are our prime goals...Give to people only what is good and necessary... Teaching the truth...knowing

the subjects... understanding the others [business partners] are the key things to business success.

The participants' values, inner concerns, honesty, and integrity of serving and dealing with their international business dyads were demonstrated through out the interview transcripts.

“Continued Friendship Means Continued Business”

It was their inner belief that business success is ensured through the continuity of family like business relationships. Strong friendship was considered a hope of continuing business with international counterparts as it is a way of predicting for future orders and behaviors of business partners and customers. Friendships are also seen as a way of avoiding opportunistic and deceptive actions as they experienced in the past. There were three deceptive incidences. One participant lost millions of rupees as one of her buyers deceived her by not paying for a shipment of goods and she has to take legal actions to secure her payment. Another experienced cheating by one of his international buyers by sending him substandard machinery. He sees that deeper understanding of his buyers through close relationships would have avoided such deceptive actions. Another experienced his patent was stolen. Based on their experience, building bonded relationships would avoid deceptive actions was deeply rooted in their minds.

If you build confidence and a close friendship with your business partner, it makes a lot success and it will make a big difference in doing business with them... Once you build close friendship, they will never go to another person, or your competitor to buy things... You also try to give them the best product, best price, best quality, and best of all.

Thus, building sustainable business relationships were seen as the continuity of business and avoidance of deceptive actions.

It was also observed that personal and business relationships were intertwined, hence inseparable. Interestingly, to all the participants profit was not the only motive of having close

business relationships with international business partners. For most of them, relationships with their business partners become part of their family lives and family social status. Sri Lankans, as a nation in general value hospitality to strangers as a valuable opportunity and a satisfying behavior in their lives. To all the participants, a successful business relationship means the continuity of international business by way of continuous orders for their products or services. Returning customers is also seen as a sign of success in international business relationships.

Frequent travels, technology such as e-mail, faxes, and telephone were used to have frequent interactions with their business dyads. When relationships become intimate and bonded friendships, the frequency of interactions increases and most of them recorded that they get more frequent orders through emails or phone calls. Once a family like friendship is established, time factor is not much of a concern as some business partners give orders overnight or to supply within a short period of time. Family like relationships is thus seen as favorable as they received continuous export markets.

My overseas friends are my business partners; they call me in the evening and ask me... whether I can send them my product within two days. They also send me designs via email. I say yes and I some or how the other manufacture the required quantity and ship the consignment the following day or the other day morning... I am used to it and I like it... That way, I get frequent orders... They know that I will do it and send them in time... I never delayed any shipment or quantity or lowered the quality... It is the trusting relationship built between us that made my business success... I should say our business success is due to our close friendship and understanding of each others capabilities.

Likewise, all the participants viewed relationships as an important factor for small businesses that helps internationalize their SMEs. Once they become closer, each party makes frequent visits and that relationship becomes more family-to-family relationship. Another constituent identified was that their strong belief about helping others and getting help from others as they feel comfortable with their business partners as family members.

Making their business dyads happy by extending personalized welcome, hosting, and providing excellent services were considered part of maintaining quality relationships. They avoided every minute thing that may conflict or lower their credibility. Business growth was achieved through entering into new markets, expanding existing markets, adding innovations and technology, and augmenting resources among international partners. Many international friends helped these participants by giving feedbacks and new ideas that lead to adding new features to their product innovations. Technology was used not only to production and design but also to communicate and share new designs while maintaining bonded relationships.

Discussion

The findings of this study guide my argument in a direction that family like business relationships were initiated through person-to-person relationships between owner-managers (decision makers) of SMEs and overtime, such relationships extended to their business organizations. It is apparent that social bonding becomes a prerequisite and a foundation for structural bonding. Both social and structural bondings (Williams, Han, and Qualls, 1998) are important for ground for achieving success in international SMEs.

The unique findings of this study were that cross-national business relationships between international dyads were like a family. Thus, person-to-person relationships were apparent preconditions for organization-to-organization relationships. Therefore, organizational relationships were seen as a longer term outcome of the owner-managers' personalized relationships with international business partners. This study emphasizes that in the Sri Lankan business context, owner-managers' cross-national business relationships play an important role in internationalizing their SMEs and therefore, personalized relationships were viewed as positive factors for international business success. The lived experience made them believe that bonded

business relationships opened many doors for them to enter into international markets while collaboratively enhanced their products, quality standards, innovative designs and augmented resources. That way, these participants were not only able to expand their markets but also establish joint partnerships and manufacturing plants in many countries.

Evidences show that many business dyads had family involvements in bonded relationships with business counterparts. Those family involvements become an enjoyable and memorable life and family events which worked as bridges to building strong psychological bonds. That way, they were able to gain deeper understanding about their dyadic business partners and clients. It was the participants' understanding that whenever, they did not have clear understanding of their business partners' they failed due to deception and untrustworthy actions by strange business counterparts. There were incidences that three participants became the victims of deceptive actions and non payment for their consignments. These deceptive actions were ended with legal sanctions to recover their losses while completely terminating future business activities with those deceptive business partners. Therefore, friendships with business partners are seen as the way to gain deeper knowledge and build trustworthy relationships to sustain in international business environments. The lived experience shows that their family values were embedded into business relationships and such relationships guide them as a predictor for future actions of business dyads.

Though the concept of family is changing according to different cultural patterns over time, still in many cultures, the unit of family becomes a powerful authority in continuing relationships, sharing resources and values, keeping strong family bonds, love, and caring for its members while transmitting generational values and cultures (Hartman and Laird, 1983). It is obvious that intimate relationships within a family play a vital role in shaping the lives of its

members. It is a common norm that family relationships are not solely based on profit motives. The essence that “money is not the prime concern” is grounded in the Sri Lankan family values as they envision goodwill of their family members. What it means by “money is not the prime concern” in this study is that each participant believed that friendship is more valuable for them than instant profits, thus integrating family values into the business decision making process. Thus, relationship building is viewed as a part of their social relationships with family like businesses partners. These findings raised another important factor that finding like-minded, family like business partners is not an easy process especially in culturally different nations; it is crucial and rare. It is apparent that a few bonded relationships were sustained over time based on their past actions are the foundations for continuity of relationships as well as businesses.

The commitments to give the best, do the best, and be a good friend were some of the ethical practices thus observed within these participants. These relationships lead to form important social capital among these business partners. Social capital refers to “features of social life-networks, norms, and trust that enable participants to act together more effectively to pursue shared objectives...social capital in short refers to social connections and attendant norms and trust (Putnam, 1995, pp. 664-5). Initially, ethical practices of individuals are an important component of relationships that worked out positively sustaining in relationships.

Over time, trustworthy personal relations formed between dyads were translated into their organizations in the form of economic returns by boosting their SMEs through market expansion, innovations, product developments, augmenting resources, and establishing brand names. In the same vein, previous researchers supports my findings that those who concerned with social capital is that when harnessed, social capital generates economic returns (Coleman, 2000; Fukuyama, 1995; Halpern, 2005). Because of the established trust in relationships, common

frames of reference and shared goals allow for better knowledge sharing within organizations. There are also lower transaction costs (Piazza-Georgi, 2002) and a cooperative spirit both within and between organizations with its customers, partners, and shareholders. Georgi further pointed out many advantages that social capital in organizations result low turnover rates, reducing severance costs, hiring and training expenses, lower attrition rates, and maintaining valuable organizational knowledge. These attributes are similar to the outcomes of structural bonds as discussed in Williams, Han, and Qualls (1998).

Strong psychological bonds between business dyads lead to mutual agreements and cohesive actions towards achieving common business goals. These cohesiveness actions can be seen through their personal behavioral factors such as commitment, reciprocity, hospitality, trustworthy and dependable actions, and caring nature towards each business dyads and organizational factors such as supplying products of high quality standard, timely actions, setting mutually beneficial prices and helping each other by sharing resources and knowledge. Cohen and Prusak (2001) also found greater coherence of actions due to organization stability and shared understanding among business dyads. This argument is further supported that “the greater the commitment of organization to a specific relationship, the greater the stability of that relationship and the greater the chance that the duration of the relationship will be longer” (Williams, Han, and Qualls 1998, p. 137; Wilson and Mummalaneni, 1988). It was their understanding that business relationships are determined partly by the appreciation and understanding that each country partner has of the other’s social and structural bonding requirements and expectations (Williams, Han, and Qualls, 1998).

Williams, Han, and Qualls (1998) pointed out two forms of commitment towards business relationships. Commitment to organization is labeled as structural bonding and

commitment to a person through greater degree of interpersonal orientation is labeled as social bonding. That means both organizational factors and personal factors influence the outcome of business relationships and thereby business success. As mentioned above, this study found similarities that both organizational and personal factors are important for better results of achieving business success. Discontinuity of business relationship is viewed as bad and a failure of business. Among many rewards highlighted as useful factors that ensured business success was partners helping one another in identifying new markets; expanding current markets; providing and sharing scarce resources; promoting markets through word-of-mouth and giving references; engaging in familiarization visits; and acting as bonded business partners. In many instances, participants stressed that where they did not have close relationships, their businesses failed due to cheating behaviors and non-payment of shipments. This study found that business relationships are important component entailing many positive attributes that leads to structural bonding.

Gaining deeper knowledge of dyads becomes the ground for predicting business success. Those who found negative factors suggest that mixing friendship and business may create conflicts (Beatty et al. 1996; Haytko 2004; Heide and Wathne 2006; Krugman 1958; Price, Arnould, and Tierney 1995). Their argument was that role conflicts arise due to conflicting expectations in certain situations that results role conflicts among partners. Conflicts lead to cognitive or psychological strain and therefore friendship in business may not work. Bonded friendship is seen as a way of developing harmonies between business dyad which lead to trustworthy business actions. Gaining deeper knowledge is important lived experience of a bonded relationship and none of the participants experienced conflicting behaviors between

international business dyads. On the contrary, it was their notion that in the absence of bonded relationships, they experienced deceptions and termination of business.

By analyzing these findings, I would like to raise a new research question, where to draw the border line for relationships with business partners. The boundaries of business relationships may lead to ethical practices of each partner and this question may require further research to understand the boundaries and ethical practices of business relationships. In summary, this research shows that in the Sri Lankan business context, friendship in doing business was accepted as an important factor for survival and growth of their businesses in international markets as it demonstrated structural bonding is an intrinsic outcome of social bonding between business partners.

IMPLICATIONS

The findings of this study not only lead to future empirical research but also have significant implications for theory, policy, and practices.

Implications for Theory

The research findings show that relationships between cross-border business partners and clients worked as bridges that connected business people in many different nations. Over time those relationships were transformed into bonding glue between business partners that resulted mutual gains and satisfaction while achieving success in their SBs. Bridging and bonding have been discussed as important elements of social capital theory that can benefit those who are in relationship with. The findings will have significant implications for social capital theory. Social capital theory can be considered a potential theory that not only generate human capital but also has greater influence in internationalization of small business.

Looking at social capital in firms is a relatively new idea (Cohen and Prusak, 2001). When social connections are strong and numerous, there is more trust, reciprocity, information flow, collective action, happiness, and greater wealth (Francois, 2002). There is the widely held view that social and economic outcomes of individuals, families and communities are better where there are higher levels of social capital. According to Coleman (1990), family is the key institution through which social capital is transmitted. This is done through investment of time and effort, development of effective ties and guidelines about acceptable and unacceptable behaviors (Wright, Cullen and Miller, 2001). Social capital in the form of close ties to family, community, and organizations may generate benefits by raising utility and output thus reducing the cost of transacting business due to higher trust and enforceability of sanctions. The findings will be useful in the establishment and management of successful cross-national business relationships. Some research shows that many companies frequently try to capitalize on social relationships to achieve economic aims (Grayson, 2007). Some encourage their friends and family network to generate new business directions (Meagher, 2006). Many firms attempt to benefit by fostering word-of-mouth recommendations among friends (Hughes, 2005; McConnel and Huba, 2007; Sernovitz, 2006). In the same vein, this study shows many positive effects of having trusting business relationships not only on business growth but also in personal and family lives. Mutual gains, expanded markets, enhanced innovations, augmenting resources, collaboration over competition, reciprocity, care, satisfaction, enjoyment, trust, social identity, personal and organizational credibility, gaining new insights are a few examples. These findings direct researchers to carry out further research to increase our understanding of positive and negative effects of social capital in internationalization of SBs. For example, this can be used for discovering and understanding new relationship concepts as well as for setting boundaries for

analytical purposes that expand current knowledge aiming to discover new aspects of relationships. In this process, future research may lead to identify new conceptual constructs of social capital theory that can be used in international business education or global economic development. Further, this will have implications for a new economic theory of foreign market entry. My argument is further supported by Ohmae (1999) that old economic theories that no longer apply in the interlinked global economy. Everyone involved in business at every level, as well as every informed consumer, needs to understand the real economy of the interlinked world.

Implications for Policy

Promotion of international business relations as a way of internationalization of SMEs can have implications on national and global economic policies. SME internationalization is still a new phenomenon that requires stimulating policy measures to harvest better results. Policies should focus on facilitation and encouragement of close business relationships rather than control of cross-border business exchanges happening today. Some of the potential aspects of policy measures are relevant to formation of international social and business networks, infrastructure and technological development, language and education, opportunities for social interactions and mutual exchanges among business partners around the globe by way of providing more opportunities for international collaboration.

This study shows that foreign market entry is the major stumbling block for small businesses. These research participants formed informal relationships mainly using relatives and friends who live in other countries. Conducive policy measures are still in demand to connect potential business partners around the globe. Therefore, viable policies that encourage SMEs to build cooperative relationships with customers, suppliers or other business partners are critical for success. This study shows importance of bridging ties to discovering novel business

opportunities in the globe. In this process, responsible authorities need to pay attention to pooling and providing resources. Though there are opportunities for international travels, still many restrictions are prevailed. Favorable policies that facilitate network formation, free flow of information, knowledge exchanges, product and services require international consensus and policies.

Globalization requires new types of expertise that traditional organizations often lack. While technology has eliminated many barriers to globalization, many significant barriers still remain, particularly those involving people and the organizations we build around them (Beaman, 2002). It is important to provide appropriate infrastructure and technology to business communities on an affordable basis. In today's environment, globalization has been the bearer of capital, ideas and culture. Although it threatens longstanding traditions and injures indigenous cultures, it also fosters new ideas, habits, and practices in its wake. Though many people can take advantage of the global communications and information revolution, still many SMEs are behind this trend. Therefore, policies, especially in developing countries need to ensure the access to technology and communication as well as other facilities. As Ohmae (1999) suggested, both country and currency are important in promoting international business. Today's exchange rates are much more volatile than they were a decade ago. It is natural that companies move deeply into the countries where they seek to neutralize the impact of currency, security, and facilities.

Implications for Practice

The current study findings show that the participants developed relational competencies over time by way of trial and error because there are no programs that encourage SME owner-managers to develop cross-border relational competencies. The common trend in the past was that most cross-cultural research and educational programs focused on employees of large

corporations. It is apparent that this study benefits practitioners in designing new educational programs for SME owner-managers. For researchers this study serves as a ground for new research agenda to help practitioners. It can be replicated in other countries and regions so that in the future it can generate interest and attention of major donors to finance to carry out a global study mobilizing practitioners and researchers of similar interest. Not only culture specific or culture general knowledge competencies but it also requires enhancing human competence on how to integrate knowledge of countries, cultures, and individuals into productions, marketing efforts, international business exchanges to build and sustain in fruitful business relationships.

Conclusion

This study highlights an emerging phenomenon of family like business relationships in internationalizing SMEs. Bonded relationships helped these participants to achieve business growth through expansion of their markets, innovations, and establishment of sustainable business partnerships. It also leads to fulfilled and enjoyable business and family lives. I argue that bonded relationships between owner-managers of SMEs over time leads to bonds between business organizations. Therefore, person-to-person relationship is a prerequisite for organizational relationships. In this endeavor, in a long run, bonded social relationships between individuals play a key role in establishing international business relationships that lead to organizational success.

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Comparison analysis between SWOT and EVR Models in the Crisis Management of Unsuccessful SMEs

Dr. Mohamed Abd-Elrazzak Hegazi

Abstract

The crisis management of the unsuccessful SMEs is relevant to the small business development that unsuccessful SMEs constitute psychological entry barriers to the start-up enterprises. One of the most important things of crisis management analysis is identifying the opportunities and threats of the crisis. In SWOT analysis, which is strategic planning mode, opportunities and threats are considered to be an external elements while in EVR analysis, which is knowledge representation model, opportunities and threats are considered to be an internal elements.

BRS is the ability to reason about and adapt to changing environment. There is an area of AI concerned with issues of revising sets of belief when new information is found to contradict old information. Belief revision systems are AI techniques that deal with contradictions. They work with a knowledge base, containing propositions about the state of the environment, performance reasoning from the propositions in the knowledge base.

This paper aims at justify the analysis of the BRS on the two models and the report the impact of considering opportunities & threats as external or internal elements on the analysis of the crisis management of unsuccessful SMEs.

The result of studding the external environmental events of 38 small enterprises concluded that opportunities and threats are internal elements and entrepreneurs' reasoning interprets the external environmental events to opportunities or threats. Also change the entrepreneurs' belief has a direct impact on helping the unsuccessful enterprise to restart again after changing their interpretation of the external environmental events.

Key words: SWOT, EVR, crisis management, opportunities, threats, BRS, reasoning

Introduction:

Over the past several decades the Small Medium Enterprises (SMEs) have played a remarkable role in the social economic development of many countries¹. There are critical constraints that limit the supply of entrepreneurs and shorten their life-span that considered barriers to the roles of these SMEs. These barriers² are identified as **Entry Barriers**, which are concerned directly with the supply function of entrepreneurs, **Survival Barriers** which are concerned the conditions of continuity and growth and **Exit Barriers** which represent the escape routes that entrepreneurs may pursue if their venture flatters, or growth beyond the size limits of small manufacturing operation.

These barriers lead to the unsuccessful SMEs crisis, which constitute psychological barriers to the start-up SMEs. In this paper unsuccessful SMEs expression mean SMEs in mortal state, which are not able to work anymore.

Use of SWOT Analysis³: Strengths Weaknesses Opportunities Threats (SWOT), which is strategic planning model. SWOT analysis may be used in any decision-making situation when a desired end-state (objective) has been defined. SWOT analysis may also be used in pre-crisis planning and preventive crisis management.

Use of EVR Analysis: Enterprise-Virtual Representation (EVR), which is a Knowledge Representation model used to evaluate the environmental adaptation process of enterprises. EVR analysis had been utilized in enterprise comprehensive diagnosis & remedy planning⁴, enterprise interventions⁵, and crisis management of unsuccessful SMEs⁶.

One of the most important things of crisis management analysis is identifying the opportunities and threats of the crisis. In SWOT analysis, which is strategic planning mode, opportunities and threats are considered to be external elements while in EVR analysis, which is knowledge representation model, opportunities and threats are considered to be an internal elements.

Enterprise belief system is the image in the enterprise management and enterprise functions. Image is a set of beliefs, ideas, and impressions that a person holds of an

¹United Nations. Entrepreneurship in economic development. The role of entrepreneurship in economic development. (New York: 1988) p. 3

²"Excise concessions to small-scale industry in India: some issues. "United Nations Small Industrial Bulletin for Asia and the Pacific, Vol. 22, (1987) pp.34-40

³http://en.wikipedia.org/wiki/SWOT_analysis, Accessed on Apr. 3, 2009

⁴ Mohamed Abd-Elrazzak Hegazi, Mohamed Nagib El-Sheikh, Ashraf Farouk Eweas, Enterprise Virtual-representation to Support Comprehensive Diagnosis and Remedy Plan for SMEs (Industrial Zone, El Minya, Upper Egypt), The 51st ICSB 2006 World Conference, 18 to 21 June 2006, Melbourne Australia.

⁵ Mohamed Abd-Elrazzak Hegazi, Mohamed Nagib El-Sheikh, The 52nd ICSB 2007 World Conference, Enterprise Virtual-Representation Model to Support Interventions of SME's development, 13 to 15 June 2007, Turku Finland.

⁶ Mohamed Abd-Elrazzak Hegazi, *EVR Analysis To Assist the Crisis Management of Unsuccessful SMEs*, 16th Scientific Conference for Information Systems and Computer Technology, *ESISACT*, 17 to 19 February 2009, Cairo Egypt.

object⁷. Enterprise image or enterprise belief system is represented in the general external environment, which includes nine attributes: education, culture, technology, economy, demography, sociology, legal, polices, and natural recourses⁸.

Belief Revision System (BRS) is the ability to reason about and adapt to changing environment. There is an area of Artificial Intelligence (AI) research concerned with issues of revising sets of belief when new information is found to contradict old information.⁹ Belief revision systems are AI programs that deal with contradictions. They work with a knowledge base, containing propositions about the state of the environment¹⁰, performance reasoning from the propositions in the knowledge base¹¹,

Background and Motivation:

There are three motives of this research:

First motive observations on 38 start-up entrepreneurs were selected from four governorates, complaining of difficulties in survival and seeking financial support. The entrepreneur cases were investigated and came up to conclusion that 90 percent of their decisions were taken based on their belief values, while 10 percent of them were taken their decision rationally.

Second motive a report commissioned by the Egyptian Community Development Association, which aims to sustain the small & medium enterprises development in Upper Egypt, estimated that 12 percent of SMEs in three governorates Qena, Sohag, and Beni Suef were shutdown (mortal state) between 2007 and 2008, although they had been taken a technically assisted. While 43 percent of these SMEs were below the normal grow, and only 5 percent had rapid growing, as shown in Figure-1.

Third motive an assumption that the component model should specify dynamic behavior of the components. The components should adapt to the dynamic availability of the services or other components they are using¹².

⁷ Philip Kotler, *Marketing analysis, planning, and control*, New Delhi: Prentice-Hall, Inc, fifth edition, 1987, p. 608.

⁸ Mohamed Abd-Elrazzak Hegazi, Impact of The Belief Revision System on The Development of Small And Micro Enterprises "The Case of El-Beleda Village, Giza Governorate", degree of Fellowship from Sadat Academy for Management Sciences, March 2007, Cairo Egypt, p. 28.

⁹ *Encyclopedia of Artificial Intelligence*, (New York: John Wiley & Sons., 1987) Vol. 1, p.58.

¹⁰ Mohamed Abd-Elrazzak Hegazi, *Belief Revision Parameters For Assisting SME's Entrepreneur Development*, The 27th ISBA National Entrepreneurship & SME Development Conference, 2nd to 4th November 2004, Newcastle-Gateshead, UK.

¹¹ Mohamed Abd-Elrazzak Hegazi, *Expert System Parameters For Evaluating Reasoning of SME's Entrepreneur*, The 49th ICSB World Conference, 20th to 23rd June 2004, Johannesburg South Africa.

¹² <http://www.eclipse.org/proposals/ecp/>, Accessed on Apr. 3, 2009

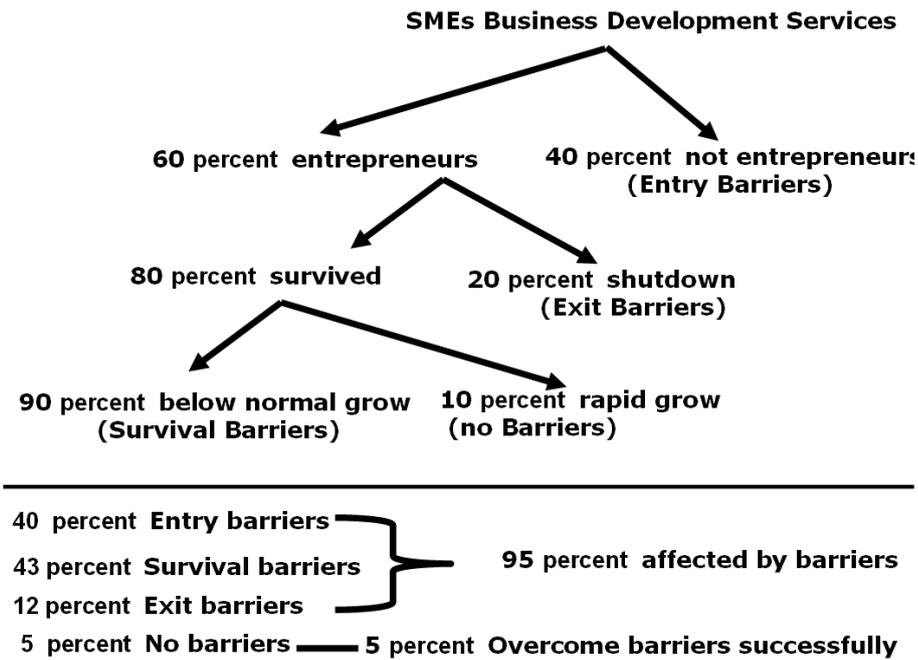


Figure-1 SMEs Crisis in Business Development Services

Problem definition:

The desired end-state (objective) is difficult to be defined for unsuccessful SMEs in mortal state, because there are many intangible elements constitute the mortal state, such as: belief values, and perception of the entrepreneurs.

SMEs are often used intuitive planning, which is based on understanding of something without conscious reasoning or study, that type of planning is difficult to define the desired end-state (objective).

Paper Objective and Research Questions:

Paper objective is to assist the crisis management of unsuccessful SMEs through revising the belief values, and perception of the entrepreneurs in their mortal states.

The above objectives can be articulated in the form of the following research questions:

- Q1. What are the impacts of assisting unsuccessful SMEs on the social and economic development?
- Q2. What are the possibilities of changing the state of unsuccessful SMEs to a rapid growing state?
- Q3. What makes SMEs more adaptive with its environment?

If stated in the form of hypotheses they could be phrased as following:

- H1. Assisting of unsuccessful SMEs may help the start-up SMEs of overtaking the psychological barriers.

- H2. Tacit knowledge of unsuccessful SMEs may motivate them toward rapid growing state.
- H3. Revising the entrepreneur interpretation of opportunities and threats of their unsuccessful SMEs make them more adaptive with their environment.

Methodological Approach:

The methodology that followed to investigate hypotheses centered on four approaches:

1. SWOT analysis
2. EVR analysis
3. BRS analysis

Analysis justification:

BRS utilized to justify the analysis of the SWOT and EVR models in the crisis management of unsuccessful SMEs. Analysis justification includes identifying to the propositions of environment state and performance reasoning from the propositions.

SWOT analysis

SWOT Analysis is a strategic planning method used to evaluate the **Strengths, Weaknesses, Opportunities, and Threats** involved in a project or in a business venture. It involves specifying the objective of the business venture or project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective, Where:

Strengths: attributes of the organization those are helpful to achieving the objective.

Weaknesses: attributes of the organization those are harmful to achieving the objective.

Opportunities: *external* conditions those are helpful to achieving the objective.

Threats: *external* conditions which could do damage to the business's performance.

SWOT analysis must first start with defining a desired end state or objective.

The state environment of unsuccessful SMEs is the state where entrepreneurs have no clear vision about the desired end state. An entrepreneur in mortal state tries many objectives and failed to achieve any of them, also failed to interpret the external condition for achieving objectives.

SWOT analysis conclusion:

SWOT analysis depends on entrepreneur's interpretation to the business environment for identifying the desired end state. Because interpretations are affected by biased judgment, such as belief values and perception, so SWOT

analysis will not be able to perform reasoning, may help the unsuccessful SMEs for changing their mortal sates.

EVR analysis:

EVR Architecture:

All enterprises contain three main parts, enterprise environment, enterprise functions, and enterprise management.

Enterprise environment, which is composed of specific external environment and general external environment. Specific external environment is composed of five elements: customers, suppliers, competitors, machineries, and location. General external environment, which includes nine attributes: education, culture, technology, economy, demography, sociology, legal, polices, and natural recourses.

Enterprise functions deal with interpreting the enterprise environment into products or services. It is composed of five elements: marketing, production, finance, personnel, and R&D functions.

Enterprise management is considered the brain of enterprise in achieving its objectives. It is composed of four elements: Planning, organizing, controlling, and monitoring.

All these elements are interrelated and constitute the EVR Architecture in 146 cells, as shown in the Figure-2. Each cell constitutes a domain of knowledge.

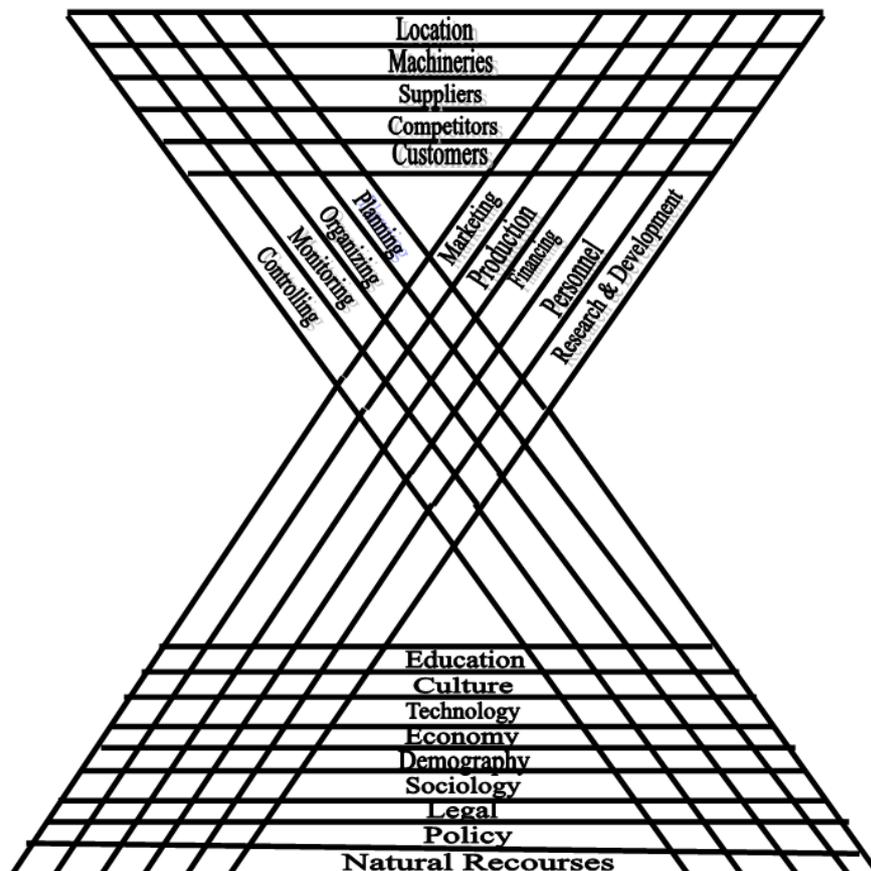


Figure-2 EVR Architecture

The type of entrepreneur's knowledge represented that tacit knowledge¹³ is carried in the entrepreneurs' minds; explicit knowledge¹⁴ is transmitted from entrepreneurs' minds to employees working in the enterprise, and information¹⁵ about the enterprise environment as shown in Figure-3.

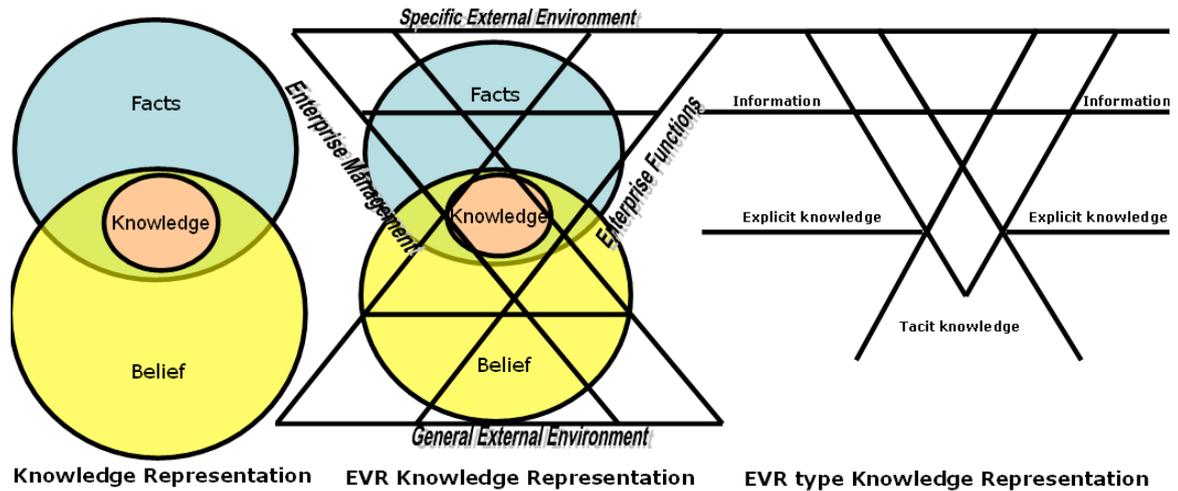


Figure-3 Types of entrepreneur's knowledge

The entrepreneur perception to the **specific external environment** is valued of needs, or wants, while his perception to **enterprise functions** is valued of custom-made or readymade product, his perception to the **enterprise management** is valued of formal planning, or intuitive planning, and the perception to the general external environment is valued of default reasoning or causal reasoning. As shown in figure-4.

The sate of the environment:

The sate of the environment is an attempt to examine business changes in all their dimensions. EVR utilized to represent business changes in all their dimensions virtually. As mentioned in the types of entrepreneur knowledge representation, entrepreneur perception is biased to one value of specific external environment, enterprise functions, enterprise management, and general external environment. This is Snapshot of entrepreneur perception about their business dimensions. The state of environmnet is represented in 16 states as shown in figure-5.

The state of environment involves

1. States are snapshots of varying conditions of entrepreneur's perception in business environment at one moment in time. All states are unique.

¹³ http://en.wikipedia.org/wiki/Tacit_knowledge, Accessed on Apr. 13, 2009

¹⁴ http://en.wikipedia.org/wiki/Explicit_knowledge, Accessed on Apr. 23, 2009

¹⁵ <http://www.businessdictionary.com/definition/information.html>, Accessed on Apr. 6, 2009

2. Operators act on a state to transform it into another state.

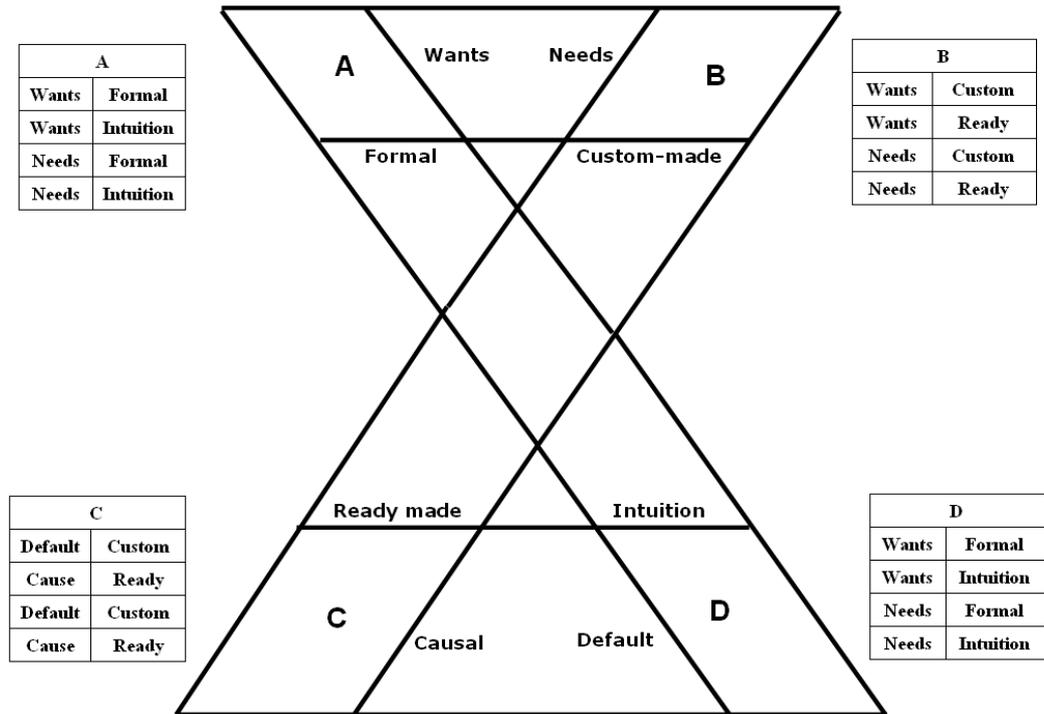


Figure-4 Entrepreneur perception

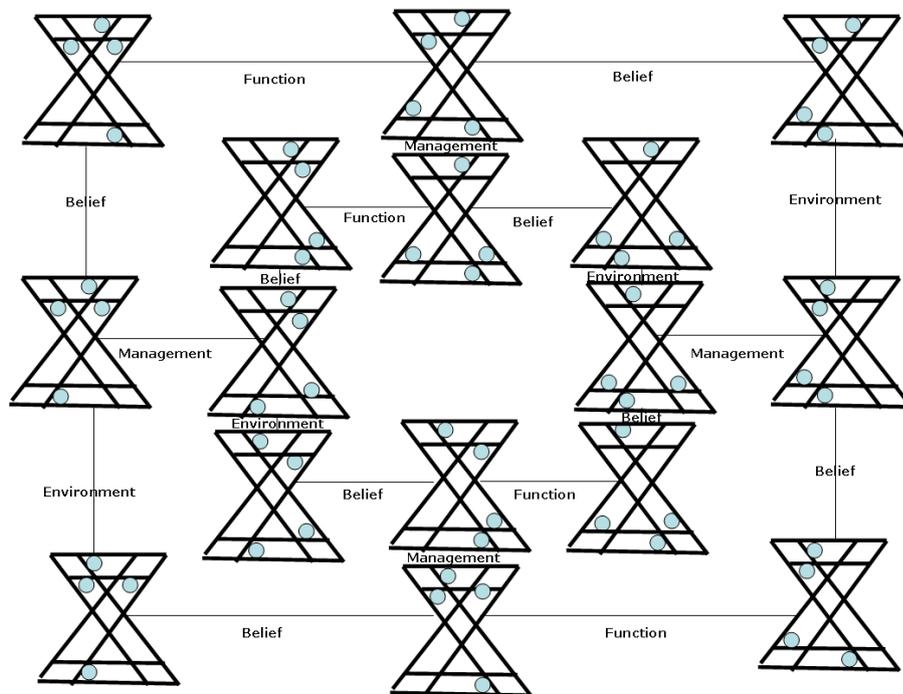


Figure-5 Snapshot of entrepreneur perception in business dimensions

Performance reasoning:

After identify the state of environment in figure-5 it can perform reasoning from the state of environment for changing the initial state to another state. For example, in figure-6 suppose the initial state of an enterprise is state "A" and the objective state is state "B". The development path is presented by the arrows. The initial state (A), where it is snapshot of the current entrepreneur's perception to the following values:

- Specific external environment is valued by Needs,
- Enterprise function is valued by custom-made,
- Enterprise management is valued by formal planning, and
- General external environment is valued by Default reasoning.

The objective state (B), where it is snapshot of the required entrepreneur's perception to the following values:

- Specific external environment is valued by Wants,
- Enterprise function is valued by readymade,
- Enterprise management is valued by intuitive planning, and
- General external environment is valued by causal reasoning.

The development operators from state (A) to state (B) are as the following:

First operator: change the entrepreneur's perception of the enterprise function from custom-made to readymade.

Second operator: change the entrepreneur's perception of the enterprise management from formal planning to intuitive planning.

Third operator: change the entrepreneur's perception of the general external environment from default reasoning to causal reasoning.

Fourth operator: change the entrepreneur's perception of the specific external environment from needs reasoning to wants.

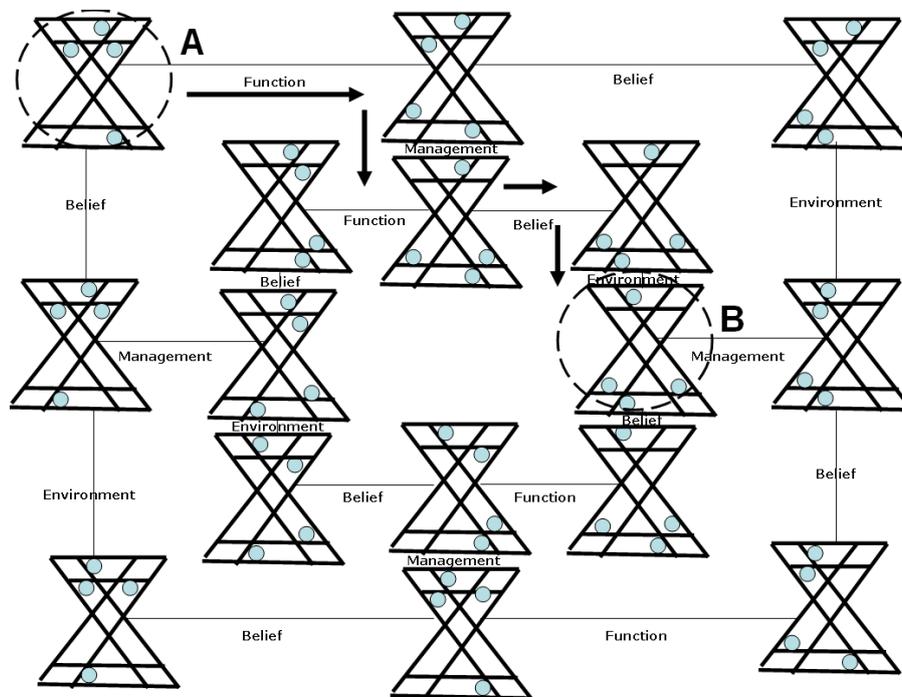


Figure-6 EVR State of environment road map

Crisis management of unsuccessful SMEs:

Crisis of unsuccessful SMEs means enterprise is not able to adapt with its environment. Enterprise crisis can be managed by changing the current non-adaptive state to adaptive state. Entrepreneur who has a deferent perception to his enterprise has high elasticity to change his position according to changes happened in the general or specific external environment. That elasticity makes entrepreneurs safe from business crisis. The previous example concluded that EVR State of environment road map can help unsuccessful SMEs to identify their current state in 16 unique states, identify the desired end-state (objective) in 16 unique state, and finally identify the development path according to SMEs capabilities.

Conclusions:

1. Changes enterprise states may help enterprise to be adapt with its environment.
2. EVR state of environment road map may help entrepreneur to identify the enterprise suitable states according to changes happened in the business environment.
3. EVR state of environment road map may help non-entrepreneur for understanding the enterprise ecology.
4. Opportunities and threats are internal elements and entrepreneurs' reasoning interprets the external environmental events to opportunities or threats.
5. Crisis management of unsuccessful SMEs is overtaken the psychological entry barriers of the start-up enterprises.
6. Unsuccessful SMEs already have tacit knowledge gaining from a bad experience that knowledge can be directed to motivate these SMEs from the current state to a better state.

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Exporting barriers and the internationalisation of manufacturing activities by SMEs in Jordan

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This study focus is on the issue of export performance and its determinants among indigenous firms in Jordan. Export marketing activities are of vital importance to the survival and growth of Jordanian companies. This is ascribed to the relatively small local market size and to the country's gradual shift from heavy reliance on import substitution strategies in the last two decades to contemporary export orientation. Also, many economists are calling for an urgent action plan to correct the situation of "Deficit in trade balance" in Jordanian economy. The action plan needs to discuss what causes or prevents Jordanian firms from exporting. Although the literature has recorded some discussions on internationalisation of firms in developed countries, there is a paucity of internationalisation efforts from manufacturing firms in developing countries. By investigating the exporting barriers that Jordanian's manufacturers face when engaging in international business, this study can enrich the body of knowledge on internationalisation of manufacturing firms in developing countries. It offers guidance for future research in a field of research that is still in its infancy.

1.1 Introduction

In general terms, the progress of a nation's exports has positive impact on the growth of the economy in total as well as on individual firms (Cavusgil & Nevin, 1981; Tesfom & Lutz, 2006). Exporting activities increase profitability, improve trade balances, and help to deal with the problems of poverty and unemployment (Koksal, 2008; Karadeniz & Gocer, 2007). Small firms are becoming increasingly international, and they have been reported to contribute between 25 and 35 percent of world exports in manufacturing (Andersson & Florén, 2008). However, there are still many SMEs in developing countries that do not export or contemplate doing so, despite the fact that export does not require but a small amount of capital investment and has lesser financial and commercial risk as a mode of a foreign market entry mode compared to some form of direct investment (Lages & Montgomery, 2004; Agndal & Chetty, 2007).

While an extensive body of literature exists regarding the export practices of firms, arguably, much of the literature has concentrated on the activities of large multinational enterprises, and there is a need to further develop the knowledge of internationalisation in small firms (Ahmad & Julian, 2006; Rundh, 2007; Zeng et al., 2008). In addition, an overview of the broad bodies of literature addressing exporting barriers facing SMEs in developing countries reveals that there has been lack of extensive research on this subject (Leonidou, 2004; Altintas et al., 2007). The overwhelming majority of studies examining exporting barriers facing SMEs, especially studies that classified the export barriers of small and medium-sized manufacturing firms have been conducted in America and Europe (Ibeh, 2003; Neupert et al., 2006). In addition, there is the issue of the methodological limitations in much of the internationalisation school's research deserves attention. Past research samples have been made up of exporters who have been asked to reconstruct past behaviour that may have taken place many years ago, and that poses a question mark about the 'recall' issue in methodology (Kaleka & Katsikeas, 1995; Leonidou, 2004). Moreover, most of these studies focused on exporters and did not survey non-exporters. This study is an attempt to correct such limitations by surveying non-exporting as well as

currently exporting firms. This observation provides scope for an important gap within the existing literature to be addressed concerning the need for research to be undertaken in a number of geographic areas which have obtained limited consideration to date, including Jordan which represents one of the developing countries.

1.2 Internationalisation

Internationalisation is defined as business activities that cross national borders and is intended to create value in organisations (Welch & Luostarinen, 1988). It is found to be a significant aspect of the maximisation of business opportunities and over the last few decades, many SMEs started it as a requirement of business success (Knowles et al., 2006; Rundh, 2007; Saixing et al., 2009). Research on the internationalisation of small firms has grown quickly in the last two decades. There is a widespread and well-built body of literature that has investigated small-firm international growth (Bell, 1995; Etemad, 2004). Usually, SME internationalisation is dealt with using three distinctive and interconnected approaches: internationalisation process, export development and barriers, and international entrepreneurship (Manolova et al., 2002). The latter is beyond the scope of the current research.

A number of models have been developed in recent years concerning the internationalisation process of the firm (*cf.* Andersen, 1993; Leonidou, 2004). The stage theory of export development amongst the different studies within the internationalisation literature, on which this study will focus, differences between exporters and non-exporters, export performance predicates, export barriers, and small-firm export attitudes and consequent behaviours among other research subjects linked to the internationalisation of SMEs.

There are many studies that have investigated the internationalisation process of a firm and proposed export development models (Bilkey & Tesar, 1977; Johanson & Vahlne 1977; Madsen & Servais, 1997). The different models proposed different stages that a firm has to pass through during its internationalisation process. Although there is general agreement that exporting is a developmental or incremental process and that firms pass through different stages in their export development, there is disagreement on the number and nature of the different export stages (Leonidou & Katsikeas, 1996). Theoretical development has been based mainly on the stage models signifying that firms move through stages as they expand from being non-exporters to becoming dynamically involved in export markets, and can be recognised widely among three groups of firms (Leonidou, 2004; Keng & Juan, 1989):

- Nonexporters: explicitly, companies currently not exporting who express a subjective view on barriers;
- Present exporters: explicitly, companies currently engaged in export activities who experience problems during their day-to-day participation in overseas markets;
- Ex-exporters: explicitly, companies that used to export in the past but no longer do so who see export barriers from their perceptual and experimental point of view.

The trend toward increased internationalisation of world markets emphasizes the importance of understanding how firms behave and how they perform in international markets. An important research area has been export marketing research and in particular a focus on internal and external determinants of export performance. Most internationalisation studies focus on the outward processes associated with exporting, licensing, franchising and foreign direct investment, with exporting being the main mode of internationalisation for SMEs (Westhead, 2008; Eusebio et al., 2007). Due to such amplitude this would be beyond the possibilities of this work. Therefore, this work sets out to investigate only one, very relevant facet of internationalisation in detail, that is exporting.

1.3 Exporting

Exporting has become a significant internationalisation strategy for both companies and national economies in the world markets (Koksal, 2006). Growing liberalisation, integration and competition in the world economies have been responsible for the increasing engagement of firms in exporting activities (Ural, 2009). Also as the pursuant to the growing globalisation of the world's economies, exporting activities for SMEs have become more consequential for the survival, growth and long-term viability of business organisations since exporting is generally a less resource-laden approach as compared with alternative foreign market entry and expansion modes since it requires minimum business risk, needs low commitment of resources, and offers high flexibility of movements (Neupert et al., 2006; Korez-Vide, 2007). From a national viewpoint, the commitment of more companies to export activities is regarded as an effective way of coping with trade deficit problems experienced by many developed and developing countries (Morgan & Katsikeas, 1997).

Exporting has traditionally been an economic activity much required by corporate managers for a number of reasons: export development is perhaps the most widely studied and least understood aspect of international business (Kazem & Heijden, 2006; Grimes et al., 2007); it seems to better production productivity (Koksal, 2006); it increases efficiency, technology, quality, and service standards in the organisation (Calof & Viviers, 1995); it grants a better profit base to reward shareholders and employees (Ahmed et al., 2004); it generates more funds for reinvestment and growth (Czinkota, 1983; Koksal, 2008); and it diversifies business risks by operating in multiple markets (Leonidou & Katsikeas, 1996).

Policy towards SME internationalisation (or specifically Exporting) has two strands. One strand is to encourage already exporting firms to export more. A second strand is to instigate non-exporters to begin exporting. A policy challenge relates to the inability and/or reluctance of many SMEs to internationalise (Westhead, 2008). Ahmad & Julian (2006) explained that the general objective in most countries is how to find ways to raise exports, through encouraging already exporting firms to export more or by instigate non-exporters to begin exporting.

At present, developing countries account for almost 22 percent of world manufacturing. In the 1990s the average annual growth of export of manufactured products in developing countries exceeded that of industrial countries. However, most manufacturing firms in developing countries possess limited resources and need support when they initiate export activities (Tesfom & Lutz, 2008).

In Jordan, International trade and integration with the world economy has become one of the primary strategies for continued domestic economic growth in the recent years. And within the country's effort to catch up with the requirement of globalisation and openness to external markets, there has been a clear effort by the government to increase industrial export to non-traditional markets and enhance the competitiveness of national industries. SMEs in Jordan are motivated to export by sales growth, market enlargement, strengthening of competitiveness, and diminishing dependence on the home market. This importance of export for Jordanian firms can be explained partly from the small size of the country (the smaller the country, the smaller the domestic market, and the sooner firms look abroad), and partly from general trends such as globalisation.

To this effect, the foreign trade, in recent years, has significantly increased, with the manufacturing industry playing an important role (Lozi, 2008). According to figures released by the Central Bank of Jordan (CBJ, 2006), exports were estimated at 36.3 percent of gross domestic product (GDP). Jordan's industrial sector contributed 21.7% of Jordanian GDP in 2006. Moreover, 98.7% of the manufacturing sector enterprises are classified as SMEs.

Jordanian manufacturing companies are being forced to look outside of Jordan in order to survive. More and more companies are facing challenges of globalisation with the accompanying open borders. After all, exporting firms are at the heart of most countries' economy. Hence, there is a real need for Jordanian entrepreneurs to target export markets by adopting a global outward-oriented vision of business development to help them face the challenges of globalisation.

1.4 Exporting barriers

SMEs report a range of barriers which they perceive to be detrimental as they seek to access international markets. Research on barriers to firms' export entry and expansion has long been considered very important (Korez-Vide, 2007; Wengel & Rodriguez, 2006). Wilkinson & Brouthers (2006) assert that understanding how barriers hinder the exporting process is of vital importance in the effort to understand issues relating to barriers, and encouraging factors to develop business in how and why firms become concerned in overseas markets. A number of researchers have directed their attention to managers' perceptions of export constraints and barriers over the past two decades (Ghauri et al., 2003; Altintas et al., 2007). Actually, the occurrence of these barriers can largely clarify why current exporters are not exploiting their full potential in the international marketplace and why non-exporters are not engaged in exporting at all (Leonidou, 1995). Exporting barriers will only be perceived as problems to the level that they are significant and hard to manage (Katsikeas & Morgan, 1994). The conceptual proposition of this is that barriers make business performance more difficult overseas in contrast with domestic market activities. In this respect, preceding to domestic firms becoming exporters a fear threshold has to be overcome in order for the firm to benefit from its export potential (Morgan & Katsikeas, 1997).

To bring together barriers characteristics, authors have proposed different classificatory techniques such as distinguishing between initial problems and on-going problems, where initial problems relate to a shortage of experience or knowledge and on-going problems linking to greater participation with foreign markets (Bilkey & Tesar, 1977; Czinkota & Johnson, 1983). Classification of export barriers was also undertaken by Leonidou (2004) who conducted a comprehensive analysis of 32 studies and came up with 39 export barriers which he classified into internal and external barriers.

Export barriers can be encountered by the firm at any stage of the export development process, from pre-export and other initial stages to extensive levels of international involvement. However, the aggregate nature of these barriers tends to differ systematically from one stage to another (Leonidou & Katsikeas, 1996). Although these differences in barriers were encountered, the literature tended traditionally to give emphasis to two forms of export barriers. These are barriers which discourage firms from engaging in export activities and barriers experienced by firms which already have initiated export operations (Morgan, 1997).

In recent decades, many scholars have adopted a company perspective of international trade by attempting to investigate the forces inhibiting the firms to initiate, develop or sustain export operations (Katsikeas & Morgan, 1994). However, an overview of the broad bodies of literature addressing exporting barriers facing SMEs in developing countries reveals that

there has been lack of extensive research on this subject (Tesfom & Lutz, 2006; Altintas et al., 2007). The majority of studies have reported upon data gathered in industrialised typically western countries (Ahmad & Julian, 2006; Leonidou, 2004). It is unfortunate to note that not much is known about the international activities of these firms in developing countries. The main reason for this is that they do not receive the same kind of attentions as large companies do.

Given the structural differences between developed and developing countries, it is possible that SMEs in developing countries may face challenges that are different to those faced by its counterparts in the developed world. Therefore, as many authors stressed (e.g. Kazem & Heijden, 2006; Leonidou, 2004), understanding the scope and importance of different barriers may be expanded by extending such researches outside of the developed countries arena.

1.5 Aim and objectives

The importance of the SME contribution to the Jordanian economy, and particularly export earnings, is very obvious from the literature review. Growth is clearly an important element and exporting is one of the most important forms of such growth. Hence, the need for SMEs to overcome export barriers is a key factor in their existence.

To this effect, the main focal point of this study is to investigate the exporting barriers that Jordanian's manufacturers face when engaging in international business, and the relationship between the perceived export barriers and export performance of Jordanian SMEs. These More specifically, the research objectives for the study are:

First: To investigate possible differences in the perception of SMEs managers towards exporting barriers considered by way of their level of exporting activities that ranges from non exporter to experienced exporter.

Second: To examine the relationship between exporting barriers and export performance of Jordanian SMEs.

Third: To examine the relationship between firm and managerial characteristics and export performance of Jordanian SMEs.

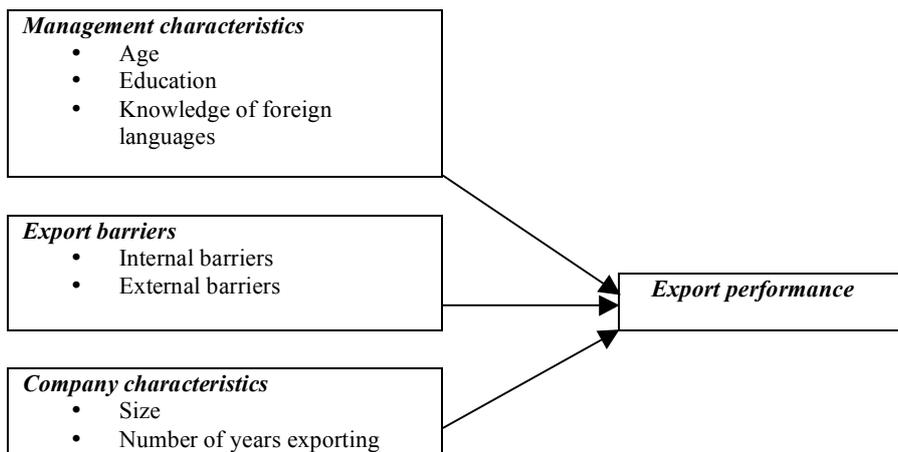
1.6 Conceptual Framework and Hypotheses Development

The conceptual framework for this research is presented in this section together with the development of research hypotheses. This framework is based on our review of literature about internationalisation, certain company characteristics, managerial characteristics and exporting barriers "internal and external" variables are integrated and viewed as potentially significant factors influencing export performance. A certain issue has been taken into consideration in developing our model of export performance. As evidence suggests from the literature that different exporter categories vary in their characteristics and behaviour (Cavusgil, 1984; Katsikeas et al., 1996). This research surveying non-exporting as well as previously exporting firms, that is, those that had exported in the past and examine firms that are engaged in regular export activities. These exporter groups are representing in the process of export development.

This study conceptual framework evaluates how the following groups of variables affect SMEs' export performance (See Figure 1):

- The firms' characteristics (such as size, number of years in business).
- Internal exporting barriers.
- External exporting barriers
- The managerial characteristics (such as age, knowledge of foreign languages).

Figure 1: The conceptual framework for this research.



1.6.1 Research Questions

The model consists of 3 research questions related to exporting barrier “internal & external”, managerial and firms characteristics affecting the performance of SMEs. The questions have been separated into the same four groups specifies in the previous page. The research questions are set below:

Research Question 1: In what way do specific firm characteristics influence the export performance?

Research Question 2: in what way do the managerial characteristics influence the export performance?

Research Question 3: Is there a relationship between managers' perceptions of export barriers and export performance?

1.6.2 Hypotheses Development

1.6.2.1 Firm Characteristics

The independent variables evaluating the characteristics of the firm to be used in the research is as follow:

- Number of employee within firm
- Number of years exporting

1.6.2.1. A Firm Size

Firm size is one of the most researched variables. However, there is little agreement on its influence on export performance. Some researchers found a positive relationship between firm size and export performance (Baldauf et al., 2000; Eusebio et al., 2007), others found no relation (Bilkey & Tesar, 1977; Saixing et al., 2009) and some even found a negative relation (Ali & Swiercz, 1991, cited in Boodai, 2001; cooper & Kleinshmidt, 1985).

Alvarez E. (2004) and Katsikeas et al. (1996) offer many explanations as to why larger firms have an advantage entering, staying, and performing better in international markets since they have better access to financial resources in capital markets, advantages associated with scale economies and specialization, and the perception of risk in international activity. For Boodai (2001), there are different reasons for such a contradiction in the results. First, there is no general

agreement on the definition of size. Some have used number of employees and some have used sales volume. The second reason for the contradiction in firm size studies is that within the same measure there is no standard definition for size. The third reason is that the dependent factors (export performance measures) in these studies were not consistent. Some researchers, for instance, study the export intensity, while others study the export profitability.

The Stage theory of internationalisation assumes that small firms internationalise stepwise (Bilkey & Tesar, 1977). The majority of small firms faces severe resource constraints, be it financial, technological or personnel (Karadeniz & Gocer, 2007). By growing larger, firms are able to commit greater resources to international activities and gradually increase their international sales. Consequently, it may also be hypothesized that managerial perceptions of the difficulty and importance of coping with exporting problems will differ between larger and smaller firms. Specifically, larger firms will be more likely to perceive exporting problems as less difficult to manage in comparison with smaller firms. One could also hypothesise that an organisation's size is a key determinant of its propensity to export. That is the larger the firm, the greater the differential size advantage over smaller firms; and this will usually have a positive impact on export activity. Based on these arguments, the following hypothesis is proposed:

- Hypothesis (1): Firm size is positively related to export performance.

As discussed above, there is no universally accepted measure for capturing company size and several indicators have been employed in the literature to measure firm size. The most popular are the number of full-time employees and sales volume. Some researchers have included total assets and domestic market sales. Since the majority of these size measures are likely to be moderately correlated. It was hypothesised in the present study that firm size, measured by the number of employees, would be significantly associated as an indicator of firm size.

1.6.2.1. B Exporting Experience

The degree of export experience is a critical factor because it determines the firm's reaction to export opportunities (Cavusgil & Nevin, 1981). Research on the influence of experience on export performance has revealed mixed findings. Some researchers found a positive relationship between export experience and export performance (Katsikeas et al., 1996; Zou & Stan, 1998), others found no relation (Nakos et al., 1998, cited in Larimo, 2007) and some even found a negative relation (Baldauf et al., 2000). In summary, the empirical evidence is mixed, but it slightly tends to support a positive relation between experience and performance.

The Uppsala model suggests that firms will gradually increase their foreign market commitments as they gain knowledge and experience in the foreign markets (Johanson & Vahlne, 1990). The theoretical explanation for the relationship between exporting experience and export performance lies in the issue of uncertainty and the way firms cope with it (Katsikeas et al., 1996; Karadeniz & Gocer, 2007). Calof & Viviers (1995) demonstrate that the more progressive the company's stage in export intensity, the lower its costs and risks of exporting and the better its advantages. It is recognised that perspectives and experiences are believed to lead to new stages in the perception of export risks, profits and costs. It may then be expected that more experienced exporters would do better in comparison with others. Hence:

- Hypothesis (2): Company experience with exporting activities is positively related to export performance.

Again, there is no general agreement on how to measure the export experience. While some studies examine the export experiences of the firm e.g. the length of time the company has been involved in exporting (Obguehi & Longfellow, 1994, cited in Watson, 2001), others specifically address the export management experience of individual decision-makers in the firm (Wiedersheim-Paul et al., 1978; Watson, 2001). Katsikeas et al. (1996:18) considered two fundamental dimensions of a firm's exporting experience refer to the length "*the number of years the manufacturer had been engaged in exporting activities*", measuring the intensity of the firm's exporting experience, and scope "*the number of countries that the firm was involved in through regular exporting operations*", measuring the diversity of this experience. It was hypothesised in the present study that export experience measured by the number of years the manufacturer had been engaged in exporting activities.

1.6.2.2 Managerial Characteristics

The independent variables evaluating the managerial characteristics to be used in the research is as follow:

- Education
- Age
- Knowledge of foreign languages

Manager characteristics such as education, age, knowledge of foreign languages, etc., have a direct influence on export performance (Cavusgil & Nevin, 1981; Miesenbock 1988; Aaby & Slater, 1989). Extensive empirical research confirmed that younger, better-educated managers with a good command of foreign languages are more successful in exporting (Miesenbock, 1988; Shoobridge, 2004; Watson, 2001). Therefore our hypotheses read:

- Hypothesis (3): managerial characteristics such as education, age and knowledge of foreign languages are positively related to export performance.

1.6.2.3 Exporting Barriers

The independent variables evaluating the exporting barriers to be used in the research is as follow:

- Internal exporting barriers
- External exporting barriers

To bring together barrier characteristics, authors have proposed different classificatory techniques. Based on the literature review and on the results of 25 in-depth interviews with practitioners in Jordan a modified model of Leonidou (2004) had been developed into internal exporting barriers which classified into (internal barriers that correlated with organizational capabilities / resources and company approach to export business), for analytical purposes, internal barriers can be broken up into informational, functional, financial and marketing barriers. External barriers which classified into (external, which related to the home and host environment within which the firm operates), for analytical purposes, external barriers can be broken up into procedural, governmental, task and environmental (See figure 2).

Figure 2: Classification of export barriers based on the modified model of Leonidou, (2004)

Internal Barriers	Informational		Limited information to locate/analyze markets	
			Problematic international market data	
			Identifying foreign business opportunities	
			Inability to contact overseas customers	
	Functional		Lack of managerial time to deal with exports	
			Inadequate/untrained personnel for exporting	
			Lack of excess production capacity for exports	
			Shortage of working capital to finance exports	
			Lack of new technology	
	Marketing	Product		Developing new products for foreign markets
				Adapting export product design/style
				Meeting export product quality/standards/specs
				Meeting export packing/labelling requirements
				Offering technical/after sales service
		Price		Offering satisfactory prices to customers
				Difficulty in matching competitors' prices
				Granting credit facilities to foreign customers
Distribution			Complexity of foreign distribution channels	
			Accessing export distribution channels	
			Obtaining reliable foreign representation	
			Maintaining control over foreign middlemen	
Logistics		Difficulty in supplying inventory abroad		
		Unavailability of warehousing facilities abroad		
Promotion		Excessive transportation/insurance costs		
		Adjusting export promotional activities		
External Barriers	Procedural		Unfamiliar exporting procedures/paperwork	
			Problematic communication with overseas customers	
			Slow collection of payments from abroad	
	Governmental		Lack of home government assistance/incentives	
			Unfavourable home rules and regulations	
	Task		Different foreign customers habits/attitudes	
			Keen competition in overseas markets	
	Environmental	Economic		Poor/deteriorating economic conditions abroad
				Forging currency exchange risks
		Political-Legal		Political instability in foreign markets
				Strict foreign rules and regulations
				High tariff and nontariff barriers
		Sociocultural		Unfamiliar foreign business practices
			Different sociocultural traits	
	Verbal/nonverbal language differences"			

It is apparent from both the export literature that exporting firms face a wide range of barriers which can constrain their efforts to developing their export market. It is considered that the causal link between perceived export constraints and export performance is likely to be that the former gives drop to the latter. Thus, the argument is that the greater the level of certain perceived export constraints are less likely to perform well. Thus, it is expected that perceived export barriers are related to export performance and the following hypothesis is proposed:

- Hypothesis (4): The higher the perceived [a] internal and [b] external international barriers, the lower the performance.

Thirty-seven exporting barriers items were selected for the study. As it has been advocated that one issue may be a frequent problem but not too important, while another may be of importance but rarely a problem each barrier was measured for its obstructing impact on ongoing export operations on a five-point scale, ranging from not important at all (1) to very important (5).

1.6.2.4 Export Performance

The dependent variable export performance has long been a construct of central interest in the international marketing literature (Sousa, 2004; Katsikeas et al., 1996). Such interest was motivated by the low export performance of many countries that have the prospective to be successful exporters, and the in capability of macro-economic studies to clarify the different export performance of firms within the same industry and same country (Boukersi, 1990, cited in Boodai, 2001). A substantial literature has collected studying the external and internal variables affecting the individual firm's export performance and its internationalisation process (Sousa, 2004; Katsikeas et al., 2000).

The literature on export performance has been classified in two fundamental approaches: The first compared exporters with non-exporters in order to develop a profile of the characteristics that differentiate the two groups of firms and identify the ones associated with better performance categories (Aaby & Slater, 1989; Katsikeas et al., 1996). The second approach measures a firm's position based on some dimensions of export performance, the most commonly used dimensions are rate of growth in export sales and percentage of total sales accounted for by exports (Aaby & Slater, 1989; Larimo, 2007). From another perspective, some researchers attempted to investigate the motives and barriers to exporting (Leonidou, 2004; Leonidou et al., 2007). These studies were aimed to determine which variables motivate the firm to involve and expand its exports and to highlight the variables that hinder and discourage the firm's export involvement and expansion in exporting.

A major problem in comparing empirical studies of exporting is that different performance measures have been used by different researchers (Katsikeas et al., 2000; Tesfom & Lutz, 2008). This lack of agreement on the conceptualisation and measurement of export performance makes it difficult to compare findings of different studies, because it is almost impossible for scholars to determine whether the conflicting findings can be attributed to the independent variables or the use of different measurement scales of export performance (Sousa, 2004).

The researchers used either objective or subjective measures for export performance (Lages & Montgomery, 2004; Sousa, 2004). Some other researchers have used multidimensional measures, combining two or more export performance measures (Belso-Martinez, 2006; Altintas et al., 2007).

To this effect, there is no general agreement about the export performance of firms. A number of researchers have tried to use an integrative approach to export performance (e.g. Diamantopoulos, 1999; Katsikeas et al., 2000; Sousa, 2004). There is a general agreement that export performance is affected by a variety of factors, but there is no agreement on the nature and type of those multiple factors. Gemunden (1991, cited in Boodai, 2001) in his review of fifty export-related empirical studies, for instance, enumerated more than 700 factors.

The export performance literature highlights the importance of the following variables: perceived obstacles to exporting, managerial characteristics, managerial competences, managerial orientation, firm size and export strategy variables. Most of these concepts have been incorporated in the study, and the use of these is discussed in the relevant sections above.

1.7 Methodology

This study is based on an empirical investigation of the barriers to export Jordanian firms' face when doing international business. A questionnaire based survey was conducted where 500 questionnaires were distributed to Jordanians manufacturing SMEs using random sampling. The sample was drawn from the population of industries firms that were determined by ministry of industry and trade in Jordan as small and medium in organizational size (employing 249 personnel or fewer).

The data obtained from the questionnaire were reduced using factor analysis. The research model is constructed using multiple regression analysis technique using SPSS version 15. The multiple regression analysis will be carried out with dependent variables measuring SME export performance, and 43 independent variables, measuring company characteristics, managerial, internal exporting barriers, and external exporting barriers.

1.8 Descriptive statistics

1.8.1 Research Sample

A total of 289 questionnaires were returned from 500 questionnaires, 256 of which were useable. This translates into an overall response rate of 57.8 per cent, and usable response rate of 51.2 per cent. Of 256 respondents, 242 were top and middle management (94.5 percent of the sample) and 14 were low management (5.5 percent of the sample). This is consistent with the fact that most SMEs are managed by the owner. Consequently, it can be assumed that the questionnaires completed from a reliable sources of information about each of the firms. In relation to the respondent's age, 31.2% of the respondents were under 40 years of age, 58.2 % were between 41 and 60 years of age and 10.5 % were over 60 years of age. Moreover, 59 % of the respondents had at least a bachelor's degree.

1.8.2 Perceived Exporting Barriers

Export barriers can be encountered by the firm at any phase of the export development process, from pre-export and other initial stages to extensive levels of international involvement. However, the aggregate nature of these barriers tends to differ systematically from one stage to another. Although these differences in barriers were encountered, the literature tended traditionally to give emphasis to two forms of export barriers. These are, barriers which discourage firms from engaging in export activities and barriers experienced by firms which already have initiated export operations.

Despite increasing overseas opportunities, some business are not interested in exporting because they are comfortable in the domestic economy, 25.8% of the sampled firms, although they have the potential to export, prefer to sell their products in the domestic market. Actually, the occurrence of these barriers can largely clarify why current exporters are not exploiting their full potential in the international marketplace and why non-exporters are not engaged in exporting at all.

1.8.2.1 Perceived Internal Exporting Barriers

The samples of companies were asked to what extent various internal factors act as a barrier to developing their exports. 21 internal export barriers were measured on a five-point scale, ranging from not important at all (1) to very important (5). The frequency data and descriptive statistics for the perceived internal export barriers are presented in table 1.

Table 1: Perceived Internal Exporting Barriers-Frequency Distribution and Descriptive Statistics

Variables	Frequency (Non- Exporters)	Mean	Frequency (Exporters)	Mean
Insufficient information about overseas markets	66	4.20	190	3.46
Difficulty in making customer contacts	66	4.02	190	3.27
Difficulties in gaining access to some data sources	66	3.89	190	3.14
Lack of managerial time to deal with exports	66	3.91	190	3.26
Lack of personal trained to deal with exporting operations	66	3.83	190	3.29
Lack of export skills	66	3.91	190	3.17
Lack of financial resources to finance exports	66	4.17	190	3.47
High cost of capital to finance exports	66	4.15	190	3.53
Lack of excess production capacity for export	66	3.85	190	3.27
Actual product unsuitable for overseas markets	66	3.42	190	3.01
Lack of new technology	66	3.88	190	3.33
Difficulties in meeting export packaging	66	3.15	190	2.87
Difficulties in meeting importers' product quality	66	4.24	190	3.31
Difficulties in adapting export product design	66	4.05	190	3.41
Difficulties in setting up adequate after-sales services	66	4.12	190	3.02
Lack of ability to locate reliable agent	66	4.26	190	3.71
Complexity of foreign distribution channels	66	4.18	190	3.62
High transportation costs	66	4.24	190	3.76
High insurance cost	66	3.92	190	3.45
Unavailability of warehousing facilities abroad	66	3.20	190	2.92
Lack of competitive price to customers in foreign markets	66	4.35	190	3.74

Note: Variables have been ranked on a five-point scale, ranging from not important at all (1) to very important (5).

According to the mean value of the importance distribution of Jordanian SMEs' exporters and non-exporters perception towards internal exporting barriers considered by way of their level of export activities. In Table 1, as for the non-exporters, the main reasons for not exporting are presented. These are the answerers given by those 25.8% of firms that do not export. Lack of competitive price to customers in foreign markets and lack of ability to locate reliable agent ranked very high. High transportation costs and difficulties in meeting importers' product quality is another area of concern. In addition, SMEs exporters in the region consider as their main barriers for selling abroad high transportation costs and lack of competitive price to customers in foreign markets, this result is consistent with Tesfom & Lutz (2006) and Kaleka & Katsikeas (1995) who found that the difficulty in matching competitors' prices in international markets was a barrier for most exporters and non-exporters. It can be concluded that exporters and non-exporters largely agree in their

views of these barriers to export. Moreover, this result is consistent to what one would expect since lack of competitive price to customers and high transportation costs and difficulties in meeting importers' product quality are often cited in the literature as barriers or constraints to exporting for both exporters and non-exporters (Leonidou, 2004; Arinaitwe, 2006).

1.8.2.2 Perceived External Exporting Barriers

The samples of firms were asked to what extent various external factors act as a barrier to developing their exports. 15 external barriers were measured on a 1 to 5 rating scale with 1 representing "not important at all" and 5 representing "very important". The frequency data descriptive statistics for the perceived external export barriers are presented in table 2.

Table 2: Perceived External Exporting Barriers-Frequency Distribution and Descriptive Statistics

	Frequency (Non- Exporters)	Mean	Frequency (Exporters)	Mean
Lack of Jordanian government incentives	66	4.17	190	3.44
Inadequate Government regulations and rules	66	4.06	190	3.34
Complex government bureaucracy	66	3.95	190	3.35
International Competition in export markets	66	4.36	190	3.53
Complexity of export documentations requirements	66	2.98	190	3.01
Inadequate communications with overseas customers	66	2.94	190	2.83
Slow collection of payments from abroad	66	3.79	190	3.27
poor or deteriorating in economic situation in the region	66	4.35	190	3.70
Currency fluctuations	66	3.70	190	3.32
Foreign exchange restrictions	66	3.82	190	3.29
Unconvertible foreign currencies	66	3.83	190	3.39
Political instability in foreign markets	66	4.42	190	3.85
Strict foreign rules and regulations	66	4.32	190	3.81
Language differences overseas	66	3.24	190	2.78
Cultural differences overseas	66	3.14	190	2.71

Note: Variables have been ranked on a five-point scale, ranging from not important at all (1) to very important (5).

According to the mean value of the importance distribution of Jordanian SMEs' exporters and non-exporters perception towards external exporting barriers considered by way of their level of export activities. In Table 2, as for the non-exporters, the main reasons for not exporting are presented. Political instability in foreign markets and international competition in export markets ranked very high. Poor or deteriorating in economic situation in the region and strict foreign rules and regulations is another area of concern. In addition, SMEs exporters in the region consider as their main barriers for selling abroad the political instability in foreign markets and strict foreign rules and regulations. It can be concluded that exporters and non-exporters largely agree in their views of these barriers to export. In addition, these results are consistent with Leonidou (1995, 2000) and Ahmed et al (2004) and Kaleka & Katsikeas (1995) who found that political instability in foreign markets and international competition in export markets are one of the major barriers to export.

As can be seen in table 2 it is especially interesting to note that most highly ranked perceived external exporting barriers are: political instability in foreign markets, international competition in export markets, and poor or deteriorating economic situation in the region. The political/economic conditions and the level of competition in export markets are likely to affect the firm's ability to enter specific markets and develop their exports. The high ranking of these factors is to be expected since they reflect the viability of export involvement in overseas markets.

The study shows that there is high similarity between the export problems faced by manufacturing firms in developed and developing countries. Almost all export problems identified in developing countries exist in the developed world, especially for small and medium-sized companies.

From a simple inspection of table 1 and 2 it is apparent that the internal exporting barriers are viewed as being greater than the external barriers, with the mean values for internal barriers generally at a high level. The average score for each respondent for internal and external barriers was calculated. The mean value of the internal barriers average scores was 3.514 and the equivalent figure for the external barriers was 3.435 thus indicating that internal barriers were viewed as more of a problem than external barriers overall. Furthermore, it is interesting to note from a simple inspection of table 1 and 2 that the majority of the items have a mean value above the mid-point of the scale which implies that the sample of firms do regard both internal and external exporting barriers as presenting a serious barriers in relation to export development.

1.9 Factor analysis

Exploratory factor analysis was used to reduce the number of variables measuring 'performance' and 'internal and external exporting barriers' into a meaningful and smaller number of subsets or factor groups. The factor analysis of the internal exporting barriers is presented first. Factor analysis was conducted on the internal and external exporting barriers independently. This approach gave a better result than the other approach where the two scales were combined and factor analysed.

In carrying out exploratory factor analysis, it is recommended to perform a principal components analysis (PCA) for factor extraction, since the objective is to summarise most of the original information (variance) in a minimum number of factors for prediction purposes. In addition, we used the varimax rotation method in the study to make the factor structure more interpretable, since it reduces the number of complex variables and enhances interpretation (Harlow, 2005). The factor solution of perceived internal exporting barriers was obtained using PCA for factor extraction and varimax rotation method. The factor loading was set at (0.50).

1.9.1 Factor Analysis of Perceived Internal Exporting Barriers

From the 21 variables measuring internal exporting barriers, four variables were discarded, 'meeting export packing' and 'unavailability of warehousing facilities abroad' did not correlate with performance variables, while 'developing new products for foreign markets' and 'offering technical/after sales service' had low factor extraction (< 0.50).

Table 3: Rotated Component Matrix for internal exporting barriers

Factor groups	1	2	3
Informational barrier			
Insufficient information about overseas markets	655.		
Difficulty in making customer contact	775.		
Difficulties in gaining access to data sources	709.		
Functional barriers			
Lack of managerial time to deal with exports			557.
Inadequate/untrained personal for exporting			790.
Lack of export skills			675.
Lack of new technology			716.
Lack of excess production capacity			569.
Financial barriers			
High cost of capital to finance export	738.		
Lack of financial resource to finance exports	757.		
Marketing barriers			
Difficulties in adapting export product design		628.	
Meeting export product quality/standards		677.	
Lack of competitive price to customers in foreign markets		505.	
Complexity of foreign distribution channels		682.	
Obtaining reliable foreign representation		694.	
High transportation costs		657.	
High insurance costs		571.	
Explained variations	27.356	19.709	19.066
Cumulative variations	27.356	47.065	66.131

The results of the varimax rotation PCA are given above in Table. 3. According to the results, the internal exporting barriers are grouped under three factors: Factor 1 relates to the issues of finding information and lack of financial resource to finance exports and is thus labeled the information/financial barriers factor. Items in the second factor are concerned with managerial and administrative aspects of engaging in export markets and are thus labeled the functional barriers factor. The third factor is labeled the marketing barriers.

1.9.2 Factor Analysis of Perceived External Exporting Barriers

From the 15 variables measuring external exporting barriers, two variables were discarded. Both 'cultural differences overseas' and 'language differences overseas' did not correlate with performance variables and the factor loading lower than minimum required (0.50).

Table 4: Rotated Component Matrix for internal exporting barriers

Factor groups	1	2
Economic and Political-Legal barriers and Governmental barriers		
Political instability in foreign markets	.886	
poor or deteriorating in economic situation in the region	.875	
International Competition in export markets	.838	
Inadequate Government regulations and rules	.824	
Strict foreign rules and regulations	.815	
Lack of Jordanian government incentives	.792	
Complex government bureaucracy	.762	
Procedural and Currency barriers		
Inadequate communications with overseas customers		.865
Complexity of export documentations requirements		.841
Foreign exchange restrictions		.668
Slow collection of payments from abroad		.654
Unconvertible foreign currencies		.560
Currency fluctuations		.541
Explained variations	43,462	43,462
Cumulative variations	25,643	69,105

The results of the varimax rotation PCA are given above in Table. 4. According to analysis these results, the external exporting barriers are grouped under two headings: Factor 1 relates to the issues of economic and political-legal and governmental barriers. Both items in the second factor are procedural and currency barriers.

1.9.3 Factor Analysis of Export Performance

Drawing upon the literature, one objective and three subjective measures of performance have been used. The objective measure is export intensity, while the subjective measures are growth of sales, growth of profitability, and growth of exports. The subjective measures were factor analysed generating one factor as illustrated in table 5.

Table 5: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative %
1	2.815	93.842	93.842	2.815	93.842	93.842
2	.122	4.066	97.908			
3	.063	2.092	100.000			

Extraction Method: Principal Component Analysis.

1.10 Multiple regression analysis

This section aims to evaluate the relationships between the dependent variables and independent variables discussed in previous sections, and whose definition is discussed in section 1.6. The variables being used in this research have been identified from the literature and can be hypothesised to influence export performance. Table. 6. a,b shows the results of the stepwise regression analysis. The model show a variety of indicators that demonstrate the overall fit of the equation (R , R^2 and Adjusted R^2). The statistical assumptions for generalisation have been met for the equation presented in this section.

Table 6.a: Multiple regression analysis results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
7	(Constant)	-.541	.141		-3.847	.000		
	REGR factor score 1 for analysis 3	-.438	.067	-.137	-2.065	.004	.292	1.421
	REGR factor score 1 for analysis 2	-.582	.061	-.590	-9.622	.000	.340	1.042
	REGR factor score 2 for analysis 2	-.299	.048	-.302	-6.266	.000	.552	1.113
	Number of years exporting	.568	.036	.076	1.906	.005	.808	1.237
	REGR factor score 3 for analysis 2	-.304	.037	-.105	-2.821	.005	.932	1.073
	Number of employees	.491	.040	.096	2.291	.007	.722	1.385
	Age of respondents	-.398	.036	-.321	-5.321	.002	.63	1.254

a Dependent Variable: REGR factor score 1 for analysis 1
 REGR factor score 1 for analysis 3- Economic/political-legal and governmental barriers factor
 REGR factor score 1 for analysis 2- Information/financial barriers factor
 REGR factor score 2 for analysis 2- Functional barriers factor
 REGR factor score 3 for analysis 2- Marketing barriers factor

Table 6.b: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.733a	.537	.535	.68168975	
2	.788b	.622	.618	.61770650	
3	.824c	.679	.675	.57004993	
4	.833d	.694	.689	.55786692	
5	.838e	.703	.696	.55101499	
6	.842f	.710	.702	.54595396	
7	.845g	.716	.721	.55453845	1.677
a. Predictors: (Constant), REGR factor score 1 for analysis 3					
b. Predictors: (Constant), REGR factor score 1 for analysis 3, REGR factor score 1 for analysis 2					
c. Predictors: (Constant), REGR factor score 1 for analysis 3, REGR factor score 1 for analysis 2, REGR factor score 2 for analysis 2					
d. Predictors: (Constant), REGR factor score 1 for analysis 3, REGR factor score 1 for analysis 2, REGR factor score 2 for analysis 2, Number of years exporting					
e. Predictors: (Constant), REGR factor score 1 for analysis 3, REGR factor score 1 for analysis 2, REGR factor score 2 for analysis 2, Number of years exporting, REGR factor score 3 for analysis 2					
f. Predictors: (Constant), REGR factor score 1 for analysis 3, REGR factor score 1 for analysis 2, REGR factor score 2 for analysis 2, Number of years exporting, REGR factor score 3 for analysis 2, Number of employees					
g. Predictors: (Constant), REGR factor score 1 for analysis 3, REGR factor score 1 for analysis 2, REGR factor score 2 for analysis 2, Number of years exporting, REGR factor score 3 for analysis 2, Number of employees, Age of respondents					

1.10.1 Interpreting the model

1.10.1.1 Firm and managerial characteristics:

The general equation (Table 6) shows that three variables of firm/managerial characteristics have a significant impact on export performance. These are:

1. Export experience measured by number of years exporting is significant as portrayed in model 7. This result confirms a significant positive relationship between the length of time "number of years" that firm has been exporting and export performance factor. This result supports hypothesis H2 and is consistent with the findings of other researchers on export performance (Katsikeas et al., 1996; Zou & Stan, 1998). Number of employees (indicating the size of the firm) has a significant positive relationship with export performance. The present research gives more weight to some previous findings presented in the literature presented above on export performance and support hypothesis H1 (Baldauf et al., 2000; Katsikeas & Morgan, 1994).
2. Age of respondents have a significant negative relationship with export performance. This result confirms some previous findings presented in the existing literature on export performance. Extensive empirical research confirmed that younger managers are more successful in exporting (Miesenbock, 1988; Shoobridge, 2004). Since younger owner-managers are more interested in growth and are more likely to engage in business development activities designed to foster this growth. This result provides support for hypothesis H3 in relation to age of respondents but not in relation to education and knowledge of foreign languages.

1.10.1.2 Perceived export barriers

Four of the perceived export barriers factors are significant in model 7. These are: economic/political-legal and governmental barriers; information/financial barriers; functional barriers; marketing barriers which has a significant negative relationship with export performance. These results provide support for hypothesis H4 in relation to these specific factors but not in relation to procedural and currency barriers. This result confirms some previous findings presented in the existing literature on export performance (Cicic et al., 2002).

Conclusions & Recommendations

This research has examined the perceived internal and external export barriers of the sample of 256 firms. Frequency data revealed that high transportation costs and lack of competitive price to customers in foreign markets were the highest ranked internal barriers. The highest ranked external export barriers were political instability in foreign markets, strict foreign rules and regulations and international competition in export market. Overall internal barriers were viewed as being greater than external barriers.

Multiple regression models were developed using the factor score of export performance as the dependent variable. The following variables/factors were significant:

- Economic/political-legal and governmental barriers; Information/financial barriers; Functional barriers; Marketing barriers which has a significant negative relationship with export performance.
- Firm export experience has a positive relationship with export performance. This result supports the stage theory of internationalisation, growing larger firms will be able to commit greater resources to international activities and gradually increase their share of sales derived from the international markets.
- Firm size has a significant positive relationship with export.
- Age of respondents have a significant negative relationship with export performance.

The study shows that there is high similarity between the export problems faced by manufacturing firms in developed and Jordan. Almost all export problems identified in developing countries exist in Jordan. Although the degree of difficulty and the importance of export problems vary, there is similarity among the major issues. Thus, it is not the type of barrier that differs but only the environment in which the SME is operating. This implies that manufacturing firms in developing countries can learn some lessons from the experience of the developed world in solving export problems. Furthermore, the vast literature that has been produced on internal and external export problems of firms in developed countries can be useful to develop a methodological of research in developing countries. In addition, this study provides an exploratory step in extending the work of Leonidou, (2004) to other countries.

It is essential that export managers in Jordanian manufacturing firms be aware of the competitive forces shaping the market structure within the spectrum of globalisation. The research implies that public policy makers and export assistance organizations in Jordan should play an active role in enhancing exports amongst local firms. There is clearly a need for well- designed national policies including specific incentives to stimulate exporting activity, assisting measures enabling firms to cope with export barriers, and government-sponsored export promotion programmes.

Also, these are important results which likewise have implications for public policy makers and business support organisations. Governments and policy makers can play an important role in helping SME internationalise because of the positive overall effects for economic growth. In order to open up greater opportunities for international trade and investment, they should consider the following actions:

- Addressing the shortage of people with the skills to advise SMEs on accessing international markets.
- The use of e-commerce as a tool for overcoming distance to markets, for reducing the cost of compliance with government regulations, and for encouraging the uptake of efficient business practices.
- Providing programmes to assist SMEs to access the finance needed to fund potentially successful entries into new markets and, where necessary, develop or create additional financial instruments, such as innovation funds, for financing the internationalisation of SMEs.
- Establishing strong relations between small and large firms. One of the major objectives of this scheme would be to provide reliable information and how to participate in the international market.
- Increasing exports of small-scale industries with governmental aid exhibiting their productions in international exhibitions.

Interpretation of our study findings and conclusions should be made in light of the following limitations. Firstly, this research effort was restricted to the internationalisation activities of manufacturing firms originating in a specific small country context. Therefore, one should be cautious in attempting to generalise the empirical findings of our study to other, potentially different export marketing systems. Secondly, there might be other factors influencing the export performance. So, it is beneficial for future research to explore other possible factors.

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Increasing Entrepreneurial Intentions through Innovations in Pedagogy: European Approaches, Programmes, and Tools

by Silke Tegtmeier¹, Carl-Johan Asplund, Lars Bengtsson, Rita Klapper, Agnieszka Kurczewska, Paula Kyrö, Catherine Léger-Jarniou, Elena Pruvli, Nickolaos G. Tzeremes, and Spyros J. Vliamos

As a reaction to the positive effects of entrepreneurship, many universities try to enhance students' entrepreneurial mindsets. Based on existing evaluations of entrepreneurship education, this paper focuses on European innovative pedagogy for classroom entrepreneurship. We highlight innovations in entrepreneurial education from seven European countries: Estonia, Finland, France, Germany, Greece, Poland, and Sweden. Consulting these approaches, the following seams to be particularly crucial: action-/project-based learning, individual and collaborative (team) experiential learning, interdisciplinary grouping, enhancing entrepreneurial skills and knowledge, key qualifications (creativity, autonomy, responsibility, risk-taking), conceptual and informal learning, critical thinking, reflection, meta-cognition, working with innovative ideas, demythologization, learning through "fun", and student-company-university collaboration/networks.

I: Introduction

As a reaction to the positive social and economic effects of entrepreneurship many universities try to advance entrepreneurial thinking and behavior (Fayolle 2007). Moreover, in this context it seems to be crucial to enhance the students' awareness about what entrepreneurship is and to create entrepreneurial mindsets. A growing consensus can be noticed that there is a need to introduce entrepreneurship curricula to every study course in order to improve an entrepreneurial culture in societies. In first approaches some pedagogical tools and programmes have been evaluated in terms of their impact on students' entrepreneurial intentions (for example, Audet 2004; Cooper and Lucas 2007; Fayolle 2000; Tegtmeier 2007). For these purposes, the authors refer to two common and well-tested cognitive theories – Ajzen's "Theory of Planned Behavior" (TPB; Ajzen 1991, 2005) and the

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“Model of the Entrepreneurial Event” (MEE; Krueger 2003; Krueger, Reilly, and Carsrud 2000; Shapero and Sokol 1982).

According to the TPB (see figure one), behavior can be explained as a result of an intention which is influenced by the three constructs attitude, perceived social norm, and perceived behavioral control. People intent to perform a specific behavior if their personal assessments of the behavior are positive, if they think their important referents agree with it, and if they assume the required resources and opportunities are available. The intention can be changed by temporal delays which come along with new information and, therefore, prevent the performance of the behavior. In most studies participants answer in the sense of an overall evaluation if their attitude towards a behavior is in sum positive or negative. For this overall measurement of attitude, social norm, and perceived behavioral control Ajzen uses the term direct measurement. According to the MEE (see figure two), an intention as antecedent of an entrepreneurial event (entrepreneurial behavior) depends on a credible opportunity. The latter is influenced by perceptions of desirability and feasibility. In addition, propensity to act influences entrepreneurial intentions as a person variable. Shapero focused especially on a “displacing event” as a catalyst for entrepreneurial behavior (Shapero and Sokol 1982). In recent years several empirical studies have linked the TPB or the MEE with entrepreneurial intentions and behavior (for example, Brännback et al. 2006; Gasse et al. 2006; Klapper and Léger-Jarniou 2006; Kolvereid 1996; Krueger, Reilly, and Carsrud 2000; Liñán 2008; Tegtmeier 2006, 2008; Zumholz 2002). An entrepreneurial activity clearly is a planned, intended behavior (Katz and Gartner 1988), so the application of formal intentional models is reasonable (Krueger and Brazeal 1994).

The TPB can also be assessed in order to explain or even promote changes in intentions or behavior over time (Ajzen 2005; Hardeman et al. 2002). For that purpose it gives implications for behavioral interventions. The TPB provides general guidelines for

intervention programmes which can be directed at behavioral, normative, or control beliefs as antecedents of intentions. Such behavior change programmes work through persuasion and information, increasing skills, goal setting, and rehearsal of skills (Hardeman et al. 2002). If the relevant sets of beliefs change, the corresponding overall attitude, social norm, or perceived behavioral control should change as well (Ajzen 2005). Comparable considerations can be made for the MEE. Though there are predominantly overlapping constructs (for overlapping components of the two models see Brännback et al. 2006; Krueger, Reilly, and Carsrud 2000) both models used to be operationalized differently. Hence, some evaluation instruments explicitly refer to both of them.

On the one hand, first evidence in terms of an impact of entrepreneurial courses and programmes on entrepreneurial attitudes and intentions has been revealed by first studies. On the other hand, these surveys exemplify which methodological problems are related to evaluations of entrepreneurship education. This paper focuses on illustrating and discussing these studies as current state of empirical research in this field as well as on highlighting some European innovations in entrepreneurial education. While emphasizing variations from seven countries, we excerpt some common key factors of classroom entrepreneurship. The paper proceeds as follows. Firstly, evaluations of entrepreneurship education referring to the intention-based models will be presented and discussed as the current state of research in this field. Afterwards, we highlight innovations in entrepreneurial education from seven different European countries and discuss them with respect to their potential for developing entrepreneurial mindsets and rising entrepreneurial intentions. The article closes with a discussion and conclusions.

II: Evaluating Entrepreneurship Education

In an earlier work **Fayolle** (2000) questioned entrepreneurship programme managers from 25 French “Grande Ecoles” as experts about their perceptions of the overall impact of

courses in entrepreneurship on students' inclinations to start a business. He distinguishes between a direct and an indirect impact (Fayolle 2000, 178):

- “Direct impact of the course offerings on the students' propensity to behave entrepreneurially when attending entrepreneurship programme.”
- “Indirect impact of the course offerings for those who have not yet attended entrepreneurship programmes or have not and do not intend to in order to measure a possible halo effect.”

Six out of 12 responding experts perceive a direct effect (five to seven on a seven-point-scale) while seven out of 15 responding experts see an indirect effect (five to seven on a seven-point-scale). Fayolle states that the heterogeneity of entrepreneurship courses complicates comparisons. Furthermore, the background of the participating students is unknown. They may already have been sensitised by for example, an entrepreneurial environment. In contrast to the evaluations beneath, experts (instead of students themselves) have been asked to assume students' propensity to behave entrepreneurially. As earlier literature is reviewed in Fayolle (2000), the following exposition focuses on recent evidence based on the intention models TPB and MEE which became widely accepted in entrepreneurship research over the last years.

Klapper and Léger-Jarniou (2006) compared entrepreneurial intentions of French higher education students at three different establishments (a management Grande Ecole, an engineering Grande Ecole and a university) using the MEE. They found that most of the students wanted to work in large organizations and were not intending to create a new company or work in a family business. There were significant differences, however, between management and engineering students in terms of their entrepreneurial environment, which may affect their attitudes to new business creation. The authors conclude that, while enforced learning through entrepreneurial courses and seminars may initially be off-putting, such initiatives may have longer-term beneficial impacts on entrepreneurial intentions.

Longitudinal studies reveal if entrepreneurial intentions and their influencing factors change through the measure or afterwards. In the following, we conclude the work from Audet, Cooper and Lucas, as well as Tegtmeier who focus on different programmes and tools at universities of different countries.

Based on the MEE, **Audet** (2004) compares two pedagogical approaches at Concordia University, Montreal, in terms of their impact on entrepreneurial intentions. Her study is about a course in business planning ($n_{BP}=35$) and a field study seminar of a real small or medium sized business ($n_{FS}=41$). All students of business administration are obliged to choose one out of these courses during their first semester. The influencing constructs *perceived desirability* and *perceived feasibility* as well as *entrepreneurial intentions* have been measured through one scale each. As target behavior a start-up within three years has been chosen. As a main result it has to be stated that the business planning course influences the students' entrepreneurial intentions in a significantly negative direction. Though, in terms of the whole sample ($n=76$) there is a positive change in perceived feasibility. Obviously, the business planning course predominantly makes the students' expectations towards an entrepreneurial career more realistic. Altogether, many students do not give up their *entrepreneurial intentions*, but move them forward to a later point of time. This study questions the impact of a business plan. While *perceived feasibility* increases in a similar way with respect to both groups *perceived desirability* decreases to the level of the field study group after writing a business plan. In this context, it has to be considered that a potential increase of actual control or feasibility that might increase business success has not been measured.

In another study, **Cooper and Lucas** (2007) examine if two entrepreneurship programmes in Great Britain influence *entrepreneurial intentions* of undergraduates and high school pupils. They refer on Ajzen's TPB as well as on Shapero's MEE and Bandura's work

with respect to self-efficiency (Bandura 1977). They focus their analyses on the constructs *feasibility* in terms of self-efficiency (average of two items) and *desirability* respectively attractiveness of behavior (average of three items). Furthermore, four items measuring *entrepreneurial intentions* have been averaged. The first programme is called “Enterprisers” (www.enterprisers.org.uk). At this one-week residential programme British students of different study courses spend their time at organizations of the Massachusetts Institute of Technology. They are supposed to develop entrepreneurial skills, to gain confidence and to build networks with participants of different academic and cultural backgrounds. The second programme is called “Encouraging Dynamic Global Entrepreneurs” (EDGE). EDGE is an eight-week programme focused on developing entrepreneurial skills for senior high school pupils and undergraduate students. During a six-weeks-period mixed teams of students and pupils conduct consulting projects aimed at corporate development. As well as with respect to the programme “Enterprisers”, participants get to know the companies during an initial two-weeks-period. 48 pupils and students participated in the pilot project in 2005. In order to reveal changes in entrepreneurial attitudes and intentions, there have been questionings at the beginning of both programmes, at the end of the programme “Enterprisers”, at the end of both steps of the programme EDGE, and in terms of a post-questioning six months later. Cooper and Lucas conclude that both programmes can influence *entrepreneurial intentions*. Both programmes have got a positive long term influence on *self-efficiency*. The programme “Enterprisers” has got a positive long term impact on *perceived desirability*, whereas EDGE increases long term *entrepreneurial intentions*.

Based on an empirical study with German students (n=73), **Tegtmeier** (2007) analyzes an introductory lecture in start-up management against the background of Ajzen’s TPB. The introductory course targets students of business administration, economics and social sciences, as well as cultural sciences. For example, the evaluated lecture deals with

founding theories and processes, founding related risk analyses, corporate planning and market entry, as well as early stage strategies. In the empirical study entrepreneurial intentions are defined as start-up intentions as well as the willingness to take over an established company (ownership and control) within five years after completing studies. The analyses distinguish between the whole sample and some sub-samples, for example, depending on the knowledge people have gained before. The mean value comparisons show significant negative effects on the *intention* and its antecedent variables in terms of all (sub-) samples. These results are accompanied by answers given to the open question “Has the introductory lecture in entrepreneurship changed your mind with respect to a potential venture creation?” placed in the second questionnaire. The answers reveal that people were more aware of negative consequences, such as risk and effort, after attending the introductory course. Though skills and knowledge broadened, students became sensible to the fact that there is still much to learn in order to manage a successful start-up. Though, after having attended the course, some participants felt even more confident, while most students answered that they had a better and more realistic insight that could prevent them from becoming entrepreneurial. Tegtmeier concludes that the introductory class sensitized students to entrepreneurship as a career alternative and it made people aware of the complexity of a venture creation.

From the evaluation studies illustrated in this chapter it can be assumed that the change of *intentions* is not only the question of a single pedagogical tool, but rather of the right pedagogical programme. It has to be pointed out that these studies deal with small sample sizes and comparing intentional variables before and after one-semester study courses or programmes only allows to measure short-term differences. Furthermore, the link between intention and behavior has not been analyzed in the studies on hand. Follow-up studies

should provide insights in mid-term changes of intentions and thereby explain why people do not become entrepreneurs despite having intended before and vice versa.

As first insights with respect to tools and programmes in entrepreneurship education these studies raise a lot of questions to be discussed in the field of entrepreneurship education especially with respect to the choice of the right tools and programmes. Particularly, due to the short time-horizon and the small sample sizes these first evaluations can only be taken as pilot studies. Based on the intention models future efforts have to be made in order to reveal changing processes in more detail.

With respect to entrepreneurship education as catalyst for students' new experiences and information, purposes and the choice of the right programmes and tools have to be discussed in the near future. In this context, we make a first international step towards finding reasonable tools and programmes in the following chapter. We present and discuss some innovative tools, programmes, and approaches in entrepreneurship education from seven different European countries (Estonia, Finland, France, Germany, Greece, Poland, and Sweden) which are supposed to develop entrepreneurial mindsets on the part of the students.

III: Innovations in European Entrepreneurial Education

The BEST-Estonia Workshops Organised for Students by Students – The Case of Estonia (BEST: Board of European Students of Technology)

BEST-Estonia active members think entrepreneurship education is about self-development, getting the leadership experience, raising the entrepreneurial spirit, setting higher goals and pushing every possible limit. Being the students of the Tallinn University of Technology (TUT), those young people offer the opportunity of the complimentary education to their fellow students by taking the initiative to organise the relevant workshops. They bring closer the sides of the student-company-university triangle, however the events are organised for students by students on the topics proposed by the students themselves. For example, the

last one was the workshop on the topic: how to increase the engineers' selling skills in the times of crises. A company representative, a behavioral specialist from another University and an authority official were invited for the interactive presentations and a debate.

Professor Tom Byers (2001), Stanford University Founding Director, founder of the Stanford Technology Ventures Programme, indicates that industry wants engineers with entrepreneurial skills. Such as an ability to function in multi-disciplinary teams and an ability to communicate effectively (by ABET), and an ability to think critically and creatively as well as independently and cooperatively, the ability and the self-confidence to adapt to rapid and major change (by Boeing). To develop those skills the soft-spoken subjects are traditionally implemented as the main pedagogical tool, but the engineer students take the soft-spoken subjects as the secondary important. A surface learning strategy is used in order just to pass them once they are included into a compulsory programme. When the students propose the topics for the BEST-workshops themselves, are having a possibility for an equal participation in the student-company-university triangle model, they are motivated to go much deeper into the subject and develop a real competence (see the approaches compared in table 1). The author wouldn't speculate about the direct correlation between the attendance of the BEST-Estonia workshops and the increase of the entrepreneurial intentions among the engineer students as the subject needs a deeper research. However the interviews with the TUT students showed a very clear shift in their leaning attitude concerning the soft-spoken subjects (from the surface learners to the deep learners), which is a very positive outcome and a step forward to the more entrepreneurial behavior.

Learning Risk-Taking Competences: Entrepreneurship Pedagogy in HSE (Helsinki School of Economics) – The Case of Finland

To define entrepreneurial and enterprising learning HSE adopts continental approach and broad definition of entrepreneurship. As Alain Gibb argues there is a substantial

synonymy between entrepreneurial and enterprising behavior and thus pedagogy as well. The only major distinction that can be made is that an entrepreneur is traditionally associated with business activity (Gibb 1993). Adopting both concepts, entrepreneurial (referring to the business context) and enterprising (referring to more general readiness) learning reflects the broad understanding of entrepreneurship as also the EU and the Finnish national policy assumes.

The very concept of entrepreneurship and consequently entrepreneurial and enterprising learning concerns with the way that individuals and organisations create and implement new ideas and ways of doing things, respond proactively to the environment, and thus provoke change involved with uncertainty, complexity and further insecurity and complicity (Carrier 2005, Gibb 2005, Schumpeter 1934). In this context it is essential to be able to create and exploit new ideas in complexity and complicity. This leads to understanding the behavior and learning in uncertainty and insecurity. In HSE this is regarded as risk-pedagogy referring to the assumption, that risk and learning risk-taking is an action-oriented social process that relates to both insecurity and uncertainty. At the ontological and epistemological level risk-pedagogy leans on pragmatism-oriented phenomenology, which allows us to combine action to individual and collective experiences and further to learning processes.

To develop risk pedagogy assumes explorative, researched oriented approach. The first findings for its bases were identified and developed in two learning interventions (Kyrö and Tapani 2007). The first intervention took place in the Jönköping International Business School in Sweden in 2001. This group contained data from 34 participants. The second intervention took place in 2003-2004 in the Tampere University Entrepreneurship Education course of 25 ECTS with 24 Finnish participants. The international students were studying business degrees. The Finnish students had a multi-scientific background from different

universities in Finland. The differences in backgrounds also concerned the students' life cycle situations, since many of the Finnish students were already working, mainly in different educational institutions, while the international participants were full-time students.

The SBM-course lasted one academic semester, focused on a special theme and was conducted by several expert lectures. It was knowledge-oriented and the focus was on individual learning. The other experimental field, the Entrepreneurship Education course, consisted of three modules and lasted for the whole academic year 2003-2004. The course was process-oriented and virtually supported, and included three days face-to-face interventions per module. Here the focus was on collaborative-, peer-learning.

The tools for supporting learning were also different, as the first offered a concept-mapping technique, previously unknown to the learners, for studying the complex concept of small business management, while the second used collaborative peer learning for studying the even more complex concept of entrepreneurship education. However, in both cases the responsibility for learning and the freedom to do so was left to the students. In both courses the students were encouraged to proactively create their own concepts and ideas about phenomena. Both courses also shared the same emphasis in encouraging students to start working immediately both individually and collaboratively.

In spite of their differences, both courses had similar assignments that actively supported students' own knowledge creation, action and interaction with surrounding firms and organisations. As well as employing concept-mapping and similar reflective tools, the assignments of the Small Business Management course consisted of a real-life case and its peer evaluation and presentation, as well as two cases based on the literature. Each module of the Entrepreneurship Education course contained a real-life case with peer evaluation, either as an analysing assignment or concept-mapping.

Thus the circumstances for the assumption, that risk and learning risk-taking is an action-oriented social process that relates to both insecurity and uncertainty, involved both interventions. Additionally, the students in both cases were exposed to learning risk-taking as a psychological and social phenomenon. They were thus exposed to individual and social failures and successes. Finally, the learning process, including the assignments in both interventions, was extremely context-bound with respect to its cultural, individual and social aspects, due to the use of real-life cases and subjective choices.

The results of these interventions indicated that risk and learning risk-taking is indeed an action-oriented social process that relates to both insecurity and uncertainty. Even contradictory to the original assumption, the fear of failure was only a minor aspect in learning the risk-taking process. These findings mean that learning risk-taking is rather a psychological and social than a financial phenomenon, and learning and teaching risk-taking competences is a context-bound process that forces one to consider the conditions for learning as an essential dimension of the learning process. The context in which learning took place seems to be more important than, for example, individual cultural factors and supporting the formation of a collaborative context seemed to provide results more effectively. Thus, learning conditions are an essential dimension in the learning process. Finally, the fact that all students of these interventions learned risk-taking competences to some extent indicates that these competences can be learned and also be taught. However, there is a need to adopt knowledge from other fields of science, especially education and psychology.

The Use of an Acculturation Seminar for Engineers – A First Case of France

The education of engineers has always tended to focus on technical know-how. New skills as autonomy, responsibility or risk-taking do not come naturally but it is vital that a new generation of technology leaders and managers emerges. Our hypothesis is that some

‘acculturation’ or cultural adjustment is possible if we use a specially designed and engaging action-based learning programme. Hytti (2002) proposed a model to understand entrepreneurship education (see table 2). This model is based on three interdependent mindsets that focus on ‘*learning about*’ to increase understanding of what entrepreneurship is about, ‘*to become entrepreneurial*’ to equip individuals with an entrepreneurial approach to the “world of work,” and ‘*to become an entrepreneur*’ that is, to act as an entrepreneur and to manage new business.

Our aim fits in with the second factor in this model, in other words to learn to become more entrepreneurial. In order to develop their skills ‘to become more entrepreneurial,’ a specific methodology was drawn up, based on two principles: project-based learning and collaborative experiential learning. Project-based learning is underpinned by action: the team works towards a goal that has to be achieved within a given timeframe (Piaget), one week. Insofar as the project is chosen by the group itself, the latter put all their energy into completing the task successfully. This approach is based on research and discovery whereby the students ask questions and provide answers in a collective process. In order to be successful, this approach requires a well-planned environment (with well-timed organisation for each stage, structured by simple documents and precise work sheets, and the goals and the work required to achieve these goals clearly spelt out at the beginning of each stage), and a stimulating environment that promotes communication, discussion and the commitment of each team member, and fosters trial and error (the teaching staff can be asked for help by email at any time outside class hours), and fosters trial and error.

The concept of student-learning teams is partially based on a theory of collaborative experiential learning (Kolb, 1984). This learner-centred approach and the small groups are designed to enhance peer learning, which is a key aspect of self-analytical work. To be able to develop their individual abilities, students must develop “self-insight” (Schein 1978). As it

is not easy to learn about themselves and students are more used to learning from experience (Bion 1959), a social context needs to be created that students can engage in.

Concretely, the programme revolved around the collective construction of a business plan based on an idea proposed by the students themselves even if the business plan in itself was not essential. Any other project that results in rapid entrepreneurial acculturation could have been used, but business plan appears to be a good tool for this purpose today. The students worked in a professional environment, in teams of 6 students. The role of the teaching team is crucial as mentor. In education, assessment is a key component of the learning process so they have to present their work at the end of the week.

Our main aim was to understand what led to any changes in attitude and behavior identified rather than the statistical findings per se. We wanted to know whether the discourse and feelings expressed by the students indicated a genuine change in their attitude and behavior. We used two study methods: firstly, a questionnaire based on a 7-point Likert item scale addressed to the whole study population, followed by some interviews.

The study was conducted between September 2007 and April 2008 in a Parisian engineering school specialised in Electronics, Materials, Earth sciences and Agri-food industry. 66 percent of the students had no entrepreneurial family. The research showed differences after the seminar compared to what they said when it started.

80 percent of the students noted a change in their behavior and attitudes (45 students). Among these students, one said he had a short-term project to start up a business within the year. 18 said they have projects but only in a medium-term horizon because they wanted to gain experience in a firm to improve their competencies before starting their own-business. And 26 noted changes in their behavior and attitudes but do not really know what the future held for them.

The second point was to identify the importance of these changes and on which topics. So, we chose the following eight criteria among the literature as the most significant for our study: creativity, critical mindset, curiosity, decision-making skills, leadership², powers of persuasion³, problem-solving skills, self-confidence. The differential between the beginning and the end of the programme also provided an interesting result. Positive differences were noted, ranging from 1 to 4 (on a 7-point scale), while certain questions obtained negative differences of -1 or -2. These negative results related to the difficulties encountered in building a business plan in a limited time and in teams.

The interviews led us to link these results with the programme conditions (one week). The students put under pressure during a short period of time seemed to be happier and indicated that this pressure was a positive factor in changing their behavior and attitude, saying that it led to a major upheaval in their way of behaving. To this end, Gibb's vision of the entrepreneurial learning model (1993) remains a valid one and we can add a new criterion, that is, learning through 'fun.'

The study shows that such acculturation is possible providing different conditions are met, such as the use of constructivist and engaging teaching methods, and an environment that promotes learning and helps to build self-confidence. Entrepreneurship is a state of mind. Engineers already possess the analytical tools necessary to succeed in business. By adding entrepreneurial skills and, obviously, business knowledge to their tools, they can deliver optimal returns for their future companies and also for themselves.

To conclude, this study aimed to show that an entrepreneurial culture, in other words appropriate entrepreneurial attitudes and behavior in engineering students who are relatively unfamiliar with this domain, can be developed through a well-planned, constructivist and engaging teaching approach.

² Leadership should be understood as the capacity to stand up to others and to motivate a team.

³ Persuasion also implies negotiation and being able to carry the day.

Innovative Teaching Using Repertory Grids – The Second Case of France

This example of innovative entrepreneurial pedagogy happened at a French Grande Ecole using repertory grids which are part of George Kelly's Personal Construct Theory (PCT). The grids aim to illicit concepts defined in the participants' own words in a systematic way and enable comparison between individuals' 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 and Finch 2003; Fransella 1988). Kelly's key question was: How does a person, consciously or unconsciously, construe the world? (Fransella 1988; for further information see Klapper 2008)

Repertory grids have been used in a course entitled 'Product and Markets seen from an entrepreneurship point of view' which was aimed at MBA students (December 2008) and most recently in a course called 'Entrepreneurship Theory and Practice' developed for a group of postgraduate students (early January 2009).

The application of repertory grids in entrepreneurial network analysis is embedded within the context of a lecture on the importance of networks and social capital for the success of a fledgling venture, which has been preceded by a practical session on entrepreneurial idea development, that is, the students have already developed and presented an idea that could be appropriate for an entrepreneurial project and a creativity session using different tools such as music, brainstorming, collage to develop creativity and trust in the student population. The analysis of the entrepreneurial network is hence a practical tool to make the students aware of the contribution any contacts from their diverse networks could make to their entrepreneurial project. The theoretical context of the network lecture (early research on entrepreneurial networks, definitions, types of networks, the benefits from entrepreneurial networking) are presented in a standard lecture format (1.5h), followed by an explication of repertory grids and their use/merits in entrepreneurship. The task for the

students is then to use repertory grids to analyse their entrepreneurial network at the pre-organisation stage. As a last step the information can be integrated in Gridsuite four, a German software available in English, which produces both a cluster analysis and principal component analysis. This analysis can potentially highlight the strengths and weakness of the participant's existing network. The major advantage of this tool is, however, that it allows the participants to develop their own networking strategy appropriate to their individual situation.

The fundamental concept of PCT is the **construct**. For Aranda and Finch (2003) constructs are concepts defined in the participants' own word and groups of constructs form individual repertory grids which can be presented in a matrix form. Constructs represent qualitative properties and the ratings are non-parametric values. As Beail (1985, 1) comments, a construct "is our way of distinguishing similarity from difference – thus, a construct is essentially a discrimination which a person can make". Kelly preferred to see constructs as bipolar which underlines the fact that we both affirm and negate something simultaneously (Beail 1985). The repertory grid technique relies on semi-structured interviews where participants discuss specific stimuli such as objects, people, and places. By comparing and contrasting these elements it is possible to map personal constructs (Aranda and Finch 2003). Construct systems are, however, not rigid, as the individual endeavours to refine them constantly.

In general a repertory grid is represented as a matrix which contains **Elements** (the presented stimuli for discussion), **Constructs** (or concepts derived from the participants), and **Ratings** (that is, hierarchical values assigned by the interview participant; Aranda and Finch 2003). I used Gridsuite four to conduct both cluster and principal component analysis on these grids. Beail (1985) suggests a five stage process for working with repertory grids which comprises: Eliciting elements, Eliciting constructs, Completing the grid, Analysis, and Interpretation.

In the following a practical example from the MBA session referred to earlier will be illustrated. Two students NB and his partner X conducted the interview together. The objective was to analyse NB's existing network that could be of use for an entrepreneurial project of a company that specializes in building management systems (BMS). These systems basically offer to the customer the ability to control all the technical aspects of a building from one computer. These aspects include electrical, plumbing, A/C, fire detection, video surveillance, elevators and many more. Needless to say that this is a very demanding field that requires a high level of technical expertise and a network of people able to provide the company with its potential first customers and possibly even help in financing the project.

The first part of the analysis consisted of choosing a number of people that form the network the student believed could help achieve his professional objective. NB was integrated in the grid, too. NB is a 26 year-old engineer with three years of experience in the area of building management systems. He received a bachelor's and a master's degree from Virginia Tech and is currently pursuing an MBA degree at a French Management School. After having identified the people who could be involved in the entrepreneurial network during the pre-organisation stage, the next step of the networking assessment consisted of randomly selecting three people from the list of contacts, these three names were transferred to cards. In the ensuing discussion NB was asked to identify what two elements of this 'triad' had in common and how a third was different to them. The key issue here is to identify the differences and commonalities in the contribution of the different elements to the entrepreneurial project. The similarities and the contrasts that are identified throughout this exercise represent a bipolar description (dichotomous construct) (Hunter and Beck 2000). NB would then rate the network contacts on a scale of one to five, with one being the lowest and five being the highest. The following bipolar concepts (vertically on the left and right hand

side of the grid) (see figure three) were integrated in Gridsuite four. The concepts were as follows:

- People that can give financial support / People that can give moral support
- People with good engineering expertise / People with good managerial skills
- People with a huge network within local administrations / People with a huge network of potential clients for the company
- People that are for the project / People that need to be convinced
- Distance / Proximity
- People that can be trusted under some conditions / People that can be trusted under all conditions

Figure three shows the resulting cluster analysis with the concepts on the left and right hand side of the grid and the network contacts horizontally. From the analysis of this dendrogram we can detect a strong correlation (88 percent) between the student himself (NB) and HB. Discussing the results with NB, he commented that this result made a lot of sense as the two share a lot of common interests and have almost similar ratings with respect to the bipolar concepts. In addition, there was a good correlation between NB, HB and ZC at 83 percent and NK at 80 percent, indicating a high level of like-mindedness among these network partners. As NB suggested the latter two could be even closer to him if he could convince them to be in favor of his professional project. In comparison, MZ, YI and AH are very close to each other (88 percent of correlation), but further away in their thinking from NB at 67 percent. Along with MB at 80 percent these people are very similar in the sense that they all have significant business administration expertise and they can all potentially provide financial support for the project. These people are very important for the entrepreneurial project as they can all be trusted under all conditions and can be very helpful in providing managerial advice since most of them are successful businessmen. The majority of them need to be convinced, however, of the potential of the project. As a result, NB concluded that he needed to present a strong business plan and a feasibility study to bring them on board.

Furthermore as shown in figure three, there was a correlation between the people that have a good engineering expertise and the ones who can give moral support. As the NB

suggested this was a very positive result given that he would most probably need the technical expertise of these people and it would be very beneficial to get moral support from them as well.

This section of the paper has provided a second example of innovative entrepreneurial pedagogy from the French context. A psychological tool that has, to date, had little or no application in an entrepreneurship context was applied to the analysis of entrepreneurial networks, which represents an innovative and original new approach to teaching entrepreneurship.

The Use of Start-up Simulations as a Pedagogical Tool - The Case of Germany

For the case of Germany a person induced start-up simulation providing economic contents and a pedagogical and didactical framework has been developed (Tegtmeier and Schulte 2008). The simulation method is an activity-based didactical concept, applied in order to teach students professional and methodological competences as well as key qualifications simultaneously. A start-up simulation can be defined as an entrepreneurship teaching course which leads students to practical experience by simulating business reality in an imitational setting. This method provides opportunities to experience and to evaluate the consequences of risky and costly decisions in a simplified model situation reproducing reality without actually exposing them to any risk. Simulation methods are manifold and versatile. They comprise action-based methods like for example, role playing, case studies, practice firms, junior companies, and computer simulations.

The **practice firm** concept is a more comprehensive method which includes less complex simulation methods such as role playing and case studies. As a dynamic simulation model of a given company it does not reproduce the original true-to-life, but reduces reality in order to emphasize relevant aspects. Hence, complex processes become comprehensible,

interdependencies and strategies of entrepreneurial processes can be identified, and thus professional active skills can be encouraged.

This approach has been designed to develop awareness for self-employment and to enable people who have never experienced a start-up process to do so. Activity-based learning is used not only to transmit entrepreneurial skills and abilities and to create experience with it, but also to encourage independent acting and self-reliance, to empower independence and the faith in one's own ideas, and to encourage openness to experience. Furthermore, this approach is aimed at inspiring creativity, enabling team work, inciting enthusiasm, as well as at unveiling routine jobs connected with the build-up of a new venture. The practice firm as a means of activity-based learning should motivate and teach entrepreneurship, but also convey a lifelike view on entrepreneurship and a down-to-earth self-concept. It clarifies unreal images of entrepreneurship and should – where appropriate – even dissuade someone from starting a business.

Based on theoretical approaches to simulation methods in general and the practice firm as a methodical style in particular an action-oriented and holistic start-up simulation in the form of six modular components has been designed. Each individual unit takes about four hours of classroom teaching and covers a specific component of a start-up process in a given environmental setting of for example, a business idea, the people involved, their CVs, their financial and human capital. These units simulate the seed phase and the start-up phase of a company, focusing on the following topics: team building (incl. cooperation and networks), legal structure of the company, entrepreneurial finance, marketing and sales, tax, and succession.

Assuming that a high proportion of active learning is necessary to enable problem-solving, self-reliant and self-reflective working and learning, students actively take pre-defined roles in this concept. This might ease the identification with the business start-up and

the involved persons. Furthermore, this allows reflections on decisions and results achieved irrespectively of one's own person. All kinds of activities are initiated by persons. In contrast to computer simulations this means that any kind of activity will be initiated by persons who are physically present (above all by students).

In a pilot work a start-up simulation course has been analyzed (Tegtmeier and Schulte 2008). For the purpose of evaluation, theory-based standardized pre- and post-questionnaires have been developed and applied. Results reveal that the simulation helps to enhance a more realistic view of entrepreneurship and might motivate students to think entrepreneurial. Overall the results of this evaluation show that the simulation sensitizes the participants and that it makes them aware of the complexity of a start-up.

An Action -based Approach to Entrepreneurship Education: The Case of Greece

What is described below is the “Entrepreneurship Educational Program” as has been developed and applied mainly by the University of Thessaly and at a lesser extent by the University of Athens.

The Program scopes to educate students to the entrepreneurial way of thinking with a desirable outcome to create their own businesses (Vliamos and Tzeremes 2003). The program concerns those students from all faculties who are in the last two years of their degrees, or at their postgraduate studies. The course contains two modules: Introduction to Entrepreneurship and Business Plans. A set of horizontal activities (actions) is included in the two modules. Students are provided with virtual exercises (VE) and virtual organisations (VO) to “explore” and learn various entrepreneurial and business skills. VE aim at the acquaintance of the student with the global marketplace to identify entrepreneurial opportunities, create an enterprise, name the firm, create its logo, and develop its business plan. Furthermore the purpose of the VO is to help students to identify small business start-up resources, make them fluent to oral presentations for venture capital, compile budgets and

other financial reports, deal with marketing, pricing, payroll, help them understand corporate tax structures, and familiarise them with the business software and technology available. Teaching and tutorials even though they contain the traditional academic pedagogical format, are more group oriented and free of hierarchical based structure (teacher-student type). During the first week of the course students are allocated into groups of 3-5 members from different academic disciplines. Immediately after all group members start thinking of innovative ideas through the VE and VO processes. Then the role of the teacher changes to a role of a consultant.

The teaching session lasts three hours and only the first deals with theory. However the other two hours are devoted to the action-based approach, calling for discussion- and action-based solutions for every idea provided by the students' groups. All the questions/answers are 'open' for everyone to step into the process and the role of the tutor is to guide through the sequence of questions/answers to an entrepreneurial oriented thinking. Following Fiet's (2000) suggestion that teachers become irrelevant when they fail to apply theory to answer students' questions, the general pedagogical approach is teaching by 'real examples' with an application of theory.

For students to get into a real business environment, visits to local SMEs are a basic ingredient of the educational program. These visits are always carried out during weekends and students must attend them. The Program encourages the owners of the SMEs to provide the students with information regarding the production process, marketing processes, financial issues and day after day problems/solutions they face. For the same line of argument, the Program organises seminars calling local SME's owners. Students also have at their disposal an online communication and support system for problems, they face upon the development of their entrepreneurial idea.

The evaluation requirements for the two modules are for the students' groups to provide in the first semester a report containing the entrepreneurial idea analysing how, where and why this is developed and in the second semester the teams accomplish their business plans taking into account all changes made during their assessment of the first semester. There is a 15-30 minute interview of the team, which counts for 30 percent of the mark and also their participation on the module activities (30 percent of the mark) and the final report (40 percent of the mark) are evaluated.

Further, mentoring activities are organised. During the semester each group is assigned an active entrepreneur, usually owner of an SME, to mentor the particular team. So students are able to discuss their ideas with them to get some guidelines for their problems. Also conferences' are organised and latest developments of entrepreneurship achievements are presented to the students. The use of the module library is also encouraged so students from non-business/economics disciplines to get theoretical background.

Finally, Entrepreneurship Competitions at local and national level are organised in order for 'external-non academic bodies' to examine students' ideas and help those being feasible. Over the five years of the program there have been six new ventures created by students.

Educating Entrepreneurship by Critical Thinking and Reflection - The Case of Poland

Entrepreneurship as an academic discipline does not have long traditions in Poland. It is still rarely taught as the separate course or its concept in education is misunderstood. On economics or management related departments entrepreneurship is often mixed with small business management and put in one course or under one title.⁴ Below description concerns

⁴ However, business entry differs from managing a business. To understand the difference between entrepreneurship courses and small business courses helpful might be a distinction made by Gibb (1987). He defines the entrepreneur in terms of attributes and the small-business person in terms of tasks. Gibb considers that the role for small business in entrepreneurial education is to enhance enterprise generation by managing the entrepreneurial attributes of people.

one semester course (30h), titled *Economy of small firm*, being launched at the Faculty of Economics and Sociology at the University of Lodz for postgraduate students of *Finance and Accountancy*. The course takes form of weekly conversations and assumes active participation of students (group of 25-30 students). Entrepreneurship constitutes the first module of that course, but consecutive elements are also related to creating entrepreneurial competences and thinking. The module is projected to provoke students to rethink their approach to entrepreneurship.

The structure of the course is designed in compliance with an understanding of entrepreneurship as serving foremost a preparatory function, that is, preparing students to behave in an entrepreneurial way, preferably starting own firm in future. Such an approach to entrepreneurship education seems to be more skills and mind developing than knowledge exploring. The idea is to give students tasks leading them to discover knowledge, instead of passively receiving the information (Ewell 1997) and to induce entrepreneurial intentions. Thus the concept of student-centred education is realized. The selected teaching model is a mixture of 3 models: the cooperation model (to teach cooperation and team working), the conceptual model (to teach terms and logics of thinking), the seeking model (to teach solving problems based on problem-exposed readings). The aim of the course is to encourage cognitive processes, continued outside classes (informal learning), including critical thinking, reflection, and meta-cognition.

The course starts with a demythologization session during which the most popular myths and stereotypes about entrepreneurs and entrepreneurship are refuted (that is, not only in-born entrepreneurs do have the chance of becoming successful in starting a business; formal education and knowledge substantially increase the probability of success; it is not

crucial to have an extraordinary and very innovative idea to successfully start a business; replicative entrepreneurs are also very successful).

At the beginning of the course, students also choose one company from their closest environment. Usually, this is a business either run by family, friends, or where the student has worked in. Their task is to evaluate the decisions done by entrepreneurs (owners) on all levels: operational, financial, and managerial. Each week, after having received a sequential part of theory and discussions on entrepreneurship and small business economy, they are obliged to reflect and to decide what they would do in particular situations if they were entrepreneurs. At the end of the course students are asked to present their papers describing their reflection and critics on chosen case. But they should also propose their vision of being entrepreneur. Apart from the written work, on each class students solve a mini case study in small groups, aimed at developing skills of analysis and synthesis. In particular, exercises are designed to encourage four leading entrepreneurial competences which are: a habit of permanent seeking of possibilities and occasions in business, ability to observe the business world, ability to search for information, and reflection. Students are put in different business contexts and have to find the best solutions.

The discipline of entrepreneurship in Poland is young and still unstructured. However, lack of structure may be taken as an advantage. Youth and freshness of the discipline makes it attractive to educators as its methodology is still not enough developed. From the beginning experimental approach to entrepreneurship education was popularized and the goal of enhancing entrepreneurial intentions prioritized.

Academy Meets Industry: Innovating on Educational Collaboration – The Case of Sweden

There is a growing interest in universities and firms of developing different collaborative projects between industry and academy in new that is, entrepreneurial and

mature companies. We know relatively much about how to create, maintain and evaluate collaborative research projects (for example, Bengtsson 2006) between industry and academy, but relatively little is known regarding educational collaboration between industry and academy (Asplund and Bengtsson 2008a). There is a small but growing knowledge base on how to establish and conduct collaborative educational projects, such as case writing projects, in university education (for example, Bengtsson and Asplund 2002, 2003; Asplund and Bengtsson 2004, 2005, 2007). In the following I present one approach/method of developing a collaborative educational project between the university and the industry (Asplund and Bengtsson 2008b).

In the autumn of 2004 a contact was taken with us, initiated by the company Biogaia in Lund, to possibly participate in and contribute to an organizational development programme in the company due to a forthcoming reorganisation. The main focus was the company's ambition to become more market oriented in order to further develop their presence on both the domestic and international markets. They expressed a need to be educated how a more market driven organisation could be designed and managed in this special kind of industry. In this meeting we decided to form an educational collaboration project together. In the planning phase we envisioned the project in three learning arenas (see figure four) in order to help us to a) define the goals for all parties, b) design the actual collaboration project, and c) to clarify our different and complementary roles in the whole learning process.

The Business platform as the first (A) learning arena (triangle) included six half-day workshops (that is, a combination of lectures, exercises and cases) and was held in the late autumn of 2004 and early spring of 2005. The purpose of the workshops was to address the theme of becoming a product manager. Each workshop had a main theme: a) Business platform, b) Industrial marketing and c) Relationship marketing. The learning material used

included two text books and working with assignments and mini-cases related to managing products and market orientation.

Technology strategy course as the second (B) learning arena focused on learning the topic of technology strategy (TS) in connection to business strategy, e.g, R & D-strategy, product development and collaboration between companies (Dodgson 2000). The idea was here in the learning arena B to address and interconnect the “needs” of both the academic course and the BioGaia managers. Students got an in-depth insight into the industry, the company and phases of technological and business innovation through three presentations by the managers. Besides BioGaia two other companies: Alfa-Laval and Sony Ericsson participated with one lecture each. For the BioGaia managers both learning arena B and C meant collaborating more in depth with the students at the university compared to just giving a stand-alone guest lecture.

Case writing as the third (C) learning arena meant that the managers provided an opportunity for the students to produce a technology strategy case (Bengtsson and Asplund 2002) that the company could use in their internal development and education, for example, in becoming more market oriented. In this case construction process we stressed the key importance of the construction of a instructors manual in order to support new knowledge of both content issues and at the same time creating a good learning vehicle to support this. The managers and two students groups constructed two BioGaia cases and instructor’s manuals during the spring of 2005. In the course a total of eight technological cases were produced.

For the managers at BioGaia Lund, reflecting back on the collaboration, the most valuable contributions was the creation of a new business “language” and deeper insights into the business world facing them in their new role as product managers. A stronger confidence and familiarity with handling the often difficult combination of technology strategy and business was also achieved. They also especially liked their lecturing at the university and

that this part of the learning arena functioned very well! They also stressed the importance that their preparations for the university lectures also gave them all more clarity of their unique competences and different roles in BioGaia in becoming product managers. Finally, they got more internal visibility from the collaboration project which helped them in forming a better link between the research and development unit in Lund and the head office in Stockholm.

When summarizing the contributions to the academy the students' achievements and knowledge comes in the forefront. The working format (i.e., pedagogy) worked very well because the managers together with us at the university took a joint responsibility for working with both the themes of market orientation as well as technology strategy. This gave the project a lot of energy. Finally the visualization of the format (that is, the three learning areas) functioned very well to communicate the advanced educational collaboration format as well as giving all of us clear roles.

What have then been the unique characteristics of this collaboration project in Lund with BioGaia? We think that the main characteristic have been the **innovative and collaborative mindset** that is held by the managers in this very innovative company. Without their "intervention level" (see Bengtsson and Asplund 2003) attitude a project of this kind and range could not have been possible. Of course the timing was very good and this was pure luck and coincidence. Had the BioGaia manager in Lund approached us some weeks later that year the university course had already been planned or held and the connection to the university course; teaching and case construction with the students had not been possible.

We have now come to main implications for university teachers/teaching. The first implication is to work with companies and managers that really see the opportunities in educational collaboration and to create clear educational gains for the company and managers in the collaboration project and not only for the university and the students. The second

implication is to design a pedagogical format that both address the educational needs in the company and at the university which explicitly communicate the overall and different learning objectives for all parties involved at the industry and university; that is, students, managers and faculty.

Is it then possible for other companies and universities to create this type of educational collaborations in the future? The answer to this is yes but it demands a shift in mindset and a good pedagogical format. We think that one feature is that we as university faculty have to as Dodgson (2000) says go into the thinking of the “5th generation innovation process”. This means for us at the university to open up and work together more closer with industry in addressing and achieving mutually shared goals in education. The university faculty could with their knowledge of both research and pedagogical formats invite industry to new, innovative and “daring” educational collaboration projects. If the universities could also put themselves in this “innovative frame of mind” (that the managers held in the collaboration), we could increase the valuable “friction” and exchange between these two contexts (that is, industry and academy) that is needed for the prospering new future in university education as well as in the business world.

IV: Discussion and Conclusions

The innovative approaches from Estonia, Finland, France, Germany, Greece, Poland, and Sweden illustrated above give a valuable international insight of what European variations in entrepreneurship education have to offer. All of these are supposed to enhance a more realistic and positive view of entrepreneurship in society and might induce entrepreneurial mindsets on the part of the students. From our point of view, these approaches are appropriate for sensitizing the participants and to make them aware of the challenges of being entrepreneurial.

From recent studies we know that it is obviously crucial to make authentic and out-of-the-box experiences during any programme or course, respectively. In this context, action- and project-based courses as well as student-company-university triangles, including for example, an in-company placement or networking events, take this point into consideration.

As a limitation of this work and a requirement for future research it has to be stated clearly that there is a strong need for empirical evidence to confirm that the aforementioned innovative approaches and tools are able to enhance entrepreneurial mindsets and behavior, effectively. First longitudinal studies confirm that the initially illustrated sound cognitive theories TPB and MEE are appropriate foundations for analysing entrepreneurial attitudes and intentions. Though, from the research designs and results taken from these surveys we are aware of the challenges which come along with working on robust empirical evidence. On the one hand, in quantitative analyses small sample sizes lead to estimates of low predictive value. On the other hand, entrepreneurship courses should be conducted with a small group of people to enable individual action and experience. Furthermore, other parallel influences apart from the evaluated course can hardly be assessed nor separated. Therefore, a further survey could also be fruitful using an experimental design and including a carefully chosen control group without that treatment (matching procedures).

With respect to the approaches as study courses it has to be stated that they represent a surreal business environment and that effects of a real environment will be different from those caused by classroom entrepreneurship. Otherwise, these courses are as close to real entrepreneurial behavior as classroom entrepreneurship can be. They demand much more action orientation from the students than any other type of course. Moreover, they use to include cooperation with companies which goes far beyond surreal activities.

It has to be pointed out that course evaluations only allow the measurement of short-term differences of entrepreneurial mindsets and intentions. Furthermore, the link between

entrepreneurial intentions and behavior can only be analyzed through follow-up studies which measure the long-term impact of such an intervention. They should provide insights into mid-term changes of intentions and thereby explain why people do not become entrepreneurs despite once having such intentions and vice versa. Obviously, entrepreneurial mindsets do barely change sustainably during the short period of a single study course (Fayolle 2005).

As a European wide insight of innovations in entrepreneurial mindsets and pedagogy, this work addresses the question about the right approaches, tools, and programmes in entrepreneurship education and reveals some **common key factors of entrepreneurship education in European pedagogy variations**. Consulting the different European approaches, the following seems to be particularly crucial for the purpose of developing entrepreneurial mindsets:

- action-/project-based learning
- individual as well as collaborative (team) experiential learning
- grouping from different academic disciplines
- enhancing entrepreneurial skills and knowledge
- key qualifications; creativity, autonomy, responsibility, risk-taking (learning in uncertainty and insecurity)
- conceptual learning, critical thinking, reflection, meta-cognition
- working with innovative ideas/projects
- demythologization
- learning through “fun”
- student-company-university triangle/collaboration, entrepreneurial networks, informal learning, mentoring

In the near future an evaluation instrument has to be developed which is appropriate for evaluating each of the innovative approaches presented in this paper (including cultural aspects of the different countries). This might also help to promote the international exchange, replication, and adjustment of classroom didactics in entrepreneurship education (Tegtmeier and Schulte 2008).

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Figures and Tables

Figure 1
“Theory of Planned Behavior” (TPB)

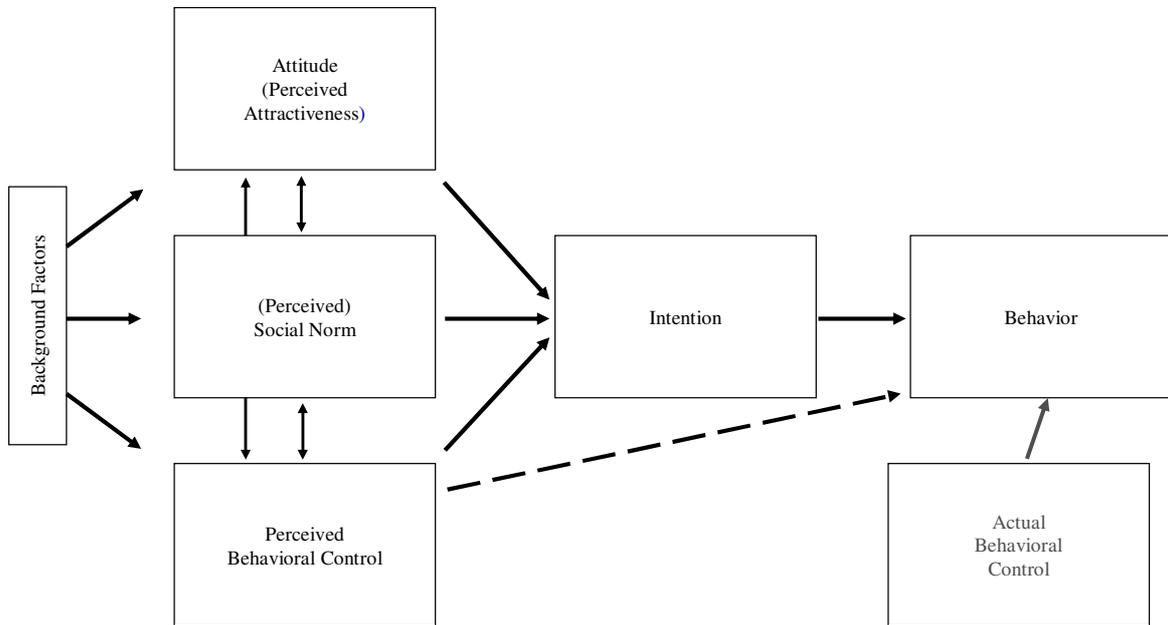


Figure 2
Shapiro-Krueger-“Model of the Entrepreneurial Event” (MEE)

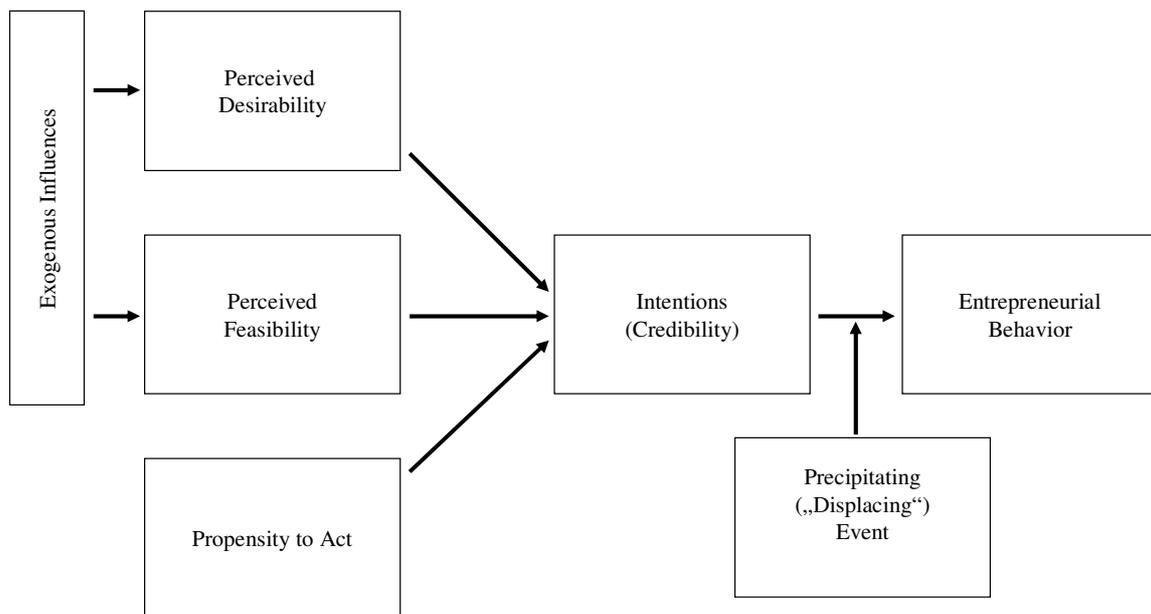
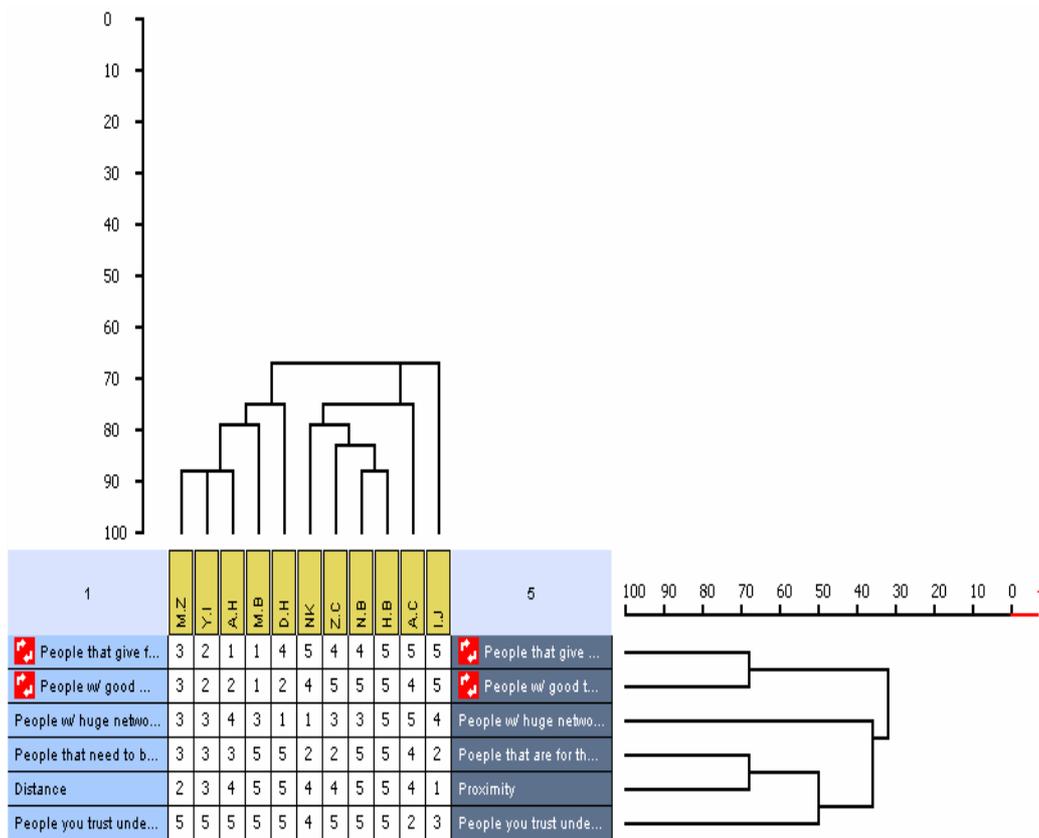


Figure 3
NB's Dendrogram



Dendrogram Grid: Creation of a BMS company - Client: Najib Bouskour/Hassabou Dounia

Figure 4
The Three Learning Arenas

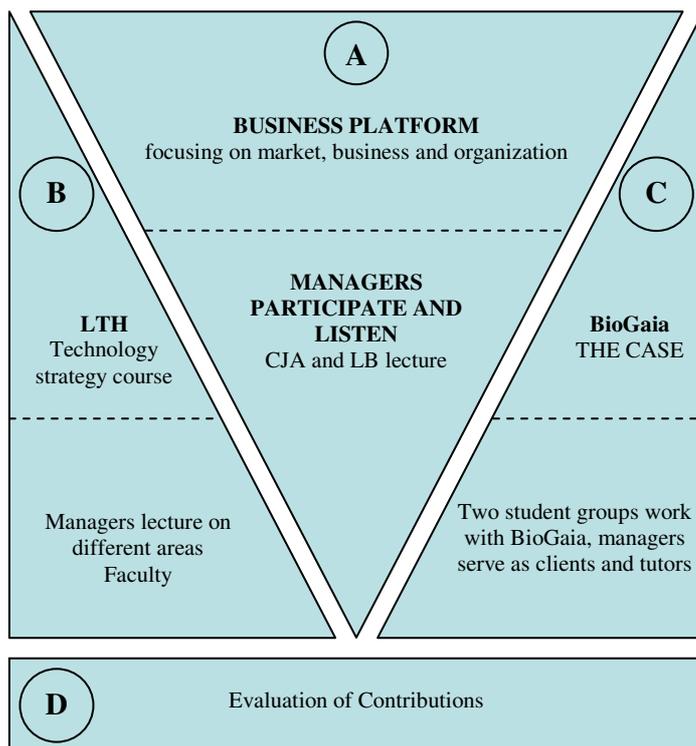


Table 1
Approaches to Learning and Studying: Motives and Strategies
(Biggs 1987, 3)

Approach	Motives	Strategies
SA: Surface	Surface motive (SM) is to meet requirements minimally; a balancing act between failing and working more than is necessary	Surface strategy (SS) is reproductive; to limit target to bare essentials and reproduce them through rote learning.
DA: Deep	Deep motive (DM) is intrinsic interest in what is being learned; to develop competence in particular academic subjects	Deep strategy (DS) is to discover meaning by reading widely and inter-relating with previous relevant knowledge

Table 2
Model of Entrepreneurship Education
(Hytti 2002)

Learn to Understand Entrepreneurship	Learn to Become More Entrepreneurial	Learn to Become an Entrepreneur
(Stage 1)	(Stage 2)	(Stage 3)
What do entrepreneurs do?	I need to take responsibility of my learning, career and life	Can I become an entrepreneur?
What is entrepreneurship?		How to become entrepreneur?
Why are entrepreneurs needed?		How to manage the business?
How many entrepreneurs do we have?	How do I take responsibility?	

***Self Reflections of Immigrant Women Engaged in Entrepreneurship
in New Zealand***

by Huibert P. de Vries, and Teresa E. Dana

The incidence of ethnic women entrepreneurs has risen in modern multi-cultural societies, as women from all ethnic immigrant backgrounds seek greater economic and societal recognition. Many migrant-receiving countries seek to support this entrepreneurial behaviour, but the difficulty in achieving this lies in the often different roads travelled by immigrant entrepreneurs with respect to ethnicity, gender, value systems, and cultural heritages. This study considers the migration, settlement, cultural and business issues as they present themselves in different forms, depending on a complex and dynamic combination of women immigrant entrepreneurs' characteristics and the receiving country's socio-economic infrastructure.

Introduction

Ethnic entrepreneurship and increasingly female entrepreneurship have become popular concepts in modern multi-cultural society (Levent, Masurel & Nijkamp, 2003: p. 1131), and the ability and desire to be entrepreneurial has become more evident among women of all ethnic immigrant backgrounds throughout the world. The challenge for receiving countries is to determine how business, ethnic, and government agencies can promote and support this entrepreneurial behaviour, however the difficulty in answering this challenge lies in the often different roads travelled by women who become immigrant entrepreneurs (IERS) with respect to ethnic backgrounds, value systems, and cultural heritages. Migration, settlement, cultural and business issues present themselves in different forms, depending on a complex and dynamic combination of the IER's own makeup and the receiving country's socio-economic infrastructure (de Vries, 2007). Yet the challenges of how to support such entrepreneurial behaviour needs further research, as ethnic entrepreneurship is generally regarded as an important self-organising principle used by ethnic minorities to improve their weak socio-economic position, and historically it has been accepted that there is a clear male gender bias

in entrepreneurship participation and research. (Levent, Masurel & Nijkamp, 2003) Yet economic data would suggest the women entrepreneurship is increasing (e.g. Carter, 2000; Gurría, 2007) and research also indicates that women entrepreneurs are becoming increasingly important as part of a nation's economic makeup and may be a key contributor to economic growth in low/middle income countries (Allen, Elam, Langowitz, & Dean, 2008). Women are also more likely to share economic and non-economic rewards with others than men are.

This study utilised a grounded theory approach to the consideration of the migration, settlement, cultural and business issues as they present themselves in different forms, depending on a complex and dynamic combination of the Women IER's own makeup and the receiving country's socio-economic infrastructure.

Ethnicity and Gender in Business

Within the literature there is substantial research on issues relating to ethnic entrepreneurship and the explaining of difference between ethnic minority businesses and the general small business community (Dhaliwal & Kangis, 2006). Perspectives have emerged such as: mixed embeddedness – which suggests that immigrant entrepreneurs can only be understood effectively by taking into account both their embeddedness in social networks (their own formal and informal activities) and their embeddedness in the socio-economic and politico-institutional environment of the country of settlement (Kloosterman, Van der Leun, Rath, 1999); and understanding cultural (personal characteristics, family, cultural factors, values etc) and structural (social-cultural, legal and political issues in the receiving country and homeland environments) factors which influence the level of entrepreneurial behaviour (Masurel, Nijkamp, & Vindigni, 2004). There is also significant research on women entrepreneurship, for example Brush (1992) reviewed 57 articles representing empirical research on women business owners; and Moore (2004) through her investigation of existing literature has developed a typological framework for current research. Yet there is some concern over the appropriateness of current research practices used in the study of women entrepreneurship (Bruni, Gherardi & Poggio, 2004). Within these bodies of work there is, nevertheless little comprehensive or solid research on women IERs. Research has been undertaken on the importance and status of minorities in self-employment and ethnic entrepreneurship (e.g. Aldrich, Jones & McEvoy, 1984; Baldock & Smallbone, 2003; Basu, 1998; Levent, Masurel & Nijkamp, 2003, Smallbone, Ram, Deakins & Baldcock, 2003), in

which the propensity of women ethnic entrepreneurship has been referred to (Dhaliwal & Kangis, 2006), and some specific cases have been researched such as Pio's (2007) study of Indian immigrant women in New Zealand, but to date the specific characteristics of the women IERs from differing cultural backgrounds has not been dealt with effectively. Of further relevance to this study's New Zealand context is a paucity of research on women entrepreneurs in that country (de Bruin & Flint-Hartle, 2005).

Methodology

This paper is taken from an expansive study of immigrant entrepreneurship which posed the question: 'What factors can help explain the phenomenon of immigrant entrepreneurship within the diverse and complex socio-cultural and environmental context in which it exists?' To better understand the phenomenon, research was undertaken that explored how both male and female immigrants in New Zealand - from different ethnic backgrounds - dealt with immigrant entrepreneurship (i.e. understanding entrepreneurial decisions and patterns in the establishment and operation of their small and medium sized enterprises). To achieve this objective, this research attempted to bring insights into a study of the embedded internal and external factors that have a multi-dimensional influence on entrepreneurial behaviour (or, as in some cases, the lack of it) among ethnic immigrant groups from geographically and culturally diverse backgrounds.

The four groups chosen were Chinese, Dutch, Indian and Pacific Peoples. The rationale for this mix of ethnic origins were: *Chinese and Indian* - Asia now houses three of the world's top five economies - China, Japan and India. Asia will increasingly impact on the lives of all New Zealanders, and its growing economic dominance will determine patterns of investment and business activity in this country in the future. Furthermore between 1991 and 2001 the number of New Zealanders of Asian descent doubled from 99,000 to 237,000 and by 2021 the numbers are predicted to nearly triple, which will then represent 15 percent of the total New Zealand population (Steeds, 2006). Hence the level of connection to the New Zealand-Asian community will impact on New Zealand's ability to participate in this new economic powerhouse and therefore two groups, Chinese and Indian, were represented in this study. *Dutch* - New Zealand's earliest recorded European contact was by the Dutch explorer Abel Tasman, followed by the English explorer James Cook. The country was then taken under colonial rule, and European immigration became an integral part of New Zealand's development and the backbone of its population base – surpassing the indigenous Maori.

Although in the late 20th century European immigration has been surpassed by Asian and Pacific immigration, the historical context and sheer numbers that identify themselves as European/Pakeha make them the dominant population base in New Zealand. Therefore, to include a group in this study representing New Zealand's European links was considered fitting. *Pacific Peoples*- New Zealand has had strong historical, geographical and economic ties to the Pacific Islands. Overall one in sixteen people in New Zealand are of Pacific ethnicity (Statistics New Zealand, 2001a). Furthermore, New Zealand has played a significant economic and social role in the development of Pacific Rim countries. Notwithstanding Niue and Cook Islanders having New Zealand citizenship, many Samoan and Tongan Islanders have also made New Zealand their home. Because of the strategic impact of Pacific Peoples on New Zealand's ethnic mix and this country's political mandates within the Pacific Rim, they were the fourth sample group identified for this study.

The full study from which this paper is taken, sought to understand multiple factors influencing the entrepreneurial behaviour among distinct ethnic immigrant groups residing in New Zealand, and outlined how this phenomenon can be explained through a normative model. The research was based on 42 semi-structures interviews and 35 follow-up interviews over an eighteen month period, which examined the four ethnic groups. The purposeful sampling was based on: (1) criteria sampling, that is participants met the definition of what constitutes an immigrant entrepreneur¹; and (2) theoretical sampling which met the grounded theory expectation for data saturation. The full sample consisted of 10 Chinese, 11 Dutch, 10 Indian and 11 Pacific male and female IERS who operated SMEs² in New Zealand. A grounded theory (Glaser & Strauss, 1967) methodology was chosen to give a fresh slant to this topic (Goulding 2002) through its inductive process of 'discovering' theory from data, and the construction of a profile of the 'New Zealand Immigrant Entrepreneur' from the perspective of viewpoints, opinions and experiences of the IERS themselves. Through grounded theory data was generated via the semi-structured interviews and follow-up

¹ In the context of this study immigrant entrepreneurship has been defined as: *immigrants or their immediate offspring, who have a specific ethnic identity, and who create work place settings for themselves and others, within their receiving country*. Whilst the term *immigrant* implies 'migrating peoples' it is noted that the definition has been extended to include New Zealand-born second generation for a number of reasons. Firstly because of the grounded theory approach of theoretical sampling drew on second generation entrepreneurs. Secondly the extended definition takes into account the 'immigrant factor' and cultural influence that are often very strong across generations within ethnic minority groups, and impacts on the entrepreneurial behaviours of their community (e.g. Butterfield, 2004; Dhaliwal and Kangins, 2006; Peters, 2002). Thirdly, it gives a stronger longitudinal perspective of immigrant adaptation and their entrepreneurial participation in New Zealand.

² The following criteria were established: (1) the business had at least two annual cycles (financial years) of current business activity, to ensured currency and substance to the entrepreneur's business activity; (2) that the entrepreneur had over 50% ownership in the business; and (3) businesses of less than 100 FTE.

interviews, and NVivo data analysis software was employed as a coding, retrieval, and analysis tool during the theoretical development stage. Finally individual ethnic case studies of immigrant entrepreneurship were written for each of the four ethnic groups under study.

The data set, drawn from the study for this paper, attempts to bring further understanding to the specific topic of women engaged in immigrant entrepreneurship. This was achieved by applying the immigrant entrepreneurship framework (figure 1) to analyse the data collected from the women IERs which was generated via semi-structured interviews with 10 women IERs within the original data set. This study does not attempt to develop an all encompassing profile of women immigrant entrepreneurship, but rather attempts to bring incites into specific circumstances and patterns of behaviour reflected upon in the ten interviews with women IERs in New Zealand, and also considers differing characteristics and behavioural patterns between women and men IERs.

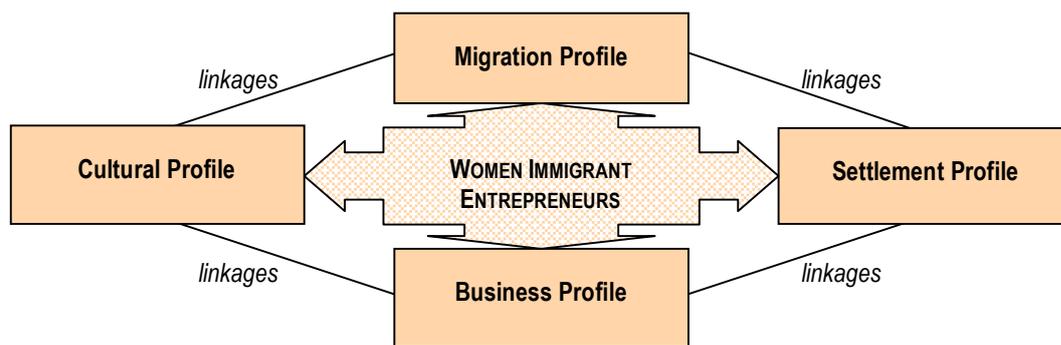


Figure 1: Model of Immigrant Entrepreneurship

Findings

The findings are presented in a format based on a framework (figure 1) which stresses four main constructs:

- The migration profile - which identifies homeland characteristics of the IERs or their families, and their migration drivers.
- The settlement profile - which identifies the influence of societal fit and social perceptions as they impact on the IERs' business activity.
- The cultural profile – which identifies personal, family, and cultural influences, and their impact on the IERs' business activity.
- The business profile – which identifies the catalysts for entrepreneurial activity, the business drivers, human and financial capital capability, and the business philosophies of the IERs.

The application of these constructs illustrate the patterns of entrepreneurial behaviour which evolved during the analysis of the semi-structured interviews with the 2 Chinese, 3 Dutch, 2 Indian and 3 Pacific women IERs.

1. Migration Profile

The study re-enforced the broad geographic origin from which migrant people originate, and the clear distinction with respect to culture, religion and values systems. Furthermore, migration occurring in different decades created distinctions within migrant groups, for example, the Chinese and Dutch interviewees both highlighted differences between established and new post-1990 immigrants, as in “immigrants of the 1950s were a true mixture – often arrived with nothing. The migrants since 1990 are slightly higher and more financially established to re-establish themselves in New Zealand.” The trend of migrant transition from a city overseas to a New Zealand city was the most common form for women IERs (n=8). They were commonly from entrepreneurial family backgrounds (n=6) and skewed towards a middle socio-economic class background (n=5) as opposed to their male counterparts who were skewed towards a lower socio-economic class. Similarly women IERs were more likely to come from white collar homeland employment (n=5), whereas their male counterpart were more likely to be blue collar. Half of the women IERs had family links in New Zealand prior to migrating and they had multiple drivers for migrating to New Zealand (such as: marriage, quality of life for children, career and family), as in “I was sent by Government to come to New Zealand as a visiting scholar at Canterbury University. So I thought it was a very good place, for my daughter and also for me – at that time my daughter was about 9 years old.” Their male counterparts, on the other hand, were predominantly driven by the potential for career and education advancement. The women predominantly arrived in New Zealand as part of a family unit (n=6) and had comparatively greater financial resources than their male IER counterparts.

2. Settlement Profile

Upon migrating to New Zealand, women IERs predominantly resided in cities (n=9). They had all been employed in New Zealand prior to going into business for themselves. This employment was skewed towards blue collar work (n=6), as in “I worked in a bakery and we did all sorts of things”, which they claimed was often of a lower calibre that they had engaged in back home. This culminated in frustration, firstly as to the lack of recognition of their

homeland qualifications, and secondly their rejection in the job market because of a lack of local experience, as in “I applied for a lot of jobs here but when I wrote down on my CV that I have a Masters in Political Science and applied for a factory job or a customer service job, they would send me a response that I was over qualified for the job. But when I applied for a manager’s job then they would say that I have no New Zealand experience and they couldn’t offer me for the job!” Women IERs had generally experienced difficulty with language (n=8) and had experienced discrimination (n=7). Overall they felt that social integration in New Zealand was thwart with more difficulties (n=9) than their male counterparts felt, as in “I found it hard when I first started in Christchurch being a woman.” The Dutch IERs, as a white European race, spoke of effectively managing integration, whilst races of colour found integration more difficult, for example the Indians - as a very adaptable people - had mixed perspectives on integration, while Pacific and Chinese had the most difficulties and had also faced discriminatory political regimes during New Zealand’s immigration history. Despite setbacks, women IERs felt positive about their adopted country (n=7) as in “absolutely, love it, couldn’t live anywhere else,” especially with respect to New Zealand’s societal infrastructure (n=6) and the natural environment (n=5), “green, clean and, you know, we breath fresh air.”

3. Cultural Profile

Women IERs mirrored their male counterparts in being achievement oriented. They all displayed a strong internal locus of control (n=10), were goal setters (n=7), and generally displayed determination and perseverance (n=6). They considered their ability to build and manage relationships to be their major business strength (n=7), whereas their male counterpart responses were skewed more toward technical strengths. Work ethic was revealed as a prominent feature among all IERs, with women IER’s frequent comments relating to working hard (n=10) and working long hours (n=10), as in “it has been hard work, it has been long hours.” This work ethic was often grounded in a family or cultural foundation (n=6), although the ‘immigrant factor’ should not be underestimated as influencing work ethic. Work based stress was highlighted by women IERs (n=9) as a negative outcome of their entrepreneurial activities, although their means of dealing with stress varied significantly. All women IERs also highlighted the influence their parents values played in how they conducted business, as in “I worked for mum and dad from the age of 10, and just watching how hard

they work,” and “Mum and dad were always really busy, both at work. We used to just play in the restaurant”. Some stated the importance to business of their spiritual values and religious affiliations (n=5), and this was especially prominent among all Pacific women IERs interviewed, as in “I’m a Christian and for my personal life I always have a quiet time with God.” How this translated into business ideology and actions varied considerably between groups. For example, a Dutch IER reflected on values of service through hard work, while a Pacific IER commented on a connectedness to God and community.

Strong family focus was evident among women in this sample (n=9), as in “the family unit is, you know, the most important thing,” and “the Asian background that our parents provide us - not just education, not just a place to live but the Asian family is more closer and they will actually support one another.” The obligation to extended family was very strong among Pacific and Indian women IERs (n=5), as in “if they are my other sisters family, and they need some money because they short of this or that, its like part of the personal thing, I have to help,” but less obvious among the Chinese and Dutch women IERs (n=1) interviewed. Women IERs preferred family involvement in their businesses (n=10), and commonly their spouses has some form of involvement in the business activities (n=7) - often complementing their skills. But for those that had children succession was not an expected outcome (n=7), as they preferred them to become educated and display independence, as in “I mean my husband and I are very much involved and we are a family too. I don’t want to involve the children in the business because I want them to live their own lives.” Women IERs connectedness to their ethnic community was relatively low (n=4) compared to their male counterparts. The Dutch spoke of no real connection to their community, Indian and Chinese indicated a lack of cohesion within their communities, but Pacific women IERs felt a very strong sense of obligation to support and engage with their community, as in “one thing about Samoan community is that it doesn’t matter where you are, you are a Samoan.” All women IERs admitted feeling a strong sense of homeland national identity, and often attempted to live in both worlds of New Zealand norms and their ethnic cultural traditions, whilst the importance of retaining the homeland language was also prominent (n=6). Women IERs generally had some form of personal connection to their homeland (n=8). They saw the homeland family connection as important, and had made or intended to make homeland visits (n=9). The women had far less homeland business connections (n=3) than their male counterparts, with

Chinese and Pacific women IERs being the only ones to express an intention of future business connections.

4. Business Profile

The businesses owned by the women IERs in this study were all service oriented. They started as very small businesses (n=8) and had predominantly a New Zealand market orientation (n=7). The most common reason for going into self-employment was career dissatisfaction (n=6) and the women were proactive in seizing businesses opportunities when they presented themselves (n=7), as in “Basically an opportunity was presented and I took it. It wasn’t our intention to go into business initially but an opportunity arose and it was like you are silly if you don’t do it.” Overall women IERs commented that they were not driven by monetary rewards (n=7). Although financial security and freedom was important to many (n=5), factors such as autonomy (n=6), achievement (n=5), life style (n=5), pride and credibility (n=4), and business reputation (n=4) were identified as drivers as in “I don’t like people telling me what to do,” and “to create my own opportunities, be accountable to my self.” These factors were similar to their male counterpart except that the male IER’s profile was skewed more toward monetary rewards and also they stressed the importance of contribution to their community. Women IERs expressed the need for financial competency in business activities (n=8). Two Dutch women IERs spoke of frugality in business and their personal lives, for example “because we agree to put our salary and commission in the company, we didn’t withdraw within the first two months. Just to make sure that the company could run smoothly.” Cash-flow (n=4) or other financial pressures (n=6) were identified as the major challenge in establishing and growing their businesses. Women IERs who required capital (n=8) stated that the funding came from family members (n=6), “I was lucky because my dad had faith and belief in me. My first business he loaned me the money and I’d just paid him back on the monthly basis,” and included overseas family, “I had time to go to the States and see my family there and they offer me some money. So when I came back we managed to buy a van and we started from there.”

There was a high propensity of university qualifications among the women IERs in this study (n=6), whereas their male counterparts had more trade qualifications. Overall, women IERs were more likely to have some form of formal qualification than their general ethnic population. In starting their business women IERs were less likely to come from positions of previous industry knowledge and employment than their male counterparts, but they were

still of the opinion that experience, as in learning-on-the-job, preceded education as a prerequisite for entrepreneurial success (n=7), as in “I just had to learn it like ‘off the hip’ if you can call it that – you are chucked into it and you have got to go!” and “I think it is life experiences more than the academic experiences that moulds you,”. Advice from accountants (n=8) and spouses (n=6) were their main business support mechanisms, but the advice of family role models was also valued (n=6). However, there was a level of mistrust of professional services (n=5) among the Chinese, Indian and Dutch women IERs.

Discussion

The women IERs under study displayed many of the classic entrepreneurial traits identified in the literature (e.g. Allen, 1999; Hisrich & Peters, 2008; Krueger, Reilly & Carsrud, 2000; Kuratko & Hodgetts, 2007; Lee and Peterson, 2000; Timmons & Spinelli, 2004), such as achievement and action orientation, internal locus of control, and strong work ethic. But they also faced the classic challenges of work based stress, financial pressure and limited access to capital. Women IERs also displayed many of the attributes of migrant peoples (e.g. Dunstan, Boyd & Crichton, 2004; Rath & Kloosterman, 2003; North & Trlin, 2004; Schouten, 1992; Smallbone, 2003; Whybrow, 2005; Yeabsley, 1997; Zhan, 2003; Zodgekar, 1980) and faced many of the gender challenges recognised in the literature (e.g. Brindley, 2005; Brush, Carter, Gatewood, Greene & Hart, 2006; Brush & Hisrich, 1988; McClelland, Bell, & Ibbotson, 2005; Pio, 2007; Wicheterich, 2000). They had faced discriminatory practices relating to employment and adaptation to New Zealand society, yet overall women IERs felt positive towards their adopted country. Religious values and a strong sense of family were highlighted in this study, as was the high level of family involvement in their businesses and the desire for children to become educated. Women IERs maintained a strong sense of homeland national identity and personal connection. Hence they faced the challenge of managing their mixed embeddedness (Kloosterman et al., 1999), in adapting to and being accepted in New Zealand society, and still maintaining their traditional culture and ethnic community connections.

There were significant differences between women IERs and their male IER counterparts. The women in this study were more likely to come from middle class backgrounds and had diverse reasons for migrating to New Zealand. Overall their social integration in New Zealand had been more difficult, despite being more likely to have university qualifications and arriving with comparatively greater financial resources than their male counterparts. In

business they were less money driven, instead citing more frequently such rewards as autonomy and life style. Women IERS were more likely to be in service industries and business competences were in relationship building as opposed to the male technical skills. But they had comparatively fewer homeland business connections.

Conclusion

This exploratory study has identified common behaviours, characteristics and challenges for entrepreneurship among immigrant women in New Zealand. The study concludes that business, ethnic, and government agencies in New Zealand or other immigrant receiving countries can support entrepreneurship among immigrant women by having systems in place to identify dissatisfied women immigrants who are working in industry, then encourage their entrepreneurial behaviour (e.g. role modelling, business advice and training, acceptance of their skill set), and support entrepreneurial opportunities (e.g. indentifying community needs and encouraging women IERS to fill them). The study also highlights that there is room within the New Zealand business environment for an appreciation of the worth of diversity and a greater tolerance of differences. In furthering this research it is suggested that a larger sample of women IERS in New Zealand and/or other migrant receiving countries be studied within the framework of the model of immigrant entrepreneurship (figure1), and that in depth investigations are undertaken to verify the assertions made in this paper. Comparative analysis could also be undertaken as this study has highlighted behavioural differences between ethnic communities.

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**Networks' Content as Factor on the Self-Employment Decision.
A Closer Look on Ties' Homogeneity and Consistency.**

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Abstract

This study investigates the role of personal networks on the decision to start a business. Personal relations affect the chance to start a business through the social capital they create which in turn is an important asset for a starting business. An important question is, however, which types of relations are beneficial for starting a business. On the one hand, strong intensive relations offer access to scarce resources and smooth the resource exchange through emergence of trust (Coleman 1990). On the other hand, weak incidental relations usually provide access to a larger variety of information and provide brokerage opportunities (Burt 1992).

In his seminal work on weak ties Granovetter (1973) notes that the strength of relations is determined by contact frequencies, relation intensity and shared values. In this article, I argue that relations are only beneficial, if their characteristics are well aligned. Thus, weak ties are only beneficial if they are characterized by low contact frequency and low intensity and strong ties are only beneficial if they are characterized by high contact frequency and high intensity. Relations with badly aligned characteristics, e.g. a high intensity relation with low frequency, will, however, not create social capital and reduce the chance to start a business. The potency of the different arguments is tested with a sample of 1196 (potential) business founders in the Dutch region South-Limburg. 977 of the respondents started a business and 219 did not. The results support our argument that weak and strong ties are only beneficial if the underlying dimensions are well aligned. In addition I find that network size and the available resources in one's network matter.

I. Introduction

The concept of social capital is the most successful export of sociological theory to (business) economics in the recent years (Woolcock 1998), although to sociologists the idea that participation and involvement in groups influences individual and aggregated behavior is far from new (Portes 1998). By now, the importance of social capital to explain micro and macro phenomena has been widely acknowledged (Becker & Murphy 2000) and the body of studies assessing social capital itself and its influence is growing at a tremendous rate (see, e.g., recent reviews Adler & Kwon 2002; Foley & Edwards 1999; Leenders & Gabbay 1999; Lin 1999; Portes 1998; Woolcock 1998; Woolcock & Narayan 2000). Not surprisingly, the importance of social capital and networks has also been studied for the phenomena of new firm founding (see, e.g., Brüderl et al. 1992; Chong & Gibbons 1997; Larson 1992; Shane & Cable 2002; Stuart et al. 1999; Walker et al. 1997).

The common finding of these studies is that individuals better embedded in networks and equipped with more social capital are more likely to start a business, because the social capital available through personal networks forms an asset increasing the success chances of the new business. While the benefits of social relations and networks for founding a business are not disputed, it is less clear which type of networks and relations are more beneficial. Network theorists emphasize the role of the formal structure of ties as the main source for social capital (Burt 1992; Coleman 1988; Granovetter 1974); while others argue that the content of the ties determines the social capital (Di Maggio 1992; Emirbayer & Goodwin 1994; Powell & Smith-Doerr 1994). Lin (1999) argues one's social capital depends largely on the characteristics of the ties and relations in a social network. Social exchange theory

(Blau 1964) suggests that social capital should rise with the intensity of the relation, the more one invests in a relation the more one should be able to get out. However, in his seminal work, Granovetter (1973; 1974) introduced the distinction between weak and strong ties and showed the benefits of weak ties in offering new information. Apparently, both distinct types of relations can be useful, as they create social capital.

This article takes a deeper look into different types of relations and their capability to create social capital. While previous research has usually assessed social capital of potential business founders rather coarsely by general measurements of one's social embeddedness (e.g. Brüderl & Preisendörfer 1998; Bosma et al. 2004) or by focusing on the frequency of the contact with others (e.g. Abell et al. 2002), this study looks at several aspects of the personal relations that build networks. It should be noted that in his seminal article on the strength of weak ties Granovetter (1973) already identified four properties determining the strength of ties, namely amount of time, the emotional intensity, intimacy and the reciprocity of services. If tie strength is a multi-dimensional concept, the question arises how these dimensions add up. This paper argues that dimensions of tie strength cannot be simply added up, but should go rather go hand in hand to develop the full potential of a weak or strong tie.

Thus, the objective of the article is to gain a better insight in the decision to start a business by employing social capital theory and addressing the issue of how characteristics of network relations create social capital. The article continues with part II, which starts with a brief review of recent studies on self-employment and then turns to the effects of social capital on the self-employment decision. Further, I derive hypotheses relating characteristics of a social network, as indicators for social capital, to the chance to become self-employed. Part III describes the research setting and the

design of the study. The analysis of the relation between social capital and self-employment and the results are presented in part IV and part V concludes.

II. Social capital, relations and entering self-employment

Social capital and relations

In recent years, the word social capital has found its way in everyday language. This is a clear signal for the usefulness of the concept to understand a number of societal and economic phenomena. Some critics argue, however, that the broad usage has watered the explicative power of the concept (De Souza Briggs 1997). While social capital has been defined in a multitude of ways (see, e.g. Bourdieu 1986; Coleman 1988), the core of the notion is the idea that members of a social network can share resources. So a network of relations is the most suitable “locus” for social capital. By being part of a social network members have access to resources beyond those that they control themselves. Social capital is a socially mediated resource, one that cannot be fully and directly controlled by a member, as he/she relies on the willingness of another party to share its resources or to act as an intermediary in gaining access to the resources of still others. Thus, while social capital is usually seen as an attribute of an individual or a social entity, the possibility to actually utilize it and reap its benefits depends on third parties with whom one maintains social relations.

Social capital clearly depends on characteristics of the network, that is, its size and structure, types of relationship and the perceptions of what is being shared by the members. This is known as the structural, relational, and cognitive layers or dimensions of social capital (Nahapiet & Ghoshal, 1998). The structural dimension refers basically to social networks and thus pays attention to nodes and ties of these

networks, as well as to the global properties of the social network (e.g. density) in which the social capital resides (see, e.g., (Burt 1992; Coleman 1988; Granovetter 1974). The relational dimension refers to the (e.g. affective) nature of the relations, the context in which and the processes through which they occur, the kind of resources that can be exchanged through them and the outcomes obtained from the exchange (see, e.g., Di Maggio 1992; Emirbayer & Goodwin 1994; Lin 1999; Powell & Smith-Doerr 1994). Finally, the cognitive dimension refers to the way in which a network is perceived by its members and the meaning they attribute to it (e.g. in terms of membership, norms, and shared values). These perceptions and meanings can become shared among the members of a network, and thereby become collective (Portes & Sensenbrenner 1993; Inkpen & Tsang 2005).

Social capital and starting a business

Networks generate social capital, i.e., resources which can be utilized to pursue certain goals, e.g. starting a business, by creating opportunities, improving the conditions for economic exchanges and offering better access to information. The social capital benefit through increased and better opportunities arises from the structural hole argument (Burt 1992). The basic idea of such structural holes is that individual networks differ in the extent to which they exclusively connect others. If one's network fills such a structural hole, one can obtain brokerage advantages, as one is the only person able to connect certain persons. It should be noted that such brokerage or intermediation activities belong to the classic entrepreneurial tasks (Cantillon 1759; Kirzner 1973; Schumpeter 1911). New ventures are often created, because an entrepreneur observed an opportunity to match unmet demand somewhere with excess supply elsewhere. In Europe for example, many small import-export firms

are run by migrants who fill the structural hole between manufacturers in their home country and business customers in the residence country as they are well connected in both countries.

Social capital fosters self-employment also through the smoothening of economic exchanges. A crucial problem in all kind of economic exchanges is the risk of exploitation by opportunistic business partners (Williamson 1985). For entrepreneurial success it is important to manage such risks and reduce the chance to become exploited. Strong ties facilitate the emergence of trust and thereby ease the exchange of information and other resources between actors. For example, the exchange of very valuable resources under conditions of high uncertainty, such as the provision of equity start-up capital for a ingenious business idea, requires at least some level of trust between the investor and the entrepreneur. Further, it should be noted that entrepreneurial networks consist partly of competitors and thus information is more likely to be biased or distorted in the absence of trust. Dense networks with strong ties are also more likely to facilitate reputation effects (Raub & Weesie 1990). Studies investigating markets with severe co-operation problems and a high necessity for trust, such as the diamond market in Antwerp or New York (Kotkin 1993), show that the multiple relations between the market parties create trust between the partners and thereby ease transactions.

Networks are built from relations, ties and those ties differ in their intensity. Granovetter (1973) introduced that now widely used distinction between weak and strong ties and argues that weak ties are often more beneficial than strong ties as they are more likely to offer new, i.e. non-redundant, information. Strong ties, such as our best friends, are often connected to the same people as we are and pursue the same activities, such as reading the same magazines and newspapers. Although their

similarity to ourselves smoothes the communication with them and makes them easy going companions, they have rarely something new to offer as they are fed by the same sources. The information accessible through weak ties, however, differs considerably from one's own information, because weak ties tap different information sources. Hansen (1999) also finds evidence that within an organization weak ties offer benefits regarding the diversity of accessible information.

Several scholars argue, however, that weak ties only provide these advantages under specific conditions and strong ties provide next to other benefits, such as trust and social support, also better information (Hansen 1999; Podolny & Baron 1997). Moreover, direct and indirect ties reinforce third parties' confidence in their assessment of a starting business. Linkages to other actors serve as a signal and increase the probability that yet unrelated others are willing to form a relation (Podolny 1994; Stuart et al. 1999).

From the perspective of a business founder both types of ties, strong and weak, offer benefits. On the one hand weak ties are beneficial, because they offer opportunities for gaining entrepreneurial rents. Further, they provide more diverse information, which is useful to detect market opportunities, such as unmet demands, and to reduce the uncertainty around the self-employment decision. On the other hand, strong ties offer benefits as well. Information from strong ties can be trusted and is less likely to be biased by third parties' strategic considerations. Moreover, certain private information and especially scarce resources are less likely to be offered by weak ties.

III. Hypotheses about the effect of relations in the self-employment decision

So far, theoretical considerations investigating the link between social relations and the self-employment decision have emphasized the structural properties of the relations. This study re-directs the focus from the structural properties to the specific content of the relations and thereby builds upon social resource theory (Lin et al. 1981a, 1981b; Lin 1990). The content of networks is an important determinant for the value of social capital (Burt 1997b). Contact's status, kind of resources related parties possess and one's own accessibility of these resources are aspects of network content. People, who have more relevant and more valuable resources, such as, higher status, more information and more available financial means, add more to one's social capital than people with only mediocre resources. In addition, the willingness and ability of people to let one access the resources are decisive for the one's social capital value.

The contribution of a tie to one's social capital depends also on whether the tie's resources meet the individual's needs and demands. The usefulness of accessible resources depends among others on characteristics of the contact. Like job seekers profit from contacts to members of organizations they applied at (Seidel et al. 2000), self-employed benefit from contacts, who have relevant resources regarding starting a business, such as, e.g., venture capitalists (Shane & Stuart 2002). Kim and Laumann (2001) show that Chicago lawyers profit more from contacts to lawyers, who work in similar law firms and have specialized in the same field of law. Hence, in the investigated context, other self-employed are an important source for valuable advice and information. Research has also shown that such support from similar people and even competitors is likely, because collaborations allow for collective action (Ingram

& Roberts 2000), joint problem solving and information exchange (Uzzi 1996).

Therefore the first hypothesis reads:

H1: The higher the share of self-employed contacts in one's network, the higher the chance that one enters self-employment.

In social psychology, many studies have investigated whether homogeneous or heterogeneous groups perform better. Heterogeneous groups will offer a broader array of sometimes even conflicting information, while in homogeneous groups the information collected reinforces each other (Byrne et al. 1966). With respect to the question who is more likely to enter self-employment, I expect that, similar reinforcing information is more likely to encourage entry into self-employment, while a wider array of information will raise doubts.

H2: The higher the homogeneity of one's network, the higher the chance that one enters self-employment.

Above, it has been argued that weak as well as strong ties offer benefits for business founders. Already Granovetter (1973; 1974) characterized weak and strong ties along the four properties time, emotional intensity, intimacy and reciprocity. Tie strength has been measured in Granovetter (1973: 1371) used frequency of contact, others used recency of contact (Lin et al. 1978), categories as family, friend and neighbour (Lin et al. 1981a). Although it is clear that each of these measures capture tie strength, using a single measurement neglects the multi-dimensions of the tie strength concept. This study looks simultaneously at the three dimensions: (a) frequency of contact, (b) history (recency of tie) and (c) relationship type. A relation that can be described by a high frequency, a long history and between kinship would

classify as a strong tie, while a relation with a person that one meets only occasionally, that one does not know for such a long time and that is between distant friends or acquaintances would classify as a weak tie. As weak and strong ties are beneficial as well, direct main effects from weak and or strong ties are not expected, rather I argue that ties are beneficial if they are genuinely weak or genuinely strong, i.e. relations are useful as long as they are consistent in itself. Relations become, however, obscure if they are inconsistent, i.e. if they different dimensions characterizing tie strength do not align well. An example illustrates the point made. Assume you are looking for an investor within your network, i.e. you look for a scarce resource that is usually offered by strong ties. One dimension of tie strength is relation history and naturally you would look for those network contacts that you already know for a long time. Some of these contacts you might see on a regular basis, while other contacts have diluted and you see them only occasionally by chance. The former contact is a strong tie, but how would you classify the latter one? You know him / her well due to your long lasting relationship, but you are less informed about her / his current stand of affairs as you have not seen each other a lot recently. One of the question arising is why did you not see more often? There is probably an answer to this question. One could be that although you know each other for a long time, you never connected well with each other, like your former high school class mate who by coincidence entered the same college and by coincidence bought a house in the same neighbourhood as you, but to with whom you still do not feel good friends. You know her / him for a long time but you never used that time to intensify the relationship and to turn that former class mate into a real friend. Thus the point here is that every network has some relations that look strong on one or two dimension but fail to be strong on other important dimensions and these are relations that do not provide social

capital as their inconsistency across dimensions of intensity signals that the relation is not functioning well.

H3a: The higher the share of old relations with an occasional contact frequency, the lower the chance that one enters self-employment.

H3b: The higher the share of old relations that neither classify as family or friend relationship, the lower the chance that one enters self-employment.

IV. Data and Methodology

Population, sample and data collection

The empirical part of the study rests on a survey among potential business starters in South Limburg, part of a Dutch province including the municipalities Maastricht and Heerlen. Two databases form the research population: (1) The registration database of the local chamber of commerce contains all new firms, who registered a business in South Limburg in 1998 or 1999. (2) The address database of the “Starterscentrum South Limburg” contains addresses of persons, who had serious plans to become self-employed. The “Starterscentrum” is a foundation sponsored by the Chamber of Commerce and other local authorities to encourage successful self-employment by providing training and advice. The “Starterscentrum” is well known in the province and the vast majority of potential starters approaches it directly or is referred to it by the municipality, banks etc. In total, both databases contain 4339 unique and complete addresses. After an initial phone screening 1223 people were willing to participate in the study and were personally interviewed for on average one hour. Thus, the response rate is 28%. 27 respondents did not provide complete information on all

investigated aspects and are excluded from the analysis,¹ which brings our effective sample size to 1196. 977 of those started a business and 219 did not so (yet).

It should be noted that our population differs considerably from cross-sectional samples of a country's whole population, which have been usually used to study entry into self-employment (see, e.g., Evans & Jovanovic 1989; Rees & Shah 1986; de Wit & van Winden 1989). The main difference is, that our population excludes people, who did not intend to become self-employed and are happy to pursue their career in a paid job. An important consequence of our more narrow population is that the variance of our dependent variable is smaller than in the studies just mentioned. While our sample consists only of people, who had a strong intention to become self-employed and already invested some time effort in the pursuing of their plans, cross sectional sample representative for a country's population include a vast majority of people who have never spend a thought on self-employment.

Measurement and Models

The dependent variable `starter` is a dummy variable, which takes the value 1 if a respondent started a business and the value 0 if not. To estimate the chance to become self-employed, I use the following independent variables, which are briefly described in table 1. The respondent's demographics are accounted for by the variables `female` taking the value 1 for female respondents and zero for male respondents. Age is measured in years, and `married` takes the value 1 for married and cohabitating people and the value zero otherwise. `Parental self-employment` indicates whether one of the respondent's parents was ever self-employed. Two indicators measure human capital: `education` rates general human capital on a seven-point

¹ 25 of the 27 respondents did not provide complete information on their networks.

scale ranging from “followed basic education” to “university degree” and the dummy leadership measures work related, specific human capital and takes the value 1 if the respondent has worked in a job involving supervising sub-ordinates before becoming self-employed. Finally, a set of dummy variables describes the sector the respondent started or intended to start a business with the categories: construction, trade, hotels and restaurants, business services and personal services. Manufacturing is the reference category (see also table 1).

<<< Table 1 about here >>>

The main focus of this article is to investigate the effects different relations have on the self-employment decision.. The following variables describe the respondent’s relations at the time of considering becoming self-employed: network size, % infrequent ties, % ties with family /friends, % ties with long history, % self-employed ties and network heterogeneity. In the survey, five name generator questions referring to the respondent’s professional as well as private life were used to identify the most important relations of the respondent. In addition, the survey contains some basic information on each mentioned relation, such as the age of the tie, the age of the relation, whether the tie is self-employed and how frequently the tie is contacted. The total number of ties is the network size and captures how many people were mentioned. I use the respondent’s age and that of the contacts to measure network heterogeneity.

This measure is the mean of the squared age differences between the tie and the

respondents. Thus, $network\ heterogeneity = \frac{\sum_{k=1}^K (age_i - age_k)^2}{K_i}$.

To what extent the network can provide relevant information is proxied by the variable % self-employed ties. The following three variables (% infrequent ties, % ties with family / friends, % ties with long history) represent the investigated dimensions of ties' strength. I measure the share of ties with a certain characteristics in the respondent's network as follows:

$$p_{mi} = \frac{\sum_{k=1}^K x_{mik}}{K_i}, \text{ with } x_{mik} = [0|1].$$

p_{mi} is the proportion of ties with characteristic m in i 's network. x_{mik} is the value of the k th tie in i 's network for characteristic m . K_i is the size of i 's network.

To test whether the network contains inconsistent weak or strong ties, I measure which share of ties is inconsistent by crossing two dimensions of ties' strength. These variables are included in the models D and E. As explained above our variables of the network dimensions are aggregates of the individual characteristics of the network members. The measures for inconsistencies in ties' strength are constructed on the relational level and then aggregated as follows:

$$p_{mi} \times p_{ni} = \frac{\sum_{k=1}^{K_i} x_{mik} x_{nik}}{K_i}, \text{ with } x_{mik}, x_{nik} = [0|1].$$

The two last estimated models contain the interaction between the diversity of resources, % infrequent ties, and the indicators for the tie's willingness to share their resources, % ties to family / friends and % ties with a long history.

Table 2 shows the descriptive statistics for the variables used. In our sample about a quarter of the respondents is female and about 80 % entered self-employment. The sector distribution is: 7 % manufacturing, 11 % construction, 22 % trade, 9 % hotels and restaurants, 37 % business services and 14 % personal services. The respondent's mean age is 38 and about three quarter of them was married. More than half of the respondents completed at least intermediate vocational education and gained leadership experience in at least one of their previous jobs. On average the respondents identified five different people in their personal network. The composition of an average network looks as follows. One third of the ties are weak, which one contacts less than once per month. Half of the network ties are closed, i.e. ties with family members and friends, while the other 50 % are ties with acquaintances, colleagues and business partners. Two third of the ties is with people, who one knows for more than five years and half of the network members is self-employed. None of the independent variables is highly correlated with another one. The highest correlation ($r = .50$) is observed for the variables % old ties and % closed ties.

<< Table 2 about here >>

IV. Analysis of the chance to start a business

The analysis is done in four steps. In each step, I estimate the probability to enter self-employment with a maximum likelihood logit model: $\ln\left(\frac{p_i}{1-p_i}\right) = b_0 + bX$. The estimation of all models is based on 1196 observation, 219 did not become self-

employed and 977 did. All models contain the controls for gender, married, self-employed parents and sectors. Respondents, who planned to start a business in the sectors hotels and restaurants and business services, have a significant larger chance to become self-employed (results of the sector dummies are not reported in table 3).

The first column of table 3 reveals the estimates for a model A, which includes next to the control variables, the respondent's demographics and human capital, thus variables that are used in cross-sectional studies on self-employment. Except for parental self-employment, none of the variables is significant. Respondents with self-employed parents are 1.33 times more likely to found a business. The other results of model A are in line with the ambiguous effects of human capital in earlier studies. Including six dummy variables for the different levels of education does not change the results significantly.² However, the coefficients of such educational dummies indicate that the relation between education and the chance to become self-employed is not linear, since higher general education (level 4) and an university degree (level 7) have the largest coefficients. Regarding the sector variables, we observe that entering self-employment is more likely in construction, hotels & restaurants and business services. The odd ratio is 1.75 for construction, 2.05 for business services and even 2.11 for hotels & restaurants. Model B includes the network variables related to the amount and the diversity of accessible resources. The size of the respondent's network and the share of self-employed ties have significant positive coefficients. Having access to more sources and to more relevant sources increases the chance to become self-employed supporting hypothesis 1. Contacts with other self-employed are evidently an important source for relevant information in order to start a new business. The chance of potential starters with a network that

² Results are not reported in a table here, but are available upon request.

completely consists of self-employed is seven times more likely to become self-employed than potential starters who report no contacts to self-employed. The last result underlines the importance of contacts to similar people and is in line with the findings on the income attainment of Chicago lawyers (Kim & Laumann 2001). Another additional explanation for this result does not address the informational benefits of contacts, but socialization effects within social groups. Like parental self-employment increases the likelihood of becoming self-employed through socialization processes, friends also serve as a role model and are important peers for reflecting and adjusting one's own behavior. The variable `network heterogeneity` is not significant and hypothesis 2 is therefore rejected. Studies investigating team performance report also often no significant effect of team heterogeneity (see for an overview, e.g., Finkelstein & Hambrick 1996). These results suggest that the relation between network heterogeneity and any outcome variable, such as entering self-employment, is more complex and one would to understand which factors drive team heterogeneity; is it really age as suggested here? Moreover, one needs to specify under which conditions heterogeneity is more beneficial and under which conditions homogeneity in a network is more beneficial.

<<< Table 3 about here >>>

In model C and D, I add one at a time the two variables describing the inconsistencies in ties' strength and the main effects of the three dimensions reflecting ties' strength. In both models all main effects are not significant supporting our earlier argument that weak respectively strong ties are not necessarily either beneficial or detrimental to entering self-employment. In two variables measuring inconsistencies

in ties' strength are in the two models negative and significant. Thus the hypotheses 3a and 3b are supported.

V. Conclusion

The study attempts to investigate the role of different dimensions of social capital in the self-employment decision, namely social capital benefits rooted in the network's structure and benefits rooted in the contact's resources. Before I will draw the general conclusion, I will discuss several limitations of the study.

Limitations

Although, unlike other studies, the survey used has some additional information on the characteristics of the respondent's contacts, it does not have any information what kind of resources if at all are actually exchanged through a tie. Thus our analysis assumes that self-employed contacts indeed provided valuable advice, that closed and old ties indeed provided more private information and other valuable scarce resources, such as time and financial means. Further, potential business starters may differ in their attitudes and abilities to ask support from their network. Thus, although the networks of two people are completely equal, one might use it while the other does not. Next to information on a respondent's ties, information on the resources and the position of ties would be valuable for a better assessment of network effects.

The descriptives of our sample reveal that the median network size is 5 (see table 2). This number of contacts seems to be rather small and suggests that the name generator questions in the survey produced mainly the names of the members of the core network. This notion is further supported by the relative low share of weak ties, 33 %, and the relative large share of old ties, 66 %, in the average network. The core

network is, however, an incomplete representation of an individual's network and it is likely that especially weaker ties are overlooked.

The decision to start a business is not taken over night; it is a process. During this process, people can prepare for self-employment by investing in their human capital, but also by investing in their social capital. The survey's information on social capital is a snapshot around the time the business was started. Hence, it is not known whether people reshaped their network to maximize the utility of their social capital for starting a business. The negative effects of variables related to old ties point at the fact, that more recent ties are more useful for starting a business, probably because they have been formed with the idea to start a business already in mind. A better understanding of how people shape their networks and maximize the returns of their social capital would improve our insights in network effects.

The study covers entries into self-employment in 1998 and 1999. These two years are economically boom years. The effects of the general economic conditions on self-employment entry are not clear. On the one hand one can argue that in a favorite economic climate more arising entrepreneurial opportunities promote entry into self-employment. On the other hand, in recession time people losing their job might be forced into self-employment. For the Netherlands, Blumberg & de Graaf (2003) show that the unemployment rate in a given year has no effect on entry into self-employment and a positive effect on exit. Thus, the dependent variable is not influenced by the macro-economic conditions. However, it is likely that the general economic condition influences the effect of the network variables on entry into self-employment. As Burt (1997a) pointed out social capital is especially an important resources under conditions of high uncertainty, but our study was conducted in a

period of economic boom, when the uncertainty regarding short-term returns and survival chances of new businesses was relatively low.

What can be learnt from the study about networks?

This study looked at people, who had already shown a rather strong intention to become self-employed. All people in our population visited at least the chamber of commerce to obtain information on founding a business. Thus, our sample differs considerable from other studies, which usually use cross-sections of the whole working population of a region or country. Interestingly, in our analysis the typical factors, which influence entering self-employment in the other studies, do not have an effect on becoming self-employed. This difference indicates that the decision process to become self-employed follows two steps. In the first step, people consider whether self-employment if at all is a viable alternative and the actual decision of entering self-employment follows then in the second step. Age and parental self-employment seem to be determinants for who will consider self-employment but cannot explain whether people will really pursue their idea of becoming an entrepreneur.

In general, networks facilitate entering self-employment. People with more extensive networks are more likely to start a business. But, what other aspects of network, next to the simple magnitude effect, increase the chance to start a business. For potential business founders, it is not only important how they are related to their ties, but much more it is crucial that the ties possess relevant resources. This analysis on the chance to enter self-employment shows that especially contacts to people who are already self-employed are important.

Whether one possess mainly weak or strong ties does not influence the chance to become self-employed, even if we look at different dimensions of ties' strength. What matters is however, the consistency of ties, people who have many inconsistent ties,

i.e. ties that classify as strong on one dimension and weak on another dimension, have a lower chance to enter self-employment.

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Table 1: Description of the independent variables

Variable name	Description
Age	Age of respondents at the time of starting a business. ^a
Married	Dummy variable, which takes the value 1 if the respondent was married at the start of the business and the value 0 otherwise. ^a
Self-employed parents	Dummy variable, which takes the value 1 if the parents of the respondents have ever been self-employed and the value 0 otherwise.
Education	Highest level of completed education, measured on a seven-point scale. (1: basis school, 2: lower vocational, 3: intermediate general, 4: higher general, 5: intermediate vocational, 6: higher vocational, 7: university)
Leadership	Dummy variable, which takes the value 1 if the respondent gained leadership experience in at least one of his previous jobs and the value 0 otherwise.
Network Size	# of people in the respondent's network
% weak ties	Share of weak ties in the respondent's network, i.e. ties, which are contacted less than once per month.
% self-employed ties	Share of ties with people, who are self-employed.
% closed ties	Share of closed ties in the respondent's networks, i.e. ties to family members and friends as opposed to ties to acquaintances, colleagues and business partners.
% old ties	Share of ties, which the respondents know for more than five years.
Network heterogeneity	Sum of the squared differences between the age of the respondent and the age of the tie contacts divided by the size of the network.

a: For respondents, who did not start a business, the time they visited the chamber of commerce is used.

Table 2: Descriptives of variables and correlation matrix (N=1196)

	Mean	S.D.	Median	Starter	Female	Age	Age squared	Married	Parental Self-Employment	Educa- tion	Leader- ship	Network size	% weak ties	% self-employed ties	% closed ties	% old ties	Network hetero- geneity	% weak and closed ties
Starter	0.82	0.39	1.00	1.00														
Female	0.26	0.44	0.00	0.02	1.00													
Age	38.09	9.12	38.00	0.01	-0.08	1.00												
Age squared	1533.83	729.88	1444.00	0.01	-0.08	0.99	1.00											
Married	0.77	0.42	1.00	0.04	0.02	0.25	0.21	1.00										
Parental self-employment	0.35	0.48	0.00	0.04	0.02	-0.01	-0.01	-0.02	1.00									
Education	4.57	1.74	5.00	0.00	-0.03	0.07	0.07	-0.03	0.01	1.00								
Leadership	0.54	0.50	1.00	-0.03	-0.20	0.21	0.22	0.11	0.05	0.12	1.00							
Network size	4.97	2.70	5.00	0.05	-0.01	-0.05	-0.05	-0.03	0.04	0.17	0.07	1.00						
% infrequent ties	0.33	0.28	0.33	0.05	-0.06	0.14	0.13	-0.02	0.00	0.07	0.10	0.11	1.00					
% self-employed ties	0.48	0.30	0.50	0.20	-0.07	0.01	0.00	0.00	0.10	0.00	0.11	-0.10	0.16	1.00				
% ties to family / friends	0.54	0.30	0.50	-0.15	0.17	-0.10	-0.09	0.04	0.01	-0.06	-0.13	-0.16	-0.41	-0.33	1.00			
% ties with long history	0.61	0.30	0.67	-0.07	0.01	0.09	0.09	0.09	0.03	-0.04	-0.04	-0.16	-0.22	-0.13	0.50	1.00		
Network heterogeneity	363.03	388.09	27.00	-0.03	0.04	0.06	0.07	-0.10	0.04	0.04	0.04	0.02	0.06	0.05	-0.26	-0.21	1.00	
% infrequent ties to family and friends	0.08	0.00	0.16	-0.09	0.03	0.11	0.11	-0.02	0.04	0.07	0.02	0.06	0.40	-0.05	0.32	0.12	-0.12	1.00
% infrequent ties with long history	0.19	0.23	0.13	-0.02	-0.06	0.19	0.18	0.00	0.04	0.07	0.07	0.06	0.62	0.11	-0.12	0.30	-0.05	0.53

Correlation coefficients printed in bold are significant at the 1% level.

Table 3: Estimates of logit model on chance to become self-employed (N=1196). Z-values are in parentheses. All models contain sector control dummies.

	Model A	Model B	Model C	Model D
Female	.126 (0.67)	.203 (1.03)	.321 (1.60)	.222 (1.11)
Age	.047 (0.84)	-.023 (-0.39)	-.038 (-0.63)	-.024 (-0.41)
Age squared	-.001 (-0.82)	.000 (0.49)	.001 (0.75)	.000 (0.56)
Married	.213 (1.13)	.305 (1.51)	.304 (1.48)	.304 (1.50)
Parental self-employment	.283 * (1.76)	.149 (0.88)	.189 (1.10)	.171 (1.01)
Education	-.005 (-0.10)	-.026 (-0.54)	-.022 (-0.44)	-.020 (-0.42)
Leadership	-.184 (-1.13)	-.347 ** (-2.04)	-.358 ** (-2.08)	-.367 ** (-2.16)
Network Size		.063 ** (2.08)	.053 * (1.70)	.060 * (1.92)
% Self-employed ties		1.977 *** (6.63)	1.753 *** (5.73)	1.966 *** (6.69)
Network heterogeneity		-.001 (-1.03)	-.001 * (-1.89)	-.000 (-1.37)
% Infrequent Ties			.315 (0.71)	.565 (1.23)
% Ties to family and friends			-.558 (-1.33)	
% Ties with long history				-.144 (-0.45)
% Infrequent & long history ties			-1.420 ** (-2.25)	
% Infrequent and family / friends ties				-.989 * (-1.81)
Constant	-.104 (-.09)	.241 (0.20)	1.028 (0.79)	.332 (0.23)
LogLikelihood	-578.158	-532.423	-523.958	-529.152
Wald Chi	16.230	70.190 ***	85.01 ***	73.05 ***
Pseudo R ²	.014	.065	.080	.071

*: $p \leq .10$; **: $p \leq .05$; ***: $p \leq .01$

Growth of Micro-enterprises (Part One): Examining Personality Attributes

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Abstract

This research examines the relationship between personality attributes of the entrepreneur and growth. A sample of 354 micro-enterprises is selected by systematic sampling from Kamukunji Jua Kali Association membership register. A descriptive research design and structured questionnaire are used. Factor analysis and descriptive statistics are done for personality attributes. Key findings indicate that personality attributes model (61.85 percent variance explained) remain conceptually valid. Correlation analysis is used to test hypothesis ($R=.15$, $P=.01$). Major conclusion is that personality attributes highly influence growth. The paper is derived from research conducted initially for work forming part of the requirements for degree of Doctor of Philosophy of Kenyatta University.

Key Words

Entrepreneurial Personality, Micro-enterprises, Growth, Factors, Manufacturing, Metallic Products, engine for growth

Introduction

This paper examines the relationship between personality attributes of the entrepreneur and growth of micro-enterprises

manufacturing metallic products at Kamukunji in Nairobi, Kenya. The last two decades have witnessed massive downsizing and restructuring of many large enterprises in the global economy (Audretsh, Carree, and Thurik 2001). As a result micro-enterprises have increased internationally.

Due to this swing the micro-enterprises have increased both in number and size worldwide (Grilo, and Thurik 2004). This increment has led to depiction of micro-enterprises as an avenue for economic development or “engine for growth” (Mambula, and Sawyer 2004; Jack, and Anderson 1999). Of course the focus on micro-enterprises is influenced by changes in micro and macro economic policies. These changes in policies have brought a global economic turnaround with a paradigm shift laying emphasis on growth of micro-enterprises.

Kamukunji is in the eastern side of the city of Nairobi. Nairobi province is in the south west part of Kenya. It has an altitude of between 1,500 and 2,500 metres above sea level and lies on latitude of $1^{\circ} 25'$ south and $1^{\circ} 12'$ south. These latitude bearings encourage people to describe Nairobi as “the green city in the sun” because it seems to be below the tropical sun. It is on a longitude of $34^{\circ} 40'$ east and approximately $37^{\circ} 07'$ east. It lies between Landhies Road on the south, Sakwa Road on the west and 15th Ahero Street on the east. The industrial cluster can also be approached from Jogoo Road round-about through Undugu Society limited at Delta House

The micro-enterprises are at Kamukunji/Muthurwa/Shauri Moyo ward. According to the Electoral Commission of Kenya, a ward elects a Councilor to the City Council of Nairobi. The Kenya-Uganda railway and an up country bus station serve the cluster. The bus station is nicknamed

Machakos Airport because it was initially a gateway to Machakos, a town 40 kilometres east of Nairobi. So the transport network adequately serves the demand and supply markets (McCormick 1998; Ofafa 1999).

Literature review indicates that concepts, theories, and personality attributes influencing growth of micro-enterprises are developed on researches in Europe (Greiner 1972; Churchill, and Lewis 1983; Scott, and Bruce 1987; Perren 1999; Lester, and Parnell 2003). Few studies determine whether these concepts, theories, and personality are applicable to micro-enterprises in sub-Saharan Africa generally and Kenya specifically (Namusonge 1998; Karimi 1998; Teal 1998; Bisebroeck 2005). The scanty literature implies that there is insufficient empirical research to elaborate the development of personality attributes influencing growth of micro-enterprises in Kenya.

The existing research gap is that there has been no study on personality attributes influencing growth of micro-enterprises in Kenya. This study bridges the research gap by providing knowledge on personality attributes influencing growth using the case of Kamukunji. The study bridges the research gap by investigating applicability of personality attributes developed in Europe to Kamukunji. Hence, it provides knowledge on a broad spectrum of personality attributes that influence growth of micro-enterprises at Kamukunji specifically and Kenya generally.

Conceptual Framework

The conceptual framework consists of independent variables and dependent variable. The independent variables have effect on the dependent variable which consists of growth variables measured as

increases in employees, sales, departments, and divisions. The seven personality attributes independent variables are numbered F1 to F7. The variables are identified from theoretical frameworks developed by other researches (Greiner 1972; Churchill, and Lewis 1983; Scott, and Bruce 1987; Penrose 1995; Perren 1999; Lester, and Parnell <http://www.google.com>). These variables that have been used by other studies are also adapted by this study as summarised in the conceptual framework in Figure 1.

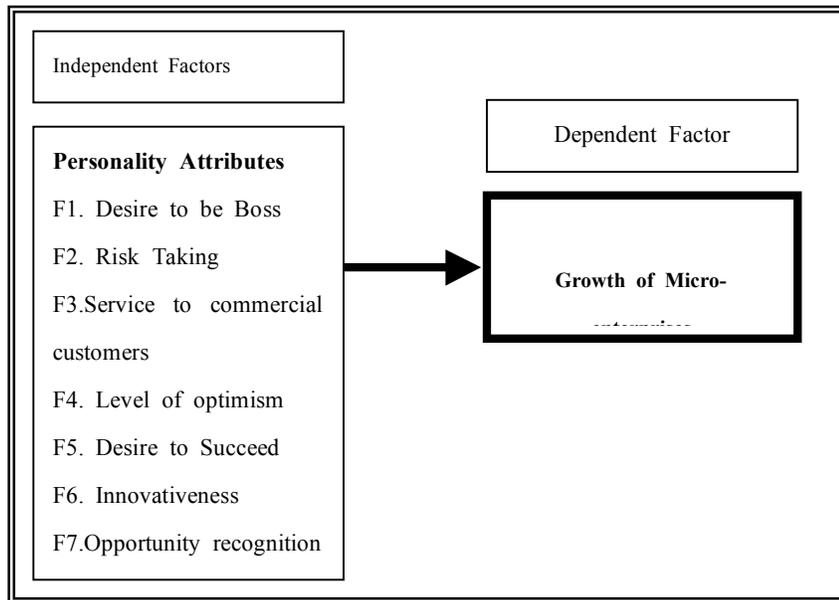


Figure 1
Conceptual Framework

Methodology

The research design for is descriptive. The descriptive design

portrays an accurate profile of persons, events or situations (Saunders, Lewis, and Thornhill 2000; Gall, Borg, and Gall 1996). This research is largely quantitative and deductive with the support of qualitative data. The quantitative information was collected using a self administered questionnaire. The supportive qualitative information was collected through key informant interviews. The survey was confined to the local area of Kamukunji metallic products manufacturing cluster. Surveys are often carried out in a limited area and at one point in time (Johnson, and Duberley 2000).

The target population are micro-enterprises established by entrepreneurs manufacturing metallic products at Kamukunji in Nairobi. The micro-enterprises are sole proprietorships and partnerships owned by Kenyans of various ethnicities. The population was purposively selected because it had the required information on factors influencing growth of micro-enterprises manufacturing metallic products (Gall et al. 1996).

The sampling methodology involved the selection of the sample from micro-enterprises that fall under the definition of a micro-enterprise and was registered by the Kamukunji Jua Kali Association (2006) as metallic products manufacturers. After the researcher requested for updating, the micro-enterprises registered in the Kamukunji Jua Kali register (2006) were 1, 118 out of the existing 4,000 micro-enterprises. This implies that most (72 percent) micro-enterprises were not registered.

These micro-enterprises formed the universe of the study. Two types of techniques were used to select respondents. First the systematic sampling was used to select 354 micro-enterprises. Perry (2002) attested

that a representative sample of a population for a PhD study required at least 350 respondents in a quantitative survey. The sample size of 354 was middling between 300 and 500 which were good and very good (Tabachnick, and Fidell 2001).

The sampling frame was the Kamukunji Jua Kali Association register (2006) which consists of micro-enterprises manufacturing metallic products. A sampling frame is useful in determining the sample size (Cooper, and Schindler 2001). The register was shifted so as to remove micro-enterprises that were not started by the entrepreneur and were not between 3 and 40 years old. After the shifting, the number reduced to 1,062 micro-enterprises. The reduced list was stratified into five categories namely: sheet metal, metal works, welding, scrap metal and painting services.

Systematic sampling was used to arrive at 354 micro-enterprises. The population was divided by the number needed for the sample ($1,062 \div 350 = 3$). A number smaller than three, in this case number one, was selected. Starting with number one, every third name was selected from the list of the population. Since the accessible population are closely comparable to the target population, it had validity. This implies that the sample was reasonably representative of the target population.

Second is the non probability sampling that selected the 10 key informants. Among the 10 key informants interviewed were Chairman, Secretary, and Treasurer of Kamukunji Jua Kali Association and the Chairman of the Kenya Jua Kali Associations. Snowballing, a non probability sampling technique was used to identify an additional six

respondents from Kenya National Jua Kali Association. Snowballing was used to purposively identify the key informants who had insights about micro-enterprises manufacturing metallic products that no amount of observation would have revealed. This sampling technique enabled the selection of key informants as per the researchers' wish and without random sampling.

Data collection included completion of the questionnaires by the entrepreneurs and interviews by the key informants. The instruments were administered by the researcher and research assistant. Data was collected for six months between July and December 2006. Before administering of the questionnaire, the researcher and research assistant visited the sampled respondents, explained the purpose of research, data collection procedures, and made appointment for data collection. On the day of appointment, the researcher or research assistant delivered the questionnaire by hand and waited as the respondent completed it. This gave the researcher an opportunity to provide additional information to the respondent when required. The researcher made field notes when important issues surfaced that were not in the questionnaire.

A covering letter was attached to the questionnaire which aimed to encourage participation in the survey and assured participants of the confidentiality. The letter was printed on blue paper and signed in blue ink while the questionnaire was printed on white paper. The coloured paper and blue ink were meant to command attention (Gall et al. 1996).

Personality attributes consisted of questions which measured the influence of desire to be boss, desire to succeed, risk taking, and innovation on growth. The questionnaire consisted of a variety of

alphanumeric five-point likert-type summated rating scales with the options strongly agree=5, agree=4, neutral=3, disagree=2, and strongly disagree=1. The rating scales produced ordinal data from preference scales. The rating scales were expected to produce ordinal data from preference scales. Personality attributes had 26 measures which were above the set minimum of 10 items.

The key informants' interviews incorporated qualitative data that explained conditions as they appeared on the ground (Taylor and Bogdan 1984). A letter of transmittal was attached to each interview instrument that aimed at encouraging participation in the survey. The letter assured participants of the confidentiality of individual survey responses.

Data was analysed using quantitative and qualitative techniques. The combination of quantitative and qualitative methods is better than one method because of complementation of data collected by both methods (Gall et al. 1996). Data was analysed using descriptive statistics with help of the Statistical Packages for the Social Sciences (SPSS for Windows).

In order to test hypothesis correlation analysis was used. To examine the bivariate associations between dependent and independent variables, correlation coefficient was used. The Pearson's r was used because association was measured in a sample. Pearson correlation coefficient measured linear relationship between two continuous variables (Maloney 2003).

Results

The relationship between personalities attributes of the entrepreneur and

growth of micro-enterprises was examined. Factor analysis determined the underlying dimensions that accounted for the patterns of collinearity among the variables. It determined the number of independent factors that were actually being measured by the items. This involved extracting latent factors from the variables. Further, summaries of assessment of univariate normality results were presented as descriptive statistics.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) indicated that the degree of common variance in the data set was meritorious (KMO=.82). KMO value was above the minimum threshold of .6. Admittedly, the sample size of 354 micro-enterprises was adequate for factor analysis. Second the Bartlett's Test of Sphericity was very highly significant at .001 level ($\chi^2=2528.20$, $df=325$, $p=.00$) showing that factor analysis using Principal Component Analysis (PCA) was relevant for data set and the correlation matrix was an identity matrix.

Through factor analysis the 26 measures were reduced to eight components which had eigenvalues greater than 1 ($\lambda > 1$). The selected variables accounted for more than 1 unit of variance. The cumulative percent variance explained by the eight variables was 60.85 percent which was above the threshold of 50 percent. Results indicated that the eight component factor model measured a goodness of fit as it accounted for substantial amount of variance (see Table 1).

The first variable had high eigenvalues ($\lambda=5.93$). This was the most important variable because it was greater than 1 and explained more variance than a single variable. The variance explained was 22.81 percent. The least important variable had low eigenvalues ($\lambda=1.02$). It was also greater than 1 and explained more variance than a single variable. Variance

explained by the least variable was 3.91 percent. A practical implication is that the remaining factors 9 through 26 had eigenvalues less than 1.

Table 1
Personality Attributes Total Variance Explained

Components	Initial eigenvalues		
	Total Percent	Variance Percent	Cumulative Percent
1	5.93	22.81	22.81
2	1.84	7.07	29.86
3	1.73	6.65	36.52
4	1.58	6.09	42.61
5	1.38	5.30	47.91
6	1.26	4.83	52.74
7	1.09	4.21	56.95
8	1.02	3.91	60.85

Extraction method: Principal component analysis

The factor pattern was clarified by rotation in F-dimensional space. Orthogonal rotation was done as it preserved independence of factors; geometrically they remained 90° apart. The rotated results in a Rotated Component Matrix which highlighted factor loadings (FL) above .30.

To ensure that one or more factors did not load about the same on more than one factor, Varimax with Kaiser Normalisation rotation method was used. Varimax rotation attempted to achieve loadings of ones and zeros in the columns of the component matrix. Results indicated that each variable loaded high (1) on one factor and approximately zero on all the

others (0). Rotations converged in 16 iterations. The values in the matrix were factor loadings that indicated correlations between each variable and each component. Variables that loaded greater than .5 for each component combined to reduce the components from eight to seven rotated factors namely: desire to be boss, risk taking, service to commercial customers, level of optimism, desire to succeed, innovativeness, and opportunity recognition. The concepts within the items guided factor labelling. Results captured seven out of seven target variables due to the fact the 26 items were highly above the threshold of 10 observations. A summary of the descriptive assessment of personality attributes variables were as presented in Table 2.

Table 2
Personality Attributes Factors

Personality Attributes	Min.	Max.	Mean (N=354)	Std. Dev.	Skew-ness	Kurt-osis
Desire to be boss	8	30	23.63	4.94	-.82	.26
Risk taking	6	30	21.45	5.45	-.57	-.02
Service to commercial customers	3	15	11.27	2.86	-.41	-.82
Level of optimism	3	15	10.99	2.55	-.34	-.08
Desire to succeed	2	10	6.71	2.43	-.36	-.99
Innovativeness	3	15	9.63	3.11	-.25	-.56
Opportunity recognition	2	10	6.25	2.13	-.15	-.67

Personality attributes variables' skewed negatively indicating that they were below the standard error ($S=.13$). Results showed negative

frequency distribution which was departure from symmetry. Kurtosis results indicated all variables were negative and below the standard error ($K=.26$) except the desire to be boss that was normal. The practical implication of this finding is that the peakedness of the frequency distribution was mesokurtic. The negative skewness and neutral kurtosis frequency distributions specified that the distribution of scores departed from normality as signified by the mean and standard deviation.

The first factor (F) was desire to be boss (F1) and comprised of personality attributes like: I have desire for independence ($FL=.74$), I feel good delegating aspects of the enterprise ($FL=.72$), my enterprise has to be large for me to feel secure ($FL=.65$), I need to grow the enterprise greatly to achieve this size ($FL=.63$), desire to succeed ($FL=.56$), and desire to be boss ($FL=.54$). These six items were summated to form an interval scale of a low of 8 (.3 percent) to a high of 30 (8.5 percent) scores with mean of 23.6 ($SD=4.9$). The majority ($n=35$, 9.9 percent) of the micro-enterprises scored 24 seconded ($n=33$, 9.3 percent) by 29 scores. The F1 highly influenced growth. Reliability showed internal consistency ($\alpha=.64$).

Risk taking (F2) consisted personality attributes such as: I often take great risk when making decisions related to my enterprise ($FL=.78$), I would rather run the risk of facing losses now than realise afterwards I missed great opportunity ($FL=.77$), If I am not prepared to take calculated risks in the enterprise, I cannot expect to make large profits ($FL=.65$), I am willing to take on challenging orders ($FL=.56$), and I am willing to accept personal financial risk in order to obtain resources ($FL=.49$). These five items were summated to form an interval scale of a low of 6 (1.7 percent) to a high of 30 (4.8 percent) scores. The mean was 21.4 ($SD=5.5$)

where the majority ($n=34$, 9.6 percent) of micro-enterprises had 26 scores. This finding implied that F2 highly influenced growth. Reliability coefficients for the items was above the set limit ($\alpha=.65$).

Service to commercial customers (F3) comprised personality attributes namely: I like serving commercial customers because they bring a lot of cash ($FL=.83$), I like to serve commercial customers even if there are more lucrative customers somewhere ($FL=.77$), and I think enterprise growth is more important than other measures of enterprise success ($FL=.31$). These three items were summated to form an interval scale of a low of 3 (3 percent) to a high of 15 (13.8 percent) scores. The mean was 11.3 ($SD=2.9$) with the majority ($n=65$, 18.3 percent) of micro-enterprises scoring 14 seconded ($n=49$, 13.8 percent) by 15 scores. The F3 highly influenced growth. The Cronbach's coefficient alpha was above the set limit ($\alpha=.63$).

Level of optimism (F4) contained personality attributes such as: I actively search for market opportunities ($FL=.59$), I have great hopes for my enterprise over the next 10 years ($FL=.58$), and I need to take on larger orders to stimulate growth ($FL=.47$). These three items were summated to form an interval scale of a low of 3 (8 percent) to a high of 15 (10.5 percent) scores. The mean was 10.9 ($SD=2.6$) with the majority ($n=60$, 16.9 percent) of micro-enterprises scoring 10 seconded ($n=53$, 15percent) by 11 scores. The F4 moderately influenced growth. The exogenous factors like buoyant economy increased the level of optimism. Reliability test with the alpha showed an internal consistency of the items ($\alpha=.54$).

Desire to succeed (F5) consisted personality attributes that included: I have strong desire to succeed in directions that are contrary to

the growth of enterprise ($FL=.79$), I have strong desire for enterprise to operate in a market that is contrary to the market needs ($FL=.75$), and I mind if an entrepreneur implements my original idea ($FL=.31$). These three items were summated to form an interval scale of a low of 2 (6.2 percent) to a high of 10 (14.1 percent) scores. The mean was 6.7 ($SD=2.4$) with majority ($n=64$, 18.1 percent) of the micro-enterprises scoring 8 seconded ($n=50$, 14.1 percent) by 9 and 10 scores each. Results implied that F5 highly influenced growth. The Cronbach's alpha coefficient of internal consistency of the items was significant ($\alpha=.62$).

Innovativeness (F6) comprised of personality attributes which encompassed: I am more focused on the technical side of enterprise compared to marketing ($FL=.70$), I often mobilise financial resources from outside enterprise ($FL=.69$), and I mind if an entrepreneur implements my original idea ($FL=.56$). These three items were summated to form an interval scale of a low of 3 (4.5 percent) to a high of 15 (5.9 percent) scores with mean of 9.6 ($SD=3.1$). Majority (14.4 percent) scored 10 seconded (13.8 percent) by 11 scores. Results indicated that F6 highly influenced growth. The Cronbach's coefficient alpha was above set limit of .5 ($\alpha=.65$).

Opportunity recognition (F7) consisted of personality attributes that covered: risk taking ($FL=.81$) and innovation ($FL=.72$). These two items were summated to form an interval scale of a low of 2 (6.8 percent) to high of 10 (5.9 percent) scores. The mean was 6.3 ($SD=2.1$) with the majority ($n=76$, 21.5 percent) of micro-enterprises scoring 6 seconded ($n=59$, 16.7 percent) by 8 scores. First the F7 moderately influenced growth. Second it took considerable amount of experience for micro-

enterprises to spot an opportunity and to have confidence to act on their intuition. Reliability score showed that the items had internal consistency ($\alpha=.76$).

Hypothesis Testing

Personality attributes of the entrepreneur have significant correlation with growth of micro-enterprises. The hypothesis was tested by correlation analysis. Results indicated correlation at ($R=.15$, $P=.01$), thus rejection of hypothesis. Correlations between personality attributes and increases in employees, sales, departments, and divisions were as shown in Table3.

Personality attributes had little or negative correlation with growth. It is true that personality attributes and increases in employees, sales and departments were not strongly related to each other. This was contrary to the expectation. Results signified that micro-enterprises had weak correlation between desire to be boss, risk taking, service to commercial customers, level of optimism, desire to succeed, innovativeness and opportunity recognition and growth.

Desire to be boss ($r=.15$, $p=.01$) and increase in divisions had highly significant correlation at $p=.01$. Results implied that entrepreneurs with high desire to be boss had high propensity with increase in divisions. Desire to be boss can be a positive influence with increase in divisions. Risk taking ($r=.11$, $p=.03$) and level of optimism ($r=.12$, $p=.03$) had significant correlation at $p=.05$ with increase in divisions. Results implied that as risk taking and level of optimism increases, the number of divisions increase. Risk taking and level of optimism can be a positive influence on divisions. There was little association between service to commercial customers, desire to succeed, innovativeness, and opportunity recognition with growth.

Table 3
Correlations between Personality Attributes and Growth

Personality Attributes	<i>N</i>	Growth				
		354	Employees	Sales	Departments	Divisions
Desire to be boss	<i>r</i>		.06	-.06	-.03	.15**
	<i>p</i>		.27	.23	.58	.01
Risk taking	<i>r</i>		.05	-.06	.02	.11*
	<i>p</i>		.33	.16	.75	.03
Service to commercial customers	<i>r</i>		-.10	-.06	-.08	-.05
	<i>p</i>		.06	.30	.14	.34
Level of optimism	<i>r</i>		.05	.02	-.05	.12*
	<i>p</i>		.33	.78	.33	.03
Desire to succeed	<i>r</i>		-.03	.07	-.09	-.05
	<i>p</i>		.54	.18	.11	.36
Innovativeness	<i>r</i>		.05	.04	-.08	.07
	<i>p</i>		.34	.46	.15	.21
Opportunity recognition	<i>r</i>		-.04	.00	.02	-.06
	<i>p</i>		.42	.97	.73	.30

**** Highly significant at the .01 level * Significant at .05 level**

Service to commercial customers can be a negative influence on employees, sales, departments, and divisions. Desire to succeed can also be a negative influence on employees, departments, and divisions but a positive influence on sales. In addition, innovativeness can be a positive influence on employees, sales, and divisions but a negative influence on departments. Opportunity recognition can also be a positive influence on

sales and departments but a negative influence on employees and divisions.

Discussion

The research objective was to examine the relationship between personality attributes of the entrepreneur and growth of micro-enterprises. Four personality attributes were discussed in the literature namely: desire to be boss, desire to succeed, risk taking, and innovation (Perren 1999). The level of agreement and disagreement between this study and previous studies is discussed below.

First the desire to be boss (F1) by the entrepreneur is highly likely to influence growth. Other studies indicated that desire to be boss can be a positive influence (Caird 1990; Perren 1999; Mambula, and Sawyer, 2004; Profile on Resources and Aptitudes Detector for Human Activities Review 2006; Gaebler 2007). Results indicate that an entrepreneur having desire to be boss is highly likely to increase growth but low desire to be boss is least likely to increase growth.

Second the desire to succeed (F5) by the entrepreneur is highly likely to influence growth. Perren (1999) indicates that an entrepreneur having a strong desire and will to succeed and equating success with growth of micro-enterprise can be a positive influence. Results indicate that an entrepreneur having high desire to succeed in directions that are contrary to the growth of the micro-enterprise is highly likely to increase growth. Equally, an entrepreneur who does not mind if other micro-enterprises implement their original idea is least likely to increase growth.

Third the risk taking attribute (F2) is highly likely to influence growth. Studies (Perren 1999, and McCarthy 2003) indicated that an entrepreneur being willing to accept personal financial risk can be a

positive influence. Results indicate that an entrepreneur taking great risk when making enterprise decisions is highly likely to increase growth. An entrepreneur not willing to accept personal financial in order to obtain resources is least likely to increase growth.

Fourth the innovativeness (F6) by the entrepreneur is highly likely to influence growth. Research indicated that a micro-enterprise actively searching for and able to spot market opportunities can be a positive influence (Namusonge 1998; McCormick 1998; Perren 1999; Littunen 2000; Witt 2002; Boyle 2003; Macpherson, Jones, and Zhang 2005). Results indicate that an entrepreneur being more focused on the technical side compared to marketing is highly likely to increase growth. Conversely, an entrepreneur not often mobilising financial resources from external sources is least likely to increase growth.

Contributions to the Body of Knowledge

The major purpose of this section is to clearly summarise how the research made a distinct contribution to the body of knowledge. Three emerging contributions are: First the service to commercial customers (F3) is highly likely to influence growth. The high F3 can be a positive influence on growth but low F3 can be a negative influence on growth of micro-enterprises manufacturing metallic products at Kamukunji. The most important extrinsic influencer of growth of micro-enterprises manufacturing metallic products at Kamukunji is service to commercial customers. These customers are highly valued by entrepreneurs at Kamukunji due to the fact that they bring in more money than other customers.

Besides this service being a quick return on investment, it also

implies fast distribution of the investment portfolio. Wealth quickly flows down from the metallic products manufacturers and spreads to the wholesalers. This in turn has multiplier effect where many micro-enterprises sprout up breaking the vicious cycle of poverty. Results suggest that serving others, as a matter of social responsibility, is an extrinsic aspect of entrepreneurial motivation. Despite the high contribution of F3 to growth of micro-enterprises, previous literature has not addressed this importance.

Second the level of optimism (F4) is moderately likely to influence growth. Entrepreneurs fairly search for opportunities. High F4 can be a positive influence while low F4 can be a negative influence on growth. Mambula and Sawyer (2004) study on a Nigerian plastic manufacturer found that entrepreneurs become optimistic because they believe in the capability of sustaining their own destinies. Extant literature has to a very small extent addressed the importance of F4 to growth.

Third the opportunity recognition (F7) attribute moderately influences growth of micro-enterprises. This implies that entrepreneurs are eager to catch the passing opportunities. High F7 can be a positive influence but low F7 can be a negative influence on growth. Extant literature has not addressed the importance of F7 to growth.

Conclusions

The objective of the research is to examine the relationship between personality attributes of the entrepreneur and growth of micro-enterprises. Factor analysis identified seven personality attributes that influence growth namely: desire to be boss, risk taking, service to commercial, level of optimism, desire to succeed, innovativeness, and

opportunity recognition. These seven factors have high or moderate influence on growth. First, factors with high influence on growth are desire to be boss, risk taking, service to commercial customers, desire to succeed, and innovativeness. Secondly, factors with moderate influence on growth are level of optimism and opportunity recognition. In nutshell, micro-enterprises have entrepreneurs with high proportion of personality attributes.

The hypothesis is personality attributes of the entrepreneur have significant correlation with growth of micro-enterprises. Correlation analysis results ($R=.15$, $P=.01$) indicate non-significant correlation between personality attributes of the entrepreneur and growth of micro-enterprises. This finding leads to the rejection of the hypothesis. The rejection implies that the answers to the questions were mainly negative.

Growth is complex and multi-dimensional element which is influenced by a myriad of interacting factors. Despite the innumerable factors influencing growth, the last two decades have witnessed massive downsizing and restructuring of many large enterprises in the global economy. Due to this swing, micro-enterprises have increased both in number and size worldwide. This increment has led to depiction of micro-enterprises as “engine for growth”.

There is need to improve the personality attributes of the entrepreneurs by increasing level of optimism and opportunity recognition during their formative years. This advancement can be achieved by training potential entrepreneurs on optimism and opportunity identification, creativity, and innovativeness during their early years. This step up is more likely to influence the entrepreneur’s propensity to identify

passing opportunities, capture them, and create high-growth micro-enterprises.

Further research

Level of optimism and opportunity recognition factors moderately influence growth. The fact that these personality attributes have modest influence on growth needs further investigation. Hypothesis can either be accepted or rejected. So hypothesis for this study was rejected. But if this is so, what of re-design of the study? It is believed that re-design could give reasons for the rejection of hypothesis. Thus concepts, theories and personality attributes influencing growth of micro-enterprises in Europe are not necessarily the ones influencing growth of micro-enterprises at Kamukunji.

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Workshop: A Study on the Differentiation Strategy of the Government Loan Program for SMEs : Focused on the Loan Programs of the Small Business Corporation in Korea

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Recently, the controversial debate on the efficiency of the government loan programs is still going on, and most studies have produced some different conclusions on the loan efficiency. Concerning with this, the study suggests quite differentiation approach as an alternative to an efficiency approach for convincing the need for government intervention in financial market for SMEs. For empirical analysis, firstly, several characteristics of firms are examined and compared with those of other SMEs using no government loan or government loan from other institutions. Secondly, a survey will be conducted to analyzing the recognition of SMEs on the SBC loan program compared to other loan program. This study intends to suggest some differentiated characteristics of the SBC loan programs compared to private market loan programs and other government loan programs.

Track: 11. Financing SMEs

The Effects of Policy Loans on Performances and satisfactions of SMEs

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This paper has reviewed the effects of policy loans on business performances and satisfactions of SMEs that were paid them in 2005. Using survey data from SMEs which were collected by Small and medium Business Corporation(SBC) in 2007, it examined how policy loans had affected the business activities of recipient firms with respect to sales, profits, etc. through following years.

The previous studies showed that the policy loans improved the firms' performances significantly. About more than 80% of firms which were paid policy loans had showed that their performances were better than before. However, these studies did not much explain the relationships between performances and firms' characteristics such as size, the age of company, and, kinds of industry. Furthermore, the previous analysis of both performances and satisfactions was not much proceeded coincidentally so that it was not easy to derive some implications for the policy loans. Although more than 90% of firms answered that they were satisfied by policy loans, we can't conclude that which facts mostly affected the degrees of satisfactions statistically.

Track: 11. Financing SMEs

When and How Does the Cooperation Between a Large Firm and SMEs Pay Off?

- The Collaborative Efforts in Korea -

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Although Korea tried to build cooperative business environments for many years academic inquiries failed to show the consistent business model. To tackle this problem we considered various contingencies such as supplier's dependency and relationship stages and extended close business relationships to open networks, for which business ecosystem and platform were included in the model. We found that dependency moderated the effect of cooperation and platform on the supplier's profitability. After controlling out the effects of industry differences and company size, only level of platform interacted with dependency. It seems that the effect of platform is more robust than that of cooperation.

Key words: Cooperation, business ecosystem, platform, moderating effect.

INTRODUCTION

Long-term collaborative relationships have received much attention and various and/or contradictory findings have been reported. (Kalwani & Narayandas 1995; Corsten & Kumar 2005)

For many years South Korea tried to build the socio-economic environments in which Korean

conglomerates interact with their SME suppliers based on trusted cooperative relationships. In the meanwhile, many academic researches have provided useful theoretical foundations and policy and managerial implications, but most of them failed to find any consistency concerning the effect of the large firm-SME cooperation on the SME's business performance. (Kim et al. 2006; Kim, Song, & Park 2007)

To tackle this issue, we considered two possibilities. First, some business cooperations will pursue other objectives than business performances such as short-term profitability. (e.g., long-term relationship and survival) Second, therefore, cooperation will have an effect (more precisely speaking, measurable effect) only in certain situations. So we paid attention to variables such as dependency (the ratio of SME supplier's sales attributable to a large buying firm), length of business relationship between firms, and industry differences.

BUSINESS COOPERATION

Cooperation refers to situations in which parties work together to achieve mutual goals (Anderson & Narus 1990; Morgan & Hunt 1994) and cooperative relationships socially contrived mechanisms for collective action, which are continually shaped and restructured by actions and symbolic interpretations of parties involved. (Ring & Van de Ven 1994)

Over the past two decades, interfirm cooperation has emerged as a significant area of managerial practice and academic inquiry. In the realm of practice, cooperative interfirm relations have acted as a means of gaining access to new knowledge and of reducing the costs and risks associated with developing new products and processes (Rindfleisch and Moorman 2003).

Cooperation is a prerequisite of coordination that is necessary for innovation and competitive success (Beer, Eisenstat, and Spector 1990). Contractor and Lorange (1988) found the positive relationship between cooperativeness among companies and strong levels of efficiency and profitability. Many of benefits of cooperation can be defined in noneconomic terms such as fast cycle time of product to market, improved quality, improved competitiveness, and so on. These variables can be seen as the intervening

variables that help to explain why cooperation might enhance performance and satisfaction. (Smith, Carroll, and Ashford 1995)

In summary, through cooperative activities, companies can get increased capacity and competence without additional needs of acquiring and developing new resources and abilities, while company flexibility is maintained. But cooperation can result in a reduction in the company's autonomy and increased need to harmonize and coordinate actions of independent organizations. (Pena & Arroyabe 2002) Therefore balance between the stability for maintaining competence and the openness for flexibility and innovation is needed. (Nooteboon 2000)

LARGE AND SMALL BUSINESS COOPERATION IN KOREA

In Korea, importance of business cooperation especially between larger companies and small-and-medium companies are highly acknowledged and even in March 2006, Korean government announced "Acts for Promoting Large and Small Business Cooperation" to "enhance the competitiveness of both large and small companies by solidifying cooperative relationships between large companies and SMEs, which contribute to sustainable growth of the national economy." In this law (symbiotic) business cooperation is defined as "joint activities in technology, human resources, financial resources, procurement, and sales routes to increase reciprocal welfare between large companies and small and medium companies, between SMEs, and between buyers and sellers." (Article 1 Clause 4)

Table 1 and Figure 1 are statistics about trends of business cooperation in Korea.

Table 1. Cooperative activities between large and small business (100 million won, %)

	2005	2006 (growth rate)	2007 (growth rate)	2008 planned (growth rate)
Top 30 Korean business groups	10,401	14,307 (37.6%)	18,909 (32.2%)	23,484 (24.2%)
Top 10 Korean business groups	8,317	11,247 (35.2%)	17,324 (54.0%)	21,798 (25.8%)

Source: FKILSC (2009)

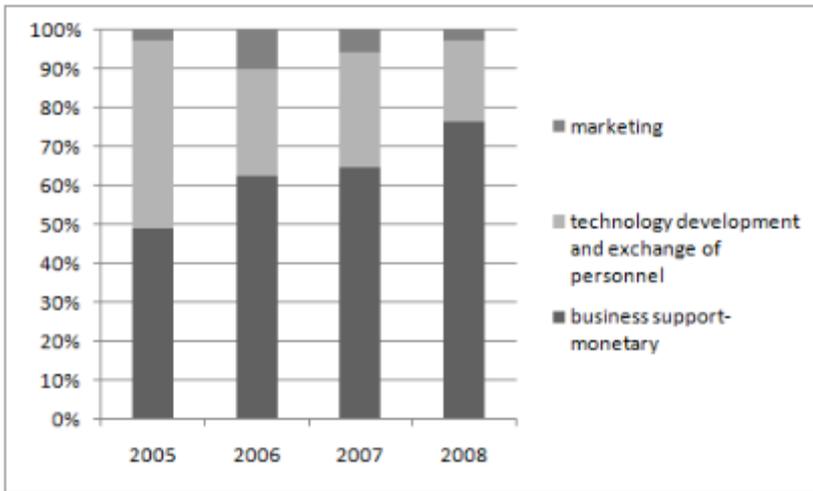


Figure 1. Changing pattern of business cooperation
Source: FKILSC (2009)

Table 1 shows that top ten conglomerates provide 90% of total cooperative supports of top 30, which means that more efforts are needed to diffuse cooperative business models.

As for figure 1, most of cooperative activities are focused too much on the low-quality cooperation such as monetary support. Especially the portion of technology development and exchange of personnel shows continuous decrease. Korean academics and practitioners argue that focus of cooperative activities move from simple business supports to high value-creating activities such as co-development of components and/or technological collaboration.

Until now, governments and government-owned companies derived business cooperation in Korea followed by a few of big conglomerates. Although this approach was useful for creating consensus among business and economic societies, most of cooperative projects show uniform pattern and are limited in the number of companies, industries, and stages of value chain. Although these problems are inevitable because of short history of cooperative business effort program, it is also desirable that private sectors lead the programs or movements (Lee 2007), and that open network perspectives are also necessary to improve current programs. (The Korean Association of Business Cooperation 2006) For this we will discuss about the business ecosystem approach and platform strategy.

BUSINESS ECOSYSTEM AND PLATFORM

The performance of firms derives from something that is much larger than the companies themselves: the success of their respective business ecosystems. Business ecosystem is defined as "loose networks of suppliers, distributors, outsourcing firms, makers of related products or services, technology providers, and a host of other organizations- affect, and are affected by, the creation and delivery of a company's own offerings." (Iansiti and Levien 2004b) Loose networks implies that we must consider loose-tie networks (e.g., third-tier networks, potential suppliers from same or different industries) as well as strong-tie networks (e.g., first-tier suppliers).

A company is not only a member of a single industry but also a part of a business ecosystem that crosses a variety of industries. For example, Apple Computer is the leader of an ecosystem that crosses at least four major industries: personal computers, consumer electronics, information, and communications. In a business ecosystem, companies co-evolve capabilities around a new innovation: they work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations. (Moore 1993) This co-evolution is another notion of the shared fates of companies in the same business ecosystem.

The leader in a business ecosystem can increase ecosystem productivity by simplifying the complex task of connecting network participants to one another or by making the creation of new products by third parties more efficient, enhance ecosystem robustness by consistently incorporating technological innovations and by providing a reliable point of reference that helps participants respond to new and uncertain conditions, and encourage ecosystem niche creation by offering innovative technologies to a variety of third-party organizations. (Iansiti and Levien 2004b). The leader can realized these objectives by providing so-called platforms for ecosystem members. A platform is a set of solutions to problems that is made available to the members of the ecosystem through a set of access points and interfaces. (Iansiti and Levien 2004a) Ecosystem participants use this platform to build its own offerings. Therefore a platform is "package of resources" through a leader company shares values with its ecosystems and/or

other members (Kim and Song 2008).

RESEARCH DESIGN

Relationships between a larger manufacturer and smaller suppliers are often based on asymmetric cooperation where the smaller companies are highly dependent on the larger companies. This dependency can cause significant uncertainty for the smaller companies. (Hallikas, Virolainen, & Tuominen 2002) The larger manufacturer would demand short-term price concessions while also expecting long-term orientation from the supplier. (Kalwani & Narayandas 1995) In summary, as much dependence on the larger company will suppress the effect of cooperation we derived following hypotheses.

Hypothesis 1-1: Dependence on the larger companies will moderate the effect of cooperation on the profitability of supplier firms.

Hypothesis 1-2: Dependence on the larger companies will moderate the effect of platform on the profitability of supplier firms.

Closer, long-term relationships are needed in order to minimize the transaction costs. (Kalwani & Narayandas 1995; Corsten & Kumar 2005) Therefore, long-term relationships can contribute to enhancing the profitability of suppliers. However certain types of cooperative activities, which are required for each of relationship stages, must be implemented. In Korea it is criticized that cooperative activities between large and small business are focused mainly on simple business support instead of collaborative activities such as NPD or knowledge co-creation. (Kim et al. 2006).

Kim et al. (2007) argued that actual implementation of such inter-firm cooperation requires careful planning and there is no one-size-fits-all application for any or all firms. They suggested three different types of inter-firm business cooperation based on the level of supplier's competence and relationship length: L, A and J type. They suggested specific methods of cooperation and development models for

each type.

Hypothesis 2-1: Length of relationship with the larger companies will moderate the effect of cooperation on the profitability of supplier firms.

Hypothesis 2-2: Length of relationship with the larger companies will moderate the effect of platform on the profitability of supplier firms.

EMPIRICAL STUDY

SAMPLE

Data were collected by on-line survey of suppliers in automobile, electronics, telecommunications, and steel industries. Online survey of SME suppliers that the list were provided by large firms in each industry was conducted for 2 weeks. Each respondent was asked to answer about the relationships with its biggest buyer.

158 SME suppliers responded and those covered telecommunication industries (51 companies, 32.5%), steel industries (43 companies, 27.4%), automobile industries (36 companies, 22.9%), and electronics industries (27 companies, 17.2%). Average number of employees was 200 people (median=120 people). During 2007 fiscal year, average sales was 84.0 billion won (64.6 million US dollar, median=26.0 billion won) with 3.86 billion won of average profit (median=630 million won).

Table 2. Sample characteristics

<u>Length of relationship with company A (mean=14.9 years, median=13 years)</u>		<u>Sales portion attributable to Company A (mean=62.6%, median=70%)</u>	
Category	ratio	Category	ratio

~ 10 years	39.7% (52)	~50%	32.7% (51)
11~20 years	32.1% (42)	51%~70%	28.8% (45)
20 years+	28.2% (37)	70%+	38.5% (60)
Total	100.0% (131)	Total	100% (156)

MEASURES

Measure items for cooperation were borrowed from past researches (e.g., Morgan & Hunt 1995). We created items for 'platform' construct based on Iansiti & Levien's (2006) definitions and explanations. We operationalized profitability as ratio of annual profit compared with annual sales. (profit/sales*100) Dependence is measured the ratio of supplier's sales attributable to the larger company A.

COOPERATION (6 items, Cronbach's alpha=0.881): Cooperation with company A is characterized by;

- vigorous communication
- cooperative partnership
- close cooperation
- frequent visit
- sharing important information
- large number of joint project execution

PLATFORM (6 items, Cronbach's alpha=0.883):

- Company A provides assets and facilities that SMEs can leverage.
- From relationship with company A, suppliers can obtain useful market/customer informations.
- Through company A's networks we can get easy access to other companies/customers.
- Company A provides a roadmap for future technological trends.

- Company A develops, disseminates, and shares up-to-date innovation tools.
- From company A's networks, suppliers can obtain necessary capabilities and resources.

DESCRIPTIVE STATISTICS

From the analysis of samples, mean profitability was 7.60% (n=138) with 4.04% median. We found no significant relationships between profitability and sales portion nor between profitability and length of relationship. We also found that level of cooperation or that of platform has no relationship with profitability.

Table 3(a). Profitability by sales portion attributable to company A.

	Sales portion attributable to company A			F	p
	~50%	51~80%	80%+		
Profitability (n)	8.89 (47)	4.78 (38)	8.56 (51)	1.010	0.367

Table 3(b). Profitability by length of relationship with company A.

	Length of relationship with company A			F	p
	~ 10 years	11~20 years	20 years+		
Profitability (n)	7.48 (44)	7.17 (36)	8.20 (32)	0.043	0.958

Table 3(c). Profitability by level of cooperation.

	Level of cooperation		t	p (2-tailed)
	Low	High		
Profitability (n)	7.276 (70)	7.9066 (67)	-0.253	0.800

Table 3(d). Profitability by level of platform.

	Level of platform		t	p (2-tailed)
	Low	High		
Profitability (n)	8.2691 (71)	7.1378 (64)	0.449	0.654

HYPOTHESIS TESTING

We tested hypotheses using analysis of variance and covariance. First, we considered the effect of cooperation moderated by the relationship length or sales portion in the interaction effect analyses. The moderated effect of platform was analyzed in the same way. Second, we included industry differences (dummy variables) and company size as control variables. Number of employees and sales were used as the proxies of company size.

Table 4(a). Results for testing the effect of cooperation on the profitability.

	1	2	3	4	5	6	7
Model	.000*	.000	.000	.000	.001	.000	.002
Level of cooperation	.775	.684	.789		.524	.713	.578
Relationship length		.973	.905		.768		.790
Sales portion	.316		.266			.515	.394
Cooperation * Relationship length		.382	.345		.421		.455
Cooperation * Sales Portion	.052		.090			.149	.187
Automobile				.329	.980	.632	.725
Steel				.000	.416	.426	.466
IT				.016	.898	.888	.703
Number of employees				.732	.521	.699	.660
Sales				.889	.708	.572	.636
R-square(Adjusted R-square)	.262 (.227)	.223 (.179)	.280 (.209)	.217 (.182)	.262 (.180)	.279 (.202)	.302 (.192)

*Each number indicates significance level.

Table 4(b). Results for testing the effect of platform on the profitability.

	1	2	3	4	5	6	7
Model	.000*	.000	.000	.000	.001	.000	.001
Level of platform	.946	.788	.956		.571	.979	.898
Relationship length		.924	.669		.753		.696
Sales portion	.356		.145			.495	.225
Platform * Relationship length		.655	.479		.618		.481
Platform * Sales Portion	.018		.020			.036	.036
Automobile				.329	.980	.811	.648
Steel				.000	.373	.485	.341
IT				.016	.987	.977	.709

Number of employees				.732	.516	.507	.454
Sales				.889	.781	.829	.979
R-square(Adjusted R-square)	.277 (.243)	.217 (.172)	.300 (.230)	.217 (.182)	.258 (.174)	.303 (.227)	.324 (.217)

*Each number indicates significance level.

We found that there is no direct correlations between sales attributable to the biggest buyer and the effect of cooperation or platform on the supplier's profitability. However, we found that the ratio of sales attributable to the biggest buyer moderated the effect of cooperation or platform on the supplier's profitability. When the transactional sales portion is higher than 50%, cooperation or platform did not influence supplier's profitability. But, for those with the sales portion equal or less than fifty percent, there were some significant correlations. But after controlling out the effects of industry differences and company size, only level of platform interacted with sales portion. It seems that the effect of platform is more robust than that of cooperation.

Table 5(a). Mean comparisons by level of cooperation and sales portion.

Sales portion attributable to company A	Level of cooperation		t	p (2-tailed)
	Low	High		
~50%	4.60 (25)	13.76 (22)	-2.444	0.018
51%~70%	6.10 (20)	3.31 (18)	0.880	0.385
70%+	10.73 (24)	6.50(26)	0.818	0.417

Table 5(b). Mean comparisons by level of platform and sales portion.

Sales portion attributable to company A	Level of platform		t	p (2-tailed)
	1	2		
~50%	5.70 (27)	13.50(19)	-1.968	0.055
51%~70%	4.69 (17)	5.47(19)	-0.234	0.816
70%+	13.01 (26)	3.92 (25)	1.847	0.071

Table 5(c). Mean comparisons by level of cooperation and relationship length.

Length of relationship with company A	Level of cooperation		t	p (2-tailed)
	Low	High		
~ 10 years	6.89 (22)	8.08 (22)	-0.311	0.757

11~20 years	8.84 (21)	4.83 (15)	0.714	0.480
20 years+	4.44 (13)	10.82 (18)	-1.084	0.287

Table 5(d). Mean comparisons by level of platform and relationship length.

Length of relationship with company A	Level of platform		t	p (2-tailed)
	Low	High		
~ 10 years	8.19 (23)	6.68 (20)	0.385	0.702
11~20 years	9.33 (16)	5.43 (20)	0.698	0.490
20 years+	7.21 (19)	10.22 (12)	-0.498	0.622

Figure 2(a). Effects of cooperation by sales portion.

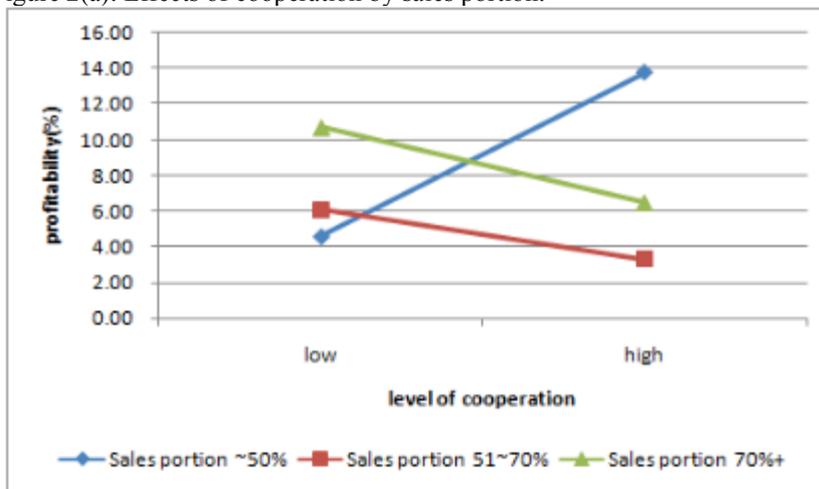
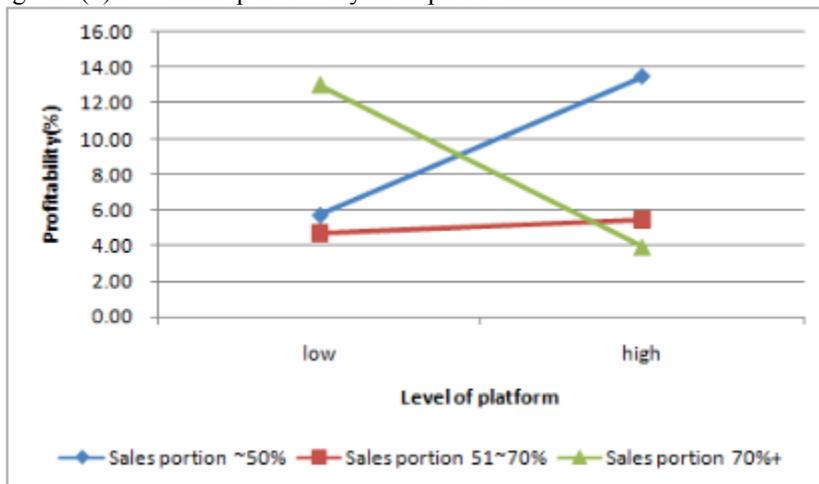


Figure 2(b). Effects of platform by sales portion.



CONCLUSION

As expected cooperation or platform was found to contribute to enhancing suppliers' profitability in the limited conditions. Therefore, it is necessary to match cooperative activities with conditions such as relationship stage, dependency, and industries. Interfirm dyadic cooperation should be upgraded to cooperative networks.

This study provides meaningful implications for deploying resources in different relational conditions. This paper also introduced the concepts of business ecosystem and platform, which are validated in the empirical study.

Our findings should be interpreted with care because there must be cross-cultural differences. Future research might focus on developing more comprehensive and accurate scales of platform in the inter-firm or business network contexts.

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Cooperation Strategy under Asymmetric Partnership: Game Theoretic Approach to Relationship between Large firm and SMEs

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This research approaches cooperation between large firm and SMEs with game theory. Critical problem occurs when reduced investment on the partnership occurs for the lack of information and rationality with opportunity loss. In long-term, future benefit and competitive advantage of the investment on co-specialized asset can be realized. However, they are usually locked in market strategy without benefits and advantages for cost myopia. This is framed by the production cost and amount, business cycle, and level of competence. Analytic approach shed light on players' decision to have rationality of cooperation especially in long-term and hard time.

Track: 9. Relationships between Large and Small Firms

How Could a Small First Mover Win a Big Late Follower? A

Simulation Analysis of KKBOX vs. Yahoo in Taiwan

Jerome Chih-Lung Chou¹, Chia-Liang Hung², and Shu-Luan Kao³

In 2004, a small start-up KKBOX first started offering authorized digital music downloads and streaming in Taiwan. In 2006 the famous Yahoo entered the same market. This research uses an innovation diffusion model with network externalities to simulate the results of KKBOX's three strategic alternatives: adding new user interactive functions, increasing complimentary variety, and interlinking with heterogeneous networks (cross-platform strategy). We find the first two strategies are better choices for KKBOX because they still can keep KKBOX's lead. Cross-platform strategy appears to be less advisable. In deterring a big follower, quickly increasing value of network should be of higher priority.

Keywords: first mover advantage, innovation diffusion, network effects

Introduction

After the success of iTunes of Apple Computer in the authorized digital music market, some similar services emerged worldwide. KKBOX, lunched in June, 2004 by a young company Skysoft which was founded in 2000, was the first to enter this market in Taiwan. In eight weeks since opening, KKBOX had gained over 400,000 registered members, and the number of songs played had reached over 100,000,000. KKBOX has an innovative business model in which members pay a flat rate of monthly fee for unlimited song downloads and streaming music from its authorized

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music database. Members without paying can still search the database and interact with other members by all other functions of KKBOX. One and a half years later, famous and resourceful Yahoo entered the same market with the same business model. This research is to examine whether KKBOX could keep its first mover advantage if different strategies were applied. We use a modified diffusion model to simulate their market shares.

Literature Review

Simulation Equation

We start with the Bass (1969) diffusion model. The rate of change of the installed base fraction is formulated as:

$$f(t)/[1-F(t)] = \alpha + \beta F(t), \quad (1)$$

where $F(t)$ is the installed base fraction, α is the coefficient of innovation, and β is the coefficient of imitation. According to Bass (1969), for most durables, α is between 0.01 and 0.03, and β is between 0.1 and 0.3.

Considering price effect and network effect, Katz and Shapiro (1985, 1994) formulated that the number of adopters at time t is:

$$c(t) = [1-p+n F(t-1)] \times C(t), \quad (2)$$

where p is the price-performance ratio, defined as price/performance. $p=1$ means the

product is just worth of its price, and a lower p means the product is more worthy. n is the coefficient of network externalities, and $C(t)$ is the number of total potential adopters at time t . Because in equation (2), $c(t) \geq 0$, therefore $p \geq nF(t-1)$. And because $F(t-1) \leq 1$, so we have the restriction as follows:

$$p \geq n \geq 0$$

Considering price and network effect, we combine equations (1) and (2), so the rate of change of the installed base fraction becomes:

$$f(t, p, n) = [\alpha + \beta F(t-1)] [1 - p + nF(t-1)] [1 - F(t-1)] \quad (3)$$

With equation (3), the cumulated rate of adoption is:

$$F(t) = \sum_{t=0}^t f(t, p, n) \quad (4)$$

Considering competition, we use i and j to denote competing products and reformulate equation (3) as follows:

$$f(i, t, p, n) = [\alpha + \beta F(i, t-1)] [1 - p + nF(i, t-1)] [1 - F(i, t-1) - F(j, t-1)] \quad (5)$$

$$f(j, t, p, n) = [\alpha + \beta F(j, t-1)] [1 - p + nF(j, t-1)] [1 - F(j, t-1) - F(i, t-1)] \quad (6)$$

We use equation (5) and (6) in calculating cumulated rate of adoptions of products in scenarios of various strategies are applied.

Platform Strategies

KKBOX is an Internet based service platform. A platform competing in the network context may more possibly succeed if it is developed utilizing the force of

network effects (Chou and Hung 2008). Chou (2005) identified three patterns of platform strategy in the network context: Firstly, the platform owner may proprietarily add user mutual interaction functions on the platform, seeking direct network effect (Katz and Shapiro 1985) on the growth of installed base (Strategy 1). Secondly, the platform owner may form an alliance, open the interface technology the alliance, and outsource innovations complement with the platform, which remains proprietary. In this way, the platform owner is seeking indirect network effect (Katz and Shapiro 1985) wherein the complimentary variety increases to help the installed base grow (Strategy 2). Thirdly, the platform owner may interlink the platform with heterogeneous established platforms, forming a new value network based on multiple platforms. The network may gain in size and value fast and thus bring the platform's growth (Strategy 3). KKBOX is a service platform of authorized digital music on Internet. If KKBOX adopts Strategy 1, it may add functions that can encourage member interactions like member's blog, friend making service, and online fans club. If KKBOX adopts Strategy 2, it may let members provide and make public self-made lyrics, let software developers design various players or interfaces, or let hardware developers design physical players. If KKBOX adopts Strategy 3, it may port its service to Mac, PDA, or mobile phones of various system operators. All these strategies may increase KKBOX's installed base.

Interpreting Platform Strategies with Changes of Diffusion Coefficients

To evaluate effects of the above strategies, first we determine how the diffusion coefficients will be influenced by strategy. We assume coefficients of innovation and imitation will increase in all strategies, that is, we assume competition will make KKBOX increase its marketing efforts to enhance advertising effect and word-of-mouth effect.

We judge price-performance ratio will be lowered in Strategy 1, and even lowered in Strategy 2 because in Strategy 2 KKBOX outsources innovations for less cost. However, we judge price-performance ratio will increase in Strategy 3 because of cost of interlinking. Other well-established platforms will ask fees of opening the access, and eventually KKBOX must raise the price for users. Thus the order of p in three strategies is:

$$p(\text{Strategy 3}) > p(\text{Strategy 1}) > p(\text{Strategy 2})$$

We judge coefficient of network externalities will increase in Strategy 1, but only slightly in Strategy 2 because Strategy 2 does not directly and immediately make users more interactive so that they can derive utility from other users. Strategy 3 can not increase the coefficient of network externality because it just moves the same KKBOX to other platforms. Therefore, the order of n is:

$$n(\text{Strategy 1}) > n(\text{Strategy 2}) > n(\text{Strategy 3})$$

We summarize our judgments in Table 1 to characterize the three platform strategies in terms of coefficient changes.

Table 1 Value Changes of Coefficients

Platform strategy	Coefficient
1. Adding user mutual interaction functions, increasing direct network effect	$\alpha(+1)$ $\beta(+1)$ $p(-1)$ $n(+2)$
2. Adding complimentary variety, increasing indirect network effect	$\alpha(+1)$ $\beta(+1)$ $p(-2)$ $n(+1)$
3. Cross-platform strategy	$\alpha(+1)$ $\beta(+1)$ $p(+1)$ $n(+0)$

+ and - denote direction of change. Numbers denote magnitude of change.

Simulation Process

To begin with, we set initial values of coefficients for KKBOX and Yahoo. We set Yahoo's coefficients of innovation and imitation to the highest ($\alpha=0.03$; $\beta=0.3$) and those of KKBOX to the lowest ($\alpha=0.01$; $\beta=0.1$), reflecting their big difference in market power. We set their price-performance ratios the same ($p=0.5$), but Yahoo has higher coefficient of network externalities ($n=0.4$) because it has all sorts of functions for members to interact. Next, we set KKBOX's coefficient values in three strategies in accordance with their magnitude orders determined previously. Table 2 summarizes these values. Lastly, we compare KKBOX and Yahoos' cumulated rate of

adoption in four scenarios: KKBOX does not react, and applies Strategy 1-3 respectively to deter Yahoo.

Table 2 Summary of Coefficient Values in Simulation

	Yahoo ^a	KKBOX ^a	Strategy 1 ^b	Strategy 2 ^b	Strategy 3 ^b
α	0.03	0.01	0.02	0.02	0.02
β	0.3	0.1	0.2	0.2	0.2
p	0.5	0.5	0.4	0.3	0.6
n	0.4	0.1	0.3	0.2	0.1

a: Initial value

b: Adjusted value

Results

We first simulated the situation where KKBOX did not react against the invasion of Yahoo into Taiwan market. The result in Figure 1 shows that after six months, Yahoo's member number would exceed that of KKBOX.

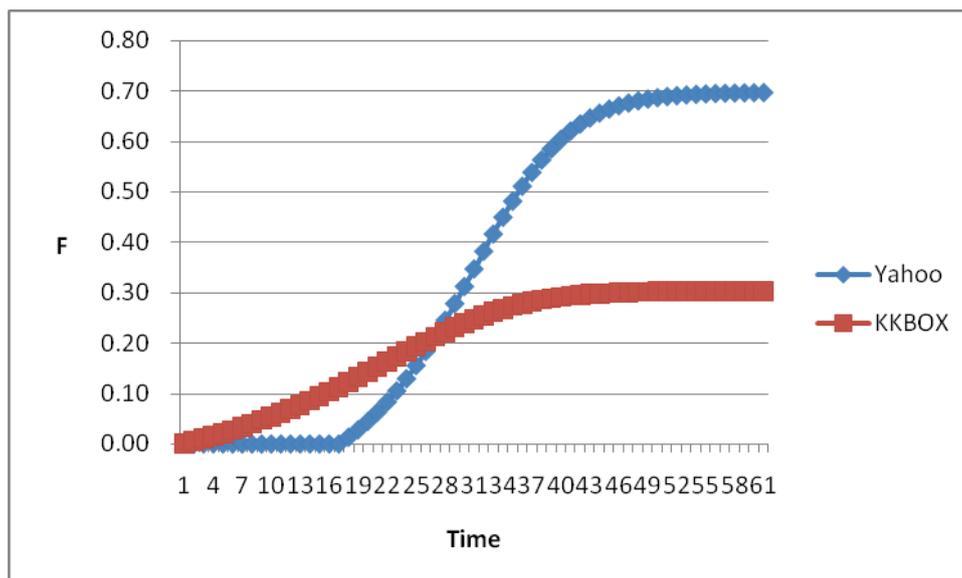


Figure 1 KKBOX Applying No Strategy

And then we simulated if the three platform strategies are applied by KKBOX one at a time. First, we simulated that KKBOX applies Strategy 1, which is adding user mutual interaction functions, pursuing direct network effect. By strategy 1, KKBOX could maintain its leading position. The result is shown in Figure 2.

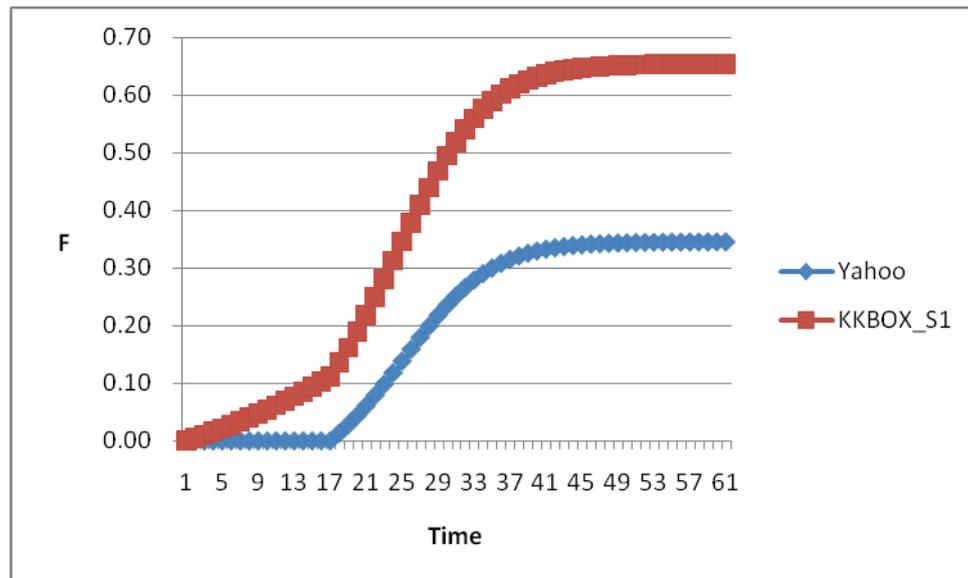


Figure 2 KKBOX Applying Strategy 1

Second, we examined what if KKBOX applies Strategy 2. It could still remain ahead of Yahoo by adding complimentary variety, which means opening its interface technology to alliance for outsourcing minor, cheaper, but more innovations. The result is shown in Figure 3.

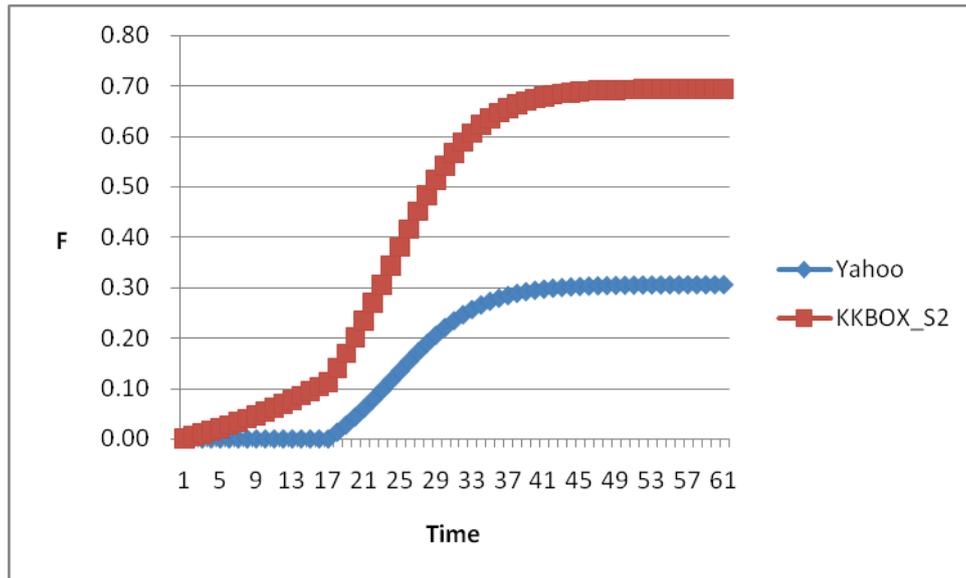


Figure 3 KKBOX Applying Strategy 2

Lastly, we simulated KKBOX applies Strategy 3, linking with heterogeneous platforms, so called cross-platform strategy. In doing so, KKBOX might lose its leading position after encountering with Yahoo sixteen months. The slower adoption is due to inevitably KKBOX had to raise the price to justify the cost for interlinking with other well-established platforms. Figure 4 depicts this situation.

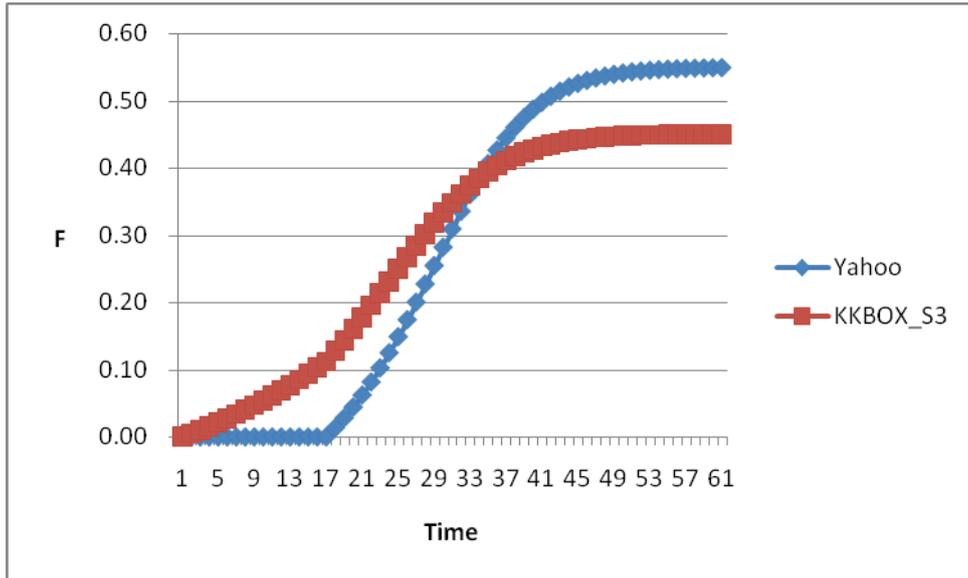


Figure 4 KKBOX Applying Strategy 3

We compare the resulted market shares by the three strategies. As shown in Figure 5, Strategy 3 has the least effect in keeping KKBOX's first mover advantage. Strategy 1 and Strategy 2 have similar effects.

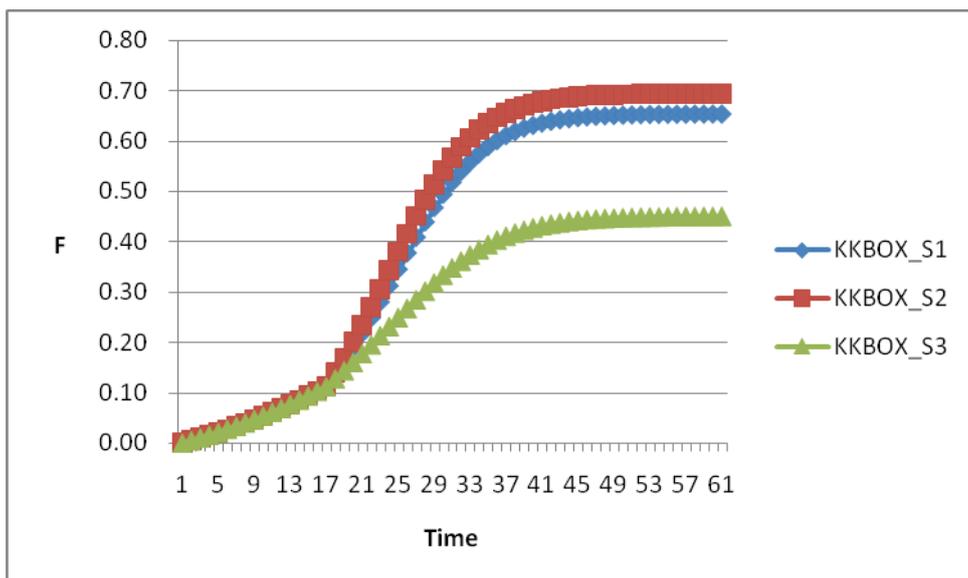


Figure 5 Comparisons of Three Strategies

Discussion

In the aftermath, Yahoo quit from the market in March, 2007, after months' laggard growth. In those months, KKBOX kept rolling out new online services of community-building but no attempts in crossing platforms of software, hardware, or mobile communication service. Until Yahoo's retreat, KKBOX did not start cooperating with other hardware and telecommunication companies to expand. Our simulation coincides with KKBOX's strategic decisions.

The research results also agree with traditional wisdom of platform strategy, that is well articulated by Cusmano and Yoffie (1999) and Gawer and Cusmano (2002). Strategy 1 and 2 are what Microsoft Windows applied in achieving platform leadership. Strategy 3 is what Netscape Navigator applied in losing its first mover advantage. Although Navigator charged free to users, cross-platform strategy made Netscape suffer in high cost, low performance, and long development time. The reasonable setting of diffusion coefficient values in this case help us further understand these strategies.

Conclusion

This research used innovation diffusion model to examine three strategies for

KKBOX to rival Yahoo. We found network effects gained in Strategy 1 and 2 can help KKBOX retain its first mover advantage. Strategy 3, or cross-platform strategy, is less advisable because the resulted rate of diffusion is slower the other two strategies. The KKBOX case and our simulation prove that network effects and the ability to reap the value of network are crucial for sustaining the first mover advantage.

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Who is a 'real' competitor and who is not? A study of competitive and co-operative dynamics within an emerging Swedish cluster.

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The purpose of this paper is to complement prior research on competitive and cooperative dynamics within regional clusters. Through a longitudinal investigation I observed the role cooperation and competition played when large and small firms, located in a traditionally strong but currently struggling region of Sweden, interacted during the establishment of a new industry cluster. Qualitative data, consisting of interviews and documents, were coded into first-order categories, second-order themes, and overarching dimensions. Literature on institutional entrepreneurship was used as an interpretative framework. Subsequently for small and large firms working together in regional cluster initiatives, in which cooperation is a natural component, this single case study suggests that localised and institutionalised competition play a key role in their successive regional clustering trajectories.

Track: 9. Relationships between Large and Small Firms

WORKSHOP: Opportunities for Collaborative Research on SB in the Asia Pacific Area

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The aim of this workshop is to identify research issues that can be studied jointly by academics in Asian Pacific countries. The workshop consists of two parts: paper presentation (30 minutes) and panel discussion (60 minutes).

Part I: Paper Presentation on ‘SB Research Trends in Korea’

1. Young-Jun Choi (University of Seoul) and Ki-Hwan Kwon (Sangmyung University) “Globalization of SME: Reality and Implications for Future Research”
2. Sang-Myung Lee (Hanyang University) and Mee-Soon Lee (Korea Venture Business Association) “Growing Pains of Venture Firms”
3. Hea-Jin Lim (IBK Economic Research Institute) “Public Credit Guarantee and Economic Growth”
4. Sang-Hyun Lee (KOSBI) and Seungwoo Kwon (Korea University) “A Multilevel Investigation of Conflict Influencing Team Commitment”

Part II: Panel Discussion on ‘Research Collaboration Opportunities’

Moderator: Su-Keun Kwak (Seoul National University)

Panelists: Delwyn Clark (University of Waikato)
Donna Kelley (Babson College)
Nobutaka Otake (Nagoya Institute of Technology)
Hiroyuki Okamuro (Hitotsubashi University)
Kai Yang (SMEG)

Track: 14. Other SME Related Issues

Re-establishing Enterprise: Identifying and applying appropriate entrepreneurship for undergraduates

by Simon Bridge, Cecilia Hegarty and Sharon Porter

Abstract

NICENT (the Northern Ireland Centre for Entrepreneurship) was established in 2000 to integrate entrepreneurship education in the University of Ulster and Queen's University, Belfast. This paper examines the University of Ulster aspect of the Centre and explores its relationship with its main promoters, and examines the focus of Invest Northern Ireland, which funded it. NICENT's offering to its consumers, students and staff, is then considered. Having eventually adopted an 'enterprise for life' approach to meet the requirements of both promoters and consumers, NICENT, paradoxically, no longer accords with the changed requirements of its funder which now promotes a 'gazelle' focused policy. The Centre itself must now change as a result. This paper challenges policy-makers' interpretations of entrepreneurship and highlights their potential impact on its promotion.

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Re-establishing Enterprise: Identifying and applying appropriate entrepreneurship for undergraduates

by Simon Bridge, Cecilia Hegarty and Sharon Porter

Introduction and Aim

NICENT (The Northern Ireland Centre for Entrepreneurship) is a joint entrepreneurship education initiative by the University of Ulster and Queen's University Belfast. This paper, however, reflects primarily on the University of Ulster's experience of that initiative.

In recent years the word entrepreneurship has acquired a variety of interpretations and in an earlier paper the authors considered which of these aspects was most appropriate for entrepreneurship education (Bridge *et al*, 2008). They acknowledged that NICENT had began its work with funder-driven motivations and with an aim which included increasing the potential for new business starts within Northern Ireland amongst the graduate population. That agenda however did not fit well with the University, even with those faculties that the Government thought would be seedbeds for graduate entrepreneurial activity. The Centre therefore had to assess what entrepreneurship should mean in this situation, not least by considering what would be a helpful interpretation of entrepreneurship for students and for staff. Through this NICENT has, in effect, rediscovered enterprise in its broader applications and now believes that its 'enterprise for life' version of entrepreneurship is more appropriate to the needs of the majority of undergraduates and is a foundation upon which 'enterprise for new venture creation' can later be built.

Nevertheless, the earlier paper concluded that funding for an integrated institutional strategy for entrepreneurship education would remain an issue and that the Centre should continue to assess the evolving needs of its funders and consumers and to improve the service it offers to both. In order to achieve its objectives it had, in effect, to 'sell' itself to two key sets of stakeholders who, the paper suggested, had somewhat different requirements:

- Consumers. If it is to spread entrepreneurship education further throughout the universities NICENT must 'sell' its services to academic staff, and in turn to their students. The staff and students want respectively to deliver and receive an enhancement to future life and work effectiveness.
- Funders. To attract funding and other resources the Centre has to 'sell' to both current and potential future funders. Some of these funders have an economic development focus (and therefore want to see new high-growth businesses) and some an education focus (and would like to see something which adds to and enhances the employability which they are already trying to deliver).

This paper therefore examines NICENT's evolving relationship with its consumers and funders. It considers the implications their different requirements have had for the establishment of entrepreneurship education and for future of the Centre's work. It first explores the varied requirements of NICENT's host university and its reception of the Centre's offering and then examines the focus of NICENT's main funder and its changing definition of entrepreneurship. The paper then compares these two now somewhat diverging positions and their implications for the future of the Centre.

The Requirements of NICENT's Host – University Factors

The University Context

NICENT (the Northern Ireland Centre for Entrepreneurship) was established in 2000 to promote entrepreneurship in the higher education sector in Northern Ireland. It was formed in response to the implicit and explicit invitations presented in many reports and strategy documents issued by Government bodies to nurture and promote the entrepreneurship agenda within Northern Ireland.

It is likely that all UK universities, as a matter of policy, address at least some components of the various agenda of enterprise, entrepreneurship, employability, work-based learning and continual professional development. Although these are often presented as separate agenda, they are similar and do overlap.

However, there is little rigorous and empirical data around to indicate what in these agenda creates best practice for the university, student or employer (See Pittaway 2007). Some authors suggest there is little conceptual value behind some of these agenda simply because the university can do relatively little to support them. For instance Boud and Symes (2000, p.3) believe that 'work-based learning is still an idea in search or practice, a pedagogy that is undergoing development as it accommodates itself to the exigencies of the workplace and the university'.

The Centre's formation was, however, stimulated from outside Ulster and the funding for the first two phases of its existence has also come from external sources. Nevertheless its formation was welcomed and supported by the University because it has helped to address strategic objectives articulated in its Corporate Plan.

The University of Ulster's Corporate Plan was produced following extensive engagement with staff in faculties and departments and reflects the shared vision for the University. It sets a path for the future that has at its centre inclusiveness, transparency and cohesiveness. It defines 'what this University is about' and sets for us all a vision and core strategic aims that reflect our distinctive mission, recognises our campus strengths while supporting a unitary approach, and reflects a common purpose. The current Corporate Plan spans the period 2006/07-2010/11 for which University's vision is 'to be a university with a national and international reputation for excellence, innovation and

regional engagement’. For this the University includes, as one of its five strategic aims in the plan: to ‘establish the University as a sector leader promoting creativity and innovation’ for which its first supporting objective is ‘to develop further creativity, including entrepreneurship, within the curriculum’. Further supporting objectives then also include developing further the University’s research, knowledge and technology exchange and/or transfer activities, and further developing work which relates to the SME sector.

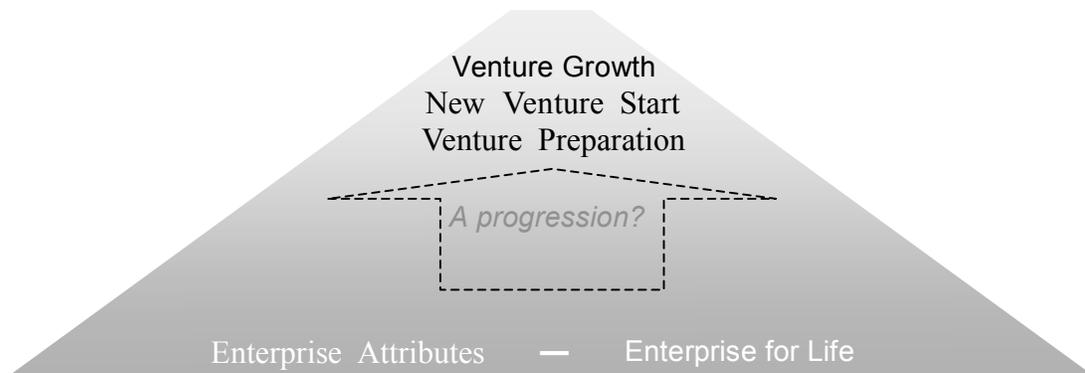


Figure 1 – A progression model of entrepreneurship

NICENT’s Contribution to the University

In accordance with its initial plan NICENT sought, in its first phase, to introduce entrepreneurship education into the University’s science, education and technology (SET) faculties. This was because the Centre was then following a funder-led model of entrepreneurship education based on business start-up (the upper part of Figure 1) and these faculties were supposed by the Centre’s funders to be the most likely sources of business ideas. (Bridge *et al*, 2008)

Then, following a review and a second funding package, NICENT made two changes for its second phase. It changed from what it saw had been primarily an ‘enterprise for new venture creation’ interpretation of entrepreneurship, to one more of ‘enterprise for life’ (the lower part of Figure 1) which it saw as a foundation on which new venture creation could later be based. It also extended its appeal into all the other faculties of the University including, for instance, the School of Art and Design. In doing this it became one of the pioneers in an integrated institutional strategy to embed entrepreneurship education (See Pittaway and Hannon, 2007).

University Factors Encouraging Entrepreneurship Education

There are many factors that have positively contributed to the process of embedding entrepreneurship within the University’s curriculum. For instance there was often a wish to have an affiliation with the Centre or its agenda:

- The Centre's funder, Invest NI, has a high profile and an established reputation in Northern Ireland. This helps in internalising the agenda because NICENT is then seen to belong to all faculties and not an initiative that arose out of a 'get lucky departmental scheme'.
- The Centre was able to continue to exploit its existing University collaborations, for example its links with Northern Ireland Science Park.
- Encouraging academic and research staff and students to become involved with the work of the Centre became easier with time as NICENT became more established and there was a realisation that the entrepreneurship agenda held sustainable possibilities.
- The Centre was an institutional pioneer and quickly established a reputation for excellence, winning several awards and, as important, receiving support from external professional bodies such as accreditation bodies and from its funder.
- Internally the students liked its entrepreneurship offering.
- It may also be important to note that the Centre pioneered its work in the Faculty of Engineering, a faculty that was highly receptive to the central concepts of entrepreneurship (innovation and change) and a faculty with well-developed IT skills among students and staff. This was important since one mechanism that the Centre used to deliver its entrepreneurship curriculum is through web-based learning.

There was also a desire to engage in the activities promoted by NICENT. To encourage engagement, the Centre not only provided curriculum content but also had a quality-approved framework for supporting an extended curriculum. It partnered with the relevant University bodies to assist students and staff in accessing new opportunities further to develop the curriculum aspects. These include business plan competitions that strengthened the curricula offering and allowed high quality university research to be exploited, not simply in the commercial sense but also in terms of exposure to expert networks and further skills development such as selling. Therefore its activities also supported some of the crosscutting aims under the strategic objective of the University to support creativity and innovation. Not only did business plan competitions and other activities create opportunities for knowledge exchange and transfer but also extra-curricular entrepreneurship programmes introduced new target audiences to the agenda including those who may have missed out on earlier education opportunities. In doing so, the activities of the Centre appealed to the University because it delivered aspects of the Corporate Plan including:

- Widening student access to higher education.
- Maintaining reputation for excellence in teaching that is student-centred where entrepreneurship could be observed as a natural fit for progressive education.
- Maintaining focus on regional engagement and inclusion of all in society/culture, e.g. community-based activity, social enterprise

Rewards also helped because staff and students often benefited from their engagement in

the entrepreneurship agenda. Academic staff have received promotion as a result of championing enterprise in a particular faculty and a number of distinguished business fellowships have been awarded to staff. Others who have worked with NICENT have become involved in further opportunities such as becoming an academic enterprise co-ordinator for the faculty, which has in turn afforded new positions for academic enterprise. The resultant staff turnover has created new champions for the work of the Centre and has served to increase the number of staff exposed to entrepreneurship. Since the University has a multi-campus structure, a good residual stock of enterprise champions is necessary to sustain the work of the Centre throughout the University and infiltrate its culture.

University Factors Inhibiting Entrepreneurship Education

The Centre may be contributing towards the achievement of key parts of the University's Corporate Plan, but that does not mean that it and its message have been universally welcomed within the University. Alongside the factors helping the delivery of the entrepreneurship message there were other factors inhibiting entrepreneurship, at least in the way that NICENT was doing it.

A significant inhibitor has, not surprisingly, been internal politics. In a situation in which not only faculties but other centres and departments are competing for attention, a new centre is not always welcomed. Entrepreneurship was perceived as similar to issues such as employability and innovation, which was the responsibility of other parts of the organisation. In fact at the early stage when the Centre was focusing on the business start-up aspect of entrepreneurship, this was seen to be competing with other forms of entrepreneurship such as social enterprise. The University of Ulster is not alone in its experience of institutional competition between different departments. The Centre was established in 2000 as one of thirteen centres of excellence across the UK to promote entrepreneurship but many of them have now been subsumed within a specific faculty or amalgamated with an existing centre or department.

This realignment of services may well be linked to the budgetary concerns of UK universities but they are also thought to be fuelled by the lack of empirical evidence to support the link between entrepreneurship education and entrepreneurship activity and to show how entrepreneurial education is best applied. By establishing NICENT in the way it did the University chose to have a specific centre for entrepreneurship rather than making it the responsibility of one specific faculty. Whilst there has been tentative evidence to suggest there are advantages of having a separate centre for entrepreneurship (Pittaway and Hannon 2007) each university will have a different institutional strategy and a small separate centre can find it difficult to make its presence felt amongst the institutional crowding. This said, institutional crowding and competing agendas can be witnessed in overlapping bureaucratic structures where there can be too many committees dealing in isolation with the same issues. Even though the Centre had been in existence since 2000 a lack of clarity persisted for some time about its role and the responsibilities of its staff.

The University of Ulster has a structure of four regionally dispersed campuses, which

presents resource issues for any centre seeking to embed activity university-wide. Because the Centre was externally funded, the various faculties and departments did not have to contribute financially to entrepreneurship education. While this made it easier for their budgets it also lessens the extent to which they were sometimes committed to something which was available ‘for free’

A further factor inhibiting entrepreneurship might also be that it is losing its appeal as a new initiative. Like any initiative, once the initial newness wears off, it needs to be renewed occasionally. The Centre has offered the bulk of its entrepreneurship delivery through e-learning which may no longer be viewed as novel and will, in any case need to be refreshed on a regular basis to maintain its interest and relevance. Also there is now a plethora of business plan competitions that are seemingly linked to entrepreneurship courses and perhaps their over-use has weakened the curricular offering.

The Impact of NICENT

NICENT believes that its ‘enterprise for life’ approach to entrepreneurship education helps to establish a foundation of enterprise skills and attributes upon which students can later base a variety of entrepreneurship applications including social entrepreneurship and being entrepreneurial in employment, as well as the more traditional new business creation. It also believes that the Centre has had considerable success in introducing this approach especially to those people and areas of the University who were initially resistant to entrepreneurship because they saw it as being too commercially focused. As a result NICENT has been able to spread entrepreneurship education beyond the SET faculties that were originally targeted to all remaining faculties.

The extent of the Centre’s success in integrating entrepreneurship education in the University, despite inhibiting factors, may be seen by the University’s decision that as they now regard entrepreneurship to be sufficiently embedded within faculties, the faculties themselves should now assume responsibility for its continuation. NICENT might therefore be said to have succeeded in integrating entrepreneurship education in the various faculties of the University to the extent that the it has decided that the central promotion of this agenda by the Centre is no longer needed.

NICENT therefore has to turn its attention to further stages of entrepreneurship education, such as promoting new venture creation for those who want to do it, and supporting the University’s innovation and spinout agenda. As before, the University is not proposing to fund NICENT directly, it has to look to external sources for funding for this work.

The Requirements of NICENT’s Funder – Development Agency Factors

NICENT was formed in response to the implicit and explicit invitations presented in many reports and strategy documents issued by Government bodies to nurture and promote the entrepreneurship agenda within Northern Ireland. Its initial funding came from Round 1 of

the Science Enterprise Challenge (SEC) the purpose of which, according to the website of the UK Department for Business, Enterprise and Regulatory Reform (BERR), ‘was to establish a network of centres in UK universities, specialising in the teaching and practice of commercialisation and entrepreneurialism in the field of science and technology’. Beyond putting it in that context, however, neither SEC nor any of the other parties involved appears to have defined entrepreneurship.

NICENT’s second source of funding was Northern Ireland’s Industrial Research and Technology Unit (IRTU) which, in 2002, was subsumed into a new organisation, Invest Northern Ireland (Invest NI). Invest NI’s first corporate plan (for 2002 – 2005) indicated that ‘the keynote for Invest NI’s activities would be innovation and entrepreneurship’ and that it would ‘work closely with the education sector and others to encourage entrepreneurship. In retrospect, however, it is clear that, while the word ‘entrepreneurship’ was then sometimes being used with different meanings, there was little perception that there were any differences and therefore many people seem to have assumed that what they meant by entrepreneurship was the same as what everyone else meant by entrepreneurship. Thus there was no perceived need to define it each time it was used with the result that there was a significant element of miscommunication.

The Introduction of Some Definitions

However in 2002, the same year that Invest NI was formed, the Department for Enterprise, Trade and Investment, Invest NI’s parent department, jointly with the Department of Education (DE) and the Department of Employment and Learning (DEL), had published the Northern Ireland Government’s Entrepreneurship and Education Action Plan which indicated that it considered entrepreneurship to be ‘the ability of an individual, possessing a range of essential skills and attributes, to make a unique, innovative and creative contribution in the world of work, whether in employment or self-employment’ (DETI et al, 2002). Earlier than that, in 2000 – the year in which the Centre was founded, the Global Entrepreneurship Monitor (GEM) started and declared that, for its purposes, entrepreneurship was defined as ‘any attempt to create a new business enterprise or to expand an existing business by an individual, a team of individuals or an established business’. These two definitions thus encapsulated two views of entrepreneurship: a narrow one focussed on business start-up and a broader one considering entrepreneurship to be something relevant to a variety of work situations.

In 2003 Invest NI launched its Accelerating Entrepreneurship Strategy (Invest NI, 2003) which referred to the GEM definition of entrepreneurship but it also added that Invest NI defined an entrepreneur as ‘Someone who pursues business opportunities beyond known resources to create wealth’. (This definition is clearly linked to the Stevenson definition of entrepreneurship from Harvard which defined it as ‘the pursuit of opportunity beyond the resources you currently control’, but did not specifically limit that just to business opportunity.) This plan, for instance, indicated that ‘the keynote for Invest NI’s activities would be innovation and entrepreneurship’ and that it would ‘work closely with the education sector and others to encourage entrepreneurship’. It reported that Invest NI’s mission ‘was to accelerate economic development in Northern Ireland, applying expertise

and resources to encourage innovation and achieve business success, increasing opportunity for all within a renewed culture of enterprise' and that for this it would have 'three interdependent client-facing groups: Innovation and Capability Development, Entrepreneurship and Enterprise, and Business International'. 'A key focus for the (Entrepreneurship and Enterprise) Group will be the creation of a more entrepreneurial culture, which is required to develop existing businesses and generate more business starts. The perception of enterprise will be positively enhanced by highlighting the contribution of business people to the Northern Ireland economy and by reinforcing this within the wider education system to encourage more to adopt an entrepreneurial outlook.' While this plan did therefore refer to an entrepreneurial culture generating more business starts it did not appear to use the term entrepreneurship only in that context. It could therefore be construed as being consistent with the wider definition of entrepreneurship used in the Entrepreneurship and Education Action Plan.

Perceiving Different Interpretations

Nevertheless, when it took over responsibility for NICENT's funding, Invest NI included in the Centre's contract a target for the number of businesses started by students. NICENT itself had started by assuming that all aspects of entrepreneurship were the same and had therefore adopted an 'enterprise for new venture creation' approach as it appeared to be the standard model. Later, however, (as described above) it changed to an 'enterprise for life' approach which it saw as being a more appropriate first step for the majority of students, and one which was closer to the official Entrepreneurship and Education Action Plan.

Such differences in interpretation took time to become apparent, possibly because at the early stage of the Centre's existence most parties seem to have assumed that theirs was the only interpretation and so they didn't look for others. Northern Ireland does not seem to have been alone in this but eventually the differences began to be noticed. In 2004, for instance, Hytti and Kuopusjärvi (2004), having evaluating a range of entrepreneurship education initiatives, published a paper that categorised three different roles which might be assigned to enterprise and/or entrepreneurship education programmes depending on whether the aim was:

- To learn to understand entrepreneurship (What do entrepreneurs do? What is entrepreneurship? Why are entrepreneurs needed?), or
- To learn to become entrepreneurial (I need to take responsibility for my learning, career and life. How to do it?), or
- To learn to become an entrepreneur (Can I become an entrepreneur? How to become an entrepreneur? Managing the business.).

A Progression Approach versus a Business Start Objective

Despite the approach taken by the official Entrepreneurship and Education Action Plan, Invest NI did not adopt a broad approach to entrepreneurship. Its second Corporate Plan (for 2005-2008)

described itself as ‘a strategy for being entrepreneurial, innovative and international’ and indicated that the organisation’s ‘economic development efforts will therefore focus on three key economic priorities: being entrepreneurial, being innovative and being international’. While those phrases might appear to have used the word ‘entrepreneurial’ in a broader context the plan went on to say that ‘Entrepreneurs are the bedrock of a vibrant and balanced economy. They make a vital contribution to prosperity and social cohesion’ and specifically indicated that ‘the implementation of the “Accelerating Entrepreneurship Strategy” was targeted at encouraging an increase in business starts’.

Although it thus took a narrower approach, this interpretation was, nevertheless, still consistent with a view of entrepreneurship as a progression from an ‘enterprise for life’ foundation to the stage of ‘new venture creation’ and subsequent growth (see Figure 1). Thus, in adopting an ‘enterprise for life’ approach, NICENT believed that it had the potential to ‘sell’ this to Invest NI as a necessary step, appropriate to many students, and upon which new venture creation could in some cases later be built. Entrepreneurship, this model suggested, could be seen as a progression from the acquisition of enterprising attributes and an ‘enterprise for life’ approach to the realisation of concrete ventures in business, the social economy or other fields

However Invest NI was increasingly concentrating on inward investment and on the promotion of new high-tech and high-growth businesses. The most recent Invest NI Corporate Plan, the third, (for 2008-2011) dropped the earlier reference to its strategy as ‘being entrepreneurial, innovative and international’ and indicated instead that there would be a focus on three priority actions for economic growth: realising client potential, shifting sectoral focus and frontier technologies’ and that the ‘main short-term priority will now be to realise the potential of existing businesses across all sectors’. It also indicates that ‘our Accelerating Entrepreneurship Strategy ... will increasingly emphasise the acceleration of high-potential existing and start-up companies’.

The Result

The definition of entrepreneurship has been an issue in the relationship between NICENT and its main funder and, in this, three phases can be discerned:

1. Initially there was an assumption that entrepreneurship meant the same thing to everyone. Therefore, although it was sometimes being used in different ways, those differences were often not perceived as entrepreneurship, and as a result were often not closely defined.
2. In the second phase the possibility of different interpretations became apparent. NICENT consciously adopted a broader approach to entrepreneurship, believing it to be a more appropriate initial introduction to entrepreneurship for the majority of university students and a foundation on which the narrower business start-up aspect could later be built. The Centre’s funder, Invest NI, however increasingly emphasised its narrower objective of just seeking to promote business starts.
3. Recently, in line with its narrow objective, Invest NI seems to have changed its definition of entrepreneurship from one which was consistent with a progression model (see Figure 1) to one which seems to apply exclusively to the formation and growth of high-tech businesses.

Apart from the initial SEC award, Invest NI has been NICENT's main funder. However, based on an undertaking from the University that it will now support the entrepreneurship education which it considers to be embedded, Invest NI has declined to renew its Phase II funding arrangement. In any case the current narrowing of Invest NI's interpretation of entrepreneurship would appear to preclude further support, unless the Centre can show that it too is focussing on stimulating high-growth start-ups.

A Comparison between the NICENT and Invest NI positions

The Centre initially viewed entrepreneurship education as being about how to start a business. Later, having considered different interpretations of entrepreneurship, it looked at what was best for its students and consciously adopted an 'enterprise for life' approach. This was consistent with the Entrepreneurship and Education Action Plan and interpreted entrepreneurship as a process which leads potentially to a variety of economically and socially beneficial activities rather than as a route leading exclusively to new business venture creation.

NICENT believes that 'enterprise for life' is a foundation upon which 'enterprise for new venture creation' can later be based. It also believes that such new venture creation need not only be limited to high-potential business but could also happen in areas such as the arts, public services such as nursing, and the social economy. Figure 2 illustrates some of the different types of enterprise that might grow from the 'enterprise for life' foundations. However the different types are often not categorised until the new venture creation stage when they start to take concrete shape, especially when they are given a specific legal form.

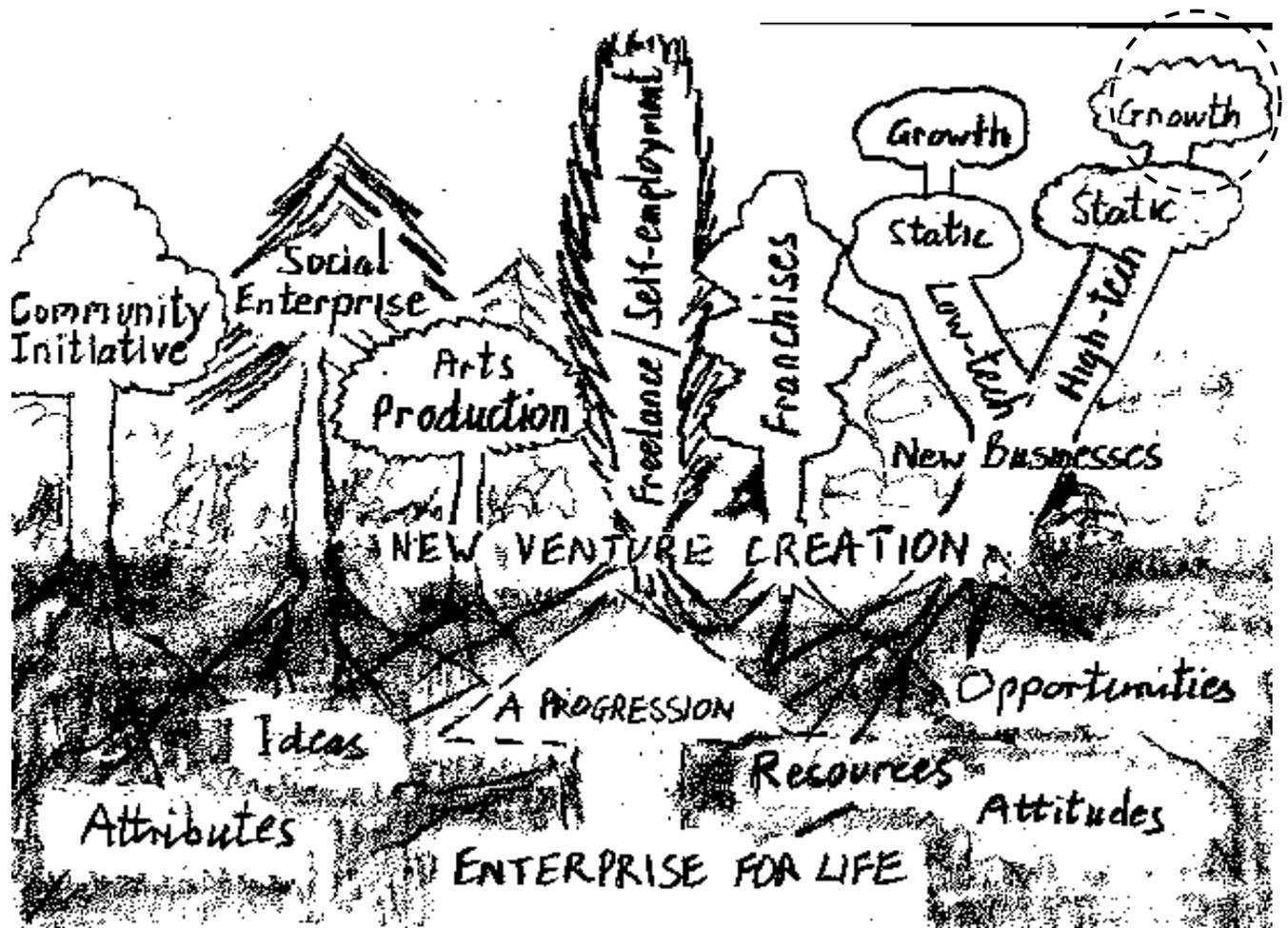


Figure 2 – Types of Enterprise

The implications of the new Invest NI view

The shift in Invest NI's emphasis appears to define entrepreneurship as being concerned only with the high-potential/high-growth (and ideally also high-tech) businesses, which Birch called 'gazelles'. It therefore has this in common with an initiative in Denmark which has defined entrepreneurship specifically as 'the entry and creation of high-growth firms' (Gabr and Hoffmann, 2006). It is clearly within the remit of Invest NI, and of the Danish initiative, to focus on such companies, if they can be identified at an early stage, but defining, or appearing to define, entrepreneurship in this way raises other concerns.

Definitions that limit entrepreneurship only to high-potential/high-growth businesses suggest that the only part of Figure 2, which is really entrepreneurship, is the very top right-hand part of the picture (in the dashed circle). This view is not therefore consistent with the progression model that suggests that all the various enterprise outcomes are different parts of an entrepreneurship continuum built on the same general foundations (characterised as 'enterprise for life'). Do the more limited definitions, therefore, suggest that the earlier stages are not part of entrepreneurship or that high-growth businesses come from a

different process? If the earlier stages which might lead to outcomes other than gazelles are not entrepreneurship, then where does entrepreneurship start? Presumably it must start only when it is clear that an initiative is going to be a gazelle, but often the only way to identify a growth business is when it has actually grown. Using this narrow definition to target entrepreneurship initiatives is therefore problematical.

Could it be that those who define entrepreneurship in such a narrow way have based their definition, not on a process that they have observed, but on one that they would like to exist: not on reality but on desire. Do they hope that by defining entrepreneurship in this way, a method will appear which will take them only to their desired destination?

The problems of trying to specify what exists based on what you want – Some analogies

The logo which Invest NI adopted for its ‘Go For It’ campaign looks as though it could be made from blue and green M&M sweets. However M&M sweets are only available in packets of mixed colours. In that case, if Invest NI had a preference for blue and green sweets, then arbitrarily defining only the blue and green ones as sweets and trying to buy packets only of the sweets thus specified, is likely to lead to frustration.

An alternative analogy might be growing trees to make wooden ships. If shipbuilders prefer the wood of oak trees then it is relevant to try to grow trees only from oak seedlings as oak seedlings are genetically and visually different from the seedlings of other trees. If however, for certain key parts of their ships, the shipbuilders want curved timber, then trying to separate out those seedlings which will grow into curved trees is a pointless activity because the curvature is a result of the way in which the trees are grown, and is not a function of which trees are grown in the first place.

In the latter analogy is the definition of entrepreneurship as referring only to high-growth businesses like specifying oak wood or specifying curved wood? Is the strand of development which leads to high-growth businesses distinguishable early in people’s lives (in NICENT’s case when they are students) or are high-growth businesses the chance result only of later factors applied to receptive (i.e. entrepreneurial) people?

This difference in definitions suggests different perceptions about the nature of entrepreneurship. Is it a human activity which has a number of possible outcomes depending on circumstances and individual aims, or is it a sequence leading exclusively to the creation and growth of new high-tech businesses? In other words is entrepreneurship determined by its process or its results? That difference in perception will affect people’s reactions to ‘entrepreneurship’: including both what they perceive to be its benefits and whether they self-identify as entrepreneurs. That in turn might affect its uptake.

The implication for NICENT, however, is that so far it has been able to make the case to Invest NI that its ‘enterprise for life’ approach to entrepreneurship education has both been appropriate for student needs and has been helpful to Invest NI by providing a foundation for possible later new venture creation starts including high-growth businesses. If, however, Invest NI adopts a new definition of entrepreneurship, which is contrary to that model

then, even if the definition is flawed, it will still serve to preclude Invest NI support for the Centre's current efforts.

The Response of NICENT's Consumers: University Staff and Student Factors

Having faced initial staff resistance in some faculties, the move to an 'enterprise for life' approach to entrepreneurship education greatly facilitated its integration in diverse subject areas. Interpreting and applying entrepreneurship education in the context and language of a specific discipline area aided understanding of the broader definition of entrepreneurship and its relevance for both staff and students. This was seen as a pivotal turning point in NICENT's integration efforts, which not only helped to get the 'job' done, but also excited many academic staff involved in course development who now saw an opportunity to enhance their programme offering and produce more cutting-edge graduates. Presented below are examples of some of the feedback received from Ulster's students and staff:

'I am still keen to write my children's books and would like to start this in the next few months. I don't see them as being a moneymaker but that is not the point of it. I want a challenge (one of the reasons for doing this course). I will know more about business and be better versed to know where to find information and have a better knowledge.'

'I discovered that there were in fact different types or categories of entrepreneurs as well as the concepts and techniques of entrepreneurship. I had not thought of the role of the social entrepreneur and I found this whole area very interesting- something I would like to explore further!'

'I learnt a lot of basic information surrounding entrepreneurship and particularly the importance of funding and finance to starting up any business or business idea.'

'Our degree course aims to develop students as reflective creative practitioners, who increasingly expect to have 'portfolio careers', working collaboratively on projects and generating their own work. It was the discovery that entrepreneurship is itself a creative process that made me realize what it had to offer our students. I had previously thought of it as a 'hard' business process, but in fact it emphasizes knowledge of your professional field, and the ability to spot opportunities and formulate creative responses to them. Rather than changing what we do, entrepreneurship education has enriched our programme by making one of our goals clearer: we were seeking to integrate entrepreneurial thinking, but didn't know what to call it. It's clearer for the students, too.'

NICENT, and University, Reaction

It would seem that the 'enterprise for life' approach contributed to the agenda eventually becoming consumer-lead rather than purely Centre driven. Courses began to request NICENT assistance to integrate entrepreneurship education within their programmes of study. A 'tipping-point' was reached within the University's culture that began to view entrepreneurship education as a 'good thing' rather than just another 'tick-box' exercise.

However the University's recent response to the Centre's success, which is that faculties will assume responsibility of continuing integration efforts and in-curricular provision, has been observed as a potentially onerous task by some faculty staff. Many staff seem to be of the view that, because integration efforts are still at a basic stage of development within some disciplines (particularly non-SET) and entrepreneurship education still requires to be integrated in further areas, central support is still very much required. However the University's view of the future role of the Centre is that it should now aim to add extra-curricular initiatives to promote spin-offs and new venture creation.

Reflections and Conclusions

To date NICENT had received economic development funding to embed entrepreneurship education within the University of Ulster. It started with a funder driven interpretation of entrepreneurship primarily focused on new venture creation, largely because, at that time, it was not perceived that there could be other interpretations. However, once it considered a broader range of entrepreneurship options, the Centre changed to an 'enterprise for life' approach because it believed that this was more appropriate to the needs of its consumers: the University's students and staff, while still being consistent with its funder's requirements. This approach was indeed well received by the staff and students and helped NICENT considerably in its efforts to integrate entrepreneurship within faculties.

However, the University now considers that entrepreneurship education has been sufficiently integrated to the extent that it now has undertaken to continue that work directly through the faculties themselves, without further Centre support or external funding. Invest NI, which had been funding NICENT's work to date, has therefore decided that it does not need to fund that aspect of the Centre's work any longer and, as a consequence, NICENT's integration work now has to cease, as neither promoter will now fund it. In addition, Invest NI has recently changed its definition of entrepreneurship, and therefore, in order to bid for further resources from that source, the Centre will have to refocus on promoting high-tech/high-growth business ventures instead. Ironically, despite its attempts to broaden entrepreneurship education to make it more relevant to all its stakeholders, due to funder requirements NICENT has now had to go in a full circle back to its initial position of concentrating primarily on new venture creation. This paper has sought to explore the paradoxical nature of some entrepreneurship policy and its implications for the promotion of entrepreneurship. It also highlights the need for a common understanding of entrepreneurship, which is acceptable to both policy-makers and entrepreneurship educators.

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**Accompanying SMEs for intensive growth : creation and
implementation of a public-financed programme
Case study of France Investissement Le Club**

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Intensive-growth SMEs are fascinating. However, growth is not something simple. Research highlights the very varied and non-linear developmental paths to growth which are characterized by rapid phases alternating with stabilisation and sometimes slowdown or collapse. Financial requirements are taken for granted. But it is not enough just to resolve the necessary questions of financing growth. These companies need to know how to manage innovation, internationalisation, sustainable development issues within global strategies. They must often be able to metamorphose themselves. This communication presents France Investissement Le Club, a public management programme to help these SMEs to become and to remain competitive.

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**Accompanying SMEs for intensive growth : creation and
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Intensive-growth SMEs are fascinating ; they account for between 2 and 10% of all durable companies depending on the country (Julien 2002), and even if their numbers are limited, they are at the root of strong job creation in industrialised countries (OECD 2002) and are developmental models which attract the attention of researchers and members of public institutions. The stakes are high and varied ; macro-economically, the lack of medium-sized SMEs in France capable of creating jobs and contributing to foreign trade is often highlighted (Lefilliatre, 2007). And there is the perennial question, how can SMEs be made to grow ? What kind of support can we offer for their development and what are the hurdles to be cleared ? On a more micro-economic scale, growth in companies can be accompanied by solid, positive financial results (KPMG2008), thus improving return on investors' investments whether public or private.

It is therefore apposite for researchers to seek greater understanding of the behaviour and developmental conditions of these SMEs, by focussing on the conditions for growth, while not forgetting to take into account their management specificities.

However, growth is not something simple. Research highlights the very varied and non-linear developmental paths to growth which are characterized by rapid phases alternating with stabilisation and sometimes slowdown or collapse (Mustar 2002). Growth is either considered as a dependent variable, on many conditions – making it difficult to propose a complete and predictive model embodying absolutely all of the latter (Janssen 2002) -, or as an independent variable (Covin et al. 1997) responsible for the complexification of company management modes.

Growth is also demanding ; sustained by both internal and external factors and also by high-powered 'conquering' managers (Bramanti 2002), growth requires effort and a wide range of know-how. Financial requirements are taken for granted : growth requires capital, and there is a strong commitment of certain public organisations to increasing investment provided by the sometimes risk-averse private sector. In France, the two

main public players are OSEO¹ and CDC Entreprises² via the France Investissement programme. The first organization offers guarantees, repayable short-term loans, and participating capital loans. The second provides capital investment.

But it is not enough just to resolve the necessary questions of financing growth. These companies need to know how to manage growth, and to this end sustainably organise all their material and immaterial resources around a solid competitive advantage. They must often be able to metamorphose themselves to keep pace (Hay and Williamson 1991). These needs are less explicit and less sharply defined by company managers, often submerged by the intensity and variety of activity generated by their development.

To address these non-financial needs, the 2007 'France Investissement.Le Club' management programme was created in the wake of the 2006 'France Investissement' public-private scheme, initiated by the public authorities. The latter aimed to finance by capital investment the creation and development of SMEs with intensive growth potential. Its public part is orchestrated by CDC Entreprises, a 100 % subsidiary of the Caisse des Dépôts³, whose mission is to increase the amount of capital invested in innovative SMEs and top-up the private sector offering. This public fund has two billion euros to cover the six-year duration of the scheme. Its private part, funded by various corporate investors, accounts for one billion euros for the same period. Both public and private partners share the main investment policy guidelines as defined in their mutually validated charter.

At the same time, the backers of 'France Investissement' wanted a support programme to be set up, the aim of which is to provide assistance to managers of the companies in order to complete and optimise the financial investment made. The idea is to improve and develop management conditions by offering a range of flexible, easily accessible and optional services to all companies benefiting from investment. This programme is to

¹ OSEO is a public organisation offering financial aid to innovative SMEs and loans plus guarantees to all of them.

² Caisse des Dépôts is a public financial institution that performs public-interest missions on behalf of France's central, regional and local governments. CDC Entreprises implements the public-interest investments programme run by Caisse des Dépôts, since 1998.

³ Caisse des Dépôts is a public financial institution that performs public-interest missions on behalf of France's central, regional and local governments.

be designed and overseen by a project leader with the focus on three areas of support to managers : innovation, opening up to international markets and sustainable development. Indeed, the backers of France Investissement consider that the companies invested in must tend towards achieving the best performance in these three areas for reasons of economic efficiency, and in keeping with the overall aims defined in the charters.

Consequently, the Club was launched to address the loneliness of SME managers in general and the concerns of intensive growth companies in particular, and to improve performance by joining a network (Mustar 2002 ; Ayerbe 2006 ; Levratto 2008), whether virtual (which is the object of a collaborative France Investissement Le Club website) or tangible via meetings concerning growth issues and specific training schemes.

In the first part of our paper, we will present a theoretical approach to expanding SMEs and their issues. In the second part, we will consider the process of creating this management programme: exploratory study of 13 expanding SMEs and 26 people from investment funds and diverse organisations, creation of a driving committee (composed of 15 people, SME and investment fund managers, university academics, members of public institutions) and lastly the content –taking into account the theoretical knowledge, exploratory findings and the recommendations of the driving committee. We shall focus on exploring why such a programme succeeds or fails.

We will conclude by highlighting the originality of this operation - both in terms of its conception and its implementation- and the benefits for public and private investors financing operations and as well as for SME management. We will emphasize the interest, in spite of the difficulties, of close collaboration between those working in the public sector, in universities and SME management, to produce ‘ applicable knowledge ‘ and participate in improving performance for actors and stakeholders alike.

1. Intensive-growth SMEs : from the academic to the ‘in-the-field’ point of view

Right from the start, the deliberations on this management programme have been notable for the willingness of the France Investissement guidance Committee to take the initiative relative to the SMEs financed by France Investissement. In fact, the guidance Committee wanted to anticipate the often unexpressed or not yet fully formulated needs

of managers, offering a package both adapted and proactive concerning those points complimentary to financial support. There was a double objective : on the one hand to improve financial performance and thus profitability of funds invested ; on the other, in keeping with the charter of values of France Investissement, they wanted to inject into the SMEs, knowledge, practices and even values for development that are still rarely considered.

Aiming for a resolutely ' bottom-up ' approach, it was important to have an in-depth understanding of the population involved. Hence two methods were used: an academic approach concerning the nature of the growing companies, and a qualitative survey of SME managers and investment funds, in order to understand from an in-the-field perspective, the driving forces underlying growth as well as any obstacles to the latter.

1.1 Literature review : different growths, pathways, strategies

Academic publications define intensive growth in a very heterogeneous manner. There are multiple indicators, which can be human, economic or financial, evaluated over more or less time. For example, the French gazelles⁴, are companies which for two consecutive years have shown growth of at least 15% of their payroll. The Banque de France (2004) qualifies intensive growth as an increase of more than 10% in turnover per year over 5 years. KPMG (2008) identifies intensive growth companies as those with four times the growth of the activity sector average over five years. OECD (2002), has defined an employment variation index (Mustar index), where intensive growth companies are the top 10%.

Given the diversity of these definitions, comparisons are not easy, and statistical adjustments often have to be made when working on growing SMEs of different nationalities (Picart 2006). Nevertheless, research can be broken down in terms of explanatory growth variables including conditions, or growth process modes.

1.1.1 Growth and strategy

Whereas SME researchers often highlight the polyvalent, all-powerful nature of SME managers, and the generally informal nature of their strategies (Julien 1994), in person, the intensive growth SME managers appear on the contrary to be willing to delegate to non-owner managers in

⁴ name given to intensive growth companies in an article by David Birch (2002)

order to divest themselves of the operational tasks and concentrate on planning and more strategic functions (Julien 2000 ; Papadaki and Chami 2002). These managers are attracted by market opportunities and have administrative experience : a study on ' *SMEs which grow* ' (KPMG 2008) shows that 62.5% of company managers have four years higher education (*Bac + 4*) and have had management experience, 50% with more than 9 years. They have quite clear strategic vision (Julien 2002). Without going to an ' anti-PME ' extreme (Torres 1997), it is nonetheless possible to see that the intensive growth SMEs do not all embody the traditional SME characteristics. The constraints of investment and/or frequent recourse to external capital, mean laying down ' business plans ', thus focussing financial needs but also the objectives to be followed and the resources needed to achieve them. And the precision of actually formalising strategy allowing the SME manager to better resist external constraints and upheavals (Boutary and Havette 2009), would appear to be a positive point.

Nevertheless, the ' intentional ' strategy (Raymond and St Pierre 2008) is not always achieved. The business plan driven objectives are not systematically achieved. There are different theoretical approaches (strategic alignment, resources based theory) allowing the strategic question to be reformulated ; was the chosen strategy a good choice ? Were the strategies envisaged and the means implemented coherent ? Were sufficient resources obtained and have they been used in the best way ? The answers are not easy to find for those in charge. The latter often lack the time to recognise, analyse and find the solutions to their problems, swept along as they are by a growth rate which can exceed their competence, know how or even just their availability (Garnsey and Heffernan 2003). Their business capabilities are unfurled in haste, under the typical pressurised SME environment (Julien 1994) ; limited rationality sometimes wins over analyses which would allow time and resources (human - in terms of competences, and availability -).

Mustar (2002) maintains that there is not one particular strategy for growing companies ; but the up side is that the highest performing ones have the capacity to take on board several dimensions. Such high-performers are not polarised on production strategies but rather, know how to adapt to the markets (Smallbone, Leigh et al. 1995) especially by getting closer to their customers. Mustar (2002) notes that 3 out of 4 growing companies measure customer satisfaction and 2/3 systematically carry out competitor and technological scanning. A strong link to the specific environment in which the company is operating is part of company practice.

These same authors link growth to innovation to the point of maintaining that there is no growth without innovation, whether it be radical (allowing markets to be developed) or incremental (reinforcing productivity) (OECD 2002).

But this innovation challenge comes at the expense of risky situations (especially for the most innovative ones) where the traditional banking system fears to invest (Audretsch and Lehmann 2004). To circumnavigate this constraint, certain companies implement alliance strategies, which allow them to obtain sufficient funds to invest and develop their activities. However, many of them open their capital to investors.

Export, is another strategic choice. Different studies show that while this is a pre-condition for intensive growth, it is not self-generating : a buoyant national market is just as good as an export one in terms of growth. Notwithstanding, more than $\frac{3}{4}$ of intensive growth companies export (half of them export for more than a third of their turnover and have set up subsidiaries abroad). And here, it would be useful to refer to the overall characteristics and constraints of exporting for SMEs (Boutary 2009 ; Torres 2007).

1.1.2 Resources and organisation

Various resources are necessary to set out the strategy and exploit the opportunities (Chrisman, Bauerschmit et al. 1998), particularly for SMEs checking profit growth and thus the building of a competitive advantage (Grant 1991). Resource mobilisation should be possible, but it must be organised : badly allocated new resources can diminish productivity and require additional liquidities (Garnsey and Heffernan 2003). Thus, ' gazelle ' organisation is seen as complex, decentralised, participative and on a learning curve (Julien 2000). They need to know how to rearrange themselves to bolster innovation (Julien 2002). But it should be noted that growth is not just linked to growth markets : more than half of intensive growth companies work in low growing markets (Mustar 2002), lending sway to the idea of an optimisation and a necessary differentiation of resources to create a competitive advantage.

The question of managing the human resources is primordial. The manager neither acts alone nor succeeds alone (Oseo 2009). He depends on his staff, as much for the risk-taking as for the strategic choices, but also on external advice, private or professional networks and consultants. He advocates teamwork, staff training (more than 4% of the payroll is devoted

to training (KPMG 2008)) and good communication (Baringer and al. 1998).

The need is for really competent staff who are also highly implicated in the company, subscribing to a sometimes far from optimal wages policy, in turn compensated by other systems of remuneration, and a strong company culture. Which in its turn poses the question of recruiting and retaining these people in the company.

1.1.3 Management programmes for intensive-growth SMEs

It is a delicate business to review intensive growth SME management programmes. They are often aimed at targeted strategic choices, most commonly innovation or exports, where growth is an umbrella word synonymous with 'development'. Backup is mainly financial (for example, Oseo) or informational (for example, Ubifrance⁵). Meaning that it is the internal financial factors or the environmental ones which take pride of place: companies are helped to get enough financial resources and to gain a better grasp of their environment. And while published work reiterates the capacity for strategic planning and organisation, back up here is minimal. The 2004 report 'For a growth 'eco' system' emphasised that '*public authorities do little to help companies adapt to globalisation and the increasing burden of innovation*' (Blanc 2004, p 12). Programmes are often fragmented, entry and implementation rules, too hard (Bramanti 2002). Other criticisms cover the insufficient backup given to SMEs concerning network insertion (Raymond and St Pierre 2008), or the ineffectiveness of management programmes due to lack of targeting (Levratto, 2008). Thus, to move away from the traditional criteria driven segmentation (workforce, location, or activity sector), we need to take another look at the SME typology and their business models.

1.2 View from 'in-the-field': survey of SME managers and investment funds

In 2007, a survey was carried out covering the period from the end of September to mid-November, and based on in-depth interviews and meetings with 13 company managers, 26 fund managers and different professionals. The company sample was derived from contacts via investment managers from CDC Entreprises or from funds in which CDC Entreprises have a stake. This sample highlighted the advantage of carefully

⁵ UBIFRANCE is the French agency for company international development. It offers information and advice (concerning the markets, procedures, international bids for tender...), and services (e.g. recruitment of young volunteers ready to work in companies abroad).

selecting those companies corresponding to the France Investissement programme target, that is those companies with high development potential. However, it also highlighted the drawbacks of concentrating largely on one category of growing companies, since they turned out to be almost all what are known as 'High Tech'⁶ companies. The interviews were carried out using extremely openly-worded guides (an 'entrepreneur' guide and a 'fund manager' guide) allowing for the freest possible expression of opinions, but with the emphasis on the three topics, innovation, exports and sustainable development, targeted by the project backers. The information/interviews were then analysed.

The first point to be noted is that when entrepreneurs are invited to speak about the three abovementioned topics, they are generally very talkative. Indeed, in most cases, they consider these areas to be determining factors. On the other hand, this topic-based approach also clashes with the reality of the company which is 'a whole'. Hence, the partitioning of reality into certain areas (useful for members of public institutions looking for ways and means to facilitate company development) is quickly called into question by the entrepreneur being interviewed about the key points for his company's development.

This is especially true concerning innovation, which frequently is seen to be the very foundation of strategy as well as being a highly transversal, structuring factor. All companies encountered reacted very positively to the mention of innovation with its highly technological connotation, however, innovation opens onto the bigger picture of the idea of company strategy and its organisation where notions of differentiation, adaptability, reactivity and anticipation are highly stressed.

Consequently, at the mention of innovation, it is not unusual for the company manager to talk about not only R&D, production processes and products, but also many other areas of company life or functions, such as the way of looking at how to move into foreign markets, or how to run a team or create and cultivate partnerships. Opening up to foreign trade is also, although perhaps less so, a commonly shared strategic concern, which is harder to translate into operational reality. For 'High Tech' companies, international development goes without saying. There are world markets by definition, and the need to amortize R&D spending usually transforms the subject 'size of the market' into a crucial question. These firms often know

⁶ In other words companies whose development (and even existence) is based on one (or several) technological innovations.

how to enter the international stage via norm accreditation procedures, since these are vital to them. Similarly, patent applications are in an international context. The more traditional companies, from the moment there is a real ambition to develop, all want to open up their markets and take advantage of new opportunities, even though actual implementation may be quite slow. This is a development model or activity sector question. Thus, a company created at the outset from an existing one on the basis of the possibilities available from the parent's sustainable additional activity, will only look towards the international market later on. The same is true for a company of the communication agency type, for example, which will only start thinking about international development when ambitions are running really high.

As a general rule, whether it is High Tech or traditional, companies are on the whole relatively helpless when it comes to going international. Overall, 'how do you do it?', is a common question.

Questions concerning sustainable development, embodied in 'social and environmental corporate responsibility', are considered in a variety of ways. They are not systematically a part of company strategy and they are not necessarily 'obvious'. However, they do appear to be closely related to whether the company manager is ready to become involved. In fact a focus on the abovementioned issues within the company often stems primarily from the manager's personal convictions and values in this area⁷. Nevertheless, those managers who have incorporated them into their strategy, cite economic efficiency as the reason. Concerning the social or societal aspect, this comes from the company's relationship with its market (differentiation concerns, desire to show a certain company image, anticipated demand pressure) its consumers (who, assumed to be ever better informed, are thus expected to choose the companies with the highest 'societal added value'), or its prime contractors (such as local communities who are especially sensitive to the company's involvement on their territory). ; The concern about social or societal aspect is also related to human resources management staff : contributing to staff motivation, concern for their 'well being', considered as a factor for improving company profitability. Sometimes, it can also be a requisite condition for exchanges, indispensable for catalysing innovation), or a useful way for creating a 'company culture', based on values, and fundamental to an identity on which the company's growth can be based.

⁷ Examples : 'What makes me get up in the morning is the thought of creating here long-term jobs',

On the environmental side there are obviously the questions of image, identity, as well as relating to the market (today, it 'sells' to be 'ecological'), to which can also be added more mundane considerations such as reducing costs by economising energy.

About public support concerning the three topics above, managers have different viewpoints :

- The existing innovation support tools remain very largely directed towards their initial goal : supporting technological innovation. A certain number of them aim to open up the spectrum of applications (innovation in organisation, processes, marketing, ...), which is doubtless a good thing. However, it raises a slightly uncomfortable question for those entrepreneurs in the sectors eligible for aid or support. Looking at the real core of innovation support under its 'historical' and hence technological meaning, we can see that 'High Tech' managers are very familiar with these support mechanisms. They know which door(s) to knock on, and most of them have worked out their own 'evaluation' as to whether to ask for this or that deal. Exchanges between them allow transmission of this special 'know how'. Entrepreneurs often consider that the range of existing tools does quite a good job (as much qualitatively as quantitatively) in answering their needs. The exception is the need in the priming phase, which is only partly satisfied⁸. On the other hand, the more traditional companies often ignore the existence of innovation support, and even when they do know of some mechanisms, they have limited visibility as to the field(s) where they can be applied and frequently dismiss them as 'not for us'.
- On the international front, the aid and public support mechanisms are very obviously less well identified than for innovation. As an example, 'VIE'⁹ is much less well known than 'CIR'¹⁰. Aid visibility, but also the visibility of the promoting organisations, the entry points that can be contacted, remain quite low and are often problematic.
- Finally, for sustainable development, the managers, including the most determined ones among them, do not seem to be able to identify the support mechanisms in these domains. The French

⁸ This overall 'satisfaction' of managers results in part from the fact that those who have been part of the survey are heading up companies which are already well on the way to success

⁹ Volontariat International en Entreprise (*International company volunteers*)

¹⁰ Crédit Impôt Recherche (*Credit Tax Research*)

Environment and Energy Management Agency (ADEME)¹¹, is the only organisation mentioned for the environmental aspects. Some mention initiatives stemming from private associations, themselves supported by public players through whom they have been able to obtain support.

Out of these meetings with entrepreneurs, but also with the different types of professionally active people likely to be able to support them in one way or another, we can tease out a certain amount of more transversal information, all of which is important to take into account when it comes to defining an action plan.

Firstly, we can see that entrepreneurs are, if anything, over rather than under-informed. They are not asking for any more information. Adapting the support information to the company situation and not aspiring to blanket-cover is the nub of the advice problem. Support provided to companies should be defined as a function of the distinctive characteristics of the benefiting companies and in particular of this specific category of 'intensive growth companies'.

In addition, cross-company exchanges are especially valued. Sharing experience, even if this flies in the face of the often fiercely independent spirit of every entrepreneur and what he does, is particularly valued. The voice of another entrepreneur, testifying to his or her own experience, has invaluable legitimacy.

This dual academic and in-the-field study has made it possible to better define the characteristics of growing SMEs, but also to bring to the surface points which public action could subsequently address. The classical approach by topic or function (innovation, exports...) is not sufficient with SMEs. Their particular management mode, which involves low task specialisation and a high level of polyvalence in their managers, also means that in general there is a need for support in terms of strategy and resources management. This does not exclude deploying more precise domains, but it is still a priority, which was not initially foreseen.

2. Development of the programme and its content

2.1 Collective development

¹¹ Difficulties in getting into contact with this agency are still mentioned by those who cite it.

Based on the growing academic knowledge of SMEs and the study made on firms and investment funds, the project manager wanted to set up a sufficiently diversified driving committee to be pragmatic as well as objective, thereby avoiding both excessive theorizing (with the danger of being out of touch with the in-the-field realities of companies) and absolute empiricism which would have meant not using precious input from research on SMEs and corporate management in general.

The Committee is made up of fifteen people :

- People from the guidance committee of France Investissement, the governing body of this mechanism, to ensure that the support programme is totally legitimate, in phase with the major public policy orientations which determined the global action, and not disconnected from the overall programme which was initially focused on satisfying equity capital requirements of target companies
- University academics, specialized in SMEs and more specifically in the taking into consideration by SMEs of key areas selected under the aegis of this programme, who in addition to being expert academics have experience in business consulting in their area of expertise
- Working managers, themselves heads of firms with strong growth potential
- Staff from CDC Entreprises.

This committee is meant to guarantee that the aims set for the initial programme are respected. It is also an arena for discussion of proposals concerning the types of assistance offered by the operational organizations supporting the programme, a source of proposals for new developments, and a ' turntable ', in other words a centre for networking with useful players or tools.

In terms of how the committee functions, it was decided to encourage practices that whenever possible would prevent committee members from working on parallel tracks, with each person remaining stuck in his or her own habitual ways of thinking or behaving. Rather, members would be encouraged to exchange ideas and understand the concerns and motivations of other members.

While the programme was being designed and launched, the committee met on a regular basis (once a month) and for a long enough time to

encourage the development of interpersonal relationships between members. Each meeting lasted at least three hours and was followed by a dinner during which members could interact and express themselves freely on any subject they wanted to address.

2.2 Support programme content

Using the preparation work discussed above, three major focus areas were defined as structuring the companies' support programme :

- The need to set up a network of entrepreneurs and companies
- Support to entrepreneurs in strategy and management
- The development of competences and provision of resources in the three key areas of the programme : innovation, international development and sustainable development.

2.2.1. Setting up a network of entrepreneurs and companies

We have already discussed above how both academic research and fieldwork carried out at the end of 2007 had highlighted the need for a network of entrepreneurs. "*The company network would seem to be the organizational form that is at once supple, flexible, rich and dynamic.*" Consequently, the network is especially adapted to a global, fast evolving environment" (Géniaux 2003).

This approach was enacted via the creation of a club of entrepreneurs, company managers, having benefited from capital investment under the aegis of France Investissement. Thanks to a suggestion of one of these entrepreneurs, this club was very simply named, " ' France Investissement. Le Club ' ". Each entrepreneur automatically becomes a member of the club once he has received the investment. It is a potential opportunity for him, that he can choose to make use of or not. As a member, he or she is entitled to participate in different actions offered under the aegis of this support programme. However, there is no obligation involved.

In addition to this club, several options were explored to develop the network : a Web site (type ' web 2.0 '), along with meetings and seminars on special themes.

- The website France Investissement Le Club : the setting up of the initial programme ' France Investissement ' was naturally accompanied by the development of a corporate communication site (www.france-investissement.fr), the aim of which was to provide information about this public policy action in favour of intensive growth potential companies. The site presented the public

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Field Code Changed

and private partners and players, the logic behind their common action, the measures enacted and the latest news about the programme. When it was decided to encourage networking of these entrepreneurs, the site www.france-investissement.fr was entirely reconfigured to include along with the public part, consisting of corporate information about the programme, a private section, reserved for entrepreneurs. Each entrepreneur and new member of the club receives a login and password giving him access to this 'social network' aspect of the site. The latter has all the functions typically associated with social networking sites: the option of communicating with other members by mail, creation of groups, publication of short texts, reactions to publications of other members. Finally an intermediary section was gradually developed. This can be accessed by the public, but it is mainly devoted to the firms themselves. It includes a list of companies, consisting of files, each of which gives a quick presentation of the identifying visuals of the company and its main economic characteristics (date of creation, nature of business, number of employees, turnover, etc.). The entrepreneur chooses whether he wants his company to be included here. Using his login and password, the entrepreneur chooses the information that he wants to appear on the site.

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Field Code Changed

- Meetings on special themes are offered every month. They take place at the end of the day and are followed by a dinner to encourage informal interaction and further the development of interpersonal contacts. Each meeting focuses on a special theme (selected on the basis of the field work discussed earlier and from the first meetings, during which small groups of France Investissement entrepreneurs were tested on the types of actions envisaged for this support programme). The meetings have two objectives : to develop a network of entrepreneurs as well as to develop the competencies of managers. The latter point will be discussed further on in this paper.
- The in-residence seminars bring together a group of entrepreneurs (some fifteen people) for 48 hours with the aim of providing training in strategy. They begin on day 1 at 17 h, continue throughout day 2, and finish on day 3 at 17h. These seminars obviously encourage entrepreneurs to get to know each other, both during the working sessions and during the more informal aspects

of the seminar. The costs of the seminars are entirely covered by the budget dedicated to the support programme.

2.2.2. Support to entrepreneurs in terms of strategy and management

The transverse subjects of strategy and management are among those addressed in the meetings discussed above. Hence, questions such as 'How to keep one's strategy alive and evolving during a crisis?' or 'Human resources management in a growth company' were dealt with. A specialist on the issue addressed is invited to the meeting, along with a 'witness' who is also an entrepreneur, to share their experience with participating entrepreneurs. The network of specialists and witnesses is constituted by mobilizing the knowledge and/or contacts of members of the driving committee described above. Neither the specialist nor the entrepreneur are asked to make lecture type presentations. They are asked to give interactive talks which stimulate the participation of entrepreneurs and help the latter to formulate questions.

Other types of strategy support are offered :

- Strategic diagnostics, made by consultants, in the company itself. These interventions, selected in accordance with advice from the driving committee, are based on a tried and tested methodology that is especially adapted to SMEs. The cost of the interventions is paid in part by the company and in part by the budget for the support programme¹². The report, including the conclusions and recommendations of the consultant who made the strategic diagnostic, is sent to and kept by, the entrepreneur.
- A very pragmatic diagnostic tool, which has come out of management research¹³ is offered to entrepreneurs. The 'PDG ®' diagnostic (Performance Development Management) created by the LaRePE (Research Laboratory on the Performance of Companies), at the University of Quebec in Trois Rivières. This tool makes it possible to create a precise analysis of the practices used by each of the main functions of the firm (production, sales/marketing, human resources, etc), to compare them to the

¹² This part is normally about 20% but could be higher in the case of a company still in the 'cash burning' phase.

¹³ This tool was brought to the notice of supporters of the accompaniment programme by a university academic, member of the driving committee.

methods of other firms and to identify both performance areas and vulnerable areas.

- Finally, the residential seminars described above also provide an opportunity for the entrepreneurs to work on management issues. In fact, the main session which is the backbone of the 48-hour seminar is an exercise designed by a professor at the Paris-Dauphine University (France), which simulates the running of a firm. This activity allows participants, organized into teams each of which represents the management committee of a company, to decide on a strategy, to put it into practice by making operational decisions, and to see the consequences of these decisions throughout the two-day seminar. This activity, as well as the two other parts of the seminar (an evening of theatrical improvisational exercises and a conference on innovation, based on a study of certain 20th century painters) have been designed to make participants aware of the importance of teamwork and listening, an essential quality for managers.

2.2.3 Development of competences and bringing in ‘innovation’, ‘international development’, and ‘sustainable development’ resources.

In these areas one of the target objectives is to facilitate maximum use by entrepreneurs of the existing aid mechanisms, set up by public authorities. The supporters of the accompanying programme have thus looked for ways of better publicising these mechanisms and of facilitating access for the ‘entrepreneurs France Investissement’.

This is particularly true of the first two areas. For these, above all the companies must be introduced to the main support organisations envisaged. An example is an experimental plan actually being set up in a French ‘département’ (*geographic division*). It consists to create professional links between French trade Advisors (CCEF)¹⁴ and local SMEs, so as the managers can take advantage of the international

¹⁴ The French Trade Advisors (Conseillers du Commerce Extérieur de la France, CCEF) are company men and women, chosen for their competence and experience in the international field, appointed for 3 years by Prime Ministerial decree following proposals from the Minister for overseas trade. It is a free network where they offer their experience in the service of French economic presence over the world.

knowledge of the advisors¹⁵. This is done with a view to setting up 'sponsorship' to accompany the France Investissement companies onto the international market. According to the results of this experiment, the partnership between 'France Investissement. Le Club' and the CNCCEF could be extended to the whole country.

In terms of sustainable development, the third focus area, the survey showed that a special effort needed to be made in order for its importance to be better appreciated by entrepreneurs. Which is why it has been decided to make certain corporate SER (social and environmental responsibility) operational tools directly available. The first of these tools is a system for measuring the company's carbon footprint along with a plan to reduce it, called 'Carbon Hub'. The latter has been chosen on account of its highly operational nature, and the underlying motivational reasons. Reducing one's carbon footprint is effectively to reduce ones emissions and reduce energy consumption and so reduce costs. The latter goal clearly makes good economic sense and should make the tool attractive to somewhat wary entrepreneurs.

The second tool the - '1000NR' -, is a diagnostic device measuring how well the principles of sustainable development are being implemented in the company : it is provided by a well-known French organisation, the AFAQ-AFNOR group. Here, a specialist visits the company, a report is drawn up and given to the entrepreneur, and a quality label is awarded which the company can use under certain circumstances for customer communication, whether consumers or prime contractors.

3. Discussion and conclusion

The 'France Investissement Le Club' programme has been set up primarily to serve the needs of growing SMEs, as set out in publications and recognised by the managers themselves, and already in itself this is a recipe for success. In the first instance, starting in-the-field with the company and then incorporating more theoretical data should allow us to avoid certain known difficulties, both in the design and implementation. The 'rigid', 'difficult to open up' and 'difficult to implement' tags, highlighted by Bramanti (2002) when describing the SME take-up constraints vis-à-vis the customised management programmes, are much less in evidence here.

¹⁵ By accompanying the SMEs the CCEF brings them knowledge from the field, allowing them to address more easily all aspects of an export strategy and mobilise those relays liable to be able to help their international development.

Launched with an important, official announcement, the programme was enacted especially via investment funds (active recommenders) and the website. Quite apart from identifying the interest and merits of the programme, the emphasis was on the ease and facility of implementing the services offered, as well as the relevance of the activities already under way.

Concerning content, the project head backed by a heterogeneous driving committee, has been able to create an overall programme wholly aimed at resolving the strategic issues (in the widest sense) of SMEs, plus input of targeted skills and techniques for short-term problems. The emphasis has been also on the need to evaluate existing business practices and usage in the SMEs concerned, in order to be able to better focus activities and optimise the budgets set aside for their development. Creation and organisation of resources and competences is the main thrust, rather than just providing 'information'. Special care was necessary in view of the often limited financial and human resources of SMEs, and the amount of time available or more likely 'unavailable' to get to grips with the tools on offer.

Networking is a fundamental part of the France Investissement Le Club proposal, and in this sense the programme conforms to the recommendations made by Raymond and St Pierre (2008) for developing support via network insertion or entry. The goal is to develop opportunities for getting involved in official networks (institutes, public bodies, etc.) on the one hand and also a managers' network, (Le Club). Since the link with the working environment has already been defined as a characteristic of intensive growth companies (Mustar 2002), it seems important that the France Investissement SMEs should be aware of all the players able to support or back their development. Indeed, these organisations tend to be all the more proactive with certain 'recognised' companies belonging to an identified system. Hence the great importance of the work accomplished by the head of this programme to introduce the companies and their needs to Le Club and the different partners. As for the managers network, this is not in the first instance a way of reducing transaction costs, but is rather a means of sharing knowledge, know how and experience and thereby improving performance.

The content richness, the networking, both between companies and between companies and their environment, and lastly the targeting of companies all preoccupied with the same questions of growth and profitability, are all very encouraging factors for the success of the

operation.

Nevertheless, setting up such a programme involves two challenges. The first is the new, groundbreaking nature of the program especially in the context of the many existing programs which managers say are too complex and fragmented (2002), thereby limiting their interest. The launch ceremony of the France Investissement Le Club programme, organised on December 2 in 2008, was highly successful in communicating the richness and user-flexibility of the programme, but naturally entrepreneurs will not instantly appropriate the concept. This will need time, and 'peer-to-peer' rather than 'vertical' transmission, bringing the team heading up the programme to the company manager. But the quality of the product (FI Le Club) is not enough to ensure that it is effectively publicized and promoted. It is also necessary to get to know the companies better and hone the targeting of services. Ideally, the support, information and services provided must be even more tailored to the needs of each company. However, research highlights the diversity of experience of these companies and so it would probably be more effective to segment them as a function of these experiences (rather than by using traditional criteria such as size or activity sector), to understand the managers' needs and also availabilities as a function of their position in the development cycle

The second challenge lies in overcoming the SME manager's wariness about diving into an information pool about support systems and then actually using some of them. An example from outside the present study can be used to illustrate this. In France, a measure was carried out through an important tax concession (Tax Credit) concerning investments for research and innovation. SME managers use this measure very little, explaining that it is too often accompanied by tax inspections to check on proper use. Even if the French administrative authorities deny this, it paralyses the spread of the programme and makes it 'dangerous' in the eyes of certain managers. A second example, this time from within the France Investissement programme is another case in point. The French are not used to making operational connections between research results (especially in the management domain) and companies (especially SMEs). The setting up of a highly diversified driving committee has enabled university academics to publicise a diagnostics tool on business practices, widely used in Canada. Managers do not immediately realise the benefits they can derive from this window onto their management practices, whereas they do immediately see the time that it will take. This type of tool, not widespread in France, obviously needs support to fulfil its promise and this

goes for most of the services offered : time is a fragile resource. Those managers who have already tried the services offered, say that they are very satisfied, while at the same time stressing the effort needed to get away from the day to day running of the company. Being part of a network, part of this ' community ' under construction, is open to the very same constraints. Even if the advantages to be gained from networking have been widely written about and acknowledged and even if their interest for growing SMEs has been often put to the fore (Mustar 2002 ; Ayerbe 2006 ; Levratto 2008), the fact still remains that it is difficult to get managers involved in these communities. Creating a network cannot be a top-down undertaking, it requires mutual trust, discovery of common interests, and above all time. For the moment, the small amount of feedback we have from the programme presented, does not allow us to evaluate its degree of success.

Finally, another innovative characteristic of ' *France Investissement Le Club* ', at least as far as France is concerned, has doubtless contributed to its start up difficulties, and this is the fact that the support programme is implemented by ' funds of funds ', those organisations whose main object is to invest in funds which themselves invest in companies. This rather shakes up the habits and customs of the capital investment environment in at least three ways. Firstly it means that an organisation which up to the present has been concerned solely with financial investment, develops a new activity, and thus there are the difficulties normally associated with the creation of said new activity in any structure. Next, it leads those heading up the project, who belong to a funds of funds organisation, to speak directly to companies. This type of contact is not usual practice, since only the investment funds themselves had direct relations with companies in their portfolio. It has therefore been necessary to overcome a certain number of sometimes strong fears and resistance to change, especially at the beginning of the programme. Finally, it proposes to bring together companies which have in common not only the fact that they are growing intensively, but that they also have been designated as such by the investment partners of the ' France Investissement ' mechanism. It is thus a question of creating an identity, a sense of belonging to ' France Investissement ' and all of this around a rather singular unifying element, which is their source of equity capital.

In this communication we have presented the issues concerned with supporting intensive growth SMEs, via the experience of France Investissement. We have highlighted the characteristics of intensive growth

SMEs, and the needs for management accompanying programmes. We wish to conclude by affirming the need to further explore and examine these types of support, especially with relation to their possible transfer to other countries. It would be very interesting to see if other countries have had similar experiences, where financial organisations specialising in equity capital intervention couple their main investment activity with accompaniment of entrepreneurs in the strategic aspects of managing SMEs, and under what conditions.

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Study on the Influence of Government's Research and Development (R&D) Policy in Small and Medium Enterprise (SME)'s Performance.

by Jiyoung Park, Min Ha and Soowook Kim

This paper attempts to examine the separate effect of government's research and development (R&D) policy in Small and Medium Enterprise(SME)'s performance. We classified every R&D policy and gave them unique names such as funds, technology and human resource support.

The whole number of research target enterprises is 21,621(Manufacturing industry 17,875 and Service industry 3,746) which does business in Korea whose employees are more than 5 and less than 300. Of all enterprises this survey is implemented on 3,400 enterprises sample (Manufacturing industry 2,881 and Service industry 519) during from April 19, 2007 to June 15, 2007 by a face to face-survey and a mail-survey.

The major results of the study are the following: Direct government funding of R&D performed by firms has no effect on business performance but R&D policy related to technology and human resource support has positive effect on SME's business performance. The research is planning to expand by adopting panel data later.

Keywords: Government R&D Policy, Small and Medium Enterprise, firm performance, Structural Equation Model, technology support, human resource support

Introduction

In order to be successful, Small and Medium Enterprise(SME) need to occupy various types of resources, including financial, technological, human and knowledge resources (Brush, Greene, and Hart 2001; Lichtenstein and Brush 2001; Greene and Brown 1997).

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To support this argument, it has been performed by government to allocate a huge budget to invest financial and human resources. Recently Korea small and medium business administration announced the '2009 SME's R&D policy plan'. This plan mainly focuses on spending a earmarked SME's R&D budget quickly on overcoming bottlenecks in management and aims to recover economic revitalizations on the first half of 2009. Moreover Korea small and medium business administration increased the amount of R&D government budget from about 330 million dollars in 2008 to about 375 million dollars in 2009. We easily find Korean government concentrates its effort upon its SME's success by enlarging R&D budget amount. In fact, the total R&D budget amount increases annually.

However, according to the study of Korea Institute for Industrial Economics & Trade(2008), firm's performance caused government's R&D supporting policy was limited so far. It is likely that the effect of R&D investment is ambiguous. This means that current government's R&D policy has several problems and it is not performed effectively and efficiently. Many research shows that it is needed to modify and adjust based on the empirical research.

Though there are many researches whose subjects are mostly correlations between government's SME R&D policy and performance or value of enterprise, these researches just remain on a familiar study area such as R&D budget, net profit, the total sales or stock price changes. Moreover methods of the research mostly have stayed in the level of slightly reforming established models had used for other researches before. So research methods is limited and cannot be reflected a real world situation and an actual proof analysis. The important thing is CEO and managers' experience and insight which comes mostly from the business fields. So we believe that research related to R&D issue has to evolve toward reflecting existing factors in the business field. Besides most of R&D topics focuses on analyzing the relationship between R&D investment and firm performance(Lee, 2008, Jung, 2008, Kwon, 2007, Kim et al., 2005). Those kinds of research have disadvantage of identifying direct and indirect effect on R&D activities to the SME. Especially government R&D policy is divided into 3 or 4 categories but so far the influence to firm performance on each government R&D policy is not interested and issued.

Therefore this research examines the current status of the Korea government's R&D policy for Korean SME. Basically it means this research is planning to focus how government's R&D policy has influenced on financial outcomes such as sales, profit, etc. Type of support, industry and budget amount is used to be criteria for this research. Furthermore, this study suggests the efficient strategy in performing government R&D policy. In the long run we investigates the effect of government R&D policy on the market value of the firm by addressing R&D policy model and collecting data and doing empirical anlysis corresponding to the issued model.

Theoretical Backgrounds and Research Model

Activity of research and development generally means a series of planned research which is performed in order to acquire new knowledge or technology, development of new product or manufacturing process by using research results or application to the improvement of existing products or manufacturing process. And the research of an enterprise can be said to be Research and Development: R&D because of including development activity. Activities of research and development are classified into basic research which is the original research performed first in order to acquire new scientific knowledge about the observable thing and natural phenomenon and doesn't aimed directly at special

application or usage, applied research which is performed in order to obtain new scientific knowledge by using the result of basic research under mainly special practical goal and purpose, and development research which is substantial activity in order to substantially improve the products that is already

Korean Government's R&D Policy (2009)

Main R&D Policies of Korea Government, Small and Medium Business Administration, in 2009

Category	R&D Policy Name	Support Amount (million \$)		R&D Policy Object
		2008	2009	
Fund Supports	SME's Technology Innovation Development	181	202	To support innovative SME(Small and Medium Enterprise)'s development which accompanies with a higher value-added business through enhancing R&D that is necessary directly to manufacture
	SME's Cooperative Technology Development	12	15	To promote development of new higher value-added products that is based on convergence technology area through supporting cooperative R&D between more than 2 enterprises
	New Product Development on condition of buying	31	35	To support new technology products development and localization products development on condition of buying these products. It's supposed to be marketable after R&D successes.
	Producing Environment Innovation Technology Development	20	19	To bring up SME that has competitive manufacturing power such as productivity improvement, quality improvement, cost reduction and energy save through supporting R&D of factory automation, producing technology innovation and so on
	BI Technology Development	(New)	77	To support new technology initial enterprise, which is located on 'business incubator(BI)' or is a condition on move in BI, to promote R&D investment and industrialization

	SME's Service R&D	38	38	To vital new development technology and to develop service industry and manufacturing industry together through supporting development of new service products and service delivery systems which focuses on innovation ability reinforcement.
Technology Supports	SME's Technology Transfer Technology Development	12	15	To support additional R&D expenses when SME uses technology that is transferred from university, research institution and enterprise to practical use
	R&D Support utilizing High Technology Equipments	19	19	To support development of SME's new higher value-added technology and products with utilizing high technology R&D equipments which is located on government's research institution
	Cooperative Uses of R&D Equipments	62	58	To maximize utilizing high technology R&D equipments and to make a foundation of competitive power improvement through supporting cooperative uses of these equipments
	Collaborative Technology Development	42	46	To support collaborative R&D with SMEs, universities and research institution whose R&D capability is low itself
	Build of SME's Collaborative Research Institution	20	23	To support to build and operate SME's research institution which is located on university, research facility or neighborhood area (researchers' personnel expenses, rent fee and so on)
	Collaborative Laboratories	75	62	To utilize university professor's laboratories which are used to R&D exclusive area (R&D expenses, rental fee of R&D equipments, students' personnel expenses and so on)

* US1\$ is about KOR□1300

produced or installed or produce new materials, products and apparatus by using the knowledge obtained from basic research, applied research and real experiences.

Since reliable assessment of future economic benefit created from certain research and development activities is generally difficult with category which can be endowed with the accounting meaning in connection with research and development cost, and there is much cases that cannot be related with specific economic benefit after the specific research and development activity succeeds. Therefore assessment and recognition of research and development costs, accounting management problem, and etc. come to the front.

In item 3 of Korea business accounting standards, it is defined that creation process of intangible assets is divided into research stage and development stage in order to evaluate whether intangible assets created internally complies with the standard of consciousness or not, and then expenditure generated in the research stage is handled as expenses in principle and expenditure generated in the development stage is recognized as the assets only in case of satisfying the assets measurement requisite.

Researches about research and development classified as R&D investment of large enterprises and small and medium enterprises are promoting actively by researchers. Medium and small firm R&D researches are divided into research about the effect of R&D investment on the enterprise value by utilizing regression analysis, research that researchers look at R&D with the national policy dimension, and research analyzing the effect of small and medium enterprises R&D support by dimension, and etc.

2.1 R&D Researches applying regression analysis.

Lee(2008) studied in the random effect model about the industrial R&D investment strategy for the company result provision. Capital fund of a company was correlated positively(+) to the result of company. It reached positive effect to the company result as there was many number of employees. And R&D amount invested had a positive(+) effect on the company result as a whole. He insisted that customized R&D policy should be promoted in order to concentrate efforts on enhancing the effectiveness of an investment, and quantitative growth-centered policy could not help be faced with a limit. Yu et.al (2005) verified the effect of R&D investment on the management result of venture business and small and medium enterprises by using multiple regression analysis. And they confirmed that all areas for R&D including R&D investment, R&D manpower, and etc have positive and valid effect on the management result of an enterprise. Result of this study suggested that effects of R&D investment on the management result of small and medium enterprise and that of venture business show nearly similar pattern in which it is nearly similar, small and medium enterprise itself is unable to connect intangible assets including intellectual property resulted from R&D, R&D network, marketing know-how, and etc. with the productive result of management. Seo(2007) used regression analysis using Almon distribution parallax model in the research about the effect of R&D investment on the management result. In this study, he proved that growing, profitability, and productivity of a enterprise was high as intensive degree of R&D costs were high and there was not big distinction depending on the type of business or whether company was listed or not.

Kim et al.(2005) studied about the influence of R&D investment activity on the management result of small and medium companies and venture business with random effect model. He proved that influence of R&D manpower and the number of employees except R&D people on the management result was positive, and R&D investment . capital fund and the management result was correlated positively. Moreover, it was identified that the number of years from foundation had positive correlation with the management result, property effect and capital effect of small and medium enterprises were in positive(+) correlation, and that effects were negative (-) in case of venture business.

There is the meaning of this research in that through above findings, they presented that the number of employees.achievement of corporate management.capital scale could give positive effect to the management result of an enterprise, by using panel data of medium and small firm and venture business, they proved that index of company management including R&D investment and amount of sales, and etc. had (+) correlation, and difference was existed between venture business and small and medium company. Jung(2008) verified the effect of KOSDAQ-listed company's R&D costs on the enterprise value correlation with multiple regression analysis which is modified from model of Ohlson.

Author confirmed below three issues; each item of R&D cost affects corporate value though not evenly; a different method of accounting also showed R&D cost influences corporate value; venture businesses are far more influenced by R&D expenditure than general firms.

There is the meaning of this research in that confirmation of the R&D expenditure effect of prior research which correlation of R&D expenditures and corporate value is different according to the characteristic of corporate and industry by classifying development cost, research cost, ordinary R&D cost, and ordinary development cost, and analyzing difference of R&D expenditures according to the characteristics of corporate for KOSDAQ registered companies by classifying venture business and general corporate apart from the prior research which compared the stock exchange and KOSDAQ, Kwon(2007) verified the research about the management result of corporate and R&D expenditure with multiple regression analysis. She confirmed that it has significance influence on the intention of using the relatives of the R&D expenditures and business performance of corporations; top management support intended to have significance influence on the relatives of the R&D expenditures and business performance of corporations ; a research worker training support influenced the relatives of the R&D expenditures and business performance of corporations significantly ; strategic importance of the R&D activity had significance influence on the intention of using the relatives of the R&D expenditures and business performance of corporations. This research suggested that the R&D expenditures had significance influence on as much as the top management support and effort of organization management in the manufacturing, and the R&D expenditures had significance influence on the top management support, a research worker training support and strategic importance of the R&D activity and that it affected the performance of corporations in the long run.

Lim(2007) analyzed the relation of R&D investment and achievement of corporate management. Author confirmed that R&D investment contributes to the profitability of a company in the point of that corporate spends more much R&D costs as operating profit of company is high and earning rate of invested capitals increases as intensiveness of R&D investment is higher, the growing of corporate in the point of that increasing rate of the sales shows increasing tendency as intensiveness of R&D investment is higher, and the productivity since investment efficiency of total capital increases as intensiveness of R&D investment is higher. The result of this study suggests that since current technological environment of industry is changing drastically, continuous R&D should be progressed in order to maintain the competitive power of an enterprise with a provision especially in case of technology-intensive industry like chemical business.

Recently, because of an industry suddenly changes, it gives suggestions that continuous research and development have to be made as it is the enterprise of the technology-intensive industry like the chemical business in order to maintain the

Jeong et al.(2008) verified the effect of R&D investment and introduction of know-how on the corporate value with correlation analysis, and multiple regression analysis. They confirmed that public notice effect of know-how introduction was higher in the group having higher R&D investment expenditure than low, and it was the lowest in the group which spent the lowest amount of know-how introduction and R&D investment. And public notice effect of corporate which invested relatively more active in R&D than know-how introduction was the most higher. In the result of verification of variables influencing the public notice effect of corporate, public notice effect of know-how introduction was high as R&D investment was high and corporate scale was small. This result suggests that continuous innovation is required in order that corporate can survive drastic technological development and unpredictable future and can create high returns.

Park(2004) verified the effect of R&D investment on domestic small and medium enterprises on the company result with multiple regression analysis. It was confirmed that growth of corporate had significant relationship with R&D investment of the Human Resource section and regression model,

ordinary development investment was significantly correlated with the profitability of corporate. Result of this study suggests that investment in the research manpower is superior to the long term assets R&D investment for the growing of small and medium companies, and investment in realistic R&D is superior to industrial property which can be enjoyed long term monopoly power and the high entry barrier for the profitability of corporate. Choi(2004) analyzed about influencing factors of R&D project performance through factorial experiment. It was confirmed that rational role of a reader more enhanced a performance than the reader of innovative role, monitoring role of a reader showed the higher results than the reader of Mentor role, and team performance was high as formulation or centralization was high. There is a meaning in that it was the research about team performing projects in the R&D department of a company.

Kim(2004) analyzed the performance factor by type of joint R&D research. It was confirmed that generality of technology, technical resources capability, and clarity of a goal gave an effect to the joint research satisfaction, technical resources capability and clarity of a goal influenced on the joint research satisfaction in the type of corporate - university joint research, intimacy sense, competent project manager, and the clarity of a goal influenced on the technical performance of joint research. In the type of corporate-university joint research, generality of technology and technical resources capability gave an effect to the joint research satisfaction, generality of technology, competent project manager, technical resources capability and clarity of a goal influenced on the technical performance of joint research. And only technical resources capability influenced the joint research satisfaction in the type of corporate-research institute joint research. This study suggests that consideration of technical resources capability of partner is important when a company selects a partner, and clarification of common objective is important when joint research is performing. In the type of corporate-university joint research, selecting intimate partner can make technical performance higher, and selecting an able project manager who flexibly can lead well cooperation with university is important.

Kim (2008) verified the effect of possession structure on the correlation of R&D expenditure and corporate value with multiple regression analysis in which Ohlson (1995) model was changed.

Asset handling development cost was shown insignificant value regardless of the structure of possession in the market of securities, and in KOSDAQ stock market only the coefficient of professional manager group showed significant positive(+) relation with the corporate value. Development cost of expense handling was (+) relation in the securities market, (-) relation with professional manager group and (+) relation with ownership manager group in KOSDAQ stock market. As to research cost had (+) relation with professional manager group and (-) relation with ownership manager group in the securities market, (-) relation with ownership manager group in KOSDAQ stock market. There is a meaning in that he confirmed the fact by classifying and analyzing the securities market and KOSDAQ that influence of possession structure on the relation of R&D expenditure and corporate value is different according to the market. Kim(2005) verified the effect of R&D cost on the stock price with multiple regression analysis. He confirmed that the current price earnings ratio and the past R&D costs showed (+) correlation with the time differences. It has a meaning in the point that it checked whether accounting information about R&D cost of corporation had information effect on the Korea stock market or not. Park(2004) verified the effect of R&D investment of small and medium manufacturing companies on the management result with multiple regression analysis of survey data. It was confirmed that management result, acquiring method for technology of the company which the average R&D is bigger than 8% of the average sales for three years was superior to the company smaller than 8% and outsource resource was excellently utilized in the latter. There is a meaning in that in-depth analysis about the difference of R&D investment between small and medium manufacturing companies was made. Park(2004) verified the effect of correlation between exceeding profit and R&D costs on valuation with multiple regression analysis using modified model of Ohlson

(1995). It was confirmed that multiple stock price for R&D expenditure of corresponding research increased as correlation of time difference was high, and multiple stock price for R&D expenditure of corresponding research was reduced as simultaneous correlation was high. This research suggests that analysis of the case creating successfully future profit and not creating is needed, and consideration of differential method of account for classified R&D expenditures can improve the correspondence of profit and cost. Baek(2004) verified the value correlation of R&D cost considering industrial economical effect with multiple regression analysis. Author confirmed that appropriate evaluation of the value correlation of provided accounting information by regarding R&D expenditure creating effectually future economic benefit as asset. The meaning of this result is that objective evaluation can be possible by reflecting characteristic of the industry in which evaluative target company belong and utilizing in a valuation.

Ahn and Kwon(2006) analyzed the relation of corporate value and R&D investment based on the corporate renovation with the model measuring of corporate renovation based on Cobb-Douglas production function. It was confirmed that variables of corporate renovation had a significant positive relation with price earnings ratio. This research has a meaning that another academic interpretation about the relation of corporate value and corporate renovation generated in the company which invests to R&D in the rapidly growing economic environment. Kim et al.(2006) verified the effect of the industrial special quality and the effect that the top management team characteristic reaches to the R&D investment were verified with the multiple regression analysis. The environment uncertainty the industry growing has the relation of a u-shaped the relation of the feeling (+) during the environmental factor with the R&D investment of an enterprise with the industry race intensity. The length of employment of CEO had the relation of the reverse u-shaped within an enterprise during the resource factor. And the more an age was small, the R&D investment was very much invested as it was high the organ compensation. It confirmed that it shows the result of having the affect of the feeling (+) in which the business knowledge diversity notes to the R&D investment among the diversity of TMT. It gives suggestions that it is important that at the same time it considers the factors of the external environment and internal environment in the position of the industrial organization and resource base because of there being because of determining the R&D investment action of an enterprise.

As to, the technology condense association a venture , and the technology diffusion association verified the change of the quarter industrial structure and ripple effect of the R&D investment around the GWANGJU metropolitan city manufacturing industry with a venture. In of a pillar, as it was the industry in which the technology condense relating effect that R&D is accumulated is high, the intermediate wood percentage of penetrating and fluency coefficient were high. As it was the industry in which the technology diffusion relating effect that R&D is accumulated is high, the sensitivity coefficient and R& D quotient confirmed the highness. In of the industry production line of the Gwangju area, the implied meaning can be given in that precise machinery and tools industry in which we could not know the significance could recognize the significance in the view of the scientific technique system. Lee(2008) analyzed the growth single step technical innovation strategy of the venture business and R&D support effect of positive and negative as the multiple regressions. The absolute investment scale of the resource for the technology development increased in the growth phase or the puberty venture business in comparison with the long term venture business. We confirmed that the difference in which it is a significant between the enterprise in which it doesn't receive with the enterprise in which it receives the R&D support funds of positive and negative as to the technical innovation strategy did not exist. The natural voice of the technology intensive venture business which is in the growth phase and puberty to long term and in which the technical innovation ability is advanced is needed. A circle is needed whether it is more selective in order to raise the effectiveness of

nation business of research and development that it supports the venture business. And or not it gives suggestions that the follow up has to be reinforced.

The joint study verified the research about the valuation of the KOSDAQ-listed company according to the feature of company with the log-linear model of the Hand (2000a) in which he develops the log-linear model of the Ye- Finn (1999). As to, there was the correlation of (+) as if it noted with the enterprise value. We confirmed that there was the difference in which it research and development costs statistically notes in the enterprise value correlation side. According to of the current profit, it gives suggestions that there is the necessity to it applies the evaluation of the enterprise value to the mutually different. In this study, Seo(2008) verified the effect that research and development costs investment reach to the growing of a company, a profitability, and the productivity with the Almon distribution parallax model, and the general distribution parallax model.

The growing of a company was high as research and development costs intensive degree was high. The profitability of a company was high. And the fact that the productivity of a company is high was confirmed. In, there is a meaning in that research and development costs investment and management result of this study company, which is the trial initial, were investigated for the first time.

Kim Dong-nam studied the research development subject valuation methodology for the R&D nature and optimization. In order to overcome the limit of the existing AHP model, the FSM method and the evaluation in which it applies the HFP method were developed. It more proved than the evaluation result of the AHP method to be the evaluation system where there is the feasibility.

There is a meaning in that research and development project developed will be able to provide the establishment of the evaluation standard and factor and the new weighted value appropriation, and the priority in which research and development project developed are reasonable rather than evaluating through the hierarchical layer evaluation system with research and development project selection and commercialization.

2.2 R&D Researches using analytic models

The method utilized the literature research and statistics and studied the research about the improvement plan of Korea nation research and development (R&D) business budget system(Shin 2008). As to, the tendency supporting the feasibility of the intervention of government about research and development was enhanced. And we considered as the distribution type in which it executes a budget according to each government ministry. Moreover, in a budget, it insisted that the budget right to decide became to the Committee of Budget Planning with the coming into power. Through this, in realistic, it was needed with the alternative of the budget system it was detail and it is realizable. And it was needed with system it can check out whether of the need was reflected at the beginning of year or not. Moreover, the function of the integrated adjustment function above a nation and Ministry Planning and Budget needed to be efficiently grafted. And it referred to that it required a transparency and openness enlargement of the nation R&D business management, and the network strengthening of the nation R&D budget system. The during the hot weather injury premised the policy propose through contribution about the result evaluation of the R&D investment. And it referred to that duplex outcome of research and development evaluation that it puts the evaluation by the tool of the self evaluation by the governmental department and the third together in the result evaluation of the R&D investment were needed. Moreover, it insisted that the legal basis repair, a goal and preference setting of the dimension of state, the database construction, the effort of the person concerned to interests and etc. were necessary. The Yoo Heung-rim and Park Seong-jun(2007) investigated the factor in which they influence on the performance of the industrial-educational cooperation joint technical development consortium business in which they are one among medium and small firm technical innovation

supporting policy as the Pearson analysis, and the multiple regression analysis. As to, the business participation experience of the number of as to medium and small firm, as to the managing department, most reached the big effect. There the sales increase effect of medium and small firm was the close related with the growth of company step and business participation experience. And the growth of company step reached the effect that it is negative in the cost reduction effect. The relation of cooperation between the business participation subject and the satisfaction confirmed that there was the correlation in which it is high on an interval. The factor which designs the result evaluation frame of the industrial-educational cooperation consortium business and in which 2,004 years influence on a performance according to the business entity is drawn and there is a meaning. This all day long verified the effect that the R&D supporting policy reaches to the result of technique with the Probit model.

A configuration and content of an investment were more important than the scale and particularly the extent of the cash investment influenced on the technical performance with the correspondence of an enterprise. And the cash investment and actual things investment of an enterprise confirmed to be connected with displacing agent. The quantitative rating on the government policy related to the technological policy was evaluated. Even though a help and the implied meaning in which it is many in the efficiency valuation as well as the planning of the new nation technology development support drawing will be given, there is a meaning. Park(2008) analyzed the economical effect of medium and small firm technical innovation field research and development (R&D) investment as the multiple regression. The research development subject support number and research and development had the average sales and export amount enlargement and reduction in labor force and new job creation effect and the meaningful relation. They confirmed that the R&D investment reaches the effect that they are most big in the reduction in labor force effect of an enterprise. The effect that it reaches to the technical field whole task number, and the economic result about the local total amount of aid among medium and small firm technical innovation field in which we were unable to handle in existing researches is comprehensively analyzed and the problem and improvement plan are groped for and we propose with medium and small firm technical innovation development business development plan and there is an object.

Kim Woo-sik(2006) verified a relation with the management result of the R&D activity with the efficiency valuation of the DEA model, and the multiple regression analysis. The effectiveness of the management had to be raised in order to improve the ultimate goal phosphorus management result of an enterprise. But the investment of the R&D section had to be increased for the effectiveness of R&D discovered the paradoxical phenomenon that it has to be degraded. It gives suggestions that the management efficiency and the performance can be maximized although enterprises are resigned that the effectiveness of the R&D activity is a bit decreased only when increasing an investment and expenses about R&D in order to develop the scene description, which is excellent and in which it is competitive the new process, and the new product and the new service. The Rotifer ring verified the ripple effect of the IT company R&D investment with OLS, the Fixed Effect Model, and the Random Effect Model. The effect that the R&D of the info-communications industry whole reaches confirmed than the effect that the R&D of each enterprise reaches to was exposed to be big with about two times. As to, because the effect that industry undergarment research and development reach was more and more enlarged, we can know in 90's that an effect is more bigger than the discrete support about each enterprise that it supports for the whole industry. There is a meaning to see existing methodologies related to the technology valuation of the nation R&D enterprise and organize a remedy in connection with this.

2.3 Other researches

The other research studied the situational relation between a performance and the technical innovation type between R&D and marketing part in the integration as the questionnaire research method. In all technical innovations, the discontinuously innovation of the necessity of the integration more showed the highness in the middle than the continuous innovation between R&D and marketing part. Moreover, in an idea, the necessity of the integration was the highest between R&D and marketing part. And we confirmed that the adequacy of the integration reached the positive effect to the nature, the learning and product renovation between R&D and marketing part. And it was seen that the relation of the feeling (+) showed up between R&D and marketing part between the extent of the integration and nature and learning and product renovation in case the renovation of a project was high. It contributed to the practical method derivation that it can strategically manage the discontinuously technical innovation. And there is a meaning in the point that we grasped a relation with the integration between R&D and the marketing part and result of technology renovation.

Data and Research Method

3.1 Sampling

This study uses data ‘2007 Survey on Technology of Small & Medium Enterprises’ which is researched by ‘Survey on Technology of Small & Medium Enterprises’, an affiliated organization of Kbiz(Korea federation of small and medium business), to provide basic data that are necessary when government makes efficient policy of SME.

The whole number of research target enterprises is 21,621(Manufacturing industry 17,875 and Service industry 3,746) which does business in Korea whose employees are more than 5 and less than 300. Of all enterprises this survey is implemented on 3,400 enterprises sample (Manufacturing industry 2,881 and Service industry 519) during from April 19 2007 to June 15 2007 by a visit-survey and a mail-survey. To select survey sample, first stratification is an industrial classification 2digits code of ‘Korea standard industrial Classification (KSIC)’ and second stratification is an employee number scale of 4 groups. An industrial classification code means Manufacturing industry 22 items (code # 15, 17~37) and Service industry 3 items (code # 72~74) and an employee number scale means divides groups of more than 5 and less than 300 employee numbers. To determine a sample enterprises number by industrial Middle Classification it uses ‘Optimum allocation’ theory of Neyman which is applied Confidence Level 95%, Sample Error(ϵ) 3% and that selected enterprises are allotted by Employee Number Scale.

- To determine a sample enterprises number by Industrial Middle Classification:

$$n_h = \frac{(\sum N\sigma)^2}{\left(\frac{\epsilon}{t_\alpha} \times \sum X\right)^2 + \sum N\sigma^2}$$

- Allotment by Employee Number Scale of Industrial Middle Classification: $n_{hi} = n_h \times \frac{N\sigma}{\sum N\sigma}$

- n_h : The number of enterprises by Industrial Middle Classification
- n_{hi} : The number of enterprises by Employee Number Scale of Industrial Middle Classification
- N : The number of a population of enterprises
- X : The number of employees of each Number Scale
- σ : Standard deviation of each Number Scale

σ^2 : Variance of each Number Scale
 $\frac{\varepsilon}{t_{\alpha}}$: ε = Sample error, t_{α} = Confidence Level (95%)

General Statistic of this paper sample which depends on above guidance is following.

	Population		Sample	
	Number	Proportion	Number	Proportion
Total (Manufacturing + Service industry)	21,621	100.0	3,400	100.0
5 ~ 19 employees	10,132	46.9	687	20.2
20 ~ 49 employees	6,786	31.4	1,005	29.6
50 ~ 99 employees	2,911	13.5	735	21.6
100 ~ 299 employees	1,792	8.3	979	28.8
15 Meal & Food	652	3.0	145	4.3
17 Fiber	461	2.1	119	3.5
18 Clothes & Fur	185	0.9	50	1.5
19 Leather, Bag & Shoes	112	0.5	34	1.0
20 Timber & Timber Products	73	0.3	38	1.1
21 Paper & Paper Products	172	0.8	55	1.6
22 Publication, Printing & Record Duplication	153	0.7	41	1.2
23 Coke, Oil Refinery & Nuclear Fuel	41	0.2	25	0.7
24 Chemical Compound & Chemical Products	1,378	6.4	222	6.5
25 Rubber & Plastic Products	990	4.6	182	5.4
26 Nonmetal Mineral Products	491	2.3	123	3.6
27 First Metal Industry	507	2.3	137	4.0
28 Assembling Metal Products	1,310	6.1	217	6.4
29 Other Machine & Equipment	3,827	17.7	285	8.4
30 Office, Calculation & Accounting Machine	340	1.6	86	2.5
31 Electricity Machine & Electricity Converter	1,445	6.7	220	6.5
32 Electron components, Picture, Sound & Communication Equipment	2,433	11.3	260	7.6
33 Medicine, Precision, Optical & Watch	1,118	5.2	203	6.0
34 Automobile & Trailer	1,432	6.6	221	6.5
35 Other Transport Equipment	278	1.3	85	2.5
36 Furniture & Others	435	2.0	110	3.2
37 Recycling Processing Materials	42	0.2	23	0.7
72 Data Processing & Other Computer Operating	2,837	13.1	274	8.1
73 Research & Development	184	0.9	58	1.7
74 Expert, Science & Technology Service	725	3.4	187	5.5

* A Population base is on December 31 2006 in Korea SME.

3.2 Research Model and Data

This study has hypotheses to prove how Government's R&D Supports of Funds Support and Technology or Human Resource Support affects Enterprise (SME)'s Performance.

<hypothesis1> *The more Government's Finance Support is the more R&D Performance.*

<hypothesis2> *The more Government's Technology or Human Resource Support is the more R&D Performance.*

These two hypotheses are objects to prove government's two support type, classified 'Finance Support' and 'Technology or Human Resource Support', have correlation with enterprise's R&D. To prove this it need to analysis data such as amount of 2005 and 2006 year's finance support and it need to find data whether they receive technology or human resource support. R&D outcomes can be estimated by the number of 'success of R&D', 'production of R&D', 'application and registration of intellectual property rights'.

<hypothesis3> *R&D would promote development of New Products.*

<hypothesis4> *R&D would promote Improved Products or Replaced Products which are existed or imported.*

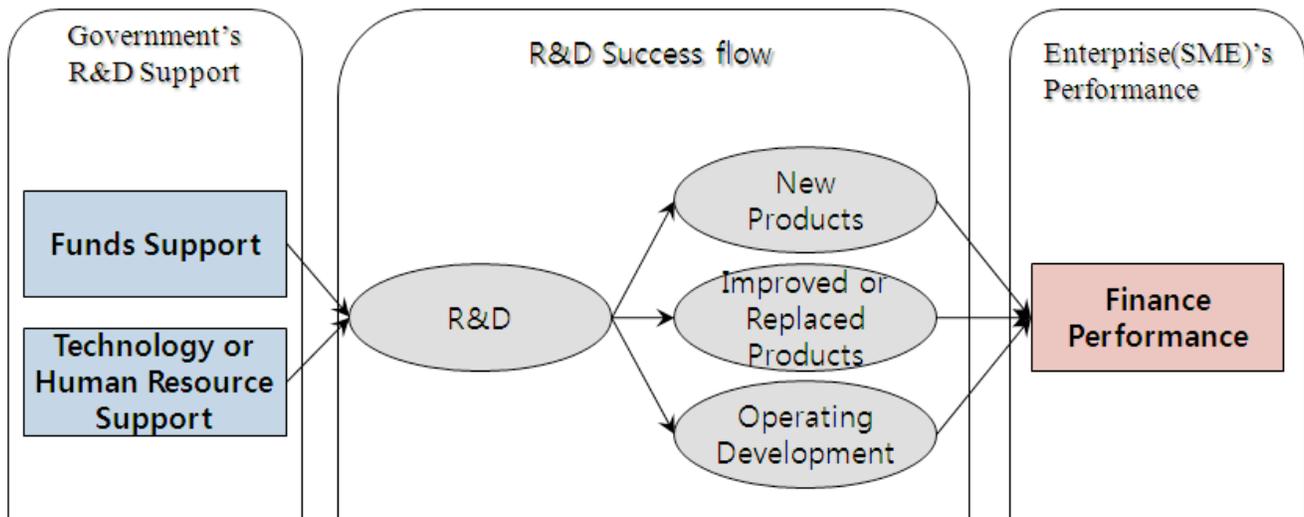
<hypothesis5> *R&D would promote Operating Development.*

These three hypotheses are objects to prove whether R&D can lead to outcomes of visible things. In other word, this study proves whether R&D success can guarantee New Products, Improved Products, Replaced Products or Operating Development. To prove this it needs to analyze data of increment of the Sales of Products or the Amount of Exports which result from new products, improved products or replaced products. And it also needs to find data of Operating Development such as increment of employment, cost reduction and so on.

<hypothesis6> *New products, Improved Products and Operating Development lead to Enterprise's Finance Performance.*

Enterprise's R&D success can result in Finance Performance ultimately. In other word, increments of the Total Sales or the Total Amount of Export, representative performance of enterprise, we can prove those criterions through analysis of data.

This study model's mapping is following.



3. Research Method

This study uses SEM method, structural equation modeling, is cross-sectional statistics of the general linear model(GLM). SEM is not explorative but verified. It means that researcher uses SEM method to verify whether a specific model is appropriate rather than to find out good models. Generally a hypothesis or theory is described as relation of abstract concepts. The term which means these abstract concepts is 'covariance structure analysis' or 'construct' in SEM. The construct can't be observed or measured. So to prove a hypothesis or theory which is consisted of these constructs, we need to define specific characters which have constructs properties that can be observed or measured. This way a specific character which can be observed or measured is named as indicator. This study's Research Model which fits on structural equation modeling(SEM) is following. In SEM, a construct is marked as a circle and a indicator is marked as a square. And each indicator has Error($\epsilon_1 \sim \epsilon_{10}$).

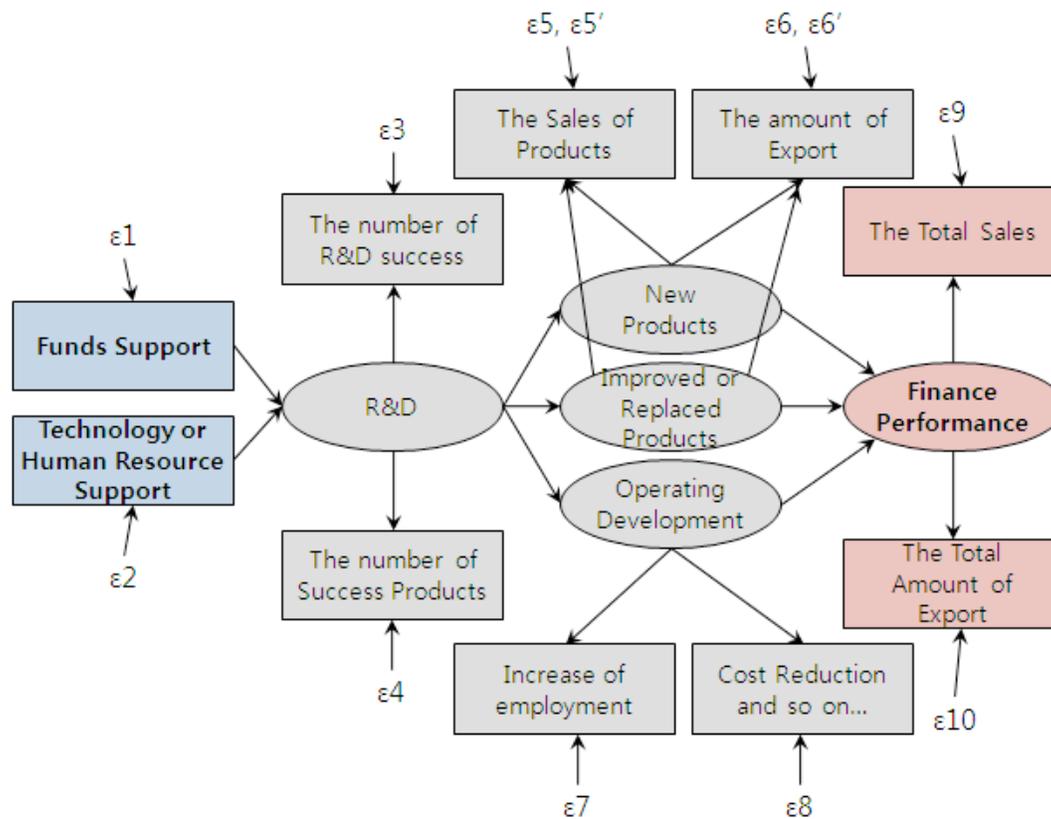


Figure 1. research model

<hypothesis1><hypothesis2> Because we can measure government's R&D support policy through amount of money or activities, both 'Finance Support' and 'Technology or Human Resource Support' is an indicator. And 'R&D' is a construct which has indicators such as number of 'success of R&D', 'production of R&D', 'application and registration of intellectual property rights'

<hypothesis3><hypothesis4><hypothesis5> Constructs such as New Products, Improved Products and Replaced Products have indicators like increment of the Sales of Products or the Amount of Exports. Likewise Operating Development construct can be measured by indicators such as increment of employment, cost reduction and so on.

<hypothesis6> 'Finance Performance' is a construct which connects to indicators such as increments of Total Sales or the Total Amount of Export.

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Internal and External Succession Solutions : Toward a Common Base of Knowledge to Facilitate Business Transfer ?*

by Julien De Freyman, and Katia Richomme-Huet

We want to initiate the debate and to confront points of view (about the problematic of succession), fields (Family Business and Entrepreneurship) and perspectives (managerial and political implications, global program of research). Our theoretical reflexion suggested the construction of a common base of knowledge (CBK) from which each practical method of transmission (succession, take-over and third-party sale) could gain in comprehension. This research proposes to supplement this prospect by subjecting it to an empirical exploration. Multiple case studies will serve its reading and its operationalisation.

Introduction

“It is estimated that one third of European companies will be transferred in the ten next years. This figure means that 610 000 SMEs will change hands each year, with a potential incidence on 2,4 million employment. (...) After the phases of creation and development, the transmission constitutes the third crucial stage in a company’s life cycle” (Erkki Liikanen, European Commission, 2003 : 3). Because of the importance of a successful transfer of ownership and management, there has been much written about the family business succession in the world literature (Harvey, and Evans, 1995; Sharma, Chrisman, and Chua, 1996), broadly defined as “the passing of the leadership baton from the founder-owner to a successor who will either be a family member or a non family member” (Beckhardt, and Burke, 1983 : 3).

However, in Europe, less and less transmissions are taking place within the family and “more family enterprises will need to be transferred to employees or third parties” (European Commission, 2004).

This European tendency is not without theoretical consequences. We know that transferring an enterprise is a process which requires careful preparation in order to minimise costs, preserve jobs and market position and not to endanger the sustainability of the company. Therefore, the entrepreneur should determine the person who shall take over the company (within the family or outside) in order to successfully transfer ownership and management. The choice is not always an easy one to make and the success probability depends on both the quality and the number of successor candidates. That’s why, according to Institutions and Professionals, promoting awareness of the possibility of becoming an entrepreneur by taking over established firms is a pertinent policy area. But what about the actual program of research on succession, in which the family solution is largely dominant? Given there is a large and growing body of work that considers the ways in which family businesses differ from non-family businesses (Chrisman, and al., 2005), should we consider jointly family succession, employee takeover and third-party sale ? It seems to us that the question deserves to be asked.

The remainder of this paper is organized as follows. First, we lay down the theoretical bases of our study, namely family businesses and succession theory, and give some empirical figures. We then proceed with the development of our theoretical model to explain the CBK.

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After having laid out the methodology for the empirical study, we present our findings. We discuss the results and we conclude the paper with implications for management theory and practice, and indicate paths for further investigation.

Theory, Constructs and Propositions

An European Phenomenon and a French Specificity

Indeed, transmission is not an epiphenomene, disconnected from any durable and persistent dynamic, but an actual and heavy tendency in all European countries. The evidence of an urgency reaction on a large scale is crushing: for instance, 354 000 German companies should be concerned in the five next years, and 40 percent of the Italian firms stock that is to say a demographic situation near to the United Kingdom where more than one third of the SME's leaders entered around fifty.

Whereas 1/3 of the French owners-managers have more than 50 years, 700.000 companies will change hand within 15 years at the average frequency of 60.000 successions per annum. As much to say that one SME on four will change owner, which means a considerable social stake on the plan of the number of employment represented. According to cabinet KPMG (2008), the most worrying report is that the rate of the family successions, that which is ready to ensure the timelessness of the company, remains lower than 10 percent in the hexagon whereas it amounts to 55 percent in the Netherlands, 58 percent in Germany and 72 percent in Italy. And, when asking the predecessors about their favourite successors, Transregio (2006) found firstly a family member, secondly a takeover, thirdly another firm, fourthly a personnel member and lastly a venture capital. We face a French paradox between wishes and reality, and we have to conclude that French owners-managers have to prepare their transmission if they want their company to succeed without them. Consequently, for a great numbers of them, except those who leave in retirement with nothing to transfer, they have to carry out a transmission towards an external third.

The preceding report is unambiguous: the great majority of the industrialized countries enters now in a "new entrepreneurial cycle", during which it would be extremely dangerous, on behalf of the Governments, to be satisfied of a policy exclusively on stimulation of ex nihilo creations. In France, we assist on a succession of measures taken since the beginning of the 2000s, bound for the two principal populations of contractors. .

However, the theme of takeover has only rare specific contributions (Siegel, 1989; Esteve, 1997), as well on the theoretical and conceptual level as on the empirical level, although it has been recognized for more than thirty years like crucial (Donckels, and al., 1993).

Theoretical Background Disequilibrium

A serious imbalance exists thus between the studies devoted to the principal option of proximity (succession intra-family), this one having very early benefited from the constitution of a field (family businesses), and the researches more concerned with the transmission where no offspring is involved. By dating the field mentioned with the first publication of *Family Business Review* (Lansberg, and al., 1988), we could almost estimate the shift at more than one decade of research. The variation becomes even more significant when we focus on the importance of the family businesses' contributions : in addition to traditional succession process models (Hershon, 1975 ; Longenecker, and Schoen, 1978 ; Churchill, and Hatten, 1987 ; Barach, and al., 1988 ; Handler, 1994), scholars highlighted our comprehension of the actors(Dyer, 1986 ; Ward, 1987 ; Sonnenfeld, 1988 ; Seymour, 1993 ; Fiegenger, and al.,

1994 ; Wortman, 1994 ; Goldberg, 1996 ; Chrisman, and al., 1998), of the noticed resistances (Levinson, 1971 ; Beckhardt, 1975 ; Handler, and Kram, 1988 ; Lansberg, 1988 ; Handler, 1992), of the success factors (Beckhard, and Dyer, 1983 ; Dyer, 1986 ; Donnelley, 1988 ; Stempler, 1988 ; Handler, 1994 ; Lansberg, and Astrachan, 1994 ; Morris, and al., 1997), or of the roles' adjustments and relational interactions (Handler, 1989 ; Kesner, and Sebor, 1994 ; Morris, and al., 1997).

On its side, the takeover (specifically by an individual entity) amount only few researches, that is to say a quite thin assessment taking into consideration socioeconomic stakes. An indicator remains particularly useful to determine this disinterest as well as possible, that of the theses having been defended on the subject. French research does not count, to our knowledge, more than five doctoral theses on this particular method (Siegel, 1989; Barbot, 1999; Deschamps, 2000; Boussaguet, 2005; Bah, 2006). If we considerer the multiplication of discourses and the figures presented, the "building site" hardly opens. The foundations gave thereafter the possibility to other researchers to explore phases and processes more specifics (Barbot, and Richomme-Huet, 2007; De Freyman, Paturel, and Richomme-Huet, 2007).

But what about the research devoted to the third possibility, the takeover by a personnel member, an actual employee of the company, where we have one thesis (Estève, 1997)? Admittedly, we acknowledge that of the three taking over methods, the Leveraged Management Buy Out or Buy In (LMBO or LMBI) is undoubtedly the one which least spontaneously comes us to mind (except in financial researches). Therefore, according to Transregio (2006), this solution would represent a minority access to entrepreneurship since its weight is obviously evaluated with less than 14 percent on the European ground and that a Country like France records less than 8 percent. Despite this slight estimation, it is a question neither of diverting, nor to even guarantee academic silence on the subject: no threshold can and does not have to exonerate us from a major reflexion on such a complex problems.

A Common Base of Knowledge Model

Despite the efforts of a small community of researchers, no global solution for the internal and external transmission was developed until now, to our knowledge. No theoretical framework authorizes today to consider a structured and structuring support able to start a useful project of knowledge for the perpetuation of the companies which have to face a problem of transmission (Allard-Poesi, and Maréchal, 1999).

The dominant scientific argument spouses fragmentation logic, with an analysis for each situation. Consequently, researchers have generally to choose between three methods: family succession (FS), purchase of the company by employees (ESOP or LMBO or ET or RES in French) and external take-over by a third-party (TPS or RPP in French). However, to express a joint interest for these approaches requires positioning ourselves on two research fields, namely family businesses and entrepreneurship. An additional level of abstraction can facilitate a better comprehension of the transmission phenomenon, while generating prospects for mutualisation, organisation and theorisation.

The theoretical reflexions which accompanied this proposal (De Freyman, Paturel and, Richomme-Huet, 2008) led to new ideas, like the Common Base of Knowledge (CBK), supporting the examination of transmission (Figure 1). CBK consists in being based on a crossed fertilisation principle, rather than to continue to follow the principle of dissociation founded in the transmission methods (where each researcher seeks to work on and for its object).

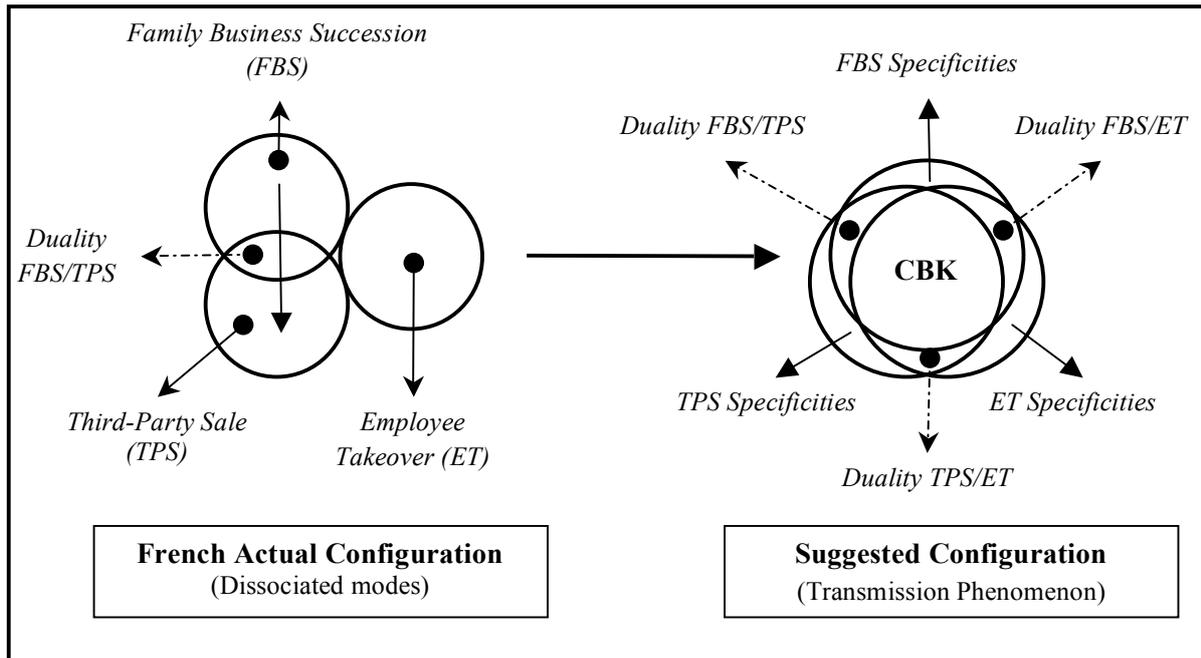


Figure 1 : The constitution of a Common Base of Knowledge (CBK)

Source : De Freyman, Paturol et Richomme-Huet (2008)

The interest of this optic, which is however stammering, is twofold:

- (1) To gather existing approaches and knowledge (in one of the two fields) for a better exploration and a greater comprehension of each transmission practices: the transition of the roles formalised by Handler (1991) in family businesses is, for instance, a process that we can also find in Employee Takeover (ET) and Third-Party Sale (TPS), but which did not receive enough attention if we take into account its importance and its probable adaptations;
- (2) To stimulate studies relating to the specificities of each methods (for example, the consequences for the company if the person who take it over is not a membership of its trade) and to the dualities inter-methods (we can study the influence of the relations already established by the successor – social, business or family relationships – on the various processes which are common to the transmission).

From a general point of view, to consider the existence of only one phenomenon to qualify and to describe various forms of transmission mean to have the capacity to release a whole of similarities between methods not belonging to the same field of study. In other words, we join a logic of abstraction where independents projects of knowledge, bearing on theoretical objects *a priori* distinct, have particular properties and common screens that we can detach from their respective objects to consider them separately.

Therefore, one of the first questions to develop following this theoretical proposal is to know how to organize and stimulate the production of actionable knowledge (managerial implications) and integratable into the common base of knowledge (memorising for redeployment).

The Structuring Role of Adaptation and Replication Strategies on CBK

One of this research finality is to supplement the suggested configuration (Cf. Figure 1) by subjecting it to an empirical exploration. Before presenting these findings, it is advisable to recall that, in its theoretical slope, the structuring of CBK need an inventory of the studies already carried out by researchers centred on the three methods (Family Succession, Employee Takeover and Third-Party Sale).

The defended idea is that each observed dimension could be gathered in generic categories (possible to extend and apply to all situations concerned by transmission). This progressive setting in order raises more precisely the question of the new research strategies to follow in order to support it. Two complementary strategies were identified in this direction (figure 2):

- (1) **Adaptation Strategy:** it consists in knowing to what point a unit of studies of each methods could be adjusted to the particular and new conditions of both others. We could, for instance, transfer, towards the context of Employee Takeover or Third-Sale Party, the interrogations from Harvey and Evans (1994) on the “successor’s strategy of entry”, from Prince (1990) on the “conflicts resolution” or from Boyd and al. (1999) about the mentoring;
- (2) **Replication strategy:** it needs no particular conformity in this type of transposition. Studies having contributed to better encircling one or the other methods could be redeployed in contexts however different. Indeed, the study of the “successor’s attributes” (Chrisman, and al., 1998), namely these characteristics which are preferable to hold for the takeover of a company, could be reproduced within the framework of Employee Takeover or Third-Party Sale.

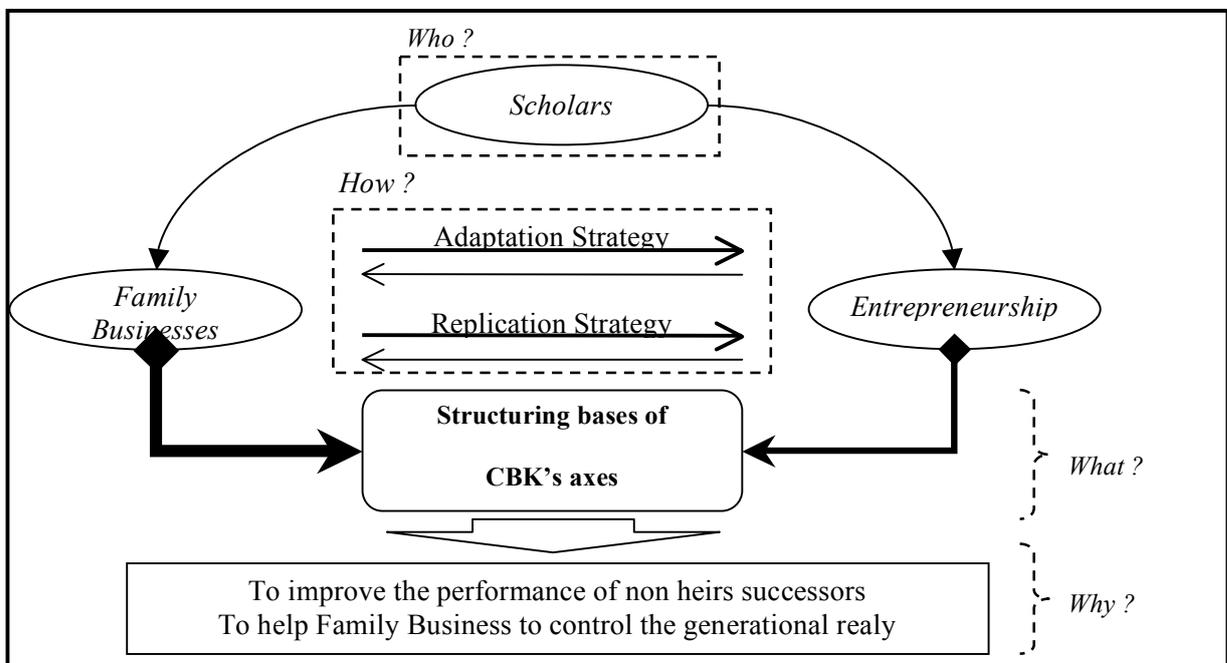


Figure 1 : Adaptation and Replication Strategies within the Construction of CBK

Source : De Freyman, Paturel et Richomme-Huet (2008)

The mechanism of CBK's structuring is issued from these strategies. They are the angular stones. In their absence, no footbridge between the takeover methods can be considered, what constrained researchers to devote much time to the rediscovery of corpus already tested and useful even if there are positioned in another field. They have the advantage to exist and to be used, with a precise review of succession research, for the structuring of CBK's axes.

Methodology And Findings

Logic of "deductive" construction (of CBK)

Firstly, our choice should reflect an overall research strategy (Mason, 1996:19). We early decided to define prior instrumentation in this exploratory part of our reflexion. The aim of our study is to improve knowledge in the three transmission methods. We worked on texts and documents written by others researchers in a particular conference, namely "Georges Doriot's Research Day" where scholars presented papers about transmission. We use reworking qualitative data which consists in the re-examination of one or more whole of qualitative data in optics to continue questions of research which are distinct from those of the initial investigation (Thorne, 2004). Indeed, according to Glaser (1962), secondary analysis does not limit itself to the quantitative information. Observation notes, not-structured interviews and documents can be reanalysed with profit (Glaser, 1962:74).

Consequently, we apply a secondary analysis on all the presentations from the First Georges Doriot's Resarch Day (March 2006 : <http://journeesdoriot.free.fr>), called "Les conduites de "repreneuriat" : réussir la reprise et la transmission de l'entreprise" ("Takeovership" Management : to success in business take-over and succession).

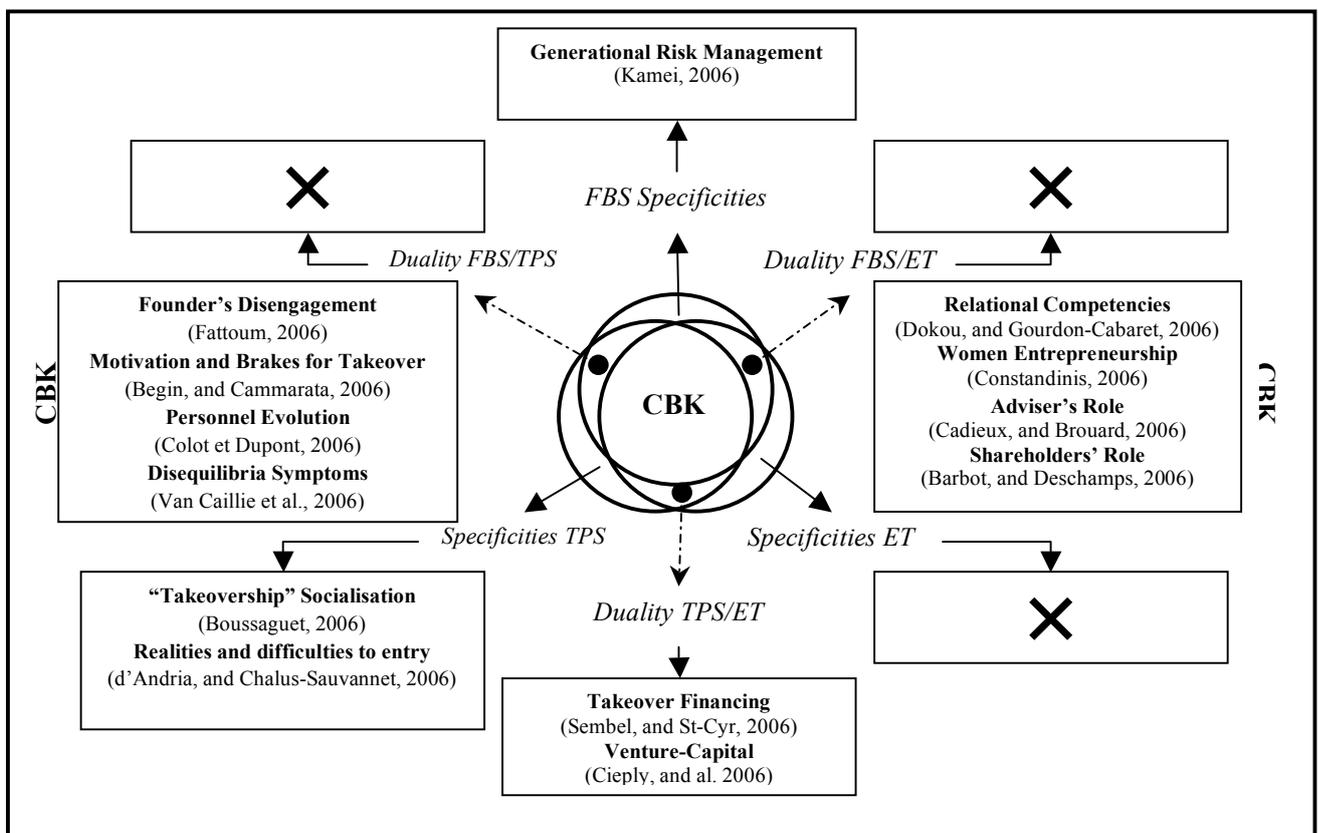


Figure 3: Example of positioning: Georges Doriot Research's Day (2006)

Therefore, whereas two research strategies are necessary to consider a rather deductive construction of the CBK, multiples positionings are possible for studies around the “transmissional” phenomenon (Figure 3). This logic can very easily lead to an anticipation of the problematics by an intellectualisation of the situations to be treated. The principal risk is to move away from the actors’ concerns and the field realities.

Logic of “inductive” construction (of CBK)

Qualitative methods have become more commonplace in areas where social interactions play a key role (Silverman, 2005). Given this trend, it is not surprising that qualitative methods have been gaining acceptance in the small business and entrepreneurship research community (Perren, and Ram, 2004:83). More specifically, case study research is one method of qualitative social inquiry considered as valuable tool for transmission research. In respect with the “*paradigmatic map*” developed by Perren, and Ram (2004), in order to underlie case-study method in the small business and entrepreneurial area, the condition model of social capital transfer has been constructed according to entrepreneurial personal story explorations cases studies” (focusing on the entrepreneur’s interpretation of events).

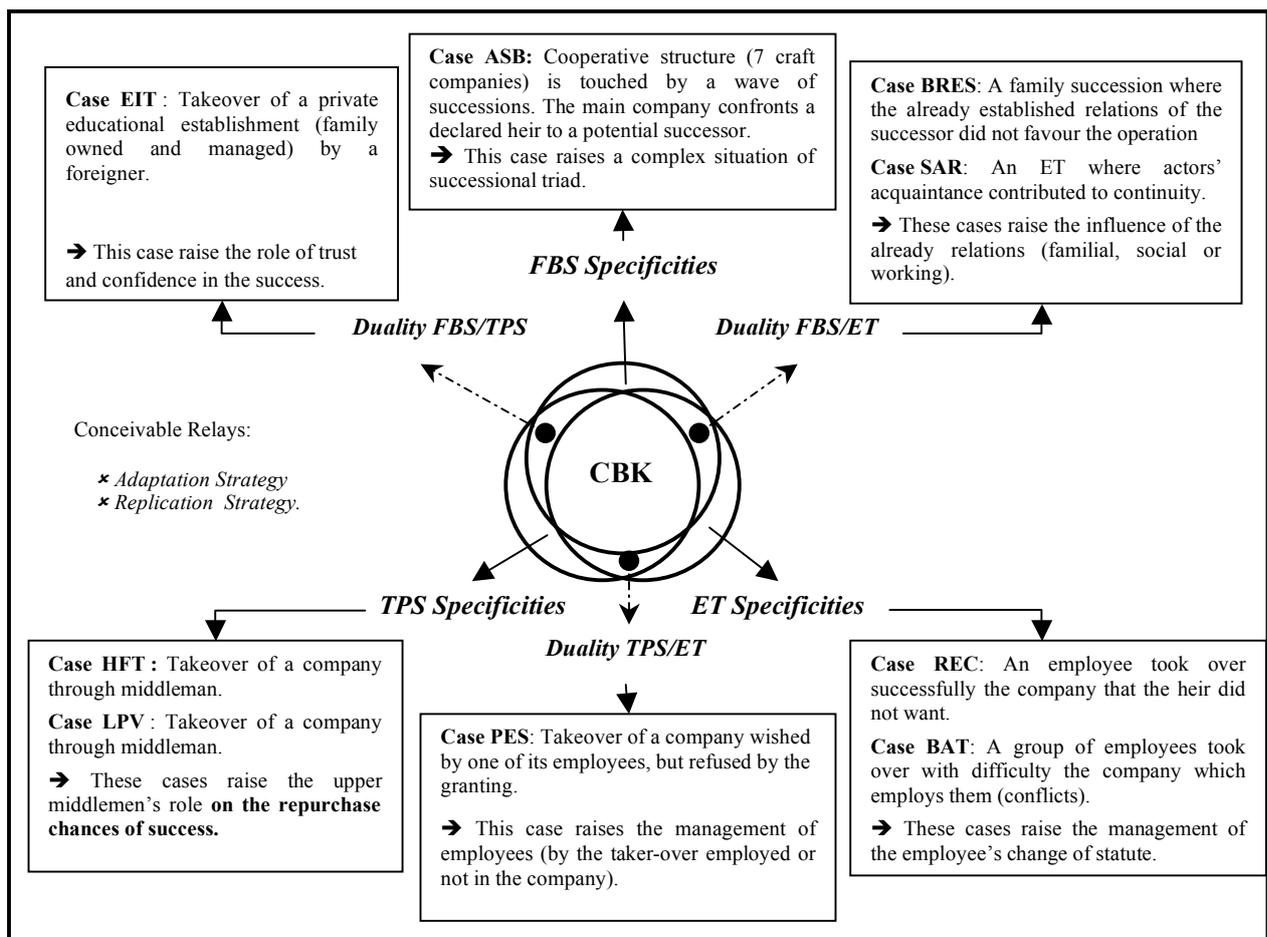


Figure 4: Inductive method of CBK construction (from multiple cases).

What is pertinent to transmission research, through this method, is that this research design takes account of understanding participants' behaviours from their points of view, their interpretations, their dynamics and properties of interactions, contextualised within their worlds (Douglas, 2004). That is what we must not forget: Human action is constructed by the actor on the basis of what he notes, interprets, and assesses; and the interlinking of such ongoing action constitutes organizations, institutions, and vast complexes of independent relations (Blumer, 1969: 49).

Therefore, semi-structured in-depth interviews (Figure 4) were conducted with members of the seven family firms constituting "ASB co-operative" (Artisans Services Bâtiment) and with others family firms engaged in a succession process (Cases BRES, SAR, EIT). We also interview employees and granting who wanted to sell or to take over (Cases REC, BAT, PES, HFT and LPV). The collection of cases offers an inductive alternative to the first logic, with a potential inversion of the CBK's construction method. Their confrontation makes the researcher able to raise problematics that the literature never treated when studied the succession phenomenon. These methods are perfectly complementary, particularly since the number of thesis on this topic tends to grow and the subjects often take a long time to be identified by the young researcher. Consequently, we believe in the utility of this theoretical framework.

Discussion :

Firstly, the managerial implications of the research are largely related to the prospects that the adaptation and replication strategies will be able to open and to offer to the researchers concerned with the "transmissional" phenomenon. Our objective is to meet needs for comprehension or to provide solutions to problematics encountered. For instance, we can easily envisage that studies (replicated) on the relation between the individual characteristics of the third-party and the purchase success can find buyers like banking organisations or trade institutions. By the way, it can be useful to better prepare the successor or the "taker-over" at the transitional period which directly follows the acquisition of the target (chosen company), due to the construction of reading grids or other adapted tools. We can also evoke the advisers' case and their role on the transmission success, as what could be done in the family businesses field, but which actually does not find equivalents on Employee Takeover or Third-Party Sale.

However, the inductive method of construction allows also the exploration of unexpressed needs, and even unconscious. A great number of cases lead us to question on the obligation to be from the trade to succeed. Indeed, in spite of a growing number of counterexamples, the implications are rather numerous (granting of the financing, behaviours to be privileged, particular processes, etc). In the same spirit, the study of specific situations like ET (cases REC or BAT, for examples), can put the question of employee's or employees' change of statute; whereas the dualities (case BRES and SAR in the duality FBS/ET) can push the reflexion towards the comprehension of the already established bonds on the internal solutions and their success.

These illustrations, higgledy-piggledy presented, coarsely guarantee the coexistence of inductive and deductive construction of the Common Base of Knowledge. They contribute to reinforce the idea that the relation "researches / practices" is twofold, because of (1) the first which can propose solutions to problems met in the second, and (2) the second can subject needs to the appreciation and the theoretical reflexion of the first. In the end, a large list of implications could be drawn up in order to serve the various actors who take part in the practices of the transmissional phenomenon.

Conclusion

The ambition of this research wanted to be extremely modest for this exploratory part. We need to follow the development of our first conceptual proposal around the Common Base of Knowledge, in order to think about the construction of a research program on the “transmissional” phenomenon. The two exposed logics (inductive and deductive) were supported by illustrations respectively founded over the First Georges Doriot Research’s Day (2006) for the theoretical axe and over cases studies (empirical axe).

Indeed, this paper will focus on the possibility of a theoretical convergence between “internal” and “external” succession solutions. It discusses about the main specificities and differences of the three modes of succession and tries to develop a more integrative framework. The French cases studies are aimed at illustrating the set of “specific” or “common” dimensions of the suggested configuration (FBS Specificities, Duality FBS/TPS, TPS Specificities, etc.). It allows to initiate the debate and to confront points of view (about the problematic of succession), fields (Family Business and Entrepreneurship) and perspectives (global program of research).

On these first elements, the complementarity of these logics let foresee all the extent of the problematics that we have to count and to treat for a better comprehension of this phenomenon in the all world. In a more global way, it informs that researchers need to continue their scientific efforts to propose a real accompaniment to takeover candidates. Several implications for future research are definitively suggested by the findings and the limitations.

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Effect of CEO-run Web Log on Internet Branding – A Case of Thai Small Business, Jeban.com

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CEO as a spokesperson in mass advertisement may help the company's branding. However, for resource-restricted small businesses, CEOs must find more efficient ways of branding. In this research, we argue CEOs of small businesses could use Web logs to build their company brands, and they shall get good results in some fields. We examine a case of small business in Thailand, Jeban, whose primary market communication channel is the businesswoman's Web log, to support our argument. We documented how Mrs. Jeerapas Ariyaburus (Jeban's head) has been running the Web Log, and surveyed the Web log's effect.

Keywords: Web blog, Internet branding

Introduction

Because of high cost, traditional media is usually beyond the choices for small businesses who wish to brand their products or services. Branding has been regarded as an expensive move for small businesses. However, recently blog (an abridgment of the term Web log) provides a new way to brand for businesses of big and small. According to Wikipedia, a blog is a website, usually maintained by an individual,

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with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse chronological order. Many blogs provide commentary or news on a particular subject; others function more like personal online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. If used properly, blog is a powerful tool of communication, and thus can be used for branding. With prevailing handy software solutions or third-party web services, small businesses can afford company blogs. Moreover, for even saving the cost, the head of the business may run the company blog by her or himself.

Jeban is such an example. Created in July 29, 2004 by Mrs. Jeerapas Ariyaburus (Jeen), Jeban blog was at first Jeen's online diary. Because of her skin problem, Jeen must always put on makeup. She tried many cosmetics products, and then in her blog, she reviewed them and also showed how she used each product on her own face with vivid pictures. Because of neutrality in reviews and openness in story telling, her blog rapidly gained popularity and drew a virtual community to share knowledge and experience about cosmetics and beauty on it. In April 27, 2005 the blog turned into Jeban.com, a full fledged commercial website keeping much of its blog characteristic. At present the website's main revenue comes from sponsorship and banner advertisement of cosmetics companies. Although many companies tried to pay Jeen to

write reviews for new products, she still insists in remaining independent. Therefore, her website is perceived as of high credibility and getting even more popular.

The purpose of this research is to investigate Jeban's case, and to survey its blog audience to examine the effect of Internet branding.

Theoretical Background

In order to measure the effect of Jeban's branding efforts, we adopt the concept of customer-based brand equity (CBBE) from Aaker (1991) to design survey questions. Aaker (1996a) considered brand equity as a set of assets and liabilities, and five brand equity assets are the sources of value created. The five assets are brand awareness, brand association, perceived quality, brand loyalty, and other proprietary brand assets. In this research, we measure the change of brand association, perceived quality, and brand loyalty to evaluate the increase of CBBE. We do not measure brand awareness because the sample was drawn from the blog audience, who are all aware of Jeban. Other proprietary brand assets, such as patents, trademarks, and channel relationships, are also omitted because they are not proper for blog audience to evaluate. We assume brand awareness and other proprietary brand assets invariable to the blog.

Brand association is anything linked in memory to a brand (Aaker 1996a). Keller (2003) suggested that brand association can be divided into three major categories: attributes, benefits, and attitudes. The most powerful brand associations are those with intangible traits of a product, rather than with the tangible characteristics (McDowell 2004). Brand association can help customers treat and retrieve information (van Osselaer and Janiszewski 2001), and make the information the base of differentiation and brand extension (Aaker 1996b). With experience of use, brand association can increase customer satisfaction (Aaker 1991).

Perceived quality is the customer's perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives (Aaker 1991). Customers' product experiences, expenditure situations, and unique needs may affect their judgment of quality (Yoo et al. 2000). Perceived quality can also increase customer satisfaction with the customer's use experience (Aaker 1996a).

Brand loyalty is important because it can translate into profit more directly. Brand loyalty represents a barrier for competitors and a basis for price premium (Aaker 1996b). Customers with brand loyalty routinely buy the same brand, and refuse to switch (Yoo et al. 2000). Loyalty is on top of the CBBE pyramid (Keller 2003). With attitudinal attachment, sense of community, and active engagement,

behavior loyalty forms brand resonance, which means the ultimate relationship and level of identification that the customer has with the brand.

Methods

In addition to a qualitative case study to demonstrate Jeban's branding efforts as the cause, we conduct an online survey to investigate the increase of CBBE as the effect. Basing on the above literature, we design a questionnaire that consists of forty one questions. Among them, seven items are for measuring brand association, seventeen for perceived quality, and the rest seventeen for brand loyalty. The scoring system is based on Likert Scale of 5 points. Alongside the answer to each question, we ask "What will be your answer if Jeban offers only a plain website instead?" for comparison. The difference between the two answers represents the blog's effect on the respondent. We conduct T-test to examine the difference in paired answers. Moreover, because a bigger difference in paired answers means the respondent is more responsive to the branding efforts, we then conduct ANOVA test to explore demographic differences according to the level of responsiveness.

Jeban Blog and Website

Jeban blog (<http://jeban.bloggang.com>) is considered as one of the most successful blogs in Thailand. Jeban blog is hosted by Bloggang.com, which is a part of Pantip.com. Jeban is a blog mainly about beauty and cosmetics. It provides plenty of information of cosmetics reviews and how-to guides with demonstrating pictures. Because of unique style, outstanding content, and eye-catching layout, from 2006 onward, Jeban blog has been repeatedly voted by Bloggang readers as number one on the “The Best of Blog” category (see Figure 1). With this achievement, Jeban blog expanded to Jeban website (www.jeban.com) in order to support heavier Internet traffic and start brand extension. Now Jeban website covers more diversified topics such as travel, food, restaurant, in addition to beauty and cosmetics.

Jeban is not only well-known in the virtual world, but also in the real world. Many media reported that Jeban blog can influence peoples’ buying behavior and impact the demand for the cosmetics products. Favorably reviewed or mentioned cosmetics products by Jeban would often run out of stock in retail stores soon. Jeban’s ability of promoting sales is better than many of those costly advertisements. That is because people could affirm the effect and quality of those products by reading Jeban blog that they trust more. Advertisements by cosmetics companies are less capable of winning such trust. Jeban functions like a neutral fashion magazine, but compared with

traditional magazines, it is easier to access, more convenient to read, more abundant in content, more social, and more humane.

The head of Jeban business and the blogger, Jeerapas Ariyaburus, was a graphic designer at a private company. The start of Jeban blog was her online diary. During that time, her attention was drawn to makeup and cosmetics because she had a serious facial skin problem. She tried many cosmetics to “conceal” her problem. After she tried a product, she gave a detailed review about it, and showed how she used it to make up her own face step by step with demonstrating pictures. People amazed by the big difference of her look due to makeup began to discuss the product and the usage enthusiastically. Her frank and open attitude in blogging by sharing personal experience also attracts and retains online readers. All of these activities were enabled simply by blog.

Although Mrs. Ariyaburus now has the Jeban website, her blog is still running. However, the nature of the blog has slightly changed. It now only focuses on her diary and interests. As to subjects about beauty, the blog informs people to visit Jeban website. Jeban website’s focus remains on beauty, but the content has expanded to cover some new topics such as travel, food, and restaurant reviews. Nevertheless, it

still focuses on the same target group. Jeban has successfully branded itself as number one vertical portal for young ladies.

สาขา	อันดับ 1	อันดับ 2	อันดับ 3	ชม.ชม
The Best of Blog	Jeban	บ้านด	เพลงทหารไรฉิ่น	<ul style="list-style-type: none"> • ge-or-ge • fluffyboy101 • สดุดะตุล • สะว่าค่า
Best Topical Blog	=p o o k p u l=	yyswim		
Best Book Blog	ยาตุลลั			
Best Literature Blog	โสดในซอย	สะว่าค่า	rosita	
Best Movie Blog	"ผมอยู่ข้างหลังคุณ"	โຈຈາຕິນ		
Best Music Blog	Niz	tokei/tookei	fluffyboy101	โถนัจจมว่าส์
Best Art Blog	อึปซีลีน่าเงิน			
Best Fanclub Blog	สาวจิ้งหรีดหวาน			
Best Photo Blog	JewNid	Mr.DogGie	<ul style="list-style-type: none"> • ตา ตา • ลุงแมว 	
Best Travel Blog	Zantha	ชานโม้ชานเขา	JewNid	
Best Beauty Blog	sushiboy69	<ul style="list-style-type: none"> • CinnamonGal • ซอญ่าผสม 		
Best Food Blog	ความจิ้งมีเพียงหนึ่งเดียว	ปู่ชาก เชมรุ	แม่เอื้อน	<ul style="list-style-type: none"> • its_gemmi • ตาอ๊านชวนคุย
Best Craft Blog	fozzil	yadegari	KOok_k	ดอกไม้กระดาษน้ำแต่ใจวัน
Best Pet Blog	CinnamonGal	อ้านคำดีดนี่		
Best Home & Gargen Blog	nature-delight	ซอญ่าผสม		
Best Parenting Blog	Jeban	<ul style="list-style-type: none"> • Baby I love you • Second impact 		
Best Dhama Blog	astor27			

Figure 1 Blogging Popular Award Result: January 6, 2008

Effect of Jeban's Blog-based Internet Branding

We collected forty three valid samples from online members of Jeban to evaluate the effect of branding. 98% of them are female, and the age range is between 15 and 35. We present the result of paired-sample T test in Table 1. The table shows the CEO-run Web log significantly increases its brand association, perceived quality, and brand loyalty as well. This means Jeban's CBBE is enhanced by its blog.

Table 1 Paired-Sample T Test of Difference in Brand Association, Perceived Quality, and Brand Loyalty

	Mean	Standard deviation	T
Brand association	7.581	5.552	8.955*
Perceived quality	19.093	22.225	5.633*
Brand loyalty	21.837	23.085	6.203*

*p<.05

Next, we explored what demographic characteristics are associated with blog audience's reaction to Internet branding. The result of ANOVA in Table 2 shows that age and frequency of visit may explain the audience's responsiveness. We then conducted Post Hoc tests and found that the younger and more frequent Internet users are more responsive to blog. This result agrees with traditional Internet consumer studies.

Table 2 ANOVA Test of Difference Grouped by Age, Education, and Frequency of visit

Grouping variable	Age	Education	Frequency of visit
	F	F	F
Brand association	19.865*	0.619	11.355*
Perceived quality	24.210*	0.412	15.652*
Brand loyalty	67.515*	1.111	50.046*

*p<.05

In summary, Jeban's blog-based Internet branding efforts enhanced its brand equity. Customers have better brand association, feel better perceived quality, and become more loyal to Jeban.

Conclusion

Based on the analysis presented above, the following conclusions may be made:

First, people need neutral second opinions to evaluate cosmetics before purchasing because they can not know the effect and quality in advance. Jeban fills the gap of this consumer needs. Second, big cosmetics companies can not compete with Jeban in providing same information or knowledge because their standpoint is not likely neutral to their own products. Product reviewing and rating is a niche for Jeban. Third, Mrs. Jeerapas Ariyaburus tests various cosmetics in person and openly shares her experience. This gives Jeban a brand personality of trustworthiness, which enhances Jeban's competitiveness. Fourth, the blog's functional characteristic is right and proper for the purpose of demonstrating usage and effect of cosmetics. Fifth, Jeban's blog-based Internet branding efforts increases its brand equity.

The implications to small businesses are first, blog can be an effective tool of branding for small business, especially in the market where the product or service

quality is hard to judge unless having some use experiences. In such markets, new information intermediaries are needed, and opportunities for small businesses are created. Second, the blogger's personality plays a role in brand building, thus if the CEO's personality fits the company brand, the CEO is suggested to run the company blog personally.

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Success Factors of Brand Management for Small Company: A Case of Komelon Corporation

By Cheol Park and You Rie Kang

Abstract

This case examined a successful brand management of Komelon which has manufactured tape measures. After learning the global trend of tape measures by OEM, the company developed a private brand, Komelon, and entered global market with it. Now, Komelon exports tape measure products to 80 countries, and is the third brand of tape measures in US market. In spite of small size, Komelon is a strong and unique company which has three overseas branches. The success factors of the brand management of Komelon are core competence based on product quality, design, and sales efforts. The drive forces of the brand management of Komelon are summarized 1) effective new product development process by inter-functional cooperation, 2) good product quality by a full vertical integration, 3) systematic management of market and customers by effective localization, and 4) abilities of publicity and information collecting by participation of world hardware fairs.

Key Words: small business, brand, global marketing, localization, inter-function cooperation

Introduction

Korea Small and medium sized companies without their own brands have had difficulties in increasing their profits in global market. In spite of small and medium companies being the advantage with oneself brand for long-term, cannot have the brand. But the tapeline productive Komelon was different. The Komelon which was insulation tape productive company changed to start initial step of tapeline manufacture in 1974.

Komelon recognized that for a global market advance and from that there must be oneself brand possession, the brand which is Komelon registered in 1978. If the company has their own brand, there are many advantages like sale promotion, market opening up, export rise in price etc which is long-term. But 1970's Korea many small and medium companies did not made own brand but adopted OEM (original equipment manufacturer methods managing) plentifully and the result which abandons the advantage which is caused by their own brand.

The Komelon respects overseas market opening up from the initial cost is more but judged with the fact that will have the profit whose oneself brand is bigger. So with meaning 'which is representative tapeline made from Korea' Ko (rea) + Me (asure) + Lon (fiber suffixes) in 1978. Currently Komelon was exporting 80 countries with like this effort and high recognition from foreign nation than domestic seems to high brand identity established nationally.

So, this case study will be meaning to small and medium company whose oneself brand development

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Company Overview

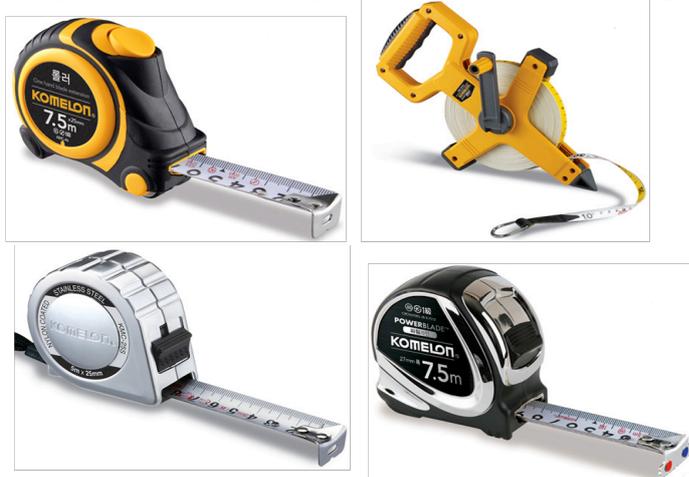
Komelon started from 1963 insulation tape productive company and started as 1974 tapeline manufacturing industry. In 1978, the 'Komelon' brand to register and changed company trade name to 'Komelon' in 1990. To 1995 founded Inchon factory and to 2001 registered the company in KOSDAQ.

Komelon organizations the overseas business team, the marketing division including development team/laboratory, design team/laboratory and the operation division (material management team, production control team and goods team), including and the quality maintenance team. Also the organization of the company of Inchon airport and the United States, Europe and China is included. The area especially North America 68%, Europe 10%, the Oceania 3%, South America 2%, was other 17%. Komelon exported with own brand more than 70%. They exported 72% in 2001, 77% in 2002, 74% in 755 with own brand.

Products and Market

The tapeline is the tool which measures a length. The tapeline according to the scaled tape and the material is divided with the steel tapeline and fiber glass tapeline. Recently the tapeline is becoming high-tech and sensitivity rapidly from the tool which is simple.

<Figure 1> Komelon product package and design



The important companies of tapelines are 'Stanley Works' in America and 'Tajima' 'KDS' in Japan. Even in others, 'ASSIST' in China, 'Hanilon' and 'Sesin Tapeline' in domestic brand. From American market 'Stanley' is having 50% market share, the Komelon is about 12%. The Komelon is having about 50% market share from Korean market and the tool store leads mainly and circulates.

The tapeline market is a possibility of dividing on 3. First, the specialist market is used with industry, construction and the interior and mainly the high price and average length of life are 1~2 months. Second, DIY markets with general market mainly are used with the family and business utility. This field the growth which is

continuous is caused by with improvement of leisure culture is forecast. Last is a sales promotion market. This market is to use the tapeline with sales promotion or the premium of the company is little by little magnified. Personal market is mainly the middle low price and price and packing are important and the other side the specialist market is middle high price and quality, function and service are mainly important.

The tapelines are supplied through various distribution channels in the world. 40% are supplied through DIY home-center and discount stores 20%, Construction material store 8%, drugstores 5%, Advertisement sales promotion company 5%, media sale 2%, business article store 2%, foodstuff market 2%, others 6%. Komelon is transacting business with Wal-mart which is worldwide largest discount store, Lowe's which is second order home-center in the world, Canadian Tire which is maximum size in Canada, OBI which is largest home-center in Germany. Komelon is having the 150 fixation buyer in 80 countries.

Brand Management of Komelon

Brand developing background and processes

Komelon where does concentrating the insulation tape from 1963, changed the main goods in tapeline in 1974. At that time Korea there is not any company which produces the tapeline and is because the tapeline demand increasing world-wide with magnification of DIY markets. So, the management of a corporation put a focus in export and to produce the tapeline, the profit whose is more insulation tape production. Small manufacturing industries of factual 70's Korean most were doing and only OEM exports even interest there was not own brand.

But the Komelon respects overseas market opening up from 1978, the tapeline ' which is representative made from Korea; Made the tapeline of the brand which is Ko (rea) + Me (asure) + Lon (fiber suffix) with meaning which is. Komelon which is an English marking the foreign nation buyers remember, the brand registration at the time of there were many advantage because being a convenient new-coined word.

It was not easy thing that Korean small manufacturing industries doing an export with own brands. But grasped need of local markets and the customers thoroughly and the buyer before always the tapeline of the quality which is equal presented with the world-wide company supplied the product which is renovation. Own brand export is becoming also the core element which binds together the company internal staffs.

Komelon Brands

Komelon main brand is a black letter in original yellow basis but winning 2003 brand compensation did a brand renewal work with opportunity (<Figure 1>). New logo did with the Gothic body to reflect the recent brand logo trend the design image to be strengthened. Line where connects L and O associate made the tapeline and foundation with from primary color to change with a little heavy yellow professional images emphasized. In order for these main brand are doing family brand duties and main brand to be emphasized to as many as package and design. Namely, Komelon images being emphasized than product individual image, raises a coherency.

The family brand KomPro is which does discount store with target like Wal-Mart. Kompro did an American market as well with target and maintained the Star-

Spangled Banner color of blue and red. KomPro enters to the low price retail store and in order to prevent Komelon image depreciation which is mother brand was a brand which develops. KOM the prefix which is common used to do make a brand connectedness have, in order to be thought with the different brand. But to the home indication of packing "KomPro is registered by Komelon Corporation" gives the quality firm belief power.

There are 9 sub brands more like INOX, MacGrip, SelfLock, GetMax, ProErgo, Eco, FastBack, InnoGrip, UniGrip where reflects a product attribute. These brands were registered with all brands. The sub-brand strategies do the role to strengthen the image of the representative brand in market environment (Asker 1997; Kwang ho An et.al 1999).

Like this sub brand creates the belief which is concrete about each products and help to take out an attitude naturally from memory about Komelon(family brand) simultaneously (Kwang ho An 2003).

Important brands management activities

Komelon in order to become a best tapeline brand in the world have been investing 18% of whole investment cost for developing brand. Komelon have been trying to brand developing, managing and maintain until now.

When neither the machine manages does not use breakdown like being no matter how the brand which is excellent to inform widely and managing, loses the values (Keller 1998). If defines a brand identity no matter how well from brand management in order maintains with brand equity, from there must be IMC (integrated marketing communication) activity which is effective (Cheol ho Sin 2005). So, Komelon was participated all exhibition which is possible and new buyer excavation and new product development, overseas market trend etc. during that time. Specially, to participation in exhibition not only for promotion but opened up activity new transactions and showed business power to advances a consultation.

Also the advertisement published continuously in the magazine and in order world-wide to inform Komelon English and German, French, Spanish, Italy and Dutch etc. total 6 foreign language catalogues distributed. With result of like this sincerity will propose a brand introduction from Taiwan and foreign countries the reaction was good about Komelon brand.

In order to increase own brand export the buyer to the case which will demand OEM demanded more highly price of the product which attaches Komelon brand. Buyers who purchase the product which attaches Komelon brand support marketing promotion cost (3% of purchase amounts). To the case which will demand contribution OEM took the method that Komelon brands attach on the inside of the tapeline.

And Komelon consider the company brand image when 20~30 small orders come in from the foreign nation and they willingly send. Before 15 years one buyer from Caribbean Sea islet ' Haiti ' ordered 470 dollar. To understand the situation only the area market will not be able to order small few, to send the product. But only the air fare expense for a product transportation 700 dollar was used as many as. But Komelon willingly submit putting out this damage and was to send the product.

The good quality known from brand but the brand which becomes known must be supported quality continuously and is because being the possibility which will be located with the best brand. At one part of like this effort Komelon registered intellectual property right about the technique which develops and authenticates work

eagerly. The technical power and the recognition about intellectual property right in small companies low at that time. But, Komelon domestic patent right of course the United States which is the biggest market and hard to satisfy Japan, secured a patent right to recently from even Europe.

In order to be best world-wide tapeline brand, Komelon founded oneself design team. Komelon analyzed not only that original function of the tapeline but appeal the design which is emphasized to the consumers. They developed every year 4~5 new products and the brand.

Not only for the stable supply materials and quality increase at 1995 founded the factory in Inchon. Also for effective localization which was founded local corporation Komelon USA in 1997, Komelon China in 2002 and Komelon Europe in 2004.

Staffs are more important in good quality and service provision before in order to maintain a brand reliability and that self-conceit about brand (Traut 2002). For this Komelon has unique culture. Komelon used the part of pure profit in staff union and ability development. Movie viewing and the skis seminar, advanced workshops and for a horizontal organizational culture used an English name. Was the rare work from small companies which the feminine staff sends alone in overseas business trip. The reason Komelon could be best from the world because of self-conceit of the internal staffs about the product and brand mental.

Result of brand management

Last 20 years Komelon which concentrates to the brand management which exports own brand became the world best tapeline maker. Komelon is a world third brand and the annual profit is ten million dollars which goes over from 80 countries market. Compares in the profit rate of the usual small export manufacturing industries being 10% under Komelon with own brand is putting in 20% pure profit. In 2001 the stocks was listed in KOSDAQ and the effective fund-raising possibly and also the public trust became high.

The patent and the patent on a new device registered from this process, reaches to total 200. Designated technical advanced small companies in 1991, small company world best companies in 1995, Vision 21 freshness companies in 1997, technical excellent venture business in 2000 with this technical power and a intellectual property right. In 2000, awarded Korea best a brand management company and designated world best product company in 2003. Also, achieved KS mark in 1984, JIS in 1990, EC form approval number in 1992, ISO9001 in 2001.

Built the company construction laboratory and produce about 200 tapelines from ideal to expert, general, promotion which is calculator tapeline, measure horizontality and perpendicular from the water-drop horizontal level, tennis racket or automobile shape tapeline etc. Specially, MagGrip was selected with the excellent industrial design goods and the Korean millennium goods in 2001 that recognized its creativity, usability and functional characteristic from the inside and outside of the country.

Drive force of Komelon brand managements

Until now tried to observe Komelon brand management actual condition and results. There are possibility various factors to drawn Komelon to be succeed in global market, but look at based on the discrimination first, effective new product development process by inter-functional cooperation, Second, good product quality by

a full vertical integration, Third, systematic management of market and customers by effective localization, Fourth, abilities of publicity and information collecting by participation of world hardware fairs. Of course these strategies certainly not only Komelon unique own is but synergy effect in these four kind elements are became the base in Komelon brand management successes.

Effective new product development process by inter-functional cooperation

Brand identity and personality are expressed in brand name and logo, symbol, slogan etc. but most the important element is that oneself of the product from brand management (Davis 2001; Keller 1998; Cheol ho Sin et.al 2005; Kwang ho An 2003). It is difficult to being good brand identity when product that oneself is not good for the further the brand management is not to be success. Komelon is successful that is, knows customer and market flowing, the planning and developing renovation product quickly. To new product planning and developing with various station relates like R&D, business, the design etc. Cooperation of the heterogeneous stations was essential for new products successes. But it is fact that discord cooperation between heterogeneous stations within company and do not co-work well. But Komelon when developing new product, maximized the pliability, a speed and the power of concentration only of small companies.

Komelon lays down a life in new product developments. The company construction laboratories are 3 for developing new products. To here the total 13 professional man power allocated each section. These people do the tractor duty of the brand discrimination to developing renovation product. From here every year 3~4 new product are developed. Komelon new product developments are complete formula through customer survey to competing product and collecting ideas for new products and selecting one of them from intensive meeting and evaluate protocol by cooperation with several stations.

Have a depth meeting again for commercialization with production team for marketability and Customer accommodating possibility among last options. Many discussions and meeting are opened from this process.. The horizontal and liberal organize culture is important to cooperate with different stations. Komelon is endeavoring in order to make like this atmosphere

Good product quality by a full vertical integration

Brand reputation is not formed suddenly. If the quality and price do not follow about the product and the brand image is not formed. Exactly, brand management must present clear brand positioning for customers to be success (Kwang ho An 2003). From this side Komelon decided the value of the tapeline product with quality and many endeavored.

To be beginner in tapeline market was not easy thing. There was not happened also the foreign nation tapeline maker to initiated their know-how and a technologies easily. Even in worst situation but from the bottom found a technique neatly. In effort 1 years passed made the fiber tapeline with only pure oneself technique. The tapeline which uses the magnet was the idea which gives the fresh shock in the conservative tapeline market. In order to raise quality, Komelon is being many difficulties at the advanced nation where hard to satisfy transaction companies and customers. Also Komelon in order to make a quality to world standard hasted JIS acquisitions.

Until receiving like this quality, there was a method which only in Komelon. That

is a full vertical integration system from choose tapeline subject matter to marketing at the end. The marketing director did proudly about this full vertical integration system.

Systematic management of market and customers by effective localization

The global market was the first target took the thorough localization strategy. The effective localization strategy is a possibility dividing into two. First is a localization product development which reflects on the export regional characteristics. Second is construct the appropriate local business networks and applied to marketing strategies. In order to localization product developing collect information from local market and analyze for establishing product strategy, market strategy and competitive company strategy.

Divides about 80 countries into 6 areas and divides again in concentration area and usual area for managing thoroughly where Komelon advanced. The localization product is developed through these processes. In order to develop localization product to make relationship with purchase buyers endeavor.

Second is a localization strategy through a local corporation that in Komelon USA only consist with American. These people have a localization mind and constructing independent distribution channel in the actual place and marketing strategies.

Abilities of publicity and information collecting by participation of world hardware fairs

Komelon is a small company which will not be able to spend much expense for brand public information. In order to inform a good quality and service tried to searching effective marketing communication. With KOTRA helps put a name initially at export company' list and participated in various exhibition introduced from. It is difficult that public information from others. Komelon came out in order to be a public information oneself brand. So, the tool exhibition or world hardware fairs which were discovered.

There are many additional advantages to participate in fairs not only to public inform. The order consultation takes, look over world trend in global tapeline market and will be helpful to grape competitive company trends.

Prospects

As like the total sales of Komelon is about 30billion won and the pure profit is about 5 billion in 2009, Komelon is trying to be a best tapeline company in the world. Komelon must win many obstacles in order to become the best tapeline company.

For these, Komelon should expend more to R&D investments for expensing development facilities and professional manpower to a market leader of tapeline. Also, to have professionalism of organization and manpower for managing brand and prevent dispute about intellectual property right and to defend Komelon brand.

The most of export is supplied through Komelon USA where is an American local corporation founded at 1997 leads North America market. It will be dangerous in Komelon if the Komelon USA deteriorated where leans plentifully. In order to prepare this Komelon must endeavor to expand external export diversification not only North America area.

Komelon founded a Europe local corporation at one part of this effort in 2004. These reflect to localization strategy after Komelon USA. There will be competitive companies like Stanley France, Fisco, Dela(Facom), Medid etc and divided market size sequentially into France, Germany, Great Britain, Spain and Italy. Komelon must invade Europe market make the Europe local branch office to do business normally.

On the other hand, Komelon has a new vision. That is to enter domestic synthetic tool market. The tool market compares with the tapeline the market size is much big but the rate of dependence on imports becomes 53%. The reason is that Sesin where is a domestic maximum tool company being placed in crisis. With the change of manufactures and distribution domestic tool market provides the fair chance to business expansions for Komelon. The possibility is high because the productive capacity will be magnified specially in Komelon Chines Chondo factories. Namely, Komelon brand image, operate Chinese Chongdo factory, strong base of domestic demand market, inactive of Sesin become the element to penetrate easily. It will go wrong fall existing tapeline image, additional management cost, cost of stocks and distribution cost, discord with the domestic tool wholesales who plans outsourcing will not be to exclude.

Internal sympathy formation is necessary from investigation of brand strategies from many sides, effective process for quality and inventory, reinforce relationship with existing distribution networks, open up new distribution channel, long-term strategy and inspection of each stages in order to advances to domestic tool market consequently.

Conclusion

The case is a success story about brand management of small tapeline manufacturing company Komelon. This case is possibility becoming benchmarking data for small manufacturing which do not have their own brand so far.

The brand management success of Komelon is showing small company advantages on speed, pliability, efficiency based on the quality power and analyzing market and customer. Also the different companies can cooperation with other stations and exhibition participation, vertical integration. But, Komelon succeeded to formation of brand identity and maintain to create synergy effect to practice these factors. It will be necessary of course to extract Komelon core abilities compared to other companies.

Many small manufacturing companies could get current points about successful brand management which is vague before. Komelon successful brand management elements are not impossible to practice. Being more important things about brand management successful power are managers and the staffs strong will power and a self-conceit. To develop and construct own brand became a short cut of success even difficulties first stage in Komelon.

It could not be applied this example for all small companies of course. This instance will be suitable in the field whose vertical systematization is possible and which produce new products every year to satisfied market and customers, maintain the quality and effective product process. Also, it will be more suitable at small manufactures which will do minimum export possible to oversea.

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The effects of knowledge on the performances of Korean Small and medium sized Firms : A Panel Data Study

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This paper investigates the contribution of knowledge, patents, and R&D to the performances of Korea manufacturing firms for the years from 1985 to 2007, particularly focusing on the small and mid sized firms. We calculated total factor productivity growths of the firms and used the panel regression model with fixed effects. This paper found the positive effects on the firms' performances. Especially the knowledge spillover effects seemed very large for the small and mid sized firms.

Key words: patent, knowledge, small and mid sized firms, Korean manufacturing

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Entrepreneurship among Russian immigrants in Norway and their stay-at-home peers.

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The level of self-employment among immigrants is often higher than among natives. The purpose of this paper was to test empirically whether selective migration with respect to entrepreneurial characteristics may explain this difference. The relevant hypotheses were tested comparing representative samples of Russian immigrants in Norway and their stay-at-home counterparts. Data from the Russian population came from the 2008 GEM study, while data on Russian immigrants in Norway were collected through a specially designed postal survey. The analysis revealed some demographic dissimilarity between the two groups, as well as a presence of selective migration with respect to entrepreneurial characteristics. This study demonstrates that immigrants (as compared to non-migrants) are more likely to report intentions to start a business. Moreover, they possess relatively large amount of specific human capital, social capital and self-confidence relevant for entrepreneurship. The paper concludes with proposed practical implications and suggestions for further research.

Keywords: immigrant entrepreneurship; selective migration; brain drain.

Introduction

While the stock of immigrants is boosting in the western countries, entrepreneurship has been increasingly recognised as a viable method of improving the living conditions for immigrants. Immigrants, often blocked from the general labour market, may survive and achieve some economic mobility by becoming self-employed. Through this type of activity, immigrants may actively participate in the local social life, and join important social networks. At the same time, the host countries are also expected to benefit from immigrant self-employment. Immigrant

entrepreneurs are argued to cease demand for social benefits, revitalise declining regions and industries, and bring a variety of new ideas and products to the market. Not surprisingly, politicians in developed countries, including Norway, have started to promote initiatives encouraging immigrants to establish businesses in their new country of residence.

The question which seems to be essential in theoretical debates on immigrant entrepreneurship is: “Why do some ethnic/immigrant groups have higher rates of business participation than others?” (see for example Flap et al., 2000; Waldinger and Chishti, 1997). In different contexts researchers have investigated the role of culture, social and human capital, discrimination, blocked mobility, opportunity structure, or a combination of several. It has also been suggested that especially “entrepreneurial” persons may be selected during the migration process. However, due to the lack of theoretical underpinnings and methodological problems, the last hypothesis remains understudied. Selectivity question represents a major knowledge gap in the field of immigration studies (Gans, 2000). The purpose of this paper is to test empirically whether selective migration with respect to entrepreneurial characteristics does exist and to propose explanations for the phenomenon under scrutiny.

This paper also seeks to contribute to the debate considering the flows of skilled migrants from less to more economically developed countries. This process, also called “brain drain”, has received a gradually growing interest both in sending and receiving countries. This paper compares Russian immigrants in Norway to a representative sample of their stay-at-home peers, applying a previously underutilized method on the rarely studied group of immigrants from a specific country.

Conceptual framework and hypotheses

It has often been observed around the globe that immigrants of a certain origin are under- or overrepresented among the self-employed. Cultural predisposition (Weber, 1958), blocked mobility on the labour market (Zhou, 2004), middleman minority position (Bonacich, 1973), extensive social capital (Potocky-Tripodi, 2004; Caulkins and Peters, 2002; Fratoe, 1988; Portes and Zhou, 1992), use of ethnic resources (Light, 1984), and mixed embeddedness (Kloosterman et al., 1998) have been proposed as possible explanations to this phenomenon.

Waldinger's interactive model (Waldinger et al., 1990) emphasizes the interaction between opportunity structures and ethnic group characteristics. Opportunity structures include market conditions and the routes through which access to business is obtained. Access to business ownership is defined by the number of vacant business-ownership positions, the extent to which natives are vying for these slots, and by government policy towards immigrants. Group characteristics include resource mobilisation and predisposing factors such as blocked mobility, aspiration levels and selective migration. It is argued that some immigrant groups may be pre-selected, first of all, with respect to prior buying and selling experience.

Indeed, immigrants do not represent a random sample of the population from which they came (Feliciano, 2005). It has been reported that immigrants are different from the home country population with respect to their average skills (Borjas, 1999), education (Feliciano, 2005), health (Landale et al., 2000), personality factors (Silventoinen et al., 2007) and occupational background (Suzuki, 2002). In some cases, the unskilled persons endowed with relatively low human capital dominate the migration flows (Borjas, 1999). Alternatively, most skilled professionals are argued to migrate extensively from Eastern Europe and the former Soviet Union (Mansoor and Quillin, 2006; Ushkalov and Malakha, 2000). It is suggested in this paper that

selective migration may have an effect that has not sufficiently been taken into account by the existing studies on immigrant entrepreneurship.

The human capital model (Sjaastad, 1962) assumes that migration occurs if the rate of return on the investment in migration is greater than the interest cost of funds for investment in human capital. The favourable selectivity of migrants occurs if the wage differential between the destination and origin is greater for the high-ability workers (Chiswick, 1999). Highly skilled immigrants are also likely to move from countries where payoff to human capital is low to countries where the payoff is high (Borjas, 1999). The inherent uncertainty associated with entrepreneurial venturing violates the assumption about the return on migration which underpins these models. It is therefore unclear to what extent this “wealth-maximizing” (word used in Borjas, 1991) reasoning may be applicable to potential entrepreneurs. In 2007 only a few¹ Russians received permission to enter Norway based on their documented intention to start a business. At the same year 254 professionals, 234 students and 658 family members received such permission (Utlendingsdirektoratet, 2008). It is therefore doubtful that many entrepreneurs rationally choose to migrate to another country because they perceive that it is more profitable to create a business abroad. Other theories of migration, such as dual labour market theory, world system theory, and the “new economics of migration” approach (for review see Massey *et al.*, 1993) also fail to predict if (and under which circumstances) self-selection of entrepreneurs occurs.

In the context of entrepreneurship studies, selective migration still lacks both theoretically sound elaboration and empirical evidences. Clark & Drinkwater (1998) suggested that immigrants, as a self-selecting group, may be “in some sense more

¹ The exact number, which is less than 5, is not revealed here protecting respondents from identification.

entrepreneurial than the native-born". However, based on the analysis of a large sample of Britain's ethnic minorities, the authors rejected this conjecture. Based on ethnographic analysis, Kasdan (1965) suggested that dominating family structure in the home country explains the differences in entrepreneurial behaviour among immigrants to the United States. The author argues that the social structure of a traditional Basque community maximizes the chances for entrepreneurial personality types to immigrate. In this study, risk-taking and acceptance of change were associated with entrepreneurial personality. Maxim (1992) suggested that similar psychological processes underline both the decision to migrate and the decision to become self-employed.

Levie (2007) suggested that immigrants may be positively selected with respect to their attitudes towards new business activity. Immigrants may be less risk-averse compared to their stay-at-home peers because they have taken a bold decision to move into a new unknown country. Indeed, low risk aversion is associated with both higher propensity to migrate (see for example Heitmueller, 2005), and entrepreneurial behaviour (for the review see Shane, 2004).

In the same vein, Dana (2007) argued that the very act of emigrating may be reflective of some entrepreneurial values, such as individualism, achievement, competitiveness, risk taking and strong work ethics. Immigrants may also be more confident of their own human capital and their ability to succeed in a new uncertain environment. Utilising the UK GEM data the author arrived at inconclusive results about the presence of self-selection. It seems that a proper assessment of the effects of selectivity requires data on both the population in the sending country and on immigrants from this specific country (Feliciano, 2005).

Dissatisfaction is argued to play a central role both for migration and business start-up decisions. On the individual level, dissatisfaction with previous work is positively associated with self-employment (Brockhaus and Horowitz, 1985). At the same time, immigrants (prior to migration) tend to be less satisfied with their jobs, educational institutions and life in general (Silventoinen et al., 2007; Hanna et al., 1990).

Based on the conjectures cited, one may expect that relatively more “entrepreneurial” individuals will choose to move abroad. It is suggested in this paper that the presence of selective migration is easier to detect when comparing early-stage entrepreneurial activities which are less influenced by particular post-migration conditions. Thus, the following hypothesis was developed for this study:

Hypothesis 1: The proportion of persons involved in early-stage entrepreneurial activities is higher among immigrants than among the population in their home country.

Immigrants may be pre-selected with respect to their human capital relevant for entrepreneurship. Becker (1993) distinguishes between general and specific human capital. General human capital, often measured as years of education and work experience, relates to the factors expected to increase the individual’s productivity for a wide range of work-related activities. Specific human capital, on the other hand, is applicable only to a specific domain. In the entrepreneurship literature specific human capital is usually measured as managerial, industry specific and self-employment related experience (Bosma et al., 2004; Cooper et al., 1994).

As far as entrepreneurship is concerned, the amount of specific human capital is especially important. To actually start a venture is probably the most effective way

of learning specific entrepreneurial tasks such as initial organizing, establishing of relationships with key stakeholders, allocation of human resources, adjusting to market changes, and facilitation of communication within the organization. It is therefore argued that immigrants coming from countries with high rates of self-employment will be overrepresented among the self-employed in the host countries. Such immigrants are predisposed towards entrepreneurship because of the home country traditions for entrepreneurship and because of the relevant training they have received before migration. The relationship between the level of self-employment in the country of origin and subsequent entry into self-employment after migration has been empirically demonstrated (Cobas, 1986; Ekberg and Hammarstedt, 1999; Yuengert, 1995). Others have failed to find support for such a relationship (van Tubergen, 2005).

The validity of these conflicting results may be questioned if the process of migration is selective with respect to entrepreneurial experience. Entrepreneurs (at least the successful ones) may be more likely to migrate than the rest of the less developed country's population because they possess the necessary financial capital. Successful entrepreneurs may also be more likely to travel abroad (as tourists or on business). Their eventual travels perhaps provide them with information facilitating the migration decision. This conjecture accords to the theory of asymmetric information as applied to migration decision-making (see Stark, 1991).

Summing up this discussion, the following hypothesis was formulated:

Hypothesis 2: Immigrants possess more specific human capital relevant for entrepreneurial activities than their stay-at-home peers.

Not only the level of specific human capital, but also individuals' awareness about their abilities, may influence the decision to start a business. Both perceived self-efficacy (Krueger et al., 2000) and perceived behavioural control (Kolvereid, 1996) are important for prediction of entrepreneurial intentions. By the same token, self-reported competences are predictive of entrepreneurial performance (Chandler and Jansen, 1992). The link between confidence in one's skills/abilities and entrepreneurship has been illustrated empirically using GEM data (Arenius and Minniti, 2005; De Clercq and Arenius, 2006). It has been suggested that immigrants may be self-selected with respect to their confidence in entrepreneurial skills (Levie, 2007). Thus, the following hypothesis was developed:

Hypothesis 3: Immigrants are more confident in their abilities relevant for entrepreneurial activities than their stay-at-home peers.

Social networks may be viewed as consisting of two components: the personal networks (i.e. individual level relationships), and cultural embeddedness (Fadahunsi et al., 2000). Focusing on the individual level, this paper emphasizes the importance of knowing other entrepreneurs when taking a decision to start a business. It is argued that the presence of entrepreneurs among parents (Constant and Zimmermann, 2006) and peers (Arenius and Minniti, 2005) increases the individual's likelihood of becoming a business owner. Immigrants may be pre-selected with respect to the quality and quantity of their personal networks relevant for entrepreneurial activities. It is well established in the field of social psychology that friendship and peer affiliation are influenced by perceived or actual similarity in attitudes, traits, and values (Byrne, 1971; Newcomb, 1956). Particularly, friends are argued to demonstrate similar perceptions of need for achievement and autonomy (Secord and Backman,

1964). Both these needs are traditionally argued to predict entrepreneurial behavior (for a review see Shane, 2004). It is possible that social groups characterized by relatively high needs for achievement and autonomy will include relatively many potential entrepreneurs and, simultaneously, many potential migrants. In this case, one may suggest that:

Hypothesis 4: Immigrants are more likely to report personally knowing other entrepreneurs as compared to their stay-at-home peers.

The context of immigration to Norway

The first years after World War II, when foreigners temporally displaced by war left Norway, the immigrant population in the country was exceptionally small. In 1950-1960, the refugees of the war, former prisoners of the Nazi camps located in Norway and citizens of other Nordic and OECD countries migrated to Norway. In the beginning of the 1970's , when other European countries began to close the borders for working migrants, this group started coming to Norway, forming the first significant wave of immigration. The initial intention of the policymakers was to invite immigrant workers for short periods of time covering the cyclical excessive demand for labour. However, appreciating the high standard of living in Norway, the absolute majority of guest workers never left the country. As early as in 1975 new laws restricting immigration of unskilled workers were introduced. When these restrictive laws were applied, the immigration did not stop, but continued through family reunion, international education programs and employment of professionals. The families of working migrants formed the second wave of immigration to Norway. In 1970-1975 Turks, Moroccans and Pakistanis constituted the majority of not-Western immigrants in Norway. The third, and by far the largest wave of immigrants,

consists of refugees which started arriving in the end of the 1970's and still continues to fuel the migration process. Since isolated local conflicts usually cause sporadic flows of refugees, this type of migrants arrived to Norway in large ethnically homogenous groups. Evolution of the Norwegian migration process from working migrants and family reunification to refugees is much like the processes observed in Germany (Wilpert, 2003), France (Ma Mung and Lacroix, 2003) and other European countries.

In 2007 there were 341 830 first generation immigrants in Norway (7.3% of the population). When the persons born in Norway by two non-Norwegian parents are included, immigrants account for 8.9% of population. When children with one Norwegian and one foreign parent are added, the respective figure rises up to 13.4% (Statistics Norway, 2007). The immigrants are unevenly distributed around the country with the largest concentration in the Oslo region.

When immigrant entrepreneurship became an observable and significant phenomenon in Norway remains unclear due to a lack of systematic historical and statistical data. In the beginning of the 1980's, immigrant owned shops and restaurants in central Oslo started attracting the attention of the public. In 1986/87, there were 127 "ethnic" shops owned by non-western immigrants in Oslo that constituted 44% of all small shops retailing daily goods. Between 1989 and 1997, non-western immigrants established 300 shops, 200 smaller outlets selling daily goods and simple food and 160 restaurants (Tjelmeland and Brochmann, 2003). Systematic national level statistics on self-employed immigrants first became available in 2001. The level of self-employment among immigrants is constantly growing, but still remains low compared to the average self-employment level in the country.

Immigrants from Denmark, Sweden and Pakistan represented about 1/3 of all self-employed immigrants in Norway in 2006. Together with immigrants from Great Britain, Iran, Poland, Vietnam and Turkey, these groups accounted for almost 50% of all self-employed migrants (2007).

Empirical evidence reveals striking intergroup differences with respect to the percentage of self-employed (Vinogradov and Kolvereid, 2007). In 2004 as much as 12.7% of the immigrants from Faroe Islands and 10.2% of the immigrants from Hong Kong were self-employed. At the same time just under 2% of the immigrants from Tanzania, Thailand and Ghana were self-employed. When divided by the world regions, immigrants from Western countries (West European countries, USA, Canada, Australia and New Zealand) demonstrated the highest average level of self-employment while immigrants from Africa and Eastern Europe are underrepresented among self-employed.

Russians (11 338 first generation immigrants), who are the focus of this paper, constitute the 15th largest immigrant group in Norway (Statistics Norway, 2007). This group demonstrates one of the highest rates of population growth with twice as many immigrants living in Norway in 2008 as compared to 2003. The absolute majority of Russian immigrants belong to the first generation and over 85% of them came to Norway during the last 10 years. Among Russians, the influence of factors related to inter-cohort heterogeneity, intergenerational relationships and long-term influence of the host country environment is considered to be relatively weak. Thus, Russians in Norway represent an appropriate case for a quasi-experimental research design.

Data and Method

Data

In order to test the hypotheses, a representative sample of Russian immigrants in Norway was compared to a sample of the Russian population. Despite the large number of Russians residing abroad, entrepreneurship among immigrants from Russia, and more broadly speaking, from the former USSR, is not often described in the literature. Rare exceptions are studies conducted on immigrants from the former Soviet Union in Israel (Lerner and Hendeles, 1996; Mesch and Czamanski, 1997).

In entrepreneurship studies, *gender* is one of the most frequently used control variables. Men are reported to have higher propensity to become self-employed both among natives (see for example Cowling and Taylor, 2001) and immigrants (Butler and Herring, 1991; Razin and Scheinberg, 2001; Bates and Dunham, 1993). In Norway only 34% of immigrants from Russia are men while the gender proportion in Russia is nearly 50/50. Because of the skewed demographic of the immigrant population in Norway and the expected differences in entrepreneurial activities, male and female respondents were analyzed independently.

Data from Russia came from the GEM study conducted in 2008 (for methodological details see Bosma et al., 2007). A regionally stratified representative sample of adults was approached for face-to-face interviewing. The response rate was about 40% in Russia. Data on Russian immigrants in Norway were collected using a specially designed mail survey. The battery of questions considering entrepreneurial behaviour and intentions was borrowed directly from GEM, ensuring comparability of the two datasets. Additional questions on home country and host country education, citizenship, migration time, settlement intentions and migration motives were presented to the immigrant respondents.

In order to identify potential respondents phonetic analysis of first names was applied to the Yellow Pages database. This method of sampling has previously been

used in research on immigrants (Bruder et al., 2007; Dassler et al., 2007; Min and Bozorgmehr, 2000; Shin and Yu, 1984; Smallbone et al., 2003; Shinnar and Cheri, 2008; Chaganti et al., 2008; Light et al., 1994; Kasdan, 1965). In sum, 1330 female and 635 male respondents were identified as having Russian-like first names and contacted.

Within six weeks after initial sending 488 questionnaires were returned because the address was not valid, 120 respondents reported that they could not read Russian, and 21 returned questionnaires were not filled. All these respondents are considered to be non-contacts. Given that 543 questionnaires (of totally 1357 that apparently reached the respondents) were returned, the response rate was 40%; that is within the frames of normality for comparable surveys. As many as 406 (75%) respondents reported coming to Norway from Russia.

For the purposes of this paper, immigrants younger than 18 years of age at the time of migration were excluded, as this exclusion increases the probability that the destination country was chosen by an immigrant and not by immigrant's parents. The final sample included 796 male and 865 female non-migrants as well as 41 male and 302 female immigrants aged 18-64. Descriptive statistics are presented in Table 1.

Table 1. Descriptive statistics.

	Female respondents					
	Nonmigrants			Immigrants		
	N	Mean/ %	Std. Deviation	N	Mean/ %	Std. Deviation
Age	864	40.06	13.205	302	41.3	9.046
Married/Cohabiting	864	52.5		302	77.2	
Higher education	865	20.0		302	60.9	
	Male respondents					
	Nonmigrants			Immigrants		
	N	Mean/ %	Std. Deviation	N	Mean/ %	Std. Deviation
Age	796	38.77	12.619	38	37.84	11.573
Married/Cohabiting	795	60.1		38	84.2	
Higher education	796	16.1		38	71.1	

Note: for nominal scales *mean* simply represents percentage of "yes" responses.

With regard to demographic characteristics, immigrants are much better educated and more likely to be married or cohabiting than their stay-at-home peers. Male immigrants are slightly younger and female immigrants are somewhat older than non-migrants. In order to assess the possible response bias, 280 out of 729 non-respondents were randomly selected and an attempt to contact them via telephone was made, resulting in 64 interviews. No differences with respect to age and geographical distribution were observed between respondents and non-respondents. However, non-respondents appeared to be significantly more likely to be single, and were also more likely to report entrepreneurial intentions and previous business ownership experience. This difference may be at least partly explained by the fact that telephone interviews provided less "don't know/refuse to answer" responses as compared to the mail survey. Since non-respondents are even more "entrepreneurial" than respondents, this response bias does not jeopardize the hypotheses on positive selection of immigrants with respect to entrepreneurial characteristics.

Measures

A respondent was categorized as being involved in the early *entrepreneurial activities* when responding positively to at least one of the following two questions:

(1) “Are you, alone or with others, expecting to start a new business within the next three years, including any type of self-employment or selling any goods or services to others?”

(2) “Are you, alone or with others, currently trying to start a new business, including any type of self-employment?”

The presence of *specific human capital* was measured by asking the following questions:

(1) “Have you, in the past 12 months, sold, shut down, discontinued or quit a business you owned and managed, any form of self-employment, or selling goods or services to anyone?”

(2) “Have you, alone or with others, ever started a business in the past that you owned and managed?”

Self-reported confidence was assessed through the following two questions:

(1) “Have you the knowledge, skills and experience required to start a new business?”

(2) “Do you agree that a fear of failure would prevent you from starting a business?”

Finally, the respondents were asked if they “*personally know anyone who started a business* in the past two years.” For these and the other previously discussed items, included in the questionnaire, the following three alternative answers were available for respondents: “yes”, “no”, and “don’t know/refuse to answer”.

Control variables

The following three control variables were included into analysis: age, education and family status. *Age* is suggested to have a curvilinear relationship with the likelihood of entrepreneurial behaviour because age incorporates the positive effect of experience, wealth and credibility and the negative effect of growing opportunity costs and resistance to change - all increasing with age (see Shane, 2004 for the review).

In the general population, the level of *education* is usually demonstrated to be positively related to self-employment (see Shane, 2004 for a review). In immigration studies, education obtained in the home-country, the host-country, as well as the total educational endowment has been measured. Empirical tests provide inconsistent results with regard to the relationships between these three measures of education and propensity of self-employment among immigrants (see Vinogradov and Kolvereid, 2007 for the review). In this paper education level was operationalized as the presence/absence of higher education from the home country.

Being married or cohabiting has in previous studies shown to increase the likelihood that a person is self-employed both among natives (see Shane, 2004 for the review) and among immigrants (Clark and Drinkwater, 1998; Le, 2000; van Tubergen, 2005; Borjas, 1986).

Analysis

Chi-square statistics (Table 2) indicate that female immigrants are significantly more likely to report intentions to start a business, being in a process of business initiation, recently shutting down or previously owning a business,

possessing relevant knowledge and personally knowing an entrepreneur. Female immigrants are also less likely to express fear of failure. Thus, all the hypotheses developed in this text are preliminary supported.

Table 2. Chi-square statistics, female respondents.

Hypotheses	Nonmigrants		Immigrants		Chi-square	Sig. (two-tailed)	
	Count	%	Count	%			
H1	Intention to start a business						
	Yes	28	3.2	49	16.2	102.69	0.000
	No	797	92.2	209	69.2		
	Trying now to start a business						
	Yes	34	3.9	30	10.0	17.43	0.000
	No	818	94.7	262	87.6		
H2	In the past 12 month shut down a business						
	Yes	4	0.5	11	3.7	18.17	0.000
	No	838	97.0	279	93.6		
	Have ever owned a company						
	Yes	30	3.7	65	21.5	95.14	0.000
	No	781	96.2	234	77.5		
H3	Possess relevant knowledge						
	Yes	80	15.4	100	33.4	77.60	0.000
	No	359	69.3	113	37.8		
	Fear of failure would prevent from starting a business						
	Yes	250	48.3	143	47.8	8.80	0.012
	No	125	24.1	96	32.1		
H4	Personally knows an entrepreneur						
	Yes	171	33.0	143	48.0	24.60	0.000
	No	298	39.5	146	49.0		

However, as considering male respondents, the significant differences between immigrants and their stay-at-home peers were revealed only with respect to previous entrepreneurial experience and self-reported knowledge and skills (see Table 3). Thus, the hypothesis on selection with respect to the relevant specific human capital is

supported also for males. The third hypothesis, regarding self-confidence, receives mixed support. On the one hand, immigrants, compared to non-migrants, are more likely to report possessing relevant knowledge (42.1% against 22.6%). On the other hand, differences in reporting fear of failure were not significant. The hypotheses on intergroup differences in early stage entrepreneurial activities and personal contacts with other entrepreneurs are not supported for males.

Table 3. Chi-square statistics, male respondents.

Hypothesis	Non-migrants		Immigrants		Chi-square	Sig. (two-tailed)		
	Count	%	Count	%				
H1 Intention to start a business	Yes	54	6.8	2	5.3	4.08	0.130	
	No	686	86.2	30	78.9			
	Trying now to start a business							
	Yes	44	5.5	2	5.3			1.17	0.557
No	744	93.6	35	92.1				
H2 In the past 12 month shut down a business	Yes	14	1.8	3	7.9	8.38	0.015	
	No	764	96.0	33	86.8			
	Have ever owned a company							
	Yes	36	5.0	9	23.7			22.92	0.000
No	690	94.9	29	76.3				
H3 Possess relevant knowledge	Yes	108	22.6	16	42.1	13.73	0.001	
	No	297	62.1	12	31.6			
	Fear of failure would prevent from starting a business							
	Yes	191	40.0	14	37.8			0.22	0.896
No	174	36.4	13	35.1				
H4 Personally knows an entrepreneur	Yes	176	36.8	18	47.4	2.22	0.329	
	No	251	52.5	18	47.4			

In order to assess the influence of control variables on the relevant differences between immigrants and non-migrants, seven logistic regressions were carried out (Table 4). In the majority of the cases, introduction of control variables did not remove the statistical significance of the differences between female immigrants and their stay-at-home peers. The only exception is the difference in self-reported fear of failure, which was not successfully predicted by the regression. Thus, for the female respondents the suggestion that demographic variables solely explain the intergroup differences in entrepreneurial intentions, relevant human capital, self-confidence and peer affiliation may be rejected.

In the male sample, the regression results suggest that immigrants are more likely to report possessing relevant knowledge because they are relatively young and highly educated. Young people may be generally overconfident and higher education may provide a ground for additional self-confidence. Thus, the relevant hypothesis on selection is not supported by the regression analysis of male respondents. The only hypothesis that is supported by this analysis is the one suggesting that male immigrants have more specific human capital than their stay-at-home peers and the control variables included into the analysis do not explain this difference.

Table 4. Logistic regression results.

	Entrepreneurial intentions		Specific human capital		Self-reported confidence		
	Intention to start a business	Trying now to start a business	In the past 12 month shut down a business	Have ever owned a company	Possess relevant knowledge	Fear of failure would prevent starting a business	Personally knows an entrepreneur
Female respondents							
Immigrant (0=no, 1=yes)	1.88***	1.07***	2.07***	2.02***	0.95***	-0.09	0.55***
Age	-0.03***	-0.03**	-0.01	0.02*	-0.01	0.01	-0.03***
Higher education (1=yes, 0=no)	-0.15	0.00	-0.09	-0.23	0.20	0.24	0.28*
Married (1=married or cohabiting, 0=otherwise)	0.05	0.02	0.02	0.17	-0.03	-0.19	0.08
Model chi-square	59.81***	21.14***	14.71***	82.31***	37.38***	5.49	38.179***
Nagelkerke R ²	0.129	0.052	0.095	0.162	0.069	0.009	0.062
Male respondents							
Immigrant (0=no, 1=yes)	-0.84	-0.78	1.86**	1.63***	0.14	-0.11	0.08
Age	-0.06***	-0.04***	0.00	0.01	-0.02**	0.02***	-0.03***
Higher education (1=yes, 0=no)	0.74**	0.70**	0.16	0.66*	1.28***	-0.05	0.43*
Married (1=married or cohabiting, 0=otherwise)	0.54*	0.29	-0.86	-0.68**	0.34	0.03	0.50**
Model chi-square	23.05***	12.79**	7.95*	20.91***	35.93***	9.67**	17.41***
Nagelkerke R ²	0.070	0.044	0.053	0.074	0.101	0.025	0.045

Notes: B values reported. *p<0.1; **p<0.05; ***p<0.01. Dependent variables in columns.

Several factors may explain why some hypotheses supported by the analysis of female respondents were not supported by the analysis of the male sample. First, the number of male immigrant respondents is low (41 against 302 female immigrants) that may disturb the results. Second, the paths to migration and entry modes may be

very different for men and women. However, the results for females are considered to be somewhat more reliable and generalisable than the results for males in this study, because females constitute the majority of the Russian immigrants in Norway, and also because the female sample is of better quality than the sample of males.

Conclusions

This study demonstrates that at least female immigrants (as compared to non-migrants) are more likely to report intentions to start a business. Moreover, they possess relatively large amount of specific human capital, social capital and self-confidence relevant for entrepreneurship. Male immigrants are also likely to demonstrate relatively large amounts of the specific human capital relevant for entrepreneurship. Since the absolute majority of Russian immigrants have spent only a few years in Norway, it is unlikely that these striking intergroup differences can be explained by the context of the receiving country. Unless the context of the host-country changes the personality dramatically within a few years after arriving, one may conclude that immigrants represent a self-selected group with respect to entrepreneurial characteristics.

These results cast doubt on the use of home-country self-employment level as a predictor of self-employment among immigrants in a particular destination country. The presence of selective migration jeopardise the implicit assumptions on the representativeness of immigrants used in some comparative studies on immigrant self-employment (see for example Hammarstedt, 2001; Yuengert, 1995; van Tubergen, 2005; Cobas, 1986; Ekberg and Hammarstedt, 1999).

The amount of immigrants' "skills" (Borjas and Bronars, 1989) and "quality of migrants" (Borjas, 1987) have attracted much attention in the existing economic

literature. Earnings differential after correction for observed human capital characteristics is usually used as a proxy of immigrants' "quality". This thesis suggests that there is at least one more dimension characterising immigrants. Even earning less than equally educated natives, immigrants may have skills that match those of natives if we take into account the preferences for particular types of self-employment. In this context, the economists' assumption that immigrants are income maximizers (Borjas, 1987) appears to be markedly simplistic.

The findings regarding selective migration are not supportive for the "model of brain circulation" proposed by Schmitt & Soubeyran (2006). This simple two-country, one-sector model differentiates individuals according to two types of talent (entrepreneurs vs. workers). The countries have different endowments of talent and all individuals choose to be workers or entrepreneurs. Allowing migration generates incentives for the relatively abundant type of individuals to move to the other country. Thus, entrepreneurs are expected to migrate to the countries where their entrepreneurial talents are relatively rare. However, our findings indicate that entrepreneurs tend to migrate disproportionately from Russia (relatively low level of business ownership and entrepreneurial aspirations) to Norway (higher level of business ownership and entrepreneurial aspirations²). It is therefore possible that migration of potential entrepreneurs leads to an even larger gap between countries rather than leading to the equilibrium on the international labour market, at least in its sector including entrepreneurs.

In immigrant sending countries, the problem of "brain drain" becomes an increasing issue. This study suggests that the process of brain drain has more dimensions than has so far been depicted. In addition to "scientific immigration"

² According to GEM reports.

(Ushkalov and Malakha, 2000; Tascu et al., 2002) and immigration of skilled workers (Mansoor and Quillin, 2006), entrepreneurs tend to be overrepresented among immigrants. In countries suffering from low levels of entrepreneurship development, such as Russia (Astrakhan and Chepurensko, 2003; Aidis et al., forthcoming in 2008), the outflow of potential entrepreneurs should attract more attention.

This study indicates that Russian immigrants are both willing and able to establish new businesses. However, Russians have so far been underrepresented among the self-employed in Norway. Thus, from the host country's perspective, it is important to pay attention to the entrepreneurial intentions of immigrants. It is possible that relatively small interventions may cause a significant increase in the number of immigrant owned new businesses.

This paper does not reveal the mechanisms underlying the selection of potential entrepreneurs in the process of migration. However, several suggestions may be made. First, entrepreneurial immigrants may be pre-selected because immigration and business venturing are associated with the same type of personality. Second, persons actively seeking new opportunities through migration may affiliate with peers who actively seek opportunities through business venturing. Thus, the relevant social networks may facilitate both immigration and entrepreneurship. Third, previous self-employment in the home country may provide the financial capital needed in order to migrate. The failure to be able to identify the reasons why immigrants are more entrepreneurial than their stay-at-home peers appeals for more research in this area.

NOTES:

- 1) The exact number, which is less than 5, is not revealed here protecting respondents from identification.
- 2) According to GEM reports.

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HOW WOMEN ENTREPRENEURS IDENTIFY THEMSELVES IN CURRENT RUSSIAN BUSINESS CULTURE

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ABSTRACT

Studies on women and men entrepreneurs show differences between them at many levels. Also in Russia there is a gender gap in entrepreneurship in terms of numbers (Verhovskaya & Dorokhina, 2008). Our study focuses on Russian women entrepreneurs, especially their identity and self-perception as leaders of their own enterprises. The aim is to examine their views of enterprising, and to learn through their perceptions about the present state of the economy in Russia.

The study findings are based on interview data of 10 women entrepreneurs in St. Petersburg, as well as photographs that were taken after the interviews. The results show that the women entrepreneurs make sense of their identity as leaders using expressions of autocratic and democratic. Moreover, they express a subjectively rich sense of their own entrepreneurship with no signs of marginality, and had an optimistic outlook on the future with wishes to expand and develop their businesses. Methodologically the study contributes in combining the interview data and photograph analysis.

1. INTRODUCTION

The world of entrepreneurship is gendered in various ways (Calás & Smircich, 2006). First of all, women are still a minority among entrepreneurs, even if their number is somewhat higher today than it used to be (Davidson & Burke, 2004). Previous work in the fields of psychology and sociology theorizes that the difference between women's and men's reality is rooted in their different backgrounds and experiences (Brush, 1992, 24). This is probably a major reason why they differ as entrepreneurs as well. Studies have shown that women's motivation, performance, networking, financing, work-family balance and even their management style is somewhat unlike their male counterparts' (Carrier et al., 2008). How women entrepreneurs establish and develop their enterprises also depends on the broader cultural context as a reality basis for their identity. The

transition of Eastern European communist societies since the 1990s has created new entrepreneurial traditions and a new business culture in those countries. Entrepreneurs identify themselves within their societal and structural contexts; when these change they, too, need to identify themselves differently.

The political system of a country has a significant influence on the principles and traditions of its economy and, consequently, on the managerial and entrepreneurial identity of its economic actors. The shift from the Soviet era to Perestroika and onwards, often referred to as a transition period, bears features of both the earlier system and the market economy, although there is a certain uniqueness in its development. Before Perestroika, the centralized system did not allow private entrepreneurship. In Soviet-style economies it was the centrally planned system that founded the enterprises, determined their activities and was also capable of closing down businesses (Liuhto, 1999). Thus, entrepreneurship was inhibited; as a matter of fact, the only existing entrepreneurs acted underground – and were almost all male. Perestroika, the big reform of 1985, privatized the large public enterprises and gave citizens the freedom to start new enterprises and work as entrepreneurs.

The former Soviet business operations could be characterized as deterministically oriented instead of voluntarily selected, because their activities were largely dictated by the demands of the centralized planning system. However, the unofficial picture shows that the duties of Soviet managers ranged from internal production supervision to coping with the deficiencies and shortages of a centrally planned economy. In this kind of context, they had to use their own imagination and follow their own aspirations. Managers were sometimes forced to replace the entrepreneurial relations that were missing from the official system with their own, unofficial networks. Indeed, underground networks and relationships had developed to support problem solving and management of scarce resources. Also the number of women entrepreneurs started to rise in Russia already in 1990-1991, the last year of the Soviet Union, when an attempt was made to overcome state totalitarianism by creating a plural economy (Gale & Polnareva, 2004, 155). Along with Perestroika, the economic system also changed as public

administration was privatized and the press became free. Contemporary Russian business cultures and the world of enterprising are therefore fairly young, if they exist at all in the Western sense.

There are still many needs for change in the current Russian business environment. However, cultures do not change rapidly because of the inertia deriving from their historical heritage. The former Soviet economic system has been described as hierarchical, autocratic and manager-centred, and involving various control and governmental practices. Initiative was not appreciated. In the 1990s and even before that, many of Eastern Europe's Soviet-type ideologies began to crumble (Czarniawska, 1986; Liuhto, 1999). This brought a new situation to business actors, who now needed new ways to grasp the changed environment and cope with it. As Uksvärav and Nurmi (1993) note, transition-period managers were caught between two extremes in a situation where change was urgently needed but with no clear concept on how to achieve it. The situation in itself must have created some change capacity, however. Learning, planning and a change in attitudes were emphasized as key principles in the transition economy. The earlier economic environment in Russia had been one where production processes, machines and materials were most significant, whereas people and their aims, desires and needs were less important. This business culture had evolved over a period of 50 years, and its ethics incorporated dubious practices like blackmail, bribery and corruption. Nascent entrepreneurs needed to build a new identity for themselves (Aaltio, Uksvärav, Kooskora, 2002; Aaltio, 2008) and they also had to tackle ethical questions in the changing business environment. Even if opportunities were open both for men and women, male entrepreneurs still seem to dominate in numbers, with female entrepreneurs representing only around one third of the total, as evaluated by Gale and Polnareva (2004, 156). This reflects the overall share of women entrepreneurs also on a global scale (Davidson & Burke, 2004).

2. THE BUSINESS CLIMATE AND WOMEN ENTREPRENEURS IN CONTEMPORARY RUSSIA

In defining entrepreneurship there are differing focuses. Entrepreneurs are often assumed to be owners of small and medium-sized firms. Entrepreneurship concept can also be used more broadly, it is about finding new combinations, goods, production methods, new markets, sources of raw materials, and even new ways of organizing and realizing all aspects together in action (Sundin & Tillmar, 2008, 95-96). Also the accidental nature of entrepreneurship is emphasized, as well as its highly determined connections to environment and its accidental forces (Görling & Rehn, 2008, 94-95). The generality of the concept is sometimes criticized and argued it being gender blind. The minority of entrepreneurs is women, and research has shown that there are common characteristics and concerns that make them somewhat different compared to general ideas about entrepreneurship.

Entrepreneurship is still a relatively new concept. Discussion on the phenomenon of so-called "New Russians" has even described them as mythological figures and associated them with the vital energies, both constructive and destructive, underlying the social chaos of the post-Soviet era. This also has to do with certain behavioural patterns related to social and moral norms. Lipovetsky (2002, 12-13) argues that the debate navigates in three directions: firstly, the traditional discourse of the Russian intelligentsia; secondly, the post-modernist culture rooted in the underground subculture of the Stagnation Period; and thirdly, the self-representation in literature and other pieces of art. It is also worth mentioning that the Soviet times also included entrepreneurial behaviour from the management, because they had to get along with the shortages of the centrally planned economy (Rehn & Taalas, 2004). Using one's own imagination was required. Beneath the earth developed networks and relations between people, supporting the management to solve problems and manage with the scarce of resources. Usually this developed networks, but mostly between the men who were in charge of the business excluding women (Aldrich, 1989). When developing business education in Russia Western trainers have to cope with the old images and be able to transform, not apply contemporary knowledge developed in North America or the rest of Europe (May et al, 2005, Kostera, 2002).

A popular stereotype of New Russianness portrays it as a combination of the one thing that people have which is namely money, and a long list of things that they lack: education, taste, morals and patience. As a mentality, the phenomenon of New Russians follows the idea that the more expensive something is, the better, which reverses the normal middle-class set of values where the goal is to get a “good bargain”. The middle class seeks to avoid any outward signs of wealth, whereas the New Russians show off their wealth, for instance, by hiring bodyguards and security systems because they can afford them (Balzer, 2003, 18). These are people who have caught the wave of change and turned it to their advantage, but on the other hand they are corrupt, boorish and ‘illicitly rich’ (Balzer, 2003, 16). Friendship patterns are changing as well, reinforcing the resentment of those left behind economically and socially. It can even be argued that the New Russians are more than just a social group: they are a myth, the empty centre of contemporary Russian mentality that questions and re-evaluates the longstanding values of Russian culture as a whole (Lipovetsky (2002, 71).

The concept of New Russianism involves archetypes and ideals that everything can be changed, even people, and that system and power are the core of the cultural mythology (Lipovetsky, 2002). Yurchak (2003, 72-90) claims that Russia’s private business is constituted along generational and gender lines. It is built of young, energetic and tough new-generation businessmen following the rule of ‘under forty’. True careerists are those who learn a whole set of norms to mark their everyday practices and their relationship to the self and to the world. One has to be the entrepreneur of oneself, with all aspects of life organized into a web of the ‘continuous business of living’ (ibid., 75). The careerists’ own human capital, its preservation and its reconstruction, is the main thing. Their performance of success involves a chain of rituals, from bodily acts like clothes, movements, voice and way of walking, to speech acts like types of utterances, genres of speech and use of English, and further to ritualistic acts of manipulating and reshaping their self-centred perspectives, emotions, feelings and existence. The new norms of the neoliberal model are fulfilled through these performative acts. Moreover, the scope of this behaviour reaches from the public to the private sphere; these young

businessmen appreciate a single marital status, and to them, women are more in a decorative position as part of their image, not as equal partners in the relationship.

The new careerist image is masculine, with implications of tough, even cruel methods (Yurchak, 2003). Indeed the entrepreneurs, especially of successful and growing businesses, often are young men. In the old Soviet period, the Russian gender order recognized women as a resource that was educated and trained to work in typically masculine fields like engineering and technology. The emphasis on the needs of the state and the communist ideology offered work equally for women. Nowadays, however, the workforce is deeply segregated. There is women's work and men's work, and men tend to occupy the leading positions (Ashwin, 2006). The new careerism does not apply to women; women entrepreneurs tend to work in typically female business like beauty salons. Additionally, their enterprises are often seen as secondary or subordinate to men's businesses, as more like a hobby (Yurchak, 2003, 84). Private and public patriarchy is actually an extension of male power from the traditional, domestic sphere into the productive. Burawoy et al. (2000, 43-65) distinguished two types of transition-period survival strategies in Russia: defensive and entrepreneurial. The former retreats to a primitive domestic economy, while the latter one reaches into a more dynamic sector of trade and services. Men were more likely to belong to the latter type, forming the core of the New Russian Bourgeoisie.

This goes well together with an overall finding concerning entrepreneurialism and masculine ethics. Bruni, Gherardi and Poggio (2004, 406-429) show that the features of entrepreneurship belong in the domain of initiative-taking, accomplishment and relative risk. According to them, "entrepreneurship is historically located in the symbolic universe of male, including hegemonic masculinity". Modern economic rhetoric frequently describes entrepreneurship as an activity geared to the discovery of new 'lands' by (male) explorers. Miller (2002, 145-161) similarly points out that the image of new frontiers and discovery of new riches in the oil industry are associated with a tough, masculine, cowboy mentality, which excludes women from the picture. Overall, the

qualities of entrepreneurship seem to establish a model of male rationality (Bruni et al. 409).

Research on women entrepreneurs suggests certain common characteristics and concerns among women entrepreneurs, which distinguish them somewhat from their male counterparts. Women are globally portrayed as being more family-orientated, using paradigms of action broader than rationality, and emphasizing leadership and cultural aspects. Carrier et al. (2008, 41) propose that women and men entrepreneurs differ in the following aspects: 1) motivating factors, 2) management style, 3) performance, 4) training needs, 5) work-family balance, 6) networking and 7) financing. In a comparison of Finnish and Russian women entrepreneurs, Logrén (2005) found that, following the collapse of the Soviet system, Russian women tended to be driven by their own private life strategy and by societal and family motives. They also had difficulties in analyzing questions of equality between women and men, as they lacked the terms and concepts for such issues and considered equality as a strange subject of discussion (ibid., 53).

Marja Oravainen 4/27/09 12:46 PM

Comment: tämä pitäis varmaan siirtää muualle, kun koko muu osa tästä luvusta käsittelee eri asiaa?

The ongoing development of entrepreneurship and entrepreneurial cultures in the Russian business environment does not follow a linear course; in fact, the current cultural discourse sometimes implies a return to Soviet forms (Mesorova, 2003, 281). The business ideology that used to prevail in earlier times seems to be transforming into a business ethics (Yurchak, 2003; Ozinga, 2003). A lack of trust, which stems from the highly arbitrary conditions of the communist and tsarist periods, is still reflected in Russian society. As often argued, a new management style is needed (McCarthy, Puffer, Vikhanski & Naumov, 2005), and there are demands for a culture that emphasizes customer orientation, strategies that utilize expertise, a transformation of business flows from functionality to process management, and from hierarchy to a flux of practices, and a reform of a 'command-and-control' way of thinking. Overall, the emphasis on the control of material flows should now be replaced by an emphasis on knowledge and information management. All this calls for human resources knowledge and management of skills and attitudes of the type required in entrepreneurial teams.

In their study of women entrepreneurship in Russia, Gale and Polnareva (2004, 154-155) observed that women's businesses were mainly established in areas like consulting services, training, magazines and publishing, agriculture, small-scale production and commerce. The bulk of these women entrepreneurs concentrated on small and medium-sized ventures (Verkhovskaya & Dorokhina, 2008). The authors also report that most of the women were highly trained, for instance in engineering, but often founded their businesses in sectors that had nothing to do with their education. However, many businesses that have been typically dominated by men are now gradually being shared by women who often occupy the second position in the company as vice-president or chief administrator. It is also found that most of the women are highly trained, like in engineering, but often found their businesses in sectors not relating their education. Women therefore look to benefit from this background, in terms of social construction and identity aspects.

3. WOMEN ENTREPRENEURSHIP AND IDENTITY CREATION IN CHANGE

ABOUT THE STUDY OF IDENTITY

Traditionally identity refers to a relatively fixed and stable construction (Hearn 2002, 40), especially if looked at through a 'functionalist lens' (Gioia, 1998) which uses methods based on deduction and the objectivity paradigm. Besides functionalism, Gioia (1998, 27-28) distinguishes two more views on identity: the interpretive and the postmodern. As opposed to the functionalist view, the interpretive lens relies on subjective and hermeneutic research methods, such as participant observation, and concentrates on a descriptive and insightful explanation of identity. The third lens, postmodernity, struggles with the concept of identity. For postmodernists there is no such thing as identity in itself; they see it more as a socially constructed product of language and a changing category of existence.

Identity is linked to many organizational and individual concepts, and thus plays an essential role in human actions and behaviour. It has been argued that the study of corporate identity and identification springs from a rediscovery of the importance of meaning and emotion in organizational life (Albert et al. 2000, 13-14). One's identity stands at the intersection of self-perception and one's perception of others. Identity is a relational concept that is situated in the given cultural context (Kärreman & Alvesson 2001, 62).

Shotter and Gergen (1994, 23) develop the idea further by suggesting that relationship precedes the individual: what we call an individual is all derived from ongoing processes of relationship. Identity, therefore, cannot develop by itself but requires a mirror to know what it is like. The social process of interaction offers the feedback necessary to enhance or even produce the self-concept of an individual. Social identity can then be regarded as a component of an individual's self-concept (Dutton et al. 1994), since part of one's identity is based on one's own conceptions of oneself and part of it is derived from outside.

While identity develops in relation to one's surroundings, social identity is explicitly a question of relating to others and the outside world, and acting in that particular social environment (Gioia, 1998; Czarniawska, 1994, 195; Aholainen, 2003). Thus, by studying individuals' identities it is possible to reveal something about the context that they live in. In this paper, we see identity more as a flexible process that changes and constructs itself socially in relation to others (Shotter & Gergen, 1994, 23). It needs to be constantly reflected through interactional processes that shape one's self-image as a basis for one's identity. In this study identity is seen as a process, a moving and developing construction that is socially produced in relation to other identities and social actors. While identity is flexible studying it reveals something about the individual and the context, where it lives (Shotter & Gergen, 1994, 23). Identity needs interaction processes, which transform one's self-image as a basis for identity.

Interviews are commonly used methods in social sciences, especially in qualitative studies with search for cultural meanings (Aaltio 2002, 201). In an interview there happens also “the presentation of oneself in everyday life” (Goffman, 1959), because it is a special situation where the interviewed person communicates, not only answers the questions of the interviewer. Therefore a lot of cultural meaning and dynamics is involved in interviewing and can be interpreted. In this study both interviews and photographs are used as a methodological choice.

VISUAL SYMBOLS AND DERESS

Organizations promote visual symbols for organizational identification and to energize their members to achieve common goals. Morgan (1997) proposed new ways of observing and structuring organizations, describing them as ‘organisms’ or ‘brains’, as political systems and as instruments of domination. Yet they are always cultures, in which visual images like dress play a part. Aholainen (2003) conducted a research on identity and work dress in Finland and examined female managers’ identification using photograph analysis, concluding that dress is indeed a multifaceted phenomenon. She notes that clothing is among the various means by which people modify the appearance of the body, but it also has to do with the social and psychological forces that make them manage their personal appearance. Clothes are so close to the body that they might be considered as an extension of the self, as well as being visual and communicative organizational symbols. Also they relate to the presentation of everyday life (Goffman, 1959).

In a study of women’s clothing habits, Guy and Banim (2000) explored three views of the self that were expressed through dress: the woman one wished to be, the woman one feared one might be, and the woman one usually was. Different presentations of identity by means of their clothing offer women ways to realize a sense of power and construct fluid images. Fluidity of self-presentation and the themes of skill and expertise, of power and control, are indicative of women’s efforts to construct personally acceptable images for themselves – with their dress.

Scholars studying women and gender in organizations have typically argued that dress and appearance are more important to women than to men, partly because women in male-dominated organizations have a greater need for legitimacy, credibility, acceptance and self-confidence that can be conveyed by the way they dress. For instance, women applying for managerial or higher positions organizations are recommended to wear more masculine rather than feminine clothing, because the appearance effect may be decisive in case of two equally competent candidates (Rafaeli & Dutton & Harquail & Mackie-Lewis, 1997, 3)

An organization's commonly shared values do not necessarily presuppose the same kind of clothing and appearance from its members. An organizational culture is directed and transformed by an opinion leader – often one's nearest manager. This leader or an equivalent force steers the organizational culture, which influences the use of artefacts and dress, making the leader an important figure in the organization. The opinion leader serves as a model for the organizational members and also for customers and co-operation partners. This is not just a matter of clothing, but concerns the entire work environment. (Aholainen, 2003, 12) Since entrepreneurs are the leaders of their staff of employees, a study of their dress will also reveal aspects of the entrepreneurial community.

PHOTOGRAPHS AND IDENTITY

Visual symbols are seen in photographs. Interviews are a commonly used method in social sciences, especially in qualitative studies and in studies searching for cultural meanings (Aaltio, 2002, 201). Photograph analysis, on the other hand, is more commonly used in other disciplines, for instance in anthropology and in ethnographic research. Geertz (1973) has written about the need for ‘thick’ description in cultural analysis, where it is important to get as full information as possible about the cultural context and achieve as detailed an explanation as possible of the subjects in that context. The researcher attempts to understand what the research subjects themselves think of their identity, of who they are and what they are doing. Anthropologists have long analysed different kinds of historical photographs, for example, to see what they can tell about a specific time period. Thus, photographs are much more than just visual snapshots of some individual. The whole situation, the person’s clothes, the surrounding environment, the placement of furniture – all this is important in the photo. Also the person taking the photograph has meaning in the process, especially in a study of identity. The photographer is a partner in the interaction and controls the situation.

Photograph analysis is a controversial method: some researchers argue that photos are too inaccurate and open to interpretations, while others think they are actually more accurate than text about the research subject. Nevertheless, it is worth noting that photographs, just like texts, can be used in various ways. A photo can be useful in one research design, in another not (Handbook of Visual Analysis 2001).

4. FINDINGS: INTERPRETATIONS BASED ON THE DATA

DATA COLLECTION

The data were collected in spring 2004 in St. Petersburg, Russia. The photographs for this study were taken after the interviews of 10 female entrepreneurs who had been selected for the study through informal social networks, because getting an interview and a photograph required having referees to get into contact with managers. The interviewer had met most of these women during her stay and studies in Russia, and also an institute involved in developing travel between Russia and Finland was used as a source of contacts. The only way to get referees was to start from colleagues and friends who were acquainted with Russian women entrepreneurs. These entrepreneurs then knew others who also turned out to be ready to take part in this research. Informal networks, thus, proved to be the main source of this type of help and information in Russian society. The whole contacting process showed a kind of snowball effect, with one case leading to another.

In the interviews, the women entrepreneurs were asked to answer open-ended questions; one interview usually took from one to two hours. An analysis of the interview data indicates that entrepreneurship offered women an opportunity that had not been available in the communist era. Almost all the interviewees had themselves actively sought to become a manager and head a business; only a few of them said they had drifted into their current position. They aspired to develop themselves and move on in their entrepreneurial and managerial career. Contemporary Russian society does not exactly promote women's careers in management. Neither does it offer any special assistance in combining family and work life, nor support the founding of enterprises by women. Still, Russians attitudes have grown more favourable in terms of female entrepreneurship than before. The interviewed women had a positive outlook on the future and saw it as full of promises. In fact, the development of Russia's economy will depend partly on women's advancement in their work careers and on their opportunities to become entrepreneurs.

In this study we wanted to minimize the role of the photographer by allowing the interviewees themselves to choose the surroundings in which they would be photographed. The photos were taken with a digital camera. All of the women

entrepreneurs were able to see their picture after it had been taken and decide whether or not to accept it: all of them accepted. Some of them wished to influence the context of their photograph, for instance by changing their place in the photo or asking other people to join them. – So, what kind of image of Russian women entrepreneurs do the pictures convey? To begin with, each photograph is different. Yet, if we look at a photo alongside the respective interview, it is possible to see many connections. For example, the woman holding a puppy in her arms implies what she had told in her interview: that it is really difficult for her to fire employees even if there were reason to do so. Moreover, only one or two of the photographs might be interpreted as explicitly feminine; the rest are more or less neutral. In five of the photos the entrepreneur is pictured alone; in the other five, she is with other persons or with an animal. This latter group of women did not want to be photographed alone, indicating the relational nature of their entrepreneurship by presenting themselves with others – staff, colleagues, relatives or pets.

TABLE 1.
BACKGROUND INFORMATION

Entrepreneur	Age	Educational level	Prior work experience	Current workplace
I	39	Higher, information technology	Department manager	Leasing company
II	28	Higher, pedagogy	CEO of other travel agencies	Travel agency
III	28	Higher, law	Head accountant, general manager	Janitorial service company
IV	32	Higher, pedagogy	Teacher trainee	Building company (not owner)
V	50	Higher, economics	Head of department in different stores	Sanitary company

VI	44	Higher, Soviet economy	Manager in wholesale trade	Wholesale trade in dairy products
VII	41	Higher, business administration	Sales director	Travel agency
VIII	34	Higher, philology	Assistant manager	Translation and interpretation company
IX	46	Secondary, machine industry	Accountant	Travel agency
X	34	Higher, business administration	Manager of design department	Design company

Table 1 shows that the women entrepreneurs in this study were aged between 28 and 50 years. Most of them had higher education, and only one was not an owner of the company she worked in.

INTERPRETATION OF THE PHOTOGRAPHS

Our interpretation of the collected photographic data is based on Geertz's (1973) idea of thick description. Besides analysing the photos we use other observations to back up the interpretation. After describing the context of each photograph, we present an analysis of it taking into account all the gathered data including the interviews. Each one of the photos was unique and had something special to say about Russian women entrepreneurs.

Photo 1.

At first the entrepreneur was reluctant to be photographed, but it was fine for her to have the photo taken after the interviewer joined her in the picture. This photograph shows that

even though the entrepreneur is sitting behind her desk, she is still in the foreground of the picture. This was the first photograph to be taken and indicated how to proceed with the next photos.

Photo 2.

There is a big, beautiful fan on the wall behind the entrepreneur. She wanted to be photographed with this fan in the background; after the photo had been taken she moved her desk back to its original place. This woman is the owner of a travelling company, so maybe she felt that the fan conveyed an image of travels and foreign countries – something that carries a lot of status and is a sign of wealth in contemporary Russia. The fan is quite a feminine object, which stresses the fact that the company's chief executive is a she, not a he.

Photo 3.

Just before the photo was taken, the entrepreneur cleaned her desk of all papers. In Russia, executives do not bother with paperwork; secretaries take care of it. A clean desk, to this woman, was a symbol of power and leadership. She is sitting behind the desk with her fingers interlaced. The photo gives the impression of some kind of advertisement promoting the executive, or something intended for a business magazine. The woman has tilted her head to one side, which suggests a kind of feminine quality or 'sweetness'. Her smile could be from a fashion magazine, highlighting her even white teeth. The whole picture is well balanced, as is her image.

Photo 4.

The woman did not want to be photographed, but instead pulled out a photo from her desk drawer. The picture shows her on holiday in Thailand. Her dress is rather feminine and she is holding a tiger cub in her arms. By giving this photo to the photographer she was pointing out that there are only a few people in Russia who can travel abroad for

their holidays. The overall impression of the picture is very feminine: she is wearing colourful clothes, her hair is loose and she is smiling, showing her white teeth. She stands at the centre of the photo. The tiger cub is either asleep or at least has its eyes closed, and the woman is holding the cub by its paws. There is nothing of interest behind her in the background, so the whole picture is really just about herself and the tiger cub. Offering this kind of photo, which holds such strong meanings, meant she was conveying a message. She actually had this photo already at workplace. Maybe she wanted the researcher to remember both her femininity and her status as a leader, as a fearless woman – all in relation to the image of the female executive that she probably represents.

Photo 5.

The entrepreneur insisted that the interview be held in her home. The photograph was taken in the living room, with her seated in an armchair, holding a young puppy. She is dressed casually, which probably points to informality. Holding the puppy in her arms gives the effect that she is a woman who takes good care of others, that she is a caring person as an entrepreneur as well.

Photo 6.

The photo shows the entrepreneur together with her daughter; she actually wanted the daughter to participate also in the interview. The daughter is standing behind her, with herself seated at her desk. She is in the foreground, which refers to her status as the leader. The photo carries the message of the continuity of leadership: the daughter will continue the business after she leaves it. On the other hand, it tells that the company is a family enterprise and that she has tight ties and is strong committed to the enterprise. The fact that it was important to her not to be alone in the photograph implies that her way of enterprising is relational. This phenomenon has been referred to as the ‘relational ethics’ of women (Gilligan, 1982).

Photo 7.

The entrepreneur did not wish to make any special preparations for the photograph, like changing where she sat or putting on some makeup. Her desk was located in a corner at the window, behind the other staff and facing the door. The desk was no bigger than the others, but its placement was meaningful, because she could see to the door and also keep an eye on her staff. She is dressed in a black blazer and white blouse – perhaps not particularly feminine, but more or less neutral. In the interview she said that the company's other two offices were led by men and that these male colleagues would have preferred all the executives to be male. She was maybe feeling under pressure and therefore did not want to make a special point of her femininity. The photo gives a fairly neutral picture of her as a leader; but in any case, the control aspect appears important to her.

Photo 8.

The woman is sitting in an executive's chair, which is like a symbol of leadership: big and authoritarian. There were two other employees' desks in the same room, but their chairs were ordinary staff chairs. The woman has her left arm on the chair's armrest, and she is sitting a little to the side, which gives the impression that she is posing for the photograph. One might ask whether a male manager would pose in this style. The executive's chair together with the feminine pose brings to mind the image of masculine management that the woman conquers by sitting in the chair. The fact that she is not sitting straight but leaning to one side of the chair also gives the picture a feminine quality. She is dressed using a black blazer and a white top.

Photo 9.

The photo shows the whole staff standing in the office, with the entrepreneur herself behind the others. When asked she at first was reluctant to give permission to be photographed at all, but when persuaded she agreed on condition that all the office workers join her in the photo. She stands in the photo as if taking care of all her staff

members, like a mother taking care of her children. The only male staff member is seated behind the other workers, with only half of his face showing. The entrepreneur's desk was in the rear corner behind the other desks, from where she could see and monitor all her subordinates. She did not have a computer on her desk, only a phone and some papers. The impression from her interview was that she did not want to be 'better' than her staff, but instead, stressed their equality and a sense of togetherness.

Photo 10.

The entrepreneur is sitting behind her desk, dressed in a black outfit. She made no preparations for the photograph. She has a stuffed animal sitting on the desk, and there is also a coffee cup, which gives a feeling of informality. There are some houseplants behind her in the background. The overall feel is that the woman wants to give an informal image of herself, but at the same time wishes to remind that the choice of this informal style is all her own, as it is she who leads the company. This is a design business, which may explain the informality as part of its corporate culture. The photo portrays a very relational image of her as an entrepreneur.

A statement that is commonly made in women's studies is that women show a greater need for relationality – but the results of our empirical research pose a dilemma in this respect. The interviews did not point to relationality as any major source of female entrepreneurial activity, whereas the photographs taken after the interviews, which were based on how the women entrepreneurs wished themselves to be portrayed, give many indications of relationality as a central element in their way of working as entrepreneurs.

Interestingly, animals frequently appear in photographs of powerful politicians in Russia – Vladimir Putin, for instance. Animals are generally used to stress the wealth and power of the person in the photo. On the other hand, the animals – like the little puppy – pictured in the photographs of our study mostly inspire a sense of caring. These animals are perhaps also meant to point to the women's aspirations for power and wealth, but using different tools that are soft and feminine, showing an appreciation for emotions and

care. There is only one photograph – taken in Thailand and showing the female executive with a tiger cub in her arms – which represents a typical image of power and perhaps also an ambition for wealth.

Our interpretation of the photographs suggests that these Russian women entrepreneurs emphasize and appreciate the following aspects in their entrepreneurship:

- Networking
- Shared entrepreneurship and teamwork
- Care, emotions and people-orientated leadership styles
- Low hierarchy and democratic leadership ideals
- Family values and a close connection between work and private life
- Femininity as a value in itself, as apparent in gestures such as smiling
- Classical, traditional female values

In earlier times, Russian executives were mostly male. Even today women continue to be rare as managers and entrepreneurs in Russia, and encouragement and support by society to female entrepreneurship is lacking. Yet there are a few societies and clubs for women managers and entrepreneurs that enable them to network and share experiences. But women's voice is not legitimized, nor is their special role in the business community. It was even remarked in the interviews that a Russian job announcement can include an additional clause noting that only men are eligible applicants for the job. Still, our photographs show that the women enjoyed their independent role as an entrepreneur, as each one of them made her own, individual choice in terms of the context in which she wanted to be photographed. Some of these choices also express the women's high evaluation of networks.

5. CONCLUSIONS AND IMPLICATIONS

Women's entrepreneurship in Russia is in a transition phase, as is the whole economy. The country's political visions and the attitudes of its population will have an influence

on the development of female entrepreneurship and on the future numbers of women entrepreneurs. The women themselves, their attitudes and their motives in entrepreneurship are, of course, crucially important in this respect. The Russian business climate and cultural environment do not especially reinforce or support women's entrepreneurship, which is not an issue in the sense as in the Western and EU economies.

This study has its place in the fields of entrepreneurship and gender research because it provides new knowledge about Russian women entrepreneurs in the transition economy. This knowledge was gained through multiple qualitative methods and using the perspective, the 'eyes', of the interviewed women as the starting point. Our research presents a challenge to learn something new from Russian women entrepreneurs themselves also about the whole issue of change in Russia.

As a research environment, for instance for entrepreneurial studies, Russia is also in a process of transformation. Still today, after 15 years of transition, the country's business practices are young and evolving, largely due to the former cultural inertia. This applies especially to private enterprising, which was non-existent in Soviet times. The women entrepreneurs in our study regarded their businesses as an opportunity that was not available to them before. This gives the impression that just like Russian society as a whole, Russian women's entrepreneurship is transforming as well. The study portrays the interviewees as women who identify themselves as carriers of change in terms of the Russian business culture, which is marked by a strong entrepreneurial spirit, even a kind of macho-entrepreneurship. The women detached themselves from such attitudes by bringing alternative practices and values to the way of doing business. The study further shows that even the women who were working in small enterprises found their entrepreneurship subjectively promising without any feelings of marginality or determinism, and had a positive view of themselves and their possibilities to develop their business.

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An Investigation into the business case for equality and diversity among SMEs

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This exploratory study investigates the business case for equality & diversity among SMEs. Specifically, how small businesses in Wales manage some challenges for compliance and best practices. Primary data was collected from 85 small businesses owners within different sectors from various locations in Wales. The results show that white managers were found to be associated with negative attitudes towards equality & diversity. Younger entrepreneurs, age 25 years and under were generally negative in their attitude towards equality & diversity challenges, equal opportunities policies and in their response to demographic changes. In addition, female managers were more likely to have more positive attitudes towards equality and diversity than their male counterparts. These findings suggest that extra efforts should be made to help entrepreneurs as organisations seek to play a part in an attempt to build a society that is fair to all, and where everyone is treated with dignity and respect.

1.1 Introduction

There have been reports on the business case for equality and diversity. The most recent publication being ‘good practices in the workplace’, which was commissioned by the European Commission’s Directorate, Social Affairs and Equal Opportunities under the framework of the Community Action Programme to combat discrimination (2001-2006). The European Business Test Panel (EBTP) also carried out a survey of existing diversity awareness and practices among 25 Member States of the European Union (EU) in 2005. In these researches there were no small businesses from Wales on the list of participating companies. Furthermore 66 per cent of its responses were based on companies with over one billion euro, and 56 per cent of them have more than 25,000 full-time employees. By investigating the business case from the perspectives of small businesses this study can create a new slant on existing knowledge in this field of study.

There are approximately more than four million business enterprises in the United Kingdom, and 99.3 per cent are considered small (0-49 employees), thus dominating all industrial sectors and employing around 10.3 million people (Department of Trade & Industry DTI 2006, Barrett and Burgee 2008). Due to the deteriorating economic climate, the Equality and Human Rights Commission (EHRC) recently launched a guide for small businesses on managing the downturn. Many of the small businesses in the UK were closing down at a rate of 85 per day and the guide was published in response to the specific queries and concerns that small business owners and managers have raised with the Commission. Findings from the 2008 National Small Business Association (NSBA)’s survey of small businesses, assert that entrepreneurs and small businesses have a very negative outlook towards the economy. NSBA President, Todd McCracken while commenting on the economic slowdown said:

“Our survey shows plain and clear how the economic slowdown is affecting small business. When asked last year about their economic outlook, a majority of small-business owners responded positively. This year, a whopping 71 percent have a negative outlook on the economy—clearly small business is feeling the pinch.” (NSBA Small & Mid-Size Business Survey 2008: 24).

These cumulative pressures from changes in demographics, migration, globalisation, employment equality policies, legislations and the economic depression could trigger an unfavourable attitude towards equality and diversity. The Commission warns that small businesses can approach the challenges they face fairly and ensure that they comply with the law. The business-case approach could be a means of identifying equality and diversity as a strategic issue, a core

value linked to organisational competitiveness. It enables organisations to act appropriately by embedding equality and diversity into all their policies, activities and practices.

1.2 Managing Diversity (MD)

Bartz *et al.* (1990:321) attempt a comprehensive definition of managing diversity as the: “...*understanding that there are differences among employees and that these differences, if properly managed, are an asset to work being done more efficiently and effectively. Examples of diversity factors are race, culture, ethnicity, gender, age, a disability, and work experience.*”

Firstly, MD places greater emphasis on firms recognising differences; it sees equality as a ‘bland uniformity of treatment’. Equality policies from this perspective are based on individuals rather than groups. It goes beyond mere recognition to valuing differences, with the aim of maximising the individual’s potential. Secondly, this theory discourages unfair comparisons between management practices and structuring of organisations. According to Liff (1997), Kandola and Fullerton (1994), the diversity in members of any particular group can be acknowledged, responded to, and individuals supported to success with an understanding of issues within such groups. MD should be perceived as an imperative, as opposed to being merely ‘the right thing to do’, or a ‘box ticking’ exercise for organisations. However, the challenges presented in its implementation could well be an uphill struggle.

1.3 Why Managing Diversity?

Competitiveness could be one of the driving factors of equality and diversity. Businesses in Canada which are keen to remain competitive in a global economy are seen to be actively recruiting women and ethnic minorities (Robinson & Dechant, 1997; Taylor, 1995). Managing diversity is a key competitive advantage, which sparks creativity, leadership and exceptional performance in the markets in which the firms are operating. The Welsh Development Agency (WDA)’s report on equality and diversity argues that the rationale behind promoting diversity is primarily economic. Organisations that embrace diversity both in their workforce and in their customer base are generally more profitable than those that do not. Thus, if the workforce is diverse it will be better adapted to provide goods and services to a wider range of customers or service users. The diversity of people ought to be mirrored or reflected by diversity in the way services are provided and job descriptions designed (WDA, 2004; Kandola and Fullerton, 1994; Carnvale and Carol, 1995; Johnson and Redmond, 2000).

1.4 Business opportunity approach of MD

Also known as ‘top-down’ approach. It encompasses the firm’s processes, systems, cultures and resources. Bagshaw (2004) asserts that the business opportunity approach values diversity as not just the right thing to do, but a long-term business factor which has significant impact on profitability, productivity, workforce motivation and innovation, market competitiveness, teamwork and customer loyalty. In EBTP 2005, companies’ which participated in a survey about business benefits of diversity, were asked to focus primarily on whether diversity initiatives have positive impact on business, 83 percent of the 495 companies which responded agreed that it did. In addition, a study in the US in 1994 found that the average annual returns for 100 companies with the highest rating for diversity management was 18.3 percent, compared to those of 100 lowest companies which was 7.9 percent (Bagshaw, 2004).

Although most literature (Bagshaw 2004, EBTP 2005; Kandola and Fullerton 1998; Dickens 1994) suggests that the majorities of companies with good practices are confident of the businesses outcomes and benefit of diversity, although the validity of their acclaimed ‘good management practices’ is doubtful. For instance, in the EBTP 2005 report, about 50

percent of the companies which responded during that research were yet to develop written diversity policies and practices. Thus a commitment that goes beyond mere words is necessary. Such commitments should be ‘from the heart and hands’ of management that is; ‘from the top to the bottom’. Most businesses admit that the biggest challenge in addressing workplace diversity and discrimination is the lack of information and awareness of diversity issues and practices (Bagshaw 2004, EBTP 2005, Kandola and Fullerton 1998 and Dickens 1994). Other opponents to this approach are skeptical of the popular one or two day diversity training; with the aim of transforming the organisation overnight (Kandola and Fullerton, 1998).

Figure 1 Evolution Cycle

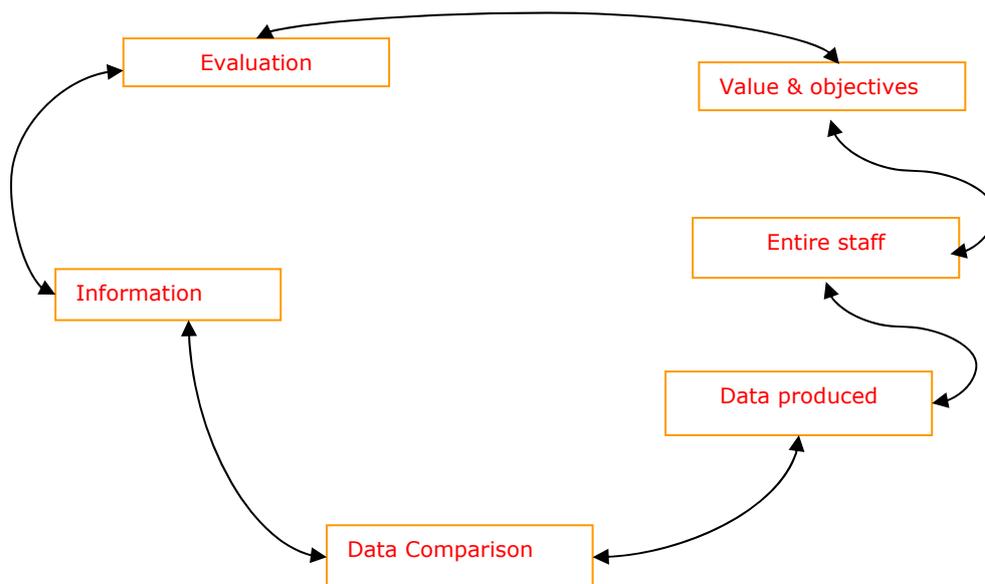


Diagram developed by the authors of this research paper

Training may have a vital role to play, but organisational changes in favour of equality and diversity may take time and requires a consistent approach. Learning and innovation are important elements of the business opportunity approach, because they help people to challenge the status quo. Different perspectives could be used to rethink basic tasks, redefine markets, products, missions, vision and values (Bagshaw, 2004). The ‘rethinking’ of these different perspectives would also help in the implementation of good practice, by re-building a work environment that encourages ‘will-power’ and a ‘yes we can’ attitude towards diversity and equality (Kandola and Fullerton, 1998).

The knowledge & skills acquired through learning and development programmes (which are relevant to challenges the organisation faces,) can be transferred to the workplace. This approach should be a part of corporate values, as well as being a fundamental component in the overall business strategy as a deliberate (purposeful, conscious and planned) business objective. According to John Smale, (who was the CEO of Procter and Gamble until 1990 and had worked for the company for 38 years) *‘it is important to our future business growth that we find ways to fully capitalise on the diversity of our workforce’* (Copeland, 1988:46).

1.5 Models for Managing Diversity

Major models for managing diversity as covered below are the Equality Impact Assessment (EIA), Special Consideration Test (SCT) and the evolutionary model.

1.5.1 Equality Impact Assessment (EIA)

Kandola and Fullerton (1998) confirm that the majority of the models used for diversity management are in favour of conducting a managing diversity 'health check' which is also known as EIA. It can serve as the first step in revealing any possible bias and direct or indirect discrimination against specific groups of people within the society (McEnrue 1993; Cox and Blake 1991; Thiederman 1994; Bartz et al. 1990; Ross and Schneider 1992; Motwani et al. 1993; Harington 1993; Hammond and Kleiner 1992).

These scholars claim that EIA helps to identify the level of diversity awareness within the organisation, the areas that need to be addressed and how this should be carried out. The findings from EIA could be helpful when planning for equality and diversity training. Furthermore, it reveals areas due for change and the practical steps which could be used to help achieve such changes. The conclusions of EIA produce baseline data for the evaluation stage and because employees are involved early on in the process during information gathering, the responsibility and participation of managing diversity strategy is shared within the entire workforce. However, EIA may not be very successful on its own if there is no visible involvement, dedicated commitment and strong support from leaders and senior management (Paelmke and Erwee 2005).

Suggested methods by Kandola and Fullerton (1998) for gathering or acquiring the data during EIA are: (1) Attitude surveys; (2) outcomes of group discussion and focus groups; (3) feedback from task groups; (4) use of interviews; (5) use of questionnaires and (6) analysis of personnel indices: selection ratios, turnover rates, performance appraisal ratings, promotion ratings and training allocation.

1.5.2 Special Consideration Test (SCT)

This is an alternative model for managing diversity. It was originally developed by Thomas (1990) and sets out to investigate whether some groups are at disadvantage as a result of the organisations practices or procedures. It is similar to the EIA in the areas which they cover when gathering information and data but SCT seems to have a more defined aim; specifically targeting those who have been discriminated against by the organisation's system. Opponents of this test suggest that it's based on a preconceived notion which tends to influence the gathering and analysis of data (Kandola and Fullerton, 1998; Ross and Schneider, 1992). Based on findings, the process or procedure that led to undue advantage or disadvantage is then reviewed. Critics of SCT often comment on the review of organisational processes and systems; that it is not in itself sufficient at the investigation and intervention stages.

Those in favour of SCT say it reviews the organisational structure and culture – that is, norms (customs) within the business, acceptable attitudes, approaches and styles. Culture Audits are a fundamental component of SCT; they can be designed to uncover implicit assumptions, values, and to identify ways in which the organisational culture leads to direct or indirect discrimination. They question the perception of written and unwritten rules and examine areas of promotion, training, career development, job enrichment, work allocation and formal/informal feedback on performances. They also welcome contributions and suggestions on how to proceed especially from those who are directly involved and affected. Methods of conducting SCT are; climate surveys, interviews, group discussions and random sampling of employees from different areas and levels of the organisation. It is worth noting that the majority of models of implementation of diversity initiatives have not been tested empirically. They are usually based on case studies, past experience or anecdotal evidence. (Kandola and Fullerton, 1998; Ross and Schneider, 1992).

1.6 RESEARCH DESIGN

1.6.1 Introduction

This research is of exploratory nature based on survey method where a quantitative questionnaire was used. The questions asked were direct, concise and simple to understand. The demographic details of respondents which included gender, type of business, business status, and number of years in business, location of business, current number of employees, ethnicity and age category were requested. The questionnaire contains six major research questions based on MD, each with an average of five to six sub-questions. 85 questionnaires were distributed to different SMEs across Wales. Respondents are expected to make one choice from numbers 'one' to 'five', with number 'one' being most positive-'agree strongly' and 'five' most negative 'strongly disagree'.

1.6.2 Aim & Objectives

The aim of this research is to investigate the business case for equality and diversity. How SMEs manage diversity in their organisations. As Tayeb (1996:179) suggested:

"While some managers treat their culturally diverse workforce as if they were homogenous one, others merely acknowledge their workforce diversity, but do not take it sufficiently and seriously to deal with it effectively. Furthermore, others merely marginalise their efforts to involve only employees, lower- and middle-level to the exclusion of senior management, but senior management is most likely to make and influence significant diversity management policies."

The issue is uncovering or discovering what these attitudes are throughout the whole organisation; the business owners have been targeted because their influence within an SME setting is more obvious. Without an investigation of this nature it is difficult to analyse and evaluate how these businesses manage diversity effectively.

1.6.3 Research Questions

There are six research questions in this study based on the main themes of MD. The answers given to these questions will reveal the attitudes of the entrepreneurs.

The first research question is: *how well-informed are SMEs of the concept of equality and diversity?*

This question focuses on the understanding of the concept of equality and diversity. Could it be that many organisations are apparently reluctant to adopt equality & diversity theories because they are ignorant of the benefits or do not comprehend the concepts? The legislative imperative of equality & diversity makes ignorance unacceptable (irrespective of its degree). The merits of equality and diversity can be divided into two categories: the internal effects and the external effects. Examples of some advantages of internal effects are; highly motivated employees, innovation, creativity, cost reduction, organisational flexibility, problem solving and knowledge transfer, among others.

Several studies have reported that the turnover of employees and absenteeism are often higher among women and ethnic minorities than for white males in an organisation. A low level of job satisfaction and frustration over career growth is very often found amongst minorities (Harvard & Allard, 2002). Employees will be more motivated and feel a greater sense of job satisfaction if they are not discriminated against. Employees who are motivated perform better and therefore the objectives of a company can be achieved faster and more effectively. Consequently positive results can be achieved.

There are claims in academic literature and in general discourse that one of the reasons why some organisations do not adopt diversity management might be that the literature does not present empirical studies supporting the claims for valuing diversity and its importance to organisational profitability and competitive advantage. According to Cox & Blake (1991:52):

“The management literature has suggested that organisations should value diversity to enhance organisational effectiveness. However, the specific link between managing diversity and organisational competitiveness is rarely made explicit and no article has reviewed actual research data supporting such link”.

As long as this gap exists, it may be difficult for enterprises who hesitate to invest in diversity management, particularly when management appears complacent towards the performance of their current homogeneous workforce. On the basis of this consideration it may be argued that management is concerned with competitiveness and organisational survival. As Tayed (1996:38) mentioned, “there seems to be a move from ‘assimilation’ to ‘multiculturalism’, from ‘morality issues’ stance to a ‘business will benefit’ stance”. Hambrick et al. (1998) agreed, and affirms that organisations stand to benefit, at least from the creativity of an ethnically diverse workforce.

The second research question is: *how do small business owners in Wales get support in dealing with equality and diversity challenges?*

This question concentrates on how organisations access support to cope with equality and diversity challenges. Equality and diversity issues can be problematic and complex. It is doubtful that most of these small businesses are self sufficient – a thought which suggests that they can handle these challenges solely by themselves without any external support. A typical case study of the challenges of equality & diversity in general can be reviewed from the equality & diversity annual report 2008 of the Open University (OU). In 2003-4, the advent of a more regulated legal framework together with the Open University’s desire to work beyond mere compliance, led to the introduction of a newly strengthened infrastructure to support the integrated management of equality and diversity.

The Office for equality and diversity in OU is one of six offices centrally located in the university’s strategy unit. The Head of equality and diversity is the Chair of the Equality and Diversity Management Group (EDMG), an executive group of senior staff from different parts of the organisation who bring a range of skills and experience to various aspects of strategy implementation. This group has the support of key visible leadership, i.e. two members of the Vice Chancellors Executive (VCE), the university secretary and the director. Facilitation and the involvement of everyone was achieved through the efforts of equality and diversity champions and the wider stakeholder community which played a vital role in realising our equality commitments and principles through demonstrating inclusive behaviour, coordinating awareness raising events, monitoring at a more localised level and ensuring important equality issues are raised in a variety of forums. At this point one could ask; how did the Open University obtain support for dealing with equality and diversity challenges? In fact, the University obtained significant management intelligence on all aspects of institutional performance in relation to equality and diversity. Then they embarked on a full race equality impact assessment exercise and reports were published. The Open University achieved 65 percent in the 2008 Stonewall workplace equality index (50 percent in 2007), compared to the sector average of 57 percent. A Silver Standard (71 percent) was achieved in the Race for Opportunity benchmarking survey in June 2008, compared to the sector average of 65 percent. An award was received from Milton Keynes Racial Equality Council in recognition of the OU contribution to raising educational aspirations and in promoting employment opportunities.

A number of resources to support staff were developed and launched for example a revised version of the equality impact assessment toolkit. Guidance on giving due regards to equality, diversity and accessibility through the curriculum

development cycle and a revised version of the language and image guide for communicators. New learning and development opportunities for staff were created, by launching a one day course, 'Diversity – everything you need to know as a manager' and another course entitled, 'Diversity – a personal responsibility'. A number of awareness raising events were held, including; 'creating positive change for a gender-equal working and research culture', 'Developing an inclusive curriculum' and Black History Month. The Black History Foundation nominated and awarded the Open University's 'Slave Narratives' as the 'outstanding contribution to black heritage in the East Midlands for 2007'. For small organisations, ways of handling these challenges may not necessarily be as elaborate when compared to a larger organisation like the Open University. However, the fundamental principles of impact assessment, staff learning and development, collaboration, team effort and specialist support are the same.

The third research question is: *how do these businesses select or recruit employees?*

This question is mainly concerned with issues around Equal Opportunities in employment. According to Jewson *et al* (1992) a good and responsible employer would make selections and recruitment in accordance with the organisation's Equal Opportunities policy. It implies not merely responding to legal pressures and threats but also taking on board the spirit of major legislative changes and innovations. In this context, the question is not so much about the practicalities of job design, advertisement for position or the actual interview process (although equality has to be considered at all stages), but it focuses more on the mind-set towards Equal Opportunities in employment for all who are qualified. The presence of Equal Opportunities (EO) policy could be seen to bestow market advantages in some organisations. Some market experts argue that, under certain circumstances, customers might be attracted to a business known to have strong EO commitments. They also suggest that a business that is perceived as uncommitted and uninterested could be a distinct market disadvantage (Jewson *et al* 1992). Organisations can collect data that will enable them to calculate the ethnic composition of both successful and unsuccessful candidates at each of the major steps or hurdles in the recruitment process (such as: making enquires; sending in applications forms; short listing; job-related tests; interviews; non-selection codes; job offers; acceptance of offers and starting work). Monitoring the selection and recruitment process is actually in line with the EHRC Code of Practice, which stipulates that companies should undertake some form of ethnic and gender monitoring. Although it is not a legal requirement to keep or produce monitoring data but it is illegal and discriminatory to turn-down qualified applicants on the bases of gender, race or disability.

The fourth research question is: *how do small businesses manage their diverse workforce?*

According to Arredondo (1996), business leaders are becoming more aware of the importance of effectively managing a diverse workforce. Workforce diversity is not a matter for debate, rather it is a fact. It presents one of the greatest challenges for businesses in the 21st century. Only through hard work and committed leadership can the potential benefits be realised within an organisation (Sonnenschein, 1997). The increasing globalisation and rapidly changing organisational structures accelerate the development of managing a diverse workforce. Increase in international trading, Foreign Direct Investment (FDI), joint ventures, acquisitions and other activities of multinational corporations makes managing diversity a necessity for most global companies. Moreover, the demand for a diverse workforce will come along with the increasing global business of companies, which is supported by government negotiated trade agreements between different states (Harvard Business Review, 1996).

A further reason for the existence of a diverse workforce in Welsh businesses can be explained by the importation of labour from other European countries. More recently, it has been mainly refugees who have contributed to the development of a new diverse society and workforce (Wendling and Palma-Rivas, 1998). All employees should be considered as individuals, not as numbers in statistical company documents relating to workforce diversity (Arredondo,

1996). A fluid and rapidly changing business market means that employees need regular training on soft skills and adaptability, communication, and emotional intelligence are becoming more important, particularly when working across cultures (Global megatrends, 2009). The cost of the failure of the organisations to manage women and racially diverse minorities as successfully as white males translates into unnecessary costs. Given that eighty-five percent of net additions to the workforce during the decade of the 90's were women and racioethnic minorities, these costs will escalate in the coming years (Cox and Blake, 1991).

The fifth research question asks: *how will small businesses in Wales respond to the demographic changes in Wales which include refugees, migrant workers, and increasing diverse population and communities?*

Barrett and Burgess (2008), believes economic development can be advanced without causing social disadvantage. They suggest that an attempt to achieve economic development through equality or diversity in society would definitely increase traditional social divisions along gender, race and economic status lines (Munck, 2005). A similar argument by Blackburn and Ram (2006) questions the role of small business owners and self employed persons in combating the structural conditions that lead to social exclusion. Another piece of research that supports this position is Marlow (2006)'s examination of single mothers in the UK who are entrepreneurs but still dependent on welfare support. The author concludes that their small business ownership did not elevate their economic status.

However, the Welsh Assembly Government is of a different opinion. The uniqueness of the Welsh economy means it could not ignore the potential capacity of prospective entrepreneurs. The Under Represented Groups (UGRs) were "seen as a large untapped pool of entrepreneurial potential which can substantially contribute to economic activity and wealth generation in Wales" (Angove et al 2008:293). With this in mind, the government commissioned two baseline research studies in 2000. The first was Baseline Setting Research – Newidiem (2001), which highlighted the widespread barriers and support necessities necessary for UGRs at the start-up and growth stages of the business life cycle.

The second piece of research was the Welsh Assembly Government (WAG) Entrepreneurial Action Plan Attitudinal Research; carried out by Beaufort Research (2001), which focused, in particular, on the issues of attitude towards self-employment, perception of entrepreneurship, motivation, barriers experienced by ethnic groups and lone parents. The findings from these two studies revealed four different factors, namely: access to finance, benefits and grant dependency, sustainability and growth and design for diversity, which were considered to have a prohibitive impact on the levels of enterprise participation by these groups.

The sixth question is: *What is the impact of age, ethnicity and gender on the five questions above?*

These variables have been shown in previous research to have a moderating effect on the main themes of MD. Although Kandola and Fullerton (1998,) is of the view that these variables can extensively affect attitudes towards 'differences', which in turn have an impact manager's perception and practices. According to the National Health Service (NHS) equality is about creating a: *'fairer society, where everyone (regardless of their race, gender, disability, sexual orientation, age, language, religious and non-religious beliefs) can participate and has the opportunity to fulfill their potential'* (Department of Health, 2004:2).

The term 'diversity', which is derived from the Latin *diversum*, is used to describe the quality or condition of someone or something that is 'different'. Diversity is based on the concept of recognition and value of differences (Kandola and Fullerton 1998).

Peoples' experiences, cultural background, age, gender and race are more likely to impact how they manage diversity in any given organisation. McDonald (1993) understands the individual as an embodied expression of racial, sexual and cultural uniqueness, while at the same time avoiding assumptions in expectation.

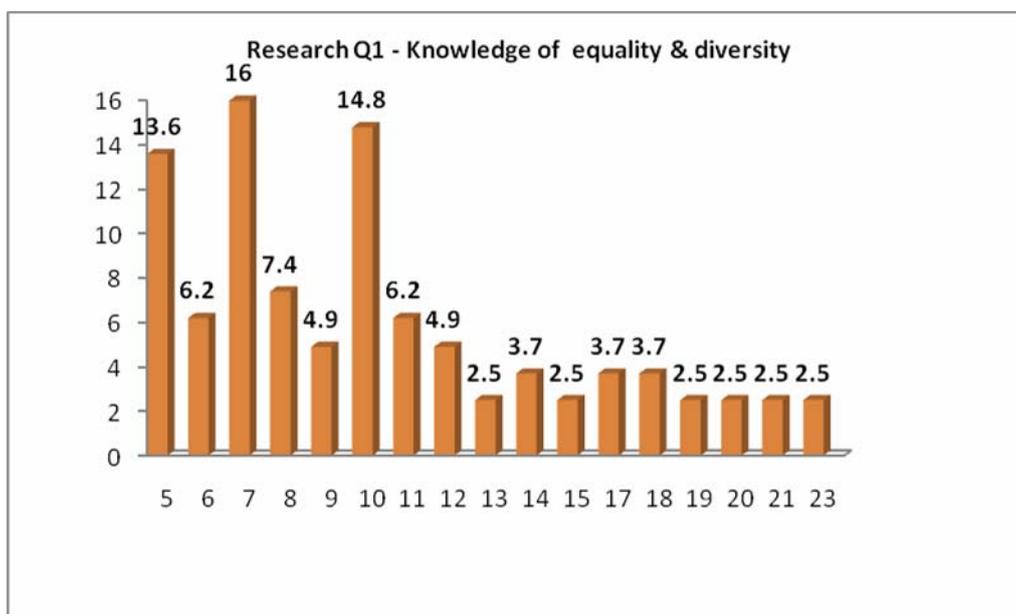
1.7 DATA ANALYSIS, INTERPRETATION AND DISCUSSION

From the 100 questionnaires distributed 85 per cent responded. This high rate of return which was expected as one of the authors is involved in MD in Wales.

Absence of fairness, adequate systems and structures could lead to discrimination. From the bar chart above, more than ten per cent of managers neither agreed nor disagreed, and 19.9 percent fundamentally disagreed with the principle of equality and diversity. This indicates that there could be a negative tendency to be complacency, which in turn creates prejudice, stereotypes and eventually discriminatory behaviour towards others that are perceived as different. The highest bar on the chart is 'seven' at 16.5 per cent which is very close to number five on the questionnaire -strongly agree (highly positive). About 70 per cent of respondents were positive in the understanding of how equality and diversity encourages fair policies and procedures.

Table 1: Descriptive Analysis of Issues

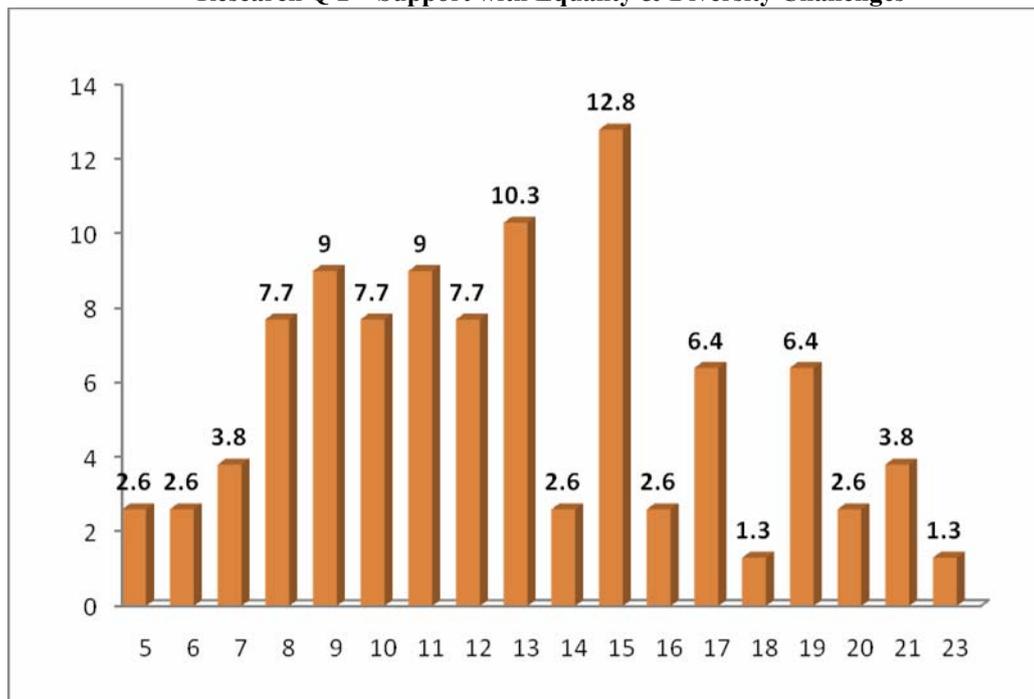
		Research Q1	Research Q2	Research Q3	Research Q4	Research Q5
n	Valid	81	78	79	76	78
	Missing	1	4	3	6	4
	Mean	10.5185	12.8333	15.5949	17.4474	15.1667
	Median	10.0000	12.5000	15.0000	17.0000	14.0000
	Mode	7.00	15.00	12.00	19.00	12.00
	Std. Deviation	4.86855	4.28957	5.15533	7.27992	6.00090



However, the findings of Duff and Ferguson (2007), suggest that commitment to diversity is more visible in the annual reports of SMEs than in practice, indicating that firms would generally agree on paper but their actual attitude or

behaviour in the workplace may be contrary. Duff and Ferguson (2007) concluded that businesses were not complying with equality and diversity legislation despite their positive reports on policies and procedures. Compliance and beyond, is fundamental to the attitude towards equality and diversity. A positive mind-set towards equality & diversity should be integrated into enterprises, since it could be a prerequisite for successful diversity management in any organisation (Cope and Kalantzis, 1997; Kirton and Green,; 2000 and Kandola and Fullerton 1998). It is the 'heart and mind' for human rights from a moral perspective that helps to create a mind-set that does not only 'tick the boxes' in order to comply with the law, but also believes that equality and diversity principles are necessary in all inter-personal relationships.

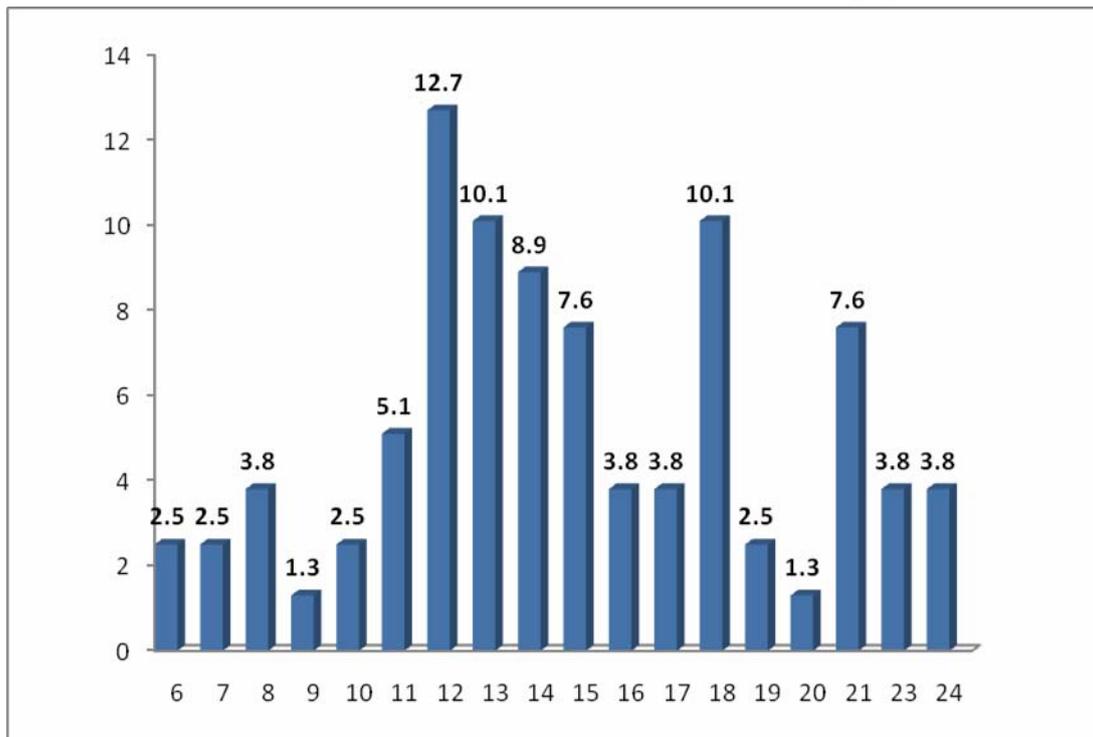
Research Q 2 – Support with Equality & Diversity Challenges



The bar chart above shows respondents' results for research question two which indicates a fairly average but neutral attitude towards equality and diversity challenges. As mentioned previously, research question number two focused more on external and internal mechanisms that help businesses handle equality and diversity challenges. Staff training, conflict resolution and EIA may be more difficult for business without specialist support. 0 to 11 can be classified as positive – agree and strongly agree, 12 to 14 can be classed as neutral (neither agree nor disagree), while 15 to 23 is negative – disagree and strongly disagree. The highest percentage is 12.8 and it is nearer the negative side of the chart. The questionnaire results reveal that the general attitude with regards to the second research question is not clearly distinct, a situation which suggests that inequalities may be rampant in these SMEs.

Inequalities exist in most parts of the world due to employment discrimination and social stereotypes. According to scholars such as Wang and Kleiner, (2001) this is associated with the lower social status of some groups and ethnic and religious minorities due to the general lower income in their communities. For instance, unfair organisational decisions could lead to job discrimination. Apodaca and Kleiner, in their 2001 study, conclude that sexual harassment and discrimination in the workplace account for the overall female disadvantage in a society.

Research Q3 – Attitudes in selection/recruitment of employees

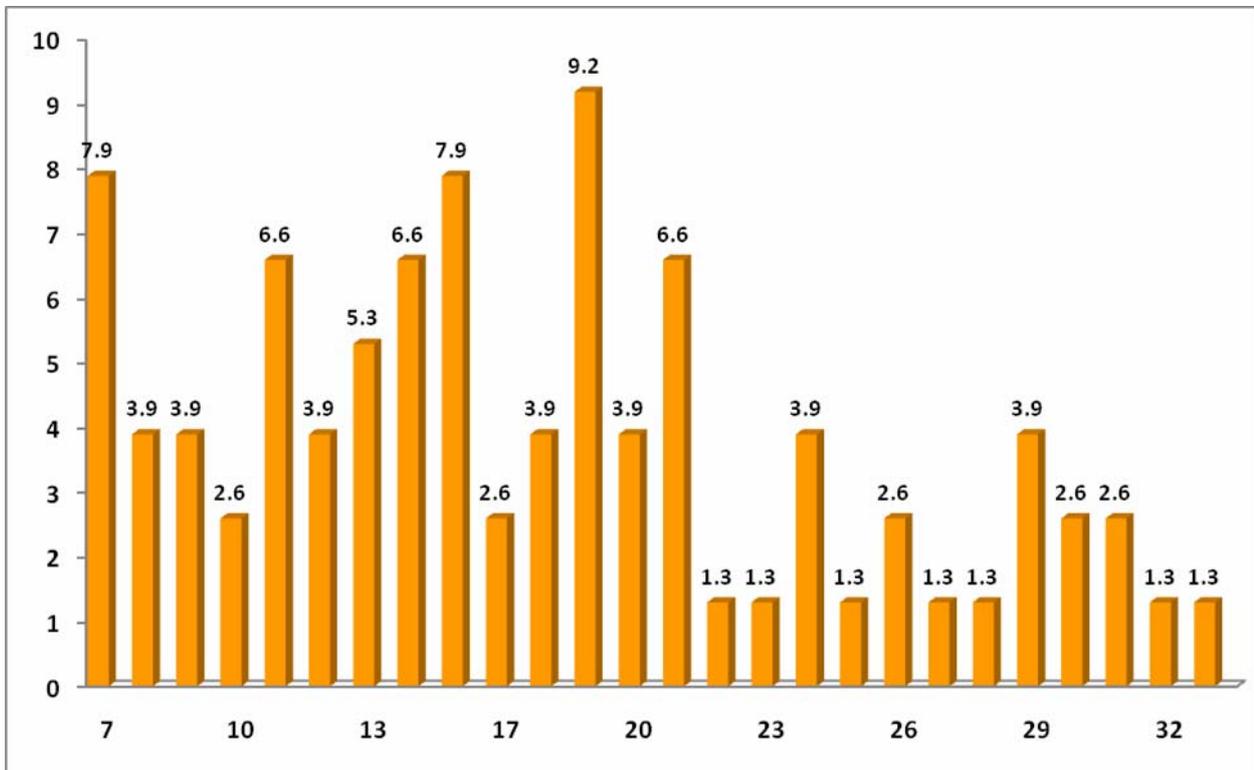


Results as presented in the chart above shows higher concentration in the neutral and positive categories than the negative side of the chart. These results are consistent with that of Ng and Burke 2004 where as a deliberate attempt to tackle apparent problems of workforce diversity in Canada, the Canadian government developed two separate policies; (1) Public policy and (2) Business policy (Jain & Verma, 1996). Employment Equity (EE) policy was one of such policies developed to eradicate employment barriers for ethnic minorities. This is in contrast to the UK, where compliance with employment legislations and individual organisational Equal Opportunities (EO) policies were mandatory for all public organisations, and binding for all employers. Heilman and Alcott, in their research, propose that women and minority groups may shy-away from EE/diversity programmes to avoid the stigma of being perceived as less qualified and incompetent. On the other hand, it was also suggested that the fact that individuals want to increase their self-esteem or justify their current social group could explain the existence of stigma. (Crocker et al, 1998). Archer, (1985) gives differences in ‘image’ as a reason for exclusionary techniques directed towards those who are presumed by social groups to be ‘unfit’ to be included in their group.

Organisational employees have a system of mutually reinforcing mechanisms which result in the attitudes and beliefs of the dominant group creating stigmatisation of those not fitting the image norm of the firm (Link and Phelan, 2001). Specifically targeted programs in small firms appear to have positive results in changing this, however the effects of this will probably disappear over time if the larger issue of where and how the stigmas are created is not addressed (Link and Phelan, 2001) Majority groups in organisations are able to stigmatise and exclude those individuals who are visibly (or invisibly) different, because of the influence or authority they have in the workplace. However, for an organisation to “address the fundamental cause of stigma – it must either change the deeply held attitudes and beliefs of powerful groups that lead to labeling, stereotyping, setting apart, devaluing, and discriminating, or it must change circumstances so as to limit the power of such groups to make their cognitions the dominant ones” (Link and Phelan, 2001).

Ng and Burke, (2003) admit that self-interest and stigmatisation arguments are inadequate and inappropriate predictors of attitudes towards equality and diversity. They affirm that cultural orientation and individual upbringing influence attitudes towards equality and diversity.

Research Q3 – Managing Diversity among workforce

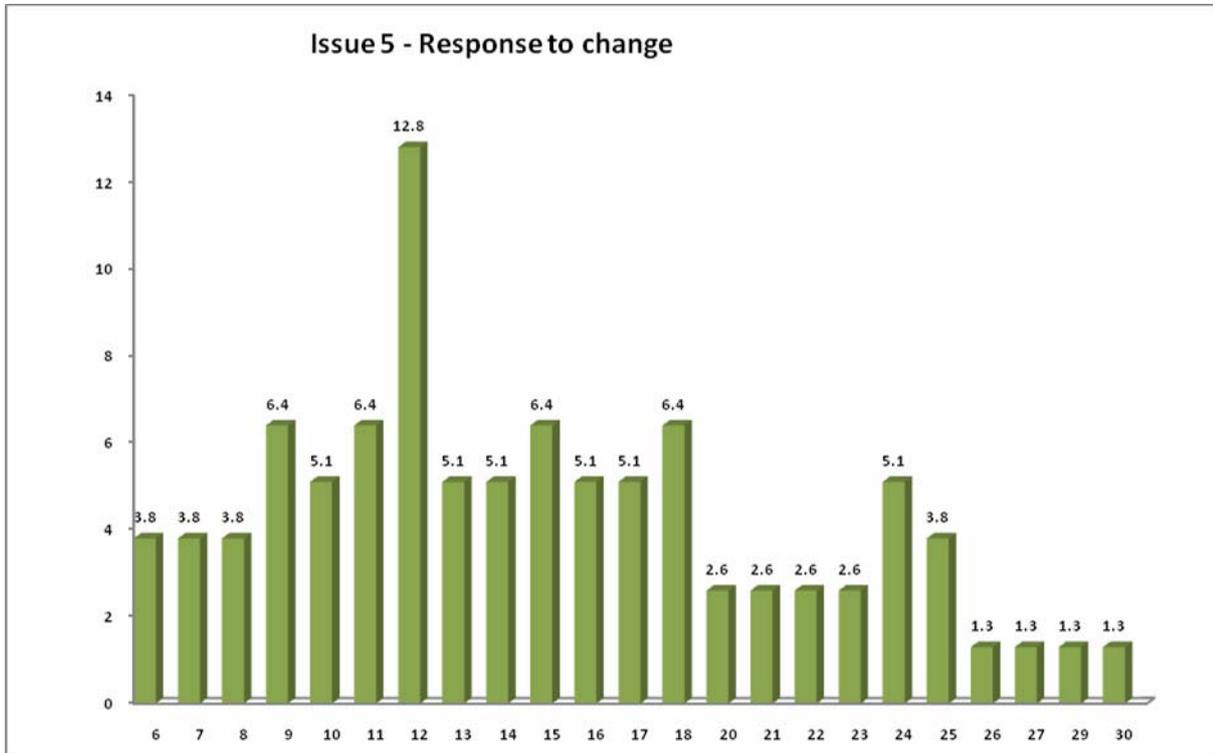


Generally, the 'low' or poor response can be seen clearly in the chart. The highest per cent of all the bars is 12 with 12.8 per cent, and 12 to 14 as mentioned earlier are neutral.

This result is not only alarming, but calls for action on the main benefits of managing diversity. These are; high retention of groups of employees, better relationships between diverse groups of employees and better customer service. It increases business with minority groups because ethnicity of client base is reflected in the diversity of staff. It improves morale amongst staff and enables the development of an open and consultative culture. A positive attitude towards equality & diversity creates and encourages a culture of inclusion, where everyone's opinion counts and all stakeholders have the freedom to deliver their absolute best; a strategic focus with both an internal and external service delivery/operations. This in turn allows organisations to internally review, reflect upon and adapt its business practices to ensure that it increases opportunities for external customers to access and participate in its services. (Kandola and Fullerton, 1994; Johnson and Redmond, 2000.

Changes in Wales include the migration of around 3,000 asylum seekers in Wales over the past few years; a figure which is less than 0.1 percent of the Welsh population. Approximately 12,000 refugees are in Wales, refugees and asylum seekers both make up less than 0.5 percent or less than 15,000 people. In order words, if all the refugees and asylum seekers in Wales sat in the Millennium Stadium, they would only fill the first 16 rows. The majority of the asylum seekers in Wales come from Iran, Iraq, Pakistan, Somalia and Sudan. While in the UK as a whole, the top five origin counties of asylum applicants as at 2007 were Afghanistan, Iran, China, Iraq and Eritrea. Most asylum seekers and

refugees reside in Cardiff, Swansea, Newport and Wrexham. According to 'Displaced People In Action' (DPIA) it is the view of most people in Wales that asylum seekers come into Wales (UK) for economic reasons. On the contrary, all the counties where most of the asylum seekers originate from have poor human rights records or are places where war and conflict is happening (WCRAS, 2007).



These are sociological changes, which might affect the culture that shape the actions and roles of individuals, attitudes & assumptions, cultural differences and stereotyping. Government statistics indicate that about 727,000 people moved into Wales in 2003 and 831,000 in 2004, these in-flows were for employment, study and other purposes. (Smith and Sharfum, Office National Statistics, 2007).

This increase in migration, the larger multi-cultural representation and rise in inter-ethnic marriages have influenced public opinion towards the ethnic minorities. In the Annual Local Area Labour Force Survey (2001/02,) Office for National Statistics, 60 percent of people in Wales identify themselves as Welsh only, 7 percent as Welsh but included another national identity (mostly British) and 33 percent were mixed national identities (i.e. Welsh and another national identity). Welsh Business is expected to respond appropriately.

1.7.2 The impact of age, ethnicity and gender on the five Issues

1.7.2.1 The impact of age on research issues

Attitudes towards Equality Employment/Diversity initiatives in Canada have been researched in the past and the common discovery is that minority groups have more positive attitudes than Caucasian men. Ng and Burke, (2004) uses the

'theory of self-interest' to substantiate this aspect of their findings, inferring that those who are in position to benefit from such policies and programmes will as a result hold more positive attitudes. Results analysed and presented in the correlation table above indicates similar findings. Ironically, in Ng and Burke (2004) some ethnic minority groups were found to have negative attitudes towards Equality Employment/Diversity initiatives (Tougas et al, 1991), but this was not the case in this research. However, in Pickhardt, (2005) the research paper concludes that leading scholars of older historical school of thought explicitly reject the view that individuals involved in economic activities (Equality Employment & Diversity programmes) are motivated by just 'self-interest'.

The correlation between age and Research Question number two and three are significant as they are -0.223, -0.280 and -0.299 respectively, shows that correlation is significant. Issue 2 focuses on Equality and Diversity challenges while question three is based on the attitude towards employment equity. These results show significance in the relationships between age and attitudes towards Equality and Diversity in general. There is no significant correlation between age of respondents and their knowledge of Equality and Diversity- issue I. In addition, the correlation coefficient of age and Issue 4 is -0.203 which is only a tendency towards negative attitudes. An indication that young people, age 25 and under show less favourable attitudes towards Equality and Diversity.

Correlation between age and the five issues								
			Age	Issue 1	Issue 2	Issue 3	Issue 4	Issue 5
Spearman's rho	Age	Correlation Coefficient	1.000	-.142	-.223*	-.280*	-.299**	-.203
		Sig. (2-tailed)	.	.205	.049	.013	.008	.079
		N	82	81	78	79	78	76
*. Correlation is significant at the 0.05 level (2-tailed).								
**. Correlation is significant at the 0.01 level (2-tailed).								

1.7.2.2 The impact of ethnicity on the five issues

The impacts of ethnicity on research questions one to five are all less than 0.05, therefore they are significant. These results suggest that ethnicity has a significant impact on attitude of business owners towards Equality and Diversity.

Test Statistics					
	Issue 1	Issue 2	Issue 3	Issue 4	Issue 5
Mann-Whitney U	406.500	229.500	368.500	246.000	224.000
Wilcoxon W	596.500	382.500	558.500	436.000	414.000
Z	-2.045	-3.509	-2.318	3.550	-3.925
Asymp. Sig. (2-tailed)	.041	.000	.020	.000	.000
a. Grouping Variable: Ethnicity					

White entrepreneurs were found to have lesser understanding of Equality & Diversity; they also do not respond to the changes in the generally demographic or ethnic diversity in our society. Findings from this research is consistent Ng and Burke, 2008:322, they discovered that white employee were less supportive of Equality & Diversity, However their findings have an ironic twist. Non-North Americans (i.e. members of minority groups) are often the targets of discrimination and unfair practices yet some members of these groups hold views and values related to less support for equality (Ng and Burke 2004)

1.7.4.3 The impact of gender on the five issues

Gender ranking takes a male as being equal to one, and a female as equal to two. Evidence from Cart and Rosa (1998) also reveals that entrepreneurs under the age of 25 enter business with less start-up capital, which indicates that women around 25 years and under, have an added disadvantage as a result of age and gender. In the research analysis of Cart and Rosa's (1998) data; fifty percent of the respondents started their business with personal and family savings, others, mostly men would also use bank overdraft facilities. 'Women were more likely to utilise redundancy payments for start-up capital'. The economically suppressed areas have experienced the greatest discrimination in accessing business start-up capital.

Test Statistics					
	Issue 1	Issue 2	Issue 3	Issue 5	Issue 4
Mann-Whitney U	499.500	633.500	709.000	672.500	555.000
Wilcoxon W	964.500	1068.500	1144.000	1050.500	990.000
Z	-2.611	-.799	-.163	-.168	-1.355
Asymp. Sig. (2-tailed)	.009	.424	.870	.866	.175
a. Grouping Variable: Gender					

The Mann-Whitney test results indicate a remarkable difference between the responses of men and women. For example, on research question four, the ratio of male to female is about one to three, while on research question one, it is approximately ratio one to four of one to four. The statistic test results show that the impact of gender is significant only on issue 1. For research question two to question four, the results are insignificant and therefore they can be ignored. These findings suggest that female entrepreneurs are more likely to have a strong positive attitude towards equality and diversity. It also reveals that female business owners seem to have a better grasp of the concept of equality and diversity, although female entrepreneurs are generally under represented at this level of business ownership. A recent report by the EHRC confirms that there has been no significant progress made in achieving gender a balance in Wales for the past four years. The research results show that women are not in a position of power and influence in Wales (Western Mail, 2009).

Only 16 percent of secondary school head teachers are women, even though the teaching profession generally is heavily dominated by women, at 74 percent. Additionally, 9 percent of council leaders of all the 22 county councils in Wales, and 25 percent of councilors are women. Despite these horrifying discoveries, none of these council leaders or women councilors are from the BME communities. Also, none of the Wales' top 100 companies reported having female chief executives and three out of every four Welsh police officers are male, that is a ratio men to women is three to one. (EHRC, 2009). Kate Bennett, the EHRC's national director for Wales, in her reaction to the outcome of the research said:

“The findings highlight a wider failure to ensure the corridors of power in our institutions reflect the breadth of society and include people from under-represented groups, such as disabled people and ethnic minority people. We draw a clear lesson from our findings – good intentions are not enough” (Western Mail, 6 March 2009:1)”

Conclusions & recommendations

In conclusion, an effective way of addressing negative attitudes towards equality & diversity is by recognising the links between peoples’ values, beliefs and attitudes, as they form a network that influences our behaviour. Gordon Allport’s nature of prejudice suggests how negative attitudes can gradually lead to derogatory languages being used. After this comes avoidance, which becomes discrimination and eventually escalates to subtle aggression (or oppressive action). It finally results in physical attack and extermination (climax of negative attitude towards ethnicity) (Gordon Allport 1953; CEHR 2005).

Ross and Schneider (1992), conclude that ‘training’ is what will help organisations ‘manage diversity’. After all, ‘one thing we do know about the future of organisations is that their employees will be increasingly diverse’ (Ross and Schneider 1992:196). The general conclusion that emerges from this study is that there is evidence of both a negative and positive attitude to equality and diversity amongst business owners, but from an ethnicity perspective, the majority of negative attitudes are from white males. This is a discovery which is consistent with previously related studies, but unhealthy for Welsh SMEs and the society in general. The business case for equality and diversity is yet to be fully comprehended and implemented. The business case is therefore far from being a ‘driver’ for equality and diversity among SMEs in Wales. Managers and entrepreneurs should endeavour to build and lead a diversity-oriented organisation through diversity management.

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Micro-family-owned businesses: survival in a dual economy or future engine for growth?

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This paper challenges common views and previous research findings on the importance and impact of micro businesses in emerging countries economy. Using panel data from the Indonesia Family Life Survey in 1997 and 2000 covering 7,616 and 10,293 households respectively, our analysis shows that micro businesses are widespread across the country, are fairly profitable on average and act as a safety net for the population in general and more specifically in times of economic turmoil. Results also unveil the positive impact of social capital on the family assets.

Track: 4. Entrepreneurship and Economic Development

Developing entrepreneurial intentions in a developing country: the mediating role of self-efficacy

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Drawing on social cognitive theory, we examined the mediating role of self-efficacy in explaining the relationship between previously identified antecedents and entrepreneurial behavior of 823 undergraduate engineering, business administration, applied arts and applied science students in a Ghanaian tertiary institution, who had completed a required undergraduate entrepreneurship course. We employed a series of hierarchical multiple regression analyses to test the model that entrepreneurial self-efficacy (ESE) mediated the relation between antecedent factors and entrepreneurial intentions (EI), to test the relation between antecedent variables and ESE, and to test the mediational model. We found that gender significantly predicted entrepreneurial intentions, and applied arts was significantly related to ESE. ESE appears to mediate the effect of subject major, specifically, applied arts major on EI. Gender was still significant although its effect was reduced by about 23%, an indication of partial mediation. Implications for educators, policy makers and research are discussed.

Track: 4. Entrepreneurship and Economic Development

Regional Development and International Trade in Italian Regions

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This paper focuses on international competitiveness of Italian regions in the period 1995-2005, in order to understand export specialization in the areas with a major concentration of industrial districts.

The analysis has been conducted on 120 exporting sectors and the results show that regions with a high presence of districts have a higher degree of openness at international level, rather than other regions.

Besides, “District regions” have a higher degree of specialization in more industrial sectors, and in particular in those of “*Made in Italy*”. Those regions seems also to have, in that same period, a higher degree of growth in GDP and export.

Track: 4. Entrepreneurship and Economic Development

Entrepreneurial Growth and Labour Market Dynamics: Spatial factors in the consideration of relevant skills and firm growth in the Creative Industries¹

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Abstract

Studies into the spatial determinants of entrepreneurship have tended to focus on (a) the characteristics of more successful regions, knowledge spillovers and agglomerations of economic activity (Jaffe, 1993,1998, Zucker, et al, 1998, Acs, 2002, Sorensen and Stuart, 2003, Audretsch and Feldman, 2004; regional differences in entrepreneurship capital (Sternburg & Wennekers 2005), (c) the relationship between personal entrepreneurial characteristics and behaviour and new business creation. An apparent propensity for researchers to focus on the performance outcomes of entrepreneurship at a regional level, rather than the structural supply-side conditions that may influence regional differences in rates of new venture formation, and therefore be construed as constituent components of an ‘entrepreneurial culture’ in those areas.

This paper is concerned with the exploration of some of the critical, spatial and structural factors underpinning industry growth, entrepreneurship and labour market dynamics with particular reference to the so-called ‘Creative Industries’. Our research shows a statistically significant spatial correlation between levels of human capital (amongst other framework factors) and higher rates of new firm formation in knowledge-intensive sectors in the United Kingdom. It then goes on to investigate how human capital (measured in terms of educational attainment at different levels) can be enhanced within an economically peripheral sub-region to overcome mismatches between the supply of, and demand for, what the government terms ‘economically valuable’ skills (Leitch Review of Skills in the UK, 2004). Not all such enhancement measures generate entrepreneurial outcomes in terms of self-employment and new business creation. Equally, the availability of flexible labour and skills can support the growth of innovative firms. It is precisely these dynamics within local production systems, coupled with the existence of an entrepreneurial capability, that force many workers to change from the status of self-employed to that of employees at various times in their lives (Cappellin 1998). Thus, the issue of labour market skills and flexibility is of particular relevance in this paper.

In recent years there has been a growing interest from academia and policy makers in the idea of the ‘cultural industries’ initially, and more recently in the ‘creative industries’ and the notion of the ‘creative economy’. It is the specific and special construct of the ‘creative industries’ (as distinct from all other industries) that has received overwhelming attention from the media, policy makers and researchers. Florida (2002, 2005) makes a compelling argument that creative talent is the key driver of growing knowledge-based economies. Creative industry products and services incorporate individual skill and creativity that are knowledge-intensive and locally derived. This paper seeks to address these issues with a particular focus on the determinants of new firm formation and the factors that can help determine regional advantage for new business creation and innovation in the creative industries. Specifically, we attempt to explore and identify key determinants of

¹ Special thanks to our ex-colleague Dr William Gleave who worked with us to develop the Creativity Index referred to in this paper, and also for the development of the ideas which informed the development of our Entrepreneurship Research Project based in the Thames Gateway Region in the UK. Some of the references are drawn from that project. We would also like to thank Dr Jun Li for his contribution to the identification of some key sources.

business formation in Knowledge Intensive sectors (which include the creative industries) of regions outside the major metropolitan conurbations, and their possible differences with other Non-Intensive Sectors.

Based on analysis of Local Authority Districts of Thames Gateway South Essex (TGSE) in East of England, we find that while human capital is positively correlated with new business entry in Knowledge intensive sectors, it is negatively correlated with new start-ups in non-knowledge intensive sectors. This finding suggests that while entrepreneurship in knowledge based and creative industries requires highly skilled labour, in non-knowledge based industries, low skilled labour is the primary determinant of new firm creation. Our findings also appear to suggest the need for higher skills/educated base in order to boost the growth of new businesses in the TGSE region. Finally, we develop a new creativity index for secondary regions that measures more directly the concentration of creative and knowledge based industries.

Keywords: Creative Industries; knowledge-based; core-periphery; talent; skills; regions; human capital; creativity; formation; new firms

Introduction

Recent years have witnessed a growing interest from academia and policy makers alike in the idea of the 'cultural industries' initially, and more recently in the creative industries and the notion of the creative economy. This has resulted from the suggestion that the creative industries (however defined) are a growing sector, which offers opportunities for new job creation, new business ventures, inward investment and tourism (European Commission, 1998). More importantly, it is based on the recognition that, as globalization has changed the international division of labour, developed countries have to base their global competitiveness on the strengths of their labour market and consequently on products and industries in the high end of value chain. While it is widely agreed that creativity can also be used as a defining characteristic of firms in every sector that take their principal competitive advantage from creativity and innovation, it is the specific and special construct of the 'creative industries' (as distinct from all other industries) that has received overwhelming attention from the media, policy makers and researchers.

Florida (2002, 2005) argues that creative talent is the key driver of growing knowledge-based economies. Creative industry products and services incorporate individual skill and creativity that are knowledge-intensive and locally derived. Hence they are difficult to imitate by low cost producers abroad (Turok, 2003). Creative industries tend to have an urban focus (Scott, 2006, Florida, 2005, Hartley, 2005, Thorsby, 2003), and this focus tends to highlight the spatial concentration of firms in those industries. The relationship between urban areas and industry agglomeration is reinforced by specific division of labour, allowing for functional diversity (in terms of production sectors, job types, occupational strata, worker skills associated human attributes, sources of capital, and a spread of businesses across the value chain (Scott, 2006). While Florida emphasizes the importance of creativity in economy, one of the uncomfortable messages from his work (and indeed that of others) is that the creative economy tends to aggravate inequality, including regional inequality.

Interestingly, in the UK the creative industries have been closely associated with the regeneration agenda of many local governments. From big cities such as Manchester, Birmingham, Glasgow, and Cardiff, to smaller towns such as Huddersfield and Southend-on-Sea, the creative industries have been integral to a broader regeneration that has focused on urban renaissance, attracting post-industrial jobs; encouraging people back to living in city centres, and generally improving the urban quality of life (Jayne, 2004).

Whilst much of the attention concerned with creative industries and creative cities has been focused on the core cities and regional capitals, there is a pressing need to explore a key research and policy issue in that whether and to what extent the creative industries have a role to play in other non-core peripheral regions. This view is based on the notion that the relatively low threshold of entry into these industries should allow for new business creation and subsequent skills as growing ventures put pressure on the local supply of adequate and relevant capabilities and competencies of people. At a meta level, shifts in the production system result in major reorganizations of the spatial division of labour, centered round high technology manufacturing, neo-artisanal production, cultural industries, business and financial services, in the new economy of our times.

An interesting outcome of such structural change in the new economy is the "expanding mosaic of interrelated economies at various levels of scale and development. This mosaic is steadily overriding.....the pre-existing core-periphery system that prevailed under the old and new divisions of labour" (Scott, 2006, p. 43). Thus the interrelationship between core-periphery regions in accommodating the growth of the creative industries provides fodder for analysis of the prospects for entrepreneurship in the creative industries.

This paper takes a more specific focus on the creative industries in the context of peripheral or secondary regions (secondary to major metropolitan areas). The purpose is to seek out the determinants of new business formation with particular reference to the creative industries and identify the regional factors that determine the advantage that some regions have in generating new businesses, encouraging specialization and achieving economic growth. Specifically, we address the following objectives:

- *Objective 1: to explore and identify key determinants of business formation in Knowledge Intensive sectors of secondary regions and their possible differences with other non-knowledge intensive sectors*

- *Objective 2: to investigate whether ‘entrepreneurship gap’ exist in knowledge intensive sectors of secondary regions, in relation to national rates of business formation and growth and why.*
- *Objective3: to develop a creativity Index for knowledge economy in secondary regions based on key factors identified.*

Addressing the above objectives, will allow us identify key factors supporting new venture creation, in secondary regions. By secondary regions, we are simply referring to non-core regions; which are regions without high-concentration of knowledge activities. The study’s findings are help in the formulation of more informed policies for supporting creative and knowledge based industries in these regions. Creative industries are widely considered to be key drivers of the knowledge economy and enablers for other services and industries. Policy-makers are therefore keen to promote their growth and development within local and regional economies.

Literature Review

Richard Florida (2002, 2005) sets his thesis at the international level to address the source of new competitiveness of nations. In his view, the movement of human capital, particularly the most creative and talented, from nation to nation is critically important to understand a nation’s future success or failure in global competition. At the centre of this thesis is the concept of ‘creative class’. Florida (2005) defines the ‘creative class’ as those employed in the fields ranging from science and engineering to architecture and design, and from arts, music, and entertainment to the creative professions of law, business and finance, health care, and related fields (p.7). From this definition, it is clear that the creative sector he refers to is broader than the widely-used definition of the creative industries. So is his ‘the global creativity index’ (GCI). The GCI is the weighted average of three indices: a) talent index, measured by creative class, human capital, and scientific talent; b) technology index, measured by R&D index and innovation index (patents); and c) tolerance index, measured by values index and self-expression index.

His argument can be summed up as follows:

- a) we are witnessing the rise of the creative economy in which the primary drivers of economic growth for both regions and nations are technology, talent, and tolerance (3 Ts);
- b) creative talent and the knowledge and technology creative people bring with them are mobile factors and an area’s ability to hold these critical factors lies in its openness, diversity, and tolerance;
- c) companies, instead of bringing talent to their existing locations, set up facilities where the talent already exists;
- d) more urbanized and denser areas gain productivity advantage due to their ability to bring together and argument creative talent;
- e) the creative economy will aggravate economic inequality and increase social and political tension.

According to Richard Florida (2002), creative centres across regions are those places where “all forms of creativity - artistic and cultural, technological and economic - can take root and flourish”. In those creative centres, the agents of production are small firms with the entrepreneurial drive, spatial proximity fosters social interaction and trust, and dense local networks create a dynamic atmosphere that spurs innovation, lures talent, attracts investment and generates growth through a self-reinforcing, endogenous process. This has led to the emphasis on the importance of creative networks in cities. Cities are said to be privileged locations in the new information-rich economy as nodes of intense business interaction and sharing of ideas and insights, leading to rapid learning and innovation (Leadbeater, 1999). Overall, Florida’s argument, from the spatial perspective, seems to imply that the creative sector, in his definition, tends to thrive in a small number of places where both the infrastructure and the tolerant environment exist and that the rise of the creative economy will therefore reinforce the pattern of regional disparity or the core-periphery relationship.

While it is still not entirely clear as to the extent to which the development of the creative industries and the creative economy as a whole correlates, there is a need for a close look at determinants of the creative industries development from a geographical or spatial point of view. This acquires greater poignancy when consideration is given to what Scott (2006) refers to as the interrelationships between different regions and sub-regions. There is also the need to address the question of the inherent tendency of inequality of the

creative economy and the desire for facilitating the development of the creative industries in secondary regions. Surprisingly, given the rapidly increasing number of publications relating to the creative industries, research on the creative industries in the non-core, peripheral or secondary regions is very limited and research, if any, is mainly case study-based.

According to Turok (2003), Scotland has a larger share of employment in television production and distribution than all other regions in the UK besides London; within Scotland, the film and television industry is strongly city-oriented; and Glasgow is the largest Centre. The film-making sector, however, has struggled to make a sustained impact. Turok argues that despite the existence of a group of talented and committed individuals, support organisations with diverse capacities ranging from acting to production and technical assistance, and the intangible resources like Scotland's culture and physical environment, the sustained development of the sector needs to have sufficient critical mass to sustain specialised services, consistent public funding and financial incentives, and control over distribution and exhibition. Although the television sector in Scotland performed much better than the film sector, the process that key decisions were made in London, underpinned by the inherent character of the commissioning process, again resulted in a lack of control over their creative products. It is secondary or 'peripheral' (in both sectoral and industry terms) that defines the character of the creative (film) industry in Scotland;

This case study suggests that city size and density matter for the existence of a pool of creative and technical talent, as well as generalized urban assets such as external air connections, recreational facilities and cultural amenities (Turok, 2003). It also echoes Florida's (2005) argument that highly skilled labour is mobile. Therefore, the quality of life and image of cities as well as efficient external transport links are important to attract and retain qualified personnel.

Montana's creative enterprise cluster is another interesting case. The cluster is dominated by businesses in arts and design and consists of three ties: the first tie consists of individuals and freelancers who mainly work alone or, occasionally, with apprentices or family members; the second tie consists of the artisan-entrepreneurs and small to mid-sized firms that can meet a larger market demand; and the third tie consists of the specialized service companies and freelancers that design, deliver, and produce creative content in various forms (Rosenfeld, 2004). In the cluster, a very large proportion of the companies are micro-enterprises, individuals, freelancers, and part time (secondary) businesses, and businesses tend to concentrate in and around a few cities.

The development of the creative industries cluster was attributable to such factors as biodiversity, low population density, independent lifestyle, and cultural heritage. It has also benefited from the home-grown talented residents of rural areas and reservations who have honed their skills over long periods of rural self-sufficiency and are now turning those skills into commercial endeavours - as knitters, weavers, woodworkers, canners and potters (Rosenfeld, 2004). Whilst higher education institutions play a positive role, a large proportion of creative and innovative people were found to lack any degrees in art or design. In fact, informal learning prevailed and tacit knowledge was highly valued. It was also recognised that the cluster was represented by a wide range of non-profit associations that serve various interests. In relation to this, businesses found it more important to have close access to support services than proximity to the manufacturing companies, as they tend to rely on intermediaries to find customers.

Jayne (2004) charts two major creative industries initiatives in Stoke-on-Trent, UK, which has a symbolic name of 'the City of Pots'. Between 1989 and 1993, millions of Euros, including European Structural Funding, were invested in the two initiatives. They sought to conserve the local industrial and cultural heritage, and to develop a new and innovative approach to the regeneration of the area. Despite substantial investment, the impact of this development on the regeneration of the city has been minimal. Jayne (2004) argues that the disappointing outcome resulted from a combination of factors, such as flawed creative industries strategy, associated failings of the city to overcome its spatial and economic structural conditions, and, most critically, the domination of working-class production and consumption cultures.

The various case study references made above suggest that an underpinning feature of the creative industries in different regions is the system of social and economic relationships that shapes and influences creative desire, capability and inventiveness. This system of interrelationships is what Scott (2006) refers to as the 'creative field', which is made up of different types of continually evolving organisational arrangements contributing to and engendering different social and economic relationships. These organisational

arrangements may be represented by specific types of labour-management relations, a nexus of particular sectors, the connections between universities, industry and government (Leydesdorff and Etzkowitz's (1997) idea of the 'triple helix', see also Mitra and Matlay, 2002) or even a regional innovation system (Cooke, 2000). The critical consideration is the spatial and locational attributes of different aspects of human capability, effort and organisation (Scott, 2006), and the extent to which they contribute to entrepreneurial outcomes in an economy. Representation of such human capability and effort can be found in the key variables (levels of skills, employment, job density, etc.) that connect or correlate with each other to help determine the patterns of new firm formation and economic growth.

What follows is the quantitative analysis of the relationship between the specific variables that contribute to new firm formation with specific reference to key sectors that are either part of the creative industries or those which support such industries. The analysis is then followed by a discussion on the development of a new 'creativity index' which could help better in obtaining a critical understanding of entrepreneurship and the creative industries.

Research Method

Given that the key purpose of this research is to seek out the determinants of new business formation in secondary regions, we employ ordinary least square (OLS) regression method. The importance of multiple regression equation is that it identifies the impact of each influence on the dependent variable independently of other influences (Barkham *et al.*, 1996). As regards choosing appropriate unit of observation, we choose the regions of Thames Gateway South Essex. The sub-regions of South Essex, which include Southend-on-Sea, Rochford, Castle Point, Basildon and Thurrock, provide a spatial construct that has much in common with areas marginal to large urban conurbations such as London (ERP, 2007). The businesses in the South Essex region are seen as having a general focus on lower-skilled activities (ERP, 2007). Thus, these regions of South Essex are considered here as being secondary regions.

The K sector (renting, real estate and renting activities) in South Essex is chosen for a number of reasons. 1) Renting, real estate and renting activities is among the sectors generally viewed as part of knowledge intensive services (Eurostat cited in Jones *et al.*, 2008; see table 1); and 2) the data on VAT registration is available at the sub-regional level from NOMIS (2004).

Table 1: Definition of knowledge intensive services and Non-knowledge Intensive Service industries

Definition	Industries included
Knowledge intensive services	<ul style="list-style-type: none"> • Financial intermediation; • Real estate, renting and business activities; • Education; • Health and social work; • Recreational, cultural and sporting activities; • Water transport; • Air transport; • Post and telecommunications.
Non-Knowledge intensive services	<ul style="list-style-type: none"> • Transportation services; • Travel services; • Construction services; • Insurance services;

Source: ESRC (2005); Eurostat cited in Jones *et al.* (2008)

Our proxy for new firm creation is VAT registration, which is inline with VAT registration, which is widely used in new firm creation related studies (Huggins and Izushi 2008; Mitra and Gleave, 2008). We however recognize that our proxy has some limitations it does not capture firms that are not VAT registered.

The Findings and the Analysis

Objective1: Determinants of business formation in Knowledge Intensive sectors of secondary regions

The following regression models examine the determinants of VAT registrations in Knowledge-sector (renting, real estate and renting activities) and non knowledge sectors (transport) industries respectively, for all districts within the East of England. They allow differences between the two industrial groups, in term of the regional economic factors which affect VAT registration rates, to be isolated and identified. Given that these districts vary in size both geographically and in terms of their total population, the absolute number of VAT registrations need to be controlled by a size measure. Ashcroft *et al* (1991) highlight the regional workforce and the stock of existing businesses as two appropriate denominators to use in this context and discuss the relative advantages of each. A per-capita measure of business start-up is employed in Table 2 in order to examine the VAT registration data in relation to the adult population in each district. The underlying assumption with this measure, which van Stel and Storey (2002) term the ‘Labour Market approach’, is that start-up activity essentially derives from the potential workers within an area. In contrast, the regression models in Table 3 consider VAT registrations as a proportion of the existing stock of businesses (the ‘Business Stock’ approach). This assumes that new firms are created out of existing ones.

Table 2: Determinants of VAT registration in K and I sector industries at LAD level – 2000 to 2004 (East of England) – Labour market measure

Predictors	Average VAT registrations per 10,000 adult population (2000-2004)	Average VAT registrations per 10,000 adult population (2000-2004)
	K-sector	I-sector
Constant	-7.77	0.43
% of economically active people educated to NVQ 4+ (2000-2004)	0.30**	-0.04**
Employment specialization in industry (2001)	6.02**	0.38**
Employment rate 16+ (2000-2004)	0.07	0.50*
% of economically active unemployed (2001)	-1.01**	-0.16**
% economically active self-employed (with employees - 2001)	0.07	-0.14
% economically active self-employed (no employees - 2001)	0.00	-0.13
% of workplaces with under 10 employees (2001)	0.76**	-0.12
Job density (2000-2004)	8.71**	0.03
R-squared (adjusted)	81.6	50.3
F-statistic	42.60	12.89
N	48	48

*Significant at 5% level **Significant at 1% level

Source: NOMIS

It can be seen that whilst the proportion of people educated to NVQ 4 and above exerts a positive influence on registrations in K-sector activities, this measure of human capital produces a negative and statistically significant predictor of registration in transport, storage and communications, indicating the importance of a lower more industry-specific skills base within this sector. Employment specialisation is an important predictor of VAT registration for both industrial groups, suggesting the positive influence of industrial concentration on new firm formation and growth. In addition, the proportion of workplaces employing fewer than 10 people and the job density variables represent positive predictors of VAT registration in K-sector activities, demonstrating the importance of ‘cluster’ related dimensions on SME growth and development.

Table 3: Determinants of VAT registration in K and I sector industries at LAD level – 2000 to 2004 (East of England) – Business stock measure

Predictors	Average VAT registrations as % of stock at end of previous year	Average VAT registrations as % of stock at end of previous year
	K-sector	I-sector
Constant	14.87	16.09
% of economically active people educated to NVQ 4+ (2000-2004)	-0.21	-0.09
Employment specialization in industry (2001)	-0.08	-0.02
Employment increase 16+ (2000-2004)	0.13	0.14
% of economically active unemployed (2001)	-0.21	-0.17
% economically active self-employed (with employees - 2001)	-0.06	-1.45**
% economically active self-employed (no employees - 2001)	-0.28*	0.17
% of workplaces with under 10 employees (2001)	-0.08	-0.03
Job density (2000-2004)	-0.12	-0.02
R-squared (adjusted)	0.13	0.35
F-statistic	7.86	26.37
N	48	48

*Significant at 5% level **Significant at 1% level
Source: NOMIS

The regression models presented in Table 2 are much weaker than those in Table 1 in terms of the proportion of the variance that is explained. This may indicate a possible limitation in using the stock of existing businesses as a denominator for analysing VAT registrations. For example, the measure cannot discriminate between areas that have a small number of large firms, and those that have a larger number of smaller business enterprises. Interestingly, the models highlight the negative influence of the self-employed segment of the work-force on business start-ups, possibly indicating market saturation in certain places or that larger businesses registering for VAT are not locating in areas with a higher proportion of low value added activities run by individual workers.

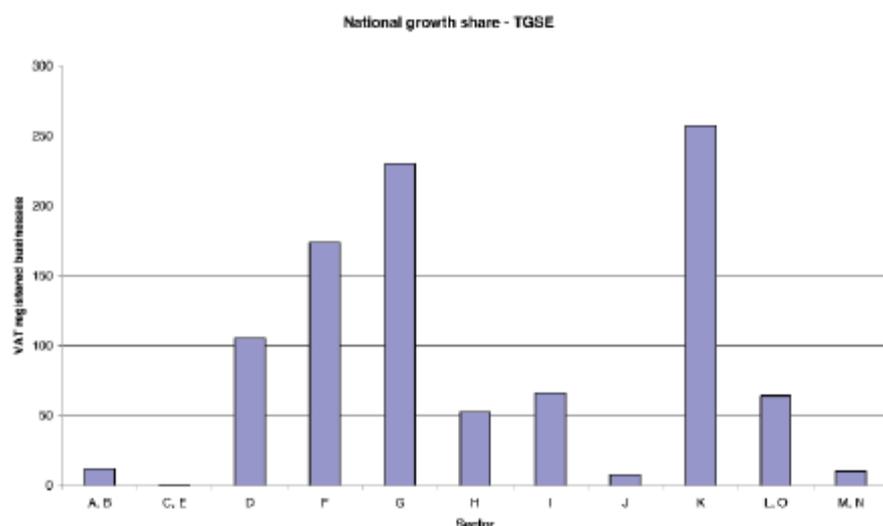
Objective 2: 'Entrepreneurship gap' in secondary regions, in relation to national rates of business formation and growth.

A shift-share analysis was conducted to examine the competitive position of TGSE in terms of the growth of VAT registered businesses across different sectors of the economy. The purpose of this was to indicate the industrial groups within which entrepreneurship was most prevalent, and where 'entrepreneurship gaps' exist, in relation to national rates of business formation and growth.

What we are looking here is the difference between current rates of entrepreneurship and what would be achieved if negative environmental factors were not present. The analyses below attempt to indicate the TGSE sectors that failed to create VAT registered establishments, given what was achieved within those sectors at the national level.

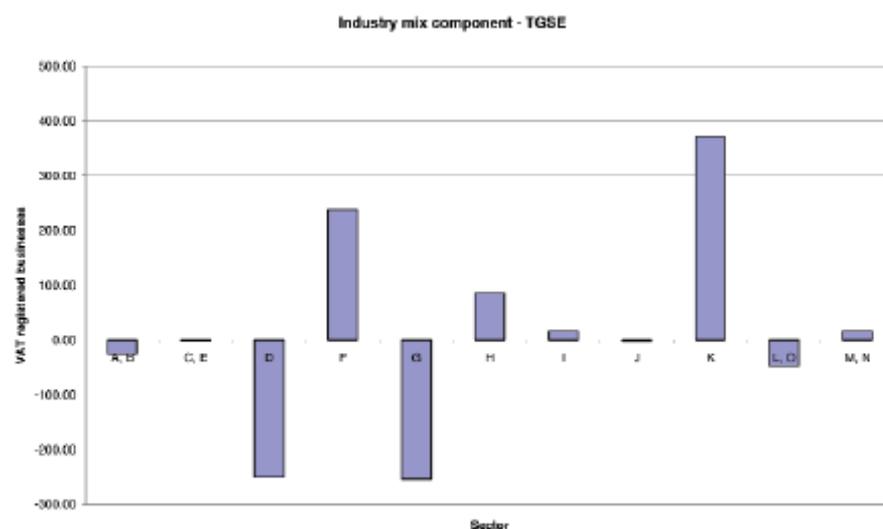
The national growth share (Figure 1) reveals the number of VAT registered businesses that were created between 2000 and 2005 as a result of the overall rate of increase (5.71%) at the national level. K- and G-sector activities perform particularly well on this component reflecting their strong representation in TGSE's business stock in 2000.

Figure 1: National Growth Share

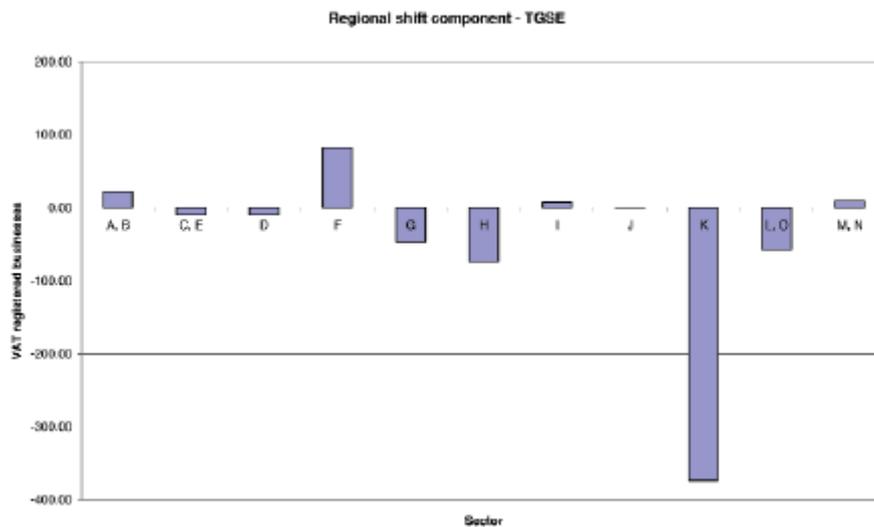


The industry mix component (Figure 2), which measures the number of VAT businesses formed or discontinued between 2000 and 2005 as a result of industrial growth or decline in the national economy, again identifies the growth of K-sector activities (including business and financial services), as well as increases in VAT registered construction businesses. Indeed, the most successful sector overall within TGSE, as indicated by the regional shift component (Figure 3), is construction in which 83 establishments were created, probably as a consequence of the urban renewal projects that have been initiated as part of the Thames Gateway regeneration strategy in recent years. Clearly this will place pressure on the construction labour market attracting a migrant workforce into the sub-region. What is especially striking is the loss of 373 VAT registered businesses on the regional mix component, attributable to the slower rate of growth of these activities at the regional level.

Figure 2: Industry Mix Component



This finding is of particular concern since K-sector activities include a range higher value-added, knowledge intensive businesses that contribute to regional growth and innovativeness. As shown above, the K-sector displays a high-degree of business churn within TGSE indicating that rates of business survival amongst these activities are particularly poor. Thus where the region needs a higher skills/educated base to allow for structural change in the economy, we find worrying signs of weakness accounting for their relatively poor entrepreneurial performance. **Investigating the shifts in the share of employment and of business registrations reveals different dynamics of the TGSE sectors.**

Figure 3: Regional Shift Component

- **Objective 3: The Creativity Index for secondary regions**

We propose a new ‘creativity index’ which can be applied in the UK context with existing secondary datasets at various levels of spatial aggregation. This composite measure is comprised of 6 different variables relating to various aspects of human capital, regional economic performance, entrepreneurship, and local specialisation in ‘creative’ sectors. Similar to the measure proposed by Florida (2004), the index considers the regional advantages that underpin growth and specialisation in ‘creative’ sectors, as well as the process of new enterprise creation. The development of this technique represents an attempt to combine the range of widely available data sources that have been used individually as proxy measures of more abstract theoretical concepts (e.g. ‘human capital’ measured empirically in terms of educational attainment at university level, and ‘regional entrepreneurship’ assessed in terms of VAT registrations per capita), and to highlight the unique spatial interactions between them. Due to data limitations, the proposed index does not consider the occupational structure of local economies as Florida (2002) and Markusen and Schrock (2006) are able to do with US census sources. Rather, the commercial exploitation of human capital in an industrial context, and the regional conditions which support this, is the focus of the technique.

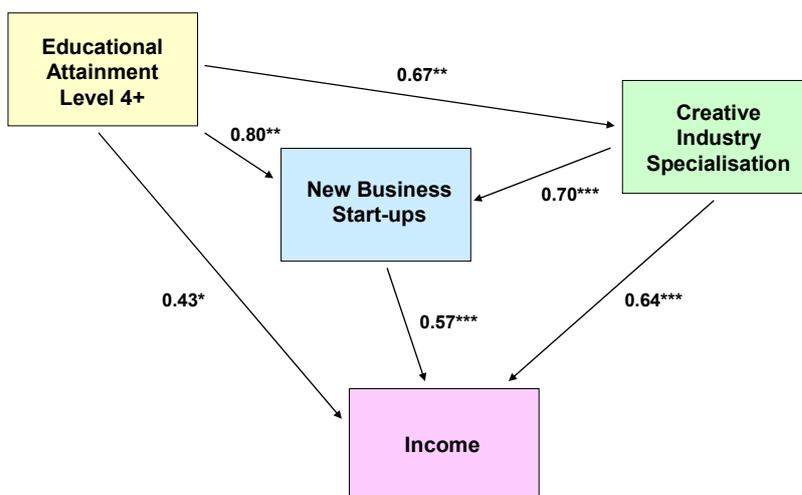
The underlying rationale for the inclusion of the 6 different variables in the index are the key interrelationships that are held to exist between them and their perceived importance to the process of creative industry specialisation and entrepreneurship. Figure 1 examines this process in the form of a simple path analysis (Florida 2002) developed from the correlation matrix presented in Table 3. It is argued that the foundations of a specialised creative industry base relate to a location’s stock of, or attractiveness to, highly educated people who are able to access employment within high value added ‘creative’ sectors of the economy. As demonstrated in the regression models above, such specialisation in turn stimulates business creation and ultimately contributes to higher average wage levels. In grouping the 6 variables together, the proposed index measures the potential for the process outlined in Figure 1 to take place and develop within a region. Principle component analysis is used to group the 6 variables together into a single ‘creativity’ component. The area’s respective coefficients against this component are then ranked.

Table 3: Interrelationships between Creative Industry Employment and Key Regional Indicators

Correlation matrix – Creative Industries Specialisation and Key Economic Characteristics in East of England (n=48)	Creative Industries LQ (2004)	VAT registrations per 10,000 adults (k-sector) (2000-2004)	Job density (2004)	Unemployment rate (2001)	Employment rate (2000-2004)	% economically active educated to NVQ level 4+	Gross annual pay (2003)
Creative industries LQ (2004)	1	0.695**	0.372**	-0.285*	0.369**	0.673**	0.640**
VAT registrations per 10,000 adults (k-sector) (2000-2004)	-	1	0.311*	-0.630**	0.564**	0.796**	0.571**
Job density (2004)	-	-	1	0.133	0.105	0.410**	0.339*
Unemployment rate (2001)	-	-	-	1	-0.656**	-0.521**	-0.248
Employment rate (2000-2004)	-	-	-	-	1	0.459**	0.371**
% economically active educated to NVQ level 4+	-	-	-	-	-	1	0.430**
Gross annual pay (2003)	-	-	-	-	-	-	1

Source: NOMIS

Figure 1: Path Analysis – Key interrelationships between educational attainment, entrepreneurship and creative industry growth in East of England



*Significant at 1% level
 **Significant at 0.1% level

'Creativity Index' – East of England

- Composite index comprised of the following 6 variables:
 - 1) Creative industries location quotient (2004)
 - 2) Average VAT registrations per 10,000 adults in K-sector activities (2000-2004)
 - 3) Average job density (2000-2004)
 - 4) Average employment rate aged 16+ (2000-2004)
 - 5) Average % of economically active population educated to NVQ 4+ (2000-2004)
 - 6) Average gross annual pay (2003)

Creativity Index - Top ten 'creative' districts within East of England (n=48) and rank scores for TGSE

Top ten districts	Rank	TGSE districts	Rank
St. Albans	1	Basildon	24
South Cambridgeshire	2	Southend-on-Sea	37
Cambridge	3	Thurrock	40
Three Rivers	4	Rochford	41
Dacorum	5	Castle Point	44
Watford	6		
East Hertfordshire	7		
Welwyn Hatfield	8		
Uttlesford	9		
Hertsmere	10		

Conclusion and Discussions

In this study we examined determinants of new firm formation and the factors that can help determine regional advantage for new business creation and innovation in the creative industries with particular reference to human capital and labour market dynamics. The study develops that the development of a new 'creativity index', made up of 6 composite measures, could help better in obtaining a critical understanding of entrepreneurship and the creative industries. The study then employs multiple regressions to test the explanatory power of the creativity index on new venture creation in two sectors, namely K-sector (renting, real estate and renting activities) and I-sector (transport) industries for all districts within the East of England. VAT registrations were employed as the key measure of new venture creation.

The following are the three key conclusions reached from the results of the analysis:

1. ***Human Capital Crucial is Crucial for business formation in Knowledge Intensive but not Non-knowledge Sectors of Secondary Regions:*** We found that our measure of human capital i.e. the proportion of people educated to NVQ 4 and above exerts a positive and significant influence on registrations in K-sector activities, but this same measure of human capital produces a negative and statistically significant predictor of registration in I-sector (transport, storage and communications). Therefore, the findings in this study show that new venture creation in K-sectors utilise highly skilled labour, while new venture creation in I sectors appears to be based on low skills.

This finding throws new light on the role of human capital in new firm creation in secondary. It suggests that human capital is mainly relevant for new firm creation in industries requiring high skills as stated elsewhere (Lee *et al.*, 2004) but not for non-knowledge intensive sectors. Rather, new firm creation in non-knowledge sectors appears to be associated low human capital.

2. ***Employment specialisation is an important predictor of new venture creation in both Knowledge Intensive but not Non-knowledge Sectors.*** In contrast to human capital, *employment* specialisation appears to be an important predictor of new venture creation (VAT registration) for both K and I industrial groups. This suggests the positive influence of industrial concentration on new firm formation in both sectors that require high and low skills.

Although studies on high technology industries have long noted the importance of high-technology concentration and new firm formation (Saxenian, 1994; Stuart and Sorenson, 2003) especially in major regions; such relationships have received little attention in secondary regions. For example, Andersson, Quigley, and Wilhelmsson (2005) and Carlino, Chatterjee, and Hunt (2001, 2006) show the positive role of local employment density on innovation. Regression analysis by Krudsen et al (2007) demonstrates a positive relationship between the density of creative workers and metropolitan patenting activity. Thus, our own findings extends these research works by showing the influence of employment specialisation on new venture creation in not just Knowledge Intensive but also non-knowledge sectors.

3. ***A New Creativity Index for secondary regions***

Our main finding based on the analysis is that the foundations of a specialised creative industry base relate to the 'new' Creativity Index – i.e. a location's stock of, or attractiveness to, highly educated people who are able to access employment within high value added 'creative' sectors of the economy. Although similar in some respects to work of other authors (Zucker, Darby, and Brewer, 1998; Florida, 2002; Currid, 2006) most of these works focus on core cities and regional agglomerations, while we focus on non-core peripheral regions (referred to here as secondary regions).

For example Florida (2002) shows that there is a positive and significant relationship between Creativity Index and concentrations of high-technology industry. Also, Currid (2006: p.344) demonstrate the concentration of artistic and cultural occupations in New York City, and suggests that "dense production agglomerations are especially likely to be sites of originality and inventiveness." Similarly, Zucker, Darby, and Brewer (1998) demonstrate how the localisation of intellectual human capital as embodied in "star" bio-technology scientists is related to the localisation of new bio-tech industry. Feldman (2000: p.380-1) claims that Zucker, Darby, and Brewer (1998) "demonstrates that localised intellectual capital is key in the development of the bio-tech industry and that knowledge generates externalities that tend to be geographically bounded within the region where the scientists reside". We extend these research works by

focussing more on secondary regions, rather than core cities. We therefore point to the role the Creativity Index in influencing entrepreneurship in secondary regions.

We however differentiate our Creativity Index from those that focus on concentration of artists as key to concentration of economic activities (Florida, 2002; Lee et al, 2004). We do not claim that a concentration of artists supports new firm creation (Lee et al, 2004). We do not bring any evidence in support of that thesis as many prominent researchers have questioned such an approach. Thus, Glaeser (2005, p. 594) states that:

“I know a lot of creative people. I’ve studied a lot of creative people. Most of them like what most well-off people like – big suburban lots with easy commutes by automobile and safe streets and good schools and low taxes. After all, there is plenty of evidence linking low taxes, sprawl and safety with growth. Plano, Texas was the most successful skilled city in the country in the 1990s (measured by population growth) – it is not exactly a Bohemian paradise”.

Also, Malanga (2004) states that:

“A far more serious – indeed fatal – objection to Florida’s theories is that the economics behind them don’t work. Although Florida’s book bristles with charts and statistics showing how he constructed his various indexes and where cities rank on them, the professor, incredibly, doesn’t provide any data demonstrating that his creative cities actually have vibrant economies that perform well over time”.

As further explained by Malanga (2008), when Florida talks about San Francisco’s economic gains, as an example, he is often referring to economic growth generated in Silicon Valley, but implying that hip Haight-Ashbury is somehow responsible for it. It is too far flung to have been influenced by bohemians. Rich case studies by Saxenian (1994) and economic analysis by Jaffe (1989) and Acs (2002) all link Silicon Valley’s entrepreneurial activities with human capital and a research base. In the UK also, which houses a highly entrepreneurial – Cambridge cluster- region; most authors link the clusters origin to the research and human capital resources of the region, including the University of Cambridge (Athreye, 1999; Keeble and Wilkin, 1999; Mying et al, 2005). Therefore, our index does not claim in any way a link between artists and economic activity. Rather the importance of variables such as human capital, local creative industries and employment specialisation are what we see as drivers of new firm creation in secondary regions.

4. Implications

One of the major implications of our results for policy makers is that in supporting new venture creation, it may be of great import to take note of the composite Creativity Index for different industries; in particular human capital needs to be considered. This is because high human capital as we found appears to play different roles for K-sectors and I-sectors. Whereas the former appears to require high skills, the later appears to incline towards low skills. Therefore, we consider it imperative that caution is exercised in advocating the role of human capital for new venture creation in all industries, but rather, future studies need take on the challenge of studying the specific role played by human capital across different industries, why there are differences if any, thereby allowing the formulation of more robust models and informed policies.

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High-tech SME Internationalization: The Knowledge Dimension

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Abstract

Since the second half of the 20th century, there has been a growing interest in explaining the internationalization of firms. This interest has resulted in a number of theories and models. Of particular interest is the internationalization of high-tech small and medium-sized enterprises (HT SMEs). Since about two decades, research on the topic has been conducted in a number of countries. The results were insightful and a number of influencing factors were explained. However, there is still a need to synthesize the findings for the sake of a better understanding of the phenomenon. Using a new perspective could help us reach that objective. Based on a knowledge perspective, this paper discusses the effect of knowledge on HT SME internationalization. A review of relevant literature has been carried out, and a number of knowledge factors have been identified as influential on such internationalization. These factors are network knowledge, cultural knowledge, opportunity recognition, experiential knowledge, and market information. A model that summarizes the findings is proposed.

Introduction

A number of theories and models have been proposed to explain the international involvement of firms. These include economic theory, process or “stages” models, innovation-related models (I-models), pre-export and export-start models, network theory, and international entrepreneurship theory. Each of these has shed light on some aspect of internationalization and provided us some insightful results.

Of particular interest is the internationalization of high-tech small and medium-sized enterprises. Recent reports (Fan and Phan, 2007; Saarenketo, Puumalainen, Kuivalainen, and Kylaheiko 2004) show that these firms are growing and expanding their operations to other countries at a relatively faster pace than the other ones. Furthermore, their number is growing, and their growth has an important impact on world economy (Coviello and Munro 1995; Lasch, Le Roy, and Yami 2007).

Despite the clarifications that have been provided from previous theories about HT

SMEs internationalization, the full picture of internationalization still needs to be clarified. Indeed, some research that reviewed the literature on firm internationalization has suggested a holistic approach (Coviello and McAuley 1999; Leonidou and Katsikeas 1996; Ruzzier, Hisrich, and Antoncic 2006) to clarify a complex phenomenon such as internationalization.

Moreover, some research works have suggested the integration of different viewpoints to understand international entrepreneurship in HT SMEs. For example, Yamakawa, Peng, and Deeds (2008) suggested the integration of the industry-based view, the resource-based view, and the institution-based view. Others suggested a holistic view of HT SMEs internationalization (Crick and Spence, 2005).

Attempts to create a holistic approach to internationalization have already been initiated (i.e. Bell et al. 2003; Etemad 2004). However, there still is a need for models that are successful in integrating the main findings of previous literature.

This paper is an attempt to present HT SME internationalization from a knowledge perspective, by integrating more previous findings. The aim is to present a knowledge-based model of HT SME internationalization.

To attain that objective, we will first briefly present the theories and models of the internationalization of the firm that have been proposed so far. Then, we will discuss the knowledge factors related to HT SME internationalization. We conclude by presenting the knowledge-based model.

1. Theories and models of internationalization of the firm

For a few decades, authors concerned with the internationalization of companies have attempted to define “internationalization”. One stream sees internationalization as a process in which firms increase their involvement in foreign markets (Johanson and Vahlne 1977). For another stream, internationalization is the adaptation of firms’ operations to international environments (Calof and Beamish 1995; cited in Prashantham, 2005). While the debate regarding a precise definition of internationalization continues, the stance adopted in this paper is that internationalization is the expansion of the firm’s operations into foreign markets.

Before discussing the impact of knowledge factors of HT SME internationalization,

it is important to briefly present the theories and models that have been proposed to explain international business. Actually, the study of SME internationalization is relatively new compared to that of multinational companies or of trade between nations. While economic theories have been proposed since more than two centuries, theories about SME internationalization have been initiated about two decades ago. More recently, since the mid 1990's, research on HT SMEs has been increasing.

Economic theories are the first to explain international trade between nations. (i.e. Smith 1776; Ricardo 1817). From the middle of the 20th century, research began to focus on the microeconomic level, and economic theories have focused on the internationalization of multinational enterprises (MNEs). These theories are mainly the product life cycle theory (Vernon 1966), the transaction cost theory (Williamson 1975), the internalization theory (Buckley and Casson 1976), and the eclectic theory (Dunning 1977).

Meanwhile, in the sixties, a behavioural theory of the firm was proposed by Cyert and March (1963), opening the way for new explanations of firm internationalization. Building on that theory, Aharoni (1966) proposed the foreign investment theory, that explains the decision of U.S. MNEs to invest abroad. During the seventies, research was carried out in Nordic countries (i.e. Johanson and Vahlne 1977; Johanson and Wiedersheim-Paul 1975) on the patterns of internationalization. This research has resulted in process models, also named "Uppsala" (U-models), or "establishment-chain", or "stages" models.

Other research, drawing on Roger's (1962) work on the diffusion of innovations, has proposed innovation-related models (I-models) (i.e. Lee and Brasch 1978; Reid 1981; Simmonds and Smith 1968). Another stream tried to explain pre-export (i.e. Olson and Wiedersheim-Paul 1978; Wiedersheim-Paul, Olson & Welch 1978) and export-start phases (i.e. Dichtl et al. 1984; Simpson & Kujawa 1974). In the 1980s, research in the field began to use network theory (i.e. Johanson and Mattsson 1986; Johanson and Vahlne 1990) as a framework to explain the internationalization of firms. Around the late 1980s and the beginning of the 1990s, as a growing number of small entrepreneurial firms, also called international new ventures, internationalized from their inception, a new stream has emerged, that is, international entrepreneurship (i.e. McDougall and Oviatt 2000).

At the beginning of the 21st century, some integrative models of firm internationalization were proposed (i.e Bell et al. 2003; Etemad 2004). The most recent models are the knowledge-based models of internationalization (i.e. Kuivalainen et al. 2003; Saarenketo et al. 2004).

These theories and models have clarified different aspects of firm internationalization. However, there is still a need to see the whole picture.

2. Knowledge and high-tech SMEs internationalization

In what follow, the knowledge factors are presented. These are: network knowledge, cultural knowledge, opportunity recognition, experiential knowledge, and market information.

2.1 Network knowledge

Network theory emphasizes the role of the decision-makers' network in facilitating internationalization. This is particularly true in high-tech sectors (Coviello and Munro, 1995; 1997; Prashantham, 2006; Zain and Ng, 2006).

In a number of studies, it has been found that network knowledge plays a vital role in HT SMEs internationalization. Network relationships with customers, suppliers, and potential allies have been perceived by technology-based firms as vital for an effective internationalization (Karagozoglu and Lindell, 1998).

A number of research works show that networks are essential to the internationalization of SMEs in high-tech industries. In a study of small software firms, Coviello and Munro (1995; 1997) found that the network relationships drive market expansion and development activities, and also facilitate product development and market diversification activities. Similarly, based on a case study of Malaysian software SMEs, Zain and Ng (2006) found that their network helped them hugely in their internationalization, and influenced its pace and pattern. Prashantham's (2006) study of Indian small software firms show that foreign network relationships provided information including some concerning about opportunities to internationalize, as well as advice.

As it is shown in our model below, network knowledge acquisition starts in the pre-internationalization stage. During that stage, the firm starts to build its relationships

in domestic and, probably, in foreign markets which are helpful in starting to internationalize. The network knowledge acquisition continues during the novice internationalization phase. While the acquisition continues during the next phases, the high-intensity acquisition of network knowledge occurs during the first phases.

Network knowledge has been shown to be used in the different phases of internationalization. However, previous findings show that the degree of use of network knowledge, as of the other kinds of knowledge, is different depending on the internationalization stage.

Interestingly, it has been found in previous literature that the network built in the pre-internationalization stage was critical for initiating the internationalization. Zain and Ng (2006) found that having a network stimulated High tech firms to initiate internationalization. Furthermore, Andersson and Wictor (2003) found that the founder's local and international network built previously was critical in the early internationalization of Swedish born-globals. In their study of small Norwegian computer software firms, Moen, gavlen, and Endresen (2004) found that previous network relationship is behind the choice of entry mode, as well as which market to enter.

There is growing evidence showing that firms, while increasing their involvement in foreign markets, also increase their use of network knowledge increases as well. The new network relationships established in the early stage of internationalization have been found to be very useful for further expansion in international operations (Andersson and Wictor, 2003).

For this reason, it is shown in our model that, during the novice internationalization, the intensity of utilization of network knowledge is relatively low. However, in the experienced internationalization stage, that intensity increases.

2.2 Cultural knowledge

Hofstede and Hofstede (2005) define culture as the “software of the mind”. Cultural knowledge of a foreign market refers to the knowledge of values, manners, and ways of thinking of people in that market. Of importance in internationalization theories is the concept of psychic distance, which was proposed by process models scholars.

It is worthy to note the existence of differences between scholars in what makes the

psychic distance small or not. For Garvey and Brennan (2006), these elements include culture, the political system as well as the level of economic and social development.

The intensity of acquisition of cultural knowledge is intense particularly during the first phase of internationalization. Even if the SME enters into a culturally close market, it tries to internalize the unknown beforehand cultural specificities of that market during the initiation stage, which turns to be helpful in later involvements.

During the novice internationalization stage, the firms in high-tech industries tend to involve themselves in culturally close markets, which implies a short psychic distance. In fact, it has been found in a number of research works that the psychic distance influences market selection decisions. Firms tend to enter psychologically close foreign markets; then, more distant markets are targeted. Interestingly, a number of these results have been found in studies about the internationalization of small software firms. In a study of the internationalization of small computer software firms, Bell (1995) found that the psychic distance influenced the initial as well as the subsequent export market choices of 50-70 per cent of the firms. In the same line, Garvey and Brennan (2006) found that the Irish Software technology companies entered at first the United Kingdom and the United States, which have many cultural similarities with Ireland. Furthermore, these firms consider these markets as the most strategic in the future. Similarly, Coviello and Munro (1997) found that the first moves in the internationalization of New Zealand small software firms was towards a psychologically close country (Australia) followed by entering into more distant markets.

During the novice stage, the intensity of utilization of cultural knowledge by HT SMEs is high, which is illustrated in the model by a bold line. As the firm becomes more involved in other markets, cultural knowledge does not seem to be as crucial as in the novice stage. The intensity of use of cultural knowledge then diminishes. In their study of small Norwegian computer software firms, Moen, Agavlen, and Endresen (2004) found that the choice of subsequent markets was less influenced by the psychic distance

2.3 Opportunity recognition

Opportunity recognition is critical for the survival and the growth of the firm. Shane

(2004) defines entrepreneurial opportunity as “a situation in which a person can create a new means-ends framework for recombining resources that the entrepreneur believes will yield a profit” (p.18).

Some propositions have been put forward to explain the factors that lead to the identification of opportunities. Kirzner (1973) relates the identification of opportunities to the alertness of the entrepreneur, while Casson (2003) relates it to the access to new information that renders the present allocation of resources inefficient. Shane (2004) proposes that two factors are behind the recognition of opportunities: the absorptive capacity (prior knowledge) and the cognitive processes (intelligence). For Baron (2004), opportunity recognitions results from a cognitive process of identification of something new with a potential value.

Opportunity recognition constitutes in many cases the reason behind the internationalization of the firm. Accordingly, detecting an opportunity related to the possibility to sell to foreign markets can lead the firm to think about engaging in internationalization.

The opportunity recognition ability is acquired from the start of the firm, meaning in the pre-internationalization phase. During operations in the domestic market, the decision-maker acquires some clues about how to recognize opportunities which might be useful when operating in foreign markets. Even if the circumstances in the domestic market could be very different from those which prevail in the foreign market, the way to detect opportunities or how to process information acquired before internationalizing could be very useful when operating in foreign markets.

During the novice internationalization phase, the acquisition of the opportunity recognition ability continues. The firm starts to get in touch with the foreign markets and begins to acquire some clues, as on how to recognize opportunities in the market. During the first phases of the internationalization, the intensity of acquisition of the opportunity recognition ability is high, as shown in the model.

During the novice internationalization stage, the firm gradually applies the acquired opportunity recognition ability. The intensity of utilization of that ability in this stage is low. However, as the firm becomes more experienced in internationalization, decision-makers use more intensively their ability to detect opportunities.

2.4 Experiential knowledge

Experiential knowledge of foreign markets has been considered as essential for firm internationalization. This type of knowledge results from practice, and ‘can only be learned through personal experience (Penrose, 1966). In this paper, experiential knowledge means knowledge other than cultural, network, or opportunity recognition ability.

The acquisition of experiential knowledge usually starts when the firm makes its first step in its internationalization. However, it is possible that the firm, when starting to internationalize, has managers or employees who have previously acquired some international experiential knowledge. For instance, in a study of eight Swedish biotech born globals, Nordman and Melen (2008) found that all of them have been initiated and managed by founders and managers who have experiential knowledge (how to market internationally). In that case the acquisition of experiential knowledge in internationalization has not really begun at the start of the internationalization, but before it. In our model, we specify that the high-intensity acquisition begins with the start of the internationalization.

The more the firm has experience, the more it tends to use it in later stages of its internationalization. During the novice internationalization stage, the intensity of utilization of experiential knowledge is relatively low compared to that which prevails during the experienced internationalization stage.

2.5 Market Information

Market information refers to objective or explicit information about foreign markets, such as the market size, the competitors, the regulations and so on. The definition of information is usually based on the distinction between knowledge and information. According to Bhatt (2000), information is a flow of signals and knowledge is the interpretation of those signals.

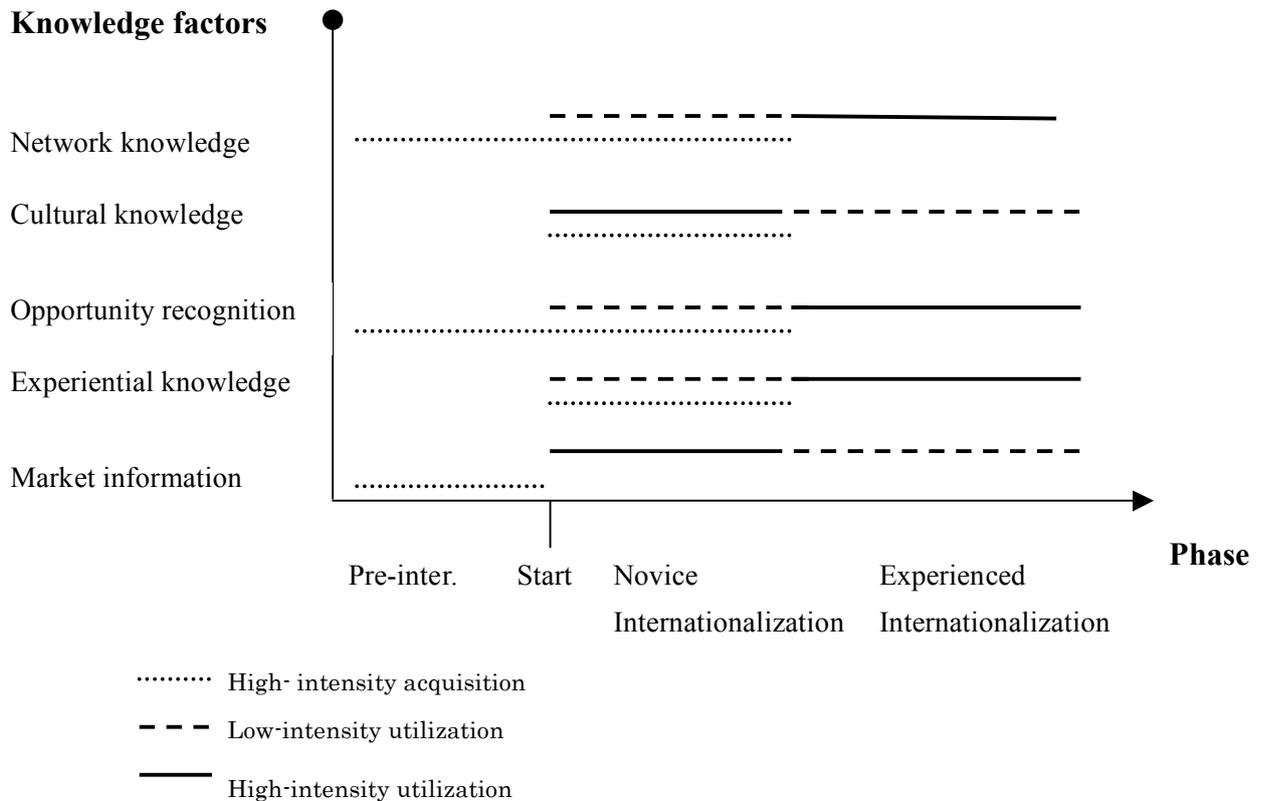
Market information acquisition is high during the pre-internationalization stage, just before entering into a foreign market. In a comparative study of the Austrian and Canadian high-tech exporters, Seringhaus (1993) found that both groups search for information when considering to enter new export markets. Also, Prashantham’s (2006) study of small Indian software firms show that these firms seek information about

opportunities to internationalize.

The firm use intensively the market information during the novice internationalization stage. However, that intensity decreases in the later phase.

The five knowledge factors and their intensity of acquisition as well as utilization during the phases of internationalization are presented in figure 1.

Figure 1
A Knowledge-based model of HT SME internationalization



CONCLUSION

The literature on SME internationalization has been growing since the second half of the 20th century. Theories and models have explained some aspects of internationalization. Of particular interest is the internationalization of HT SMEs due to their fast growth and its impact on the world economy. The findings about the internationalization of these firms show a number of influencing factors. Despite that, a holistic approach is needed to see the whole picture.

Building on the assumption that knowledge constitutes a valuable resource for the

activities of the firm, a knowledge-based model is proposed. In this model, we included knowledge factors which have been shown to be significant in explaining HT SME internationalization.

Five factors have been proposed, which are network knowledge, cultural knowledge, opportunity recognition, experiential knowledge, and market information. The intensity of acquisition and utilization of each factor during the phases of internationalization is presented in the model.

This knowledge-based model is an additional step in order to see a wider picture of HT SME internationalization. Future research could study empirically the impact of the knowledge factors in the model on the internationalization pattern. A case study strategy would be more suitable since it allows a deep understanding of the factors that explain internationalization, and therefore tests the model proposed.

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Knowledge Intensive Firms and Their Growth - a Longitudinal Case Study on ICT sector

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Abstract

During the past few years, new venture growth has been an acute theme among entrepreneurship scholars and policy makers. The focus of this paper is the planning process of entrepreneurs as part of the entrepreneur-specific knowledge. This paper intends to investigate the relationship between planning and growth. The aim of this paper is to study how planning activities are connected to firm growth and to build local, context sensitive theories on two KIF firms. As a result of this paper, two different planning styles are presented and their impacts on firms operations and growth are discussed.

1. INTRODUCTION

During the past few years, new venture growth has been an acute theme among entrepreneurship scholars and policy makers: the competitiveness of nations and regions has been directly linked to the innovativeness of small and medium size firms (SMEs) and their ability to grow (Bosma & Harding 2007). Indeed, the most potential sources of new jobs are growing new ventures and small firms (Reynolds & White, 1997). At the same time we know that not all new ventures want to grow or have the ability to grow. For example, most of Finnish small firms are driven by so called lifestyle entrepreneurs who value to be their own bosses and working on something they appreciate and through which they can realize their own dreams (Varamäki, Saarakkala & Tornikoski 2007). Moreover, despite an impressive body of research and publication about new venture performance and growth, there is a general feeling among scholars and practitioners that extant theories and models have not yet produced conclusive evidence about why some new ventures succeed and why others fail (Bygrave, 1989; Bouchikhi, 1993; Murphy et al., 1996). With these empirical and theoretical realities in mind, entrepreneurship scholars start to acknowledge that there are many different factors affecting firm growth, and that growth processes vary between firms and situational contexts (Delmar, Davidsson & Gartner, 2003). It is for these reasons that we promote the importance of context specific or mid-range theories (Merton, 1968) of small firm growth.

In our own effort to contribute to the new venture growth literature, we intend to build local, context sensitive theories of growing new ventures. To do that we focus our investigations to one specific type of new ventures, namely technology based knowledge intensive firms (KIFs). We define a KIF to be dependent on knowledge as (i) a source of competitive advantage and (ii) an integrated part of firm's activities. In addition, (iii) a KIF is capable to solve complex problems through creative and innovative solutions (cf. Alvensson 1993; Autio 2000; Nummela et al. 2005). What makes KIFs an interesting context is related to the fact that they have potential for growth (e.g. European Commission 2002; Delmar, Davidsson & Gartner 2003; Lindholm-Dahlstrand 2007).

In the growth literature, three distinct issues warrant our attention. First, we are interested in investigating some of the antecedents of growth, namely growth *motivation* and *potential* for growth. Indeed, entrepreneurs may have other objectives than growth (Davidsson, 1989), which is why it is important to look at the growth motivation of entrepreneurs and their firms. However, growth motivation does not make a firm to grow. Instead, a firm needs to have potential for growth,

such as resources (Limere, Lavaren, Van Hoof & Cleeren, 2003). In our study, the growth motivation is related to the objectives (incl. strategy) of the firm/owner-manager, whereas the potential for growth is linked to the abilities of the firm (Orser, Hogarth-Scott & Wright 1998). Second, we also investigate the *realized* growth of new ventures (i.e. growth in sales, employees, partnerships).

Because the main asset of KIFs is their technology, they face a specific challenge to synchronize their product innovation strategy with the firm development strategy, as already pointed out by Delmar and Sölvell (2006). It seems that the challenge for KIFs is how they succeed to combine, maintain and develop business and other strategic *competencies* (Packham et al. 2005). As of today, we know relatively little about the process of business competence building in KIFs and its effect on the firm's growth trajectory. Therefore, in order to understand the connections between business competence and the three growth issues (i.e. growth motivation, potential for growth, and realized growth), we have conducted several longitudinal case studies. The investigated cases operate in the ICT field. In our empirical data collection, we use both archival data and interview data (from owner-managers and/or other key employees).

The first part of our empirical analysis has already been communicated in the ICSB 2007 conference (Toivola & Tuomi, 2007). We observed that shared business competencies, such as networks, seemed to be essential for growth of the investigated firms. As a result of the preliminary analysis, we put forward a model to explain the formation and development of business competencies. This current paper represents the second phase of the research project in which the recent developments of the case firms will be analyzed. By analyzing the development of the case firms, we expect to gain a deeper understanding of the firm's growth trajectory and strategic changes during the process.

2. PLANNING AS BUSINESS COMPETENCE

In this research, we concentrate especially on the development of business competence in the growth firm context. In order to define the term 'business competence,' we start with Parry's (1996) and McLagan's (1998) overall definition of competence. According to the authors, 'business competence' refers to the sum of business experiences and knowledge, skills, traits, aspects of self-image or social role, values and attitudes a person has acquired during a lifetime. The previous

definition of business competence is utterly general, especially because it and similar definitions tend to combine all the past experiences of an individual under one single overreaching construct. In similar vein, Colombo and Grilli (2005) speak about generic human capital, which relates to the general knowledge acquired by entrepreneurs through formal education and professional experience. From our point of view, this kind of generic knowledge is relatively difficult, if not impossible, to acquire at the time of growth: one either has it or does not have it. What is more fruitful, at least from scholarly point of view, is to learn more about how entrepreneurs use their generic competencies to succeed in the specific context of their firm. To this, Colombo and Grilli (2005) speak about entrepreneur-specific knowledge, which includes the knowledge of how to manage a firm. Also, Bassellier and Bensabat (2004) speak about organization-specific knowledge, which includes the person's holistic understanding of the organization and its current activities and processes.

In our study, we are particularly keen to investigate how the entrepreneur-specific knowledge (the knowledge how to manage the firm) develops during the growth process, and as a result of the growth process. To be more specific, we are interested in the planning process of entrepreneurs as part of the entrepreneur-specific knowledge. There have been debates, for example, whether business plans are useful for start-up companies. Some scholars have argued that writing a business plan offers little value to entrepreneurs (Bhide 2000), whereas others point out that planning improves most subsequent human action (Locke and Latham 1990). To support the former, Mintzberg (1990) speaks about strategies as blinders designed to focus direction and block out peripheral vision. To counter the previous Ansoff (1991) argues that planning generally produces better alignment and financial results than does trial-and-error learning. More recently, Shane and Delmar (2004) observed that writing a business plan is a useful precursor to marketing activities during venturing process. While the results regarding the usefulness of business plans on the performance of new start-ups are somewhat mixed, an interesting distinction is made between plans and planning. For example, a well-worn axiom from Dwight D. Eisenhower states that *plans are nothing, planning is everything*. Planning can be seen as a psychological process of thinking about the activities required to create a desired goal on some scale. Careful planning, especially in the face of high complexity such as growth of a firm, can ensure that *the various bits and pieces fit together* (Armstrong 1982: 203) As such, what should make a difference in successful new ventures is that they do not necessarily stick to plans, but continue planning during the growth phase of their firm.

During the past thirty years, strategy research has demonstrated positive relationships (e.g. Langerak, Hultink, & Robber 2004) and negative relationships (e.g. Shrader et al 1989) between planning and organizational performance. Several meta-analysis (e.g. Miller & Cardinal 1994) conclude that there is a significant but weak relationship between planning and performance. To our knowledge, the context of new ventures has gained much less attention of scholars investigating the relationship between planning and growth. Planning is much more informal in smaller and younger firms compared to more established and bigger organizations with their formal planning processes and protocols. Planning also concentrates on few key individuals in smaller and younger firms. A specific challenge for younger and smaller ventures is to adopt more formal planning process as the firm grows and increases organizational complexity. As such, the context of new venture growth offers an opportunity to investigate the planning processes during the growth period.

As a summary, in this study we will investigate how entrepreneurs use and develop planning as part of their business competencies during growth period of their firm.

3. METHODOLOGY

Case study methodology is used in order to deepen the understanding of how business competence is connected to the growth of knowledge intensive firms. The research design will cover the five components of case study (see Yin 2003):

1. Research question: How planning activities as entrepreneur-specific business competence are connected to the growth of the firm and how these activities differ in KIF firms?
2. Proposition: The planning activities are connected to the growth of the firm.
3. Unit of analysis: Two KIF growth firms
4. The logic linking the data to the proposition: Planning activities and their connection to the growth are described on each case separately in order to build local, context sensitive theories of both cases.
5. The interpretation: As a result, the theories will be interpreted in order to contribute the development of growth firms.

In this research the CEOs of two case firms have been interviewed in spring 2007 and 2009. Thus, it is possible to focus on planning activities as well as on realized actions of the case firms.

4. FIRM A – STRONG TECHNOLOGY COMPETENCE AND AN INTENCE DESIRE TO GAME PRODUCING

4.1 Background information and situation in 2007

Firm A was founded in 1999 by the CEO and his two partners. In 2007, the firm was in the growth phase and its turnover had risen 61 % in one year (2005-2006) and the turnover was expected to continue to rise in 2007 as well. At the same time, the number of employees had been stable (4 full-time and 1 part time employee). In 2007, the firm operated in the field of digital content and it was specialized in mobile games. The main customers were teleoperators and mobile phone producers. Ever since the startup phase, the growth of the firm had been organic. The firm had been financed by the positive cash flow and there was no external funding. The internationalization of the firm had begun and the majority of the income came from abroad (Asia and USA). According to the CEO, the competitive edge of the firm was in technological competence.

Considering the three dimensions to grow, there had been both intention for growth and potential to grow ever since the start up of the firm. In addition, actual growth had been the reality of the firm since 2001: both the number of employees and the firm turnover had grown remarkably. The CEO's focus was in marketing and sales, customer relations and the strategic management. However, his main competence was only in strategic management. He does not believe in theories and criticizes the business theories for not being applicable for SMEs – or even for growth firms.

In 2007, the firm A's vision for the future was:

- Strong internationalization and the leader in its own field (approximately 2009-).
- Wider service concepts and solutions for the customers in the global market. Risk funding is needed for international growth.
- Professional business competence is needed in order to reach the vision i.e. to become a gazelle in the business sector.

In addition, firm A had not chosen a strategy to use networks and partners as a tool for internationalization or growth

4.2 The Current Situation – What has happened between 2007 and 2009

At 2007, firm A was in the field of mobile games. In August 2008, firm A merged with another small company operating in the game business. The staff from firm A moved to the new company. The former CEO is now a member of the board, a partner and a game producer. He has now the role he was looking for already in the year 2007. His real passion is for producing games, not managing

the business operations. At the moment, the company has a CEO who takes care of the everyday business operations. Moreover, he also has formal business education and experience in running a growth business. The new firm A has three board members, CEO, CMO (chief marketing officer) and the former firm A's CEO.

The number of employees is now 15. They are located in Helsinki (12), Barcelona (1) and Iceland (2). Firm A operates in the same premises together with another company. These two firms have some common owners as well. They cooperate and firm A also gets some subcontracting customer projects from them e.g. producing web applications. That offers firm A some cash flow and security during the intensive game development periods. The aim is to concentrate on the core business, i.e. to invest in game producing. According to the former CEO, the reasons for merging were that the mobile games didn't break through. Thus, the technology wasn't ready and the business model didn't work. The other reason was that in the new company A, they have a clear business focus, internet (cross platform) games, and they have enough resources to be competitive and successful in the global market. In the beginning of August 2008, they gave a strong signal to the game community that the production of a new war game had already started.

The new firm A has some public funding and the subcontracting work is about 25 % of their working time. They have a strong vision to grow also in the future. Of the end users or players 40 % come from Finland and the rest of them are from all over the world. The war game, which they are now working on, is targeted to 30 to 50 year old war enthusiastic (war history, war strategy etc.). The main cash flow comes from monthly payments. There have been one and a half people working full time on the content of the game since the beginning of August 2008. The game begins from the landing of Normandy. The most popular games have 200-300 000 players or regular customers. This game is a proof of concept for the developed platform and it can be used in the next games as well.

They market the games inside the game communities and also in events, trade shows and game magazines. Thus, firm A is also an active member of game producers networks. In addition, they have tight connections to their competitors i.e. other game companies all over the world. They are constantly negotiating with them and trying to build closer partnerships so that they could become even stronger players in the game business.

Firm A intends to keep on its growth also in the future. They will have a new game to be published and on the market every year. The production of the next game has already started. The new employee recruits among the people which they already now. Because they don't have a lot of money from investors or other big resources they have to be creative and agile. Firm A now has a clear focus in its business and they are a strong player also in global market. The business sector has

a lot of potential and it is an emerging industry. They see a bright future ahead of them. Firm A's success is based on strong technology competence and an intense desire to game producing. The business networks give them opportunities to build powerful partnerships, access to the newest technology and an ability to be the visionary in the game business.

5. FIRM B – UNIVERSITY SPIN-OFF AIMING TO BECOME THE BEST USABILITY RESEARCH FIRM

5.1 Background information and situation in 2007

Firm B, established in 2001, is based on the Helsinki University of Technology's usability laboratory. In other words, it is a university spin-off. It operates in the service industry, offering usability and user-based research services in Finland and globally. The main customers are in the IT and finance industries. Company B started in a campus incubator and the founders made a decent business plan, because this was requested in order to be selected for the incubator. The firm started with only one full-time employee, while the founders still worked at the university. In 2007 the firm had 16 full-time employees. In 2006 the number of employees was 15, and the year before it was 12. Also, all the six owners work at the company. The board of the firm consisted of the owners (5 members and one deputy), which means that there are no outside members. The background of the employees is multi-professional: technical, psychological, behavioral sciences and design. The company has chosen to grow through its own income and not by loans or risk funding (i.e. organic growth). According to the CEO, the competitive edge of the firm is in strong usability competence, i.e. they understand well the end users.

The goals for 2010 were stated in 2007 as follows:

- Global business and clear focus areas (competitive edge)
- Strong growth and focus on selected business areas
- From a small player to a big global player
- Risk funding to speed up the growth
- Turnover 3 MEUR
- The best known usability research firm in Finland.

5.2 The Current Situation – What has happened between 2007 and 2009

Today (2009) the number of employees is 20 and the turnover in the year 2008 was 2,2 MEUR. The services of the company are still the same as during the start up phase (usability research and planning as well as consultancy on usability methods). During the year 2008 the actual growth rate was 40% in regard to the turnover and 20% on the profit. The profitability has been good. The customers come from ICT- and financing as well as from public sectors. About 25% of the turnover comes from abroad. The original aim was to set up international offices. However, soon it was realized that the own partner network is more efficient and flexible way for the internationalization than offices in certain countries.

According to the CEO the current financial crisis has not affected the company. On the contrary the company has been able to grow. The reasons for this have been the possibility to raise the prices as well as on the ability to raise the invoicing rate. Recently the company has moved to new office facilities and it has built its own usability laboratories. Even though the situation is quite positive for the company, the CEO sees some challenges in the future. For example new players – even larger companies - are coming to the usability research market (e.g. marketing research firms). Thus, the strategic aim of the company is to diminish the risk of research business by balancing the sales of research and planning services (50/50).

In all, it can be said that almost all strategic goals for the year 2010 have been met already in the beginning of 2009. The business of firm B is global. The company has chosen two clear focus areas e.g. research and planning. The growth rate has been relatively high. Also, it can be said that the company is a big global player due to the reason that the size of the companies in the field usability is fairly small. Thus, firm B is one of the biggest in the market. Moreover, it can be said that the Firm B is the best known usability research firm in Finland. In regard to risk funding the company has grown organically by using its own funding (cash-flow) and it has not needed any external financing. According to the CEO, despite the financial crisis, it is expected that the turnover will be 3 MEUR in 2010. In sum, it can be said that the company has moved assertively – like a train - towards its goals.

6. DISCUSSION & CONCLUSIONS

The aim of this paper was to study how planning activities are connected to firm growth and, thus, to build local, context sensitive theories on two KIF firms. In firm A the planning style can be described as dynamic, creative and flexible. Firm A does not believe in written and systematic plans for the future. In the contrary, they like to be able to react to market changes and new customer needs. Table 1. is a summary of the negative and positive sides of agile planning style.

Table 1. The agile planning style and its negative and positive issues.

Positive issues (+)	Negative issues (-)
<ul style="list-style-type: none"> • creativity • agility • grasping the opportunities • visionary • close to market and end users • network and communities 	<ul style="list-style-type: none"> • goals are moving all the time • chaotic • flickering, not stable

If the firm applies agile planning style, it is not stuck to its written plans or strategies. It can easily take new directions and it is constantly looking for new opportunities. Agile planning style is especially applicable for dynamic companies and emerging industries.

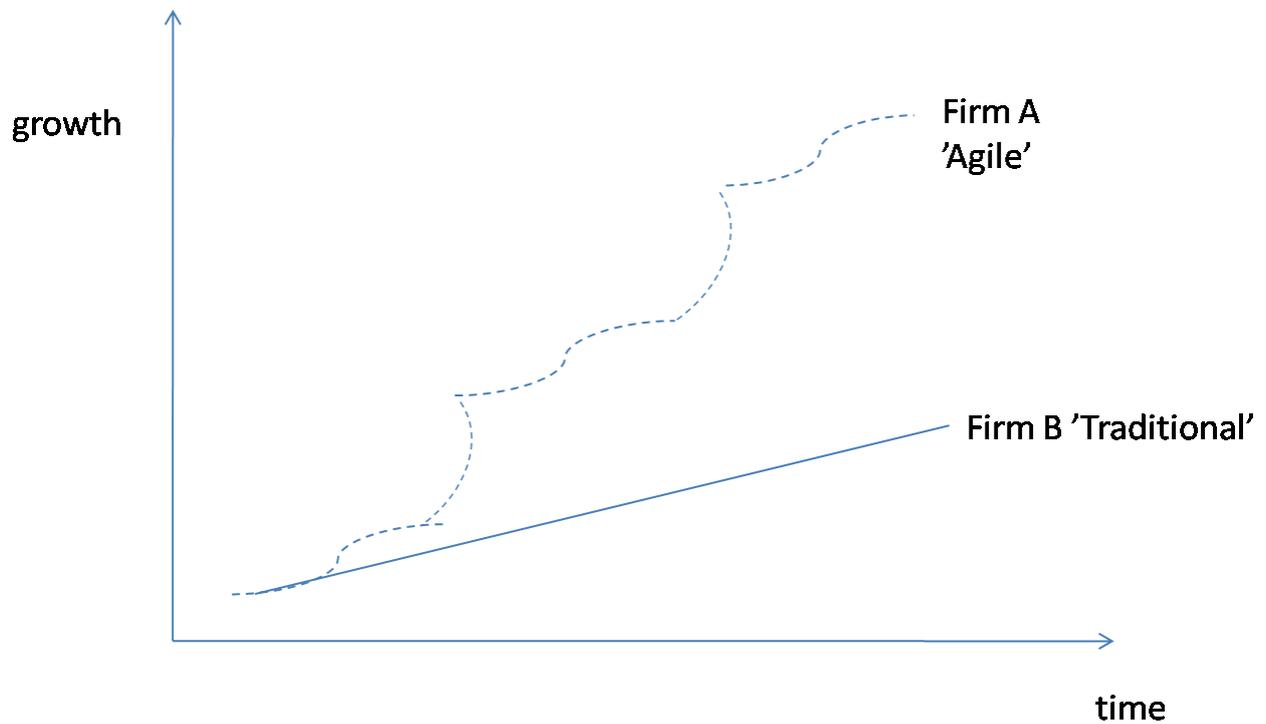
The adjectives which describe Firm B's planning activities are: linear, process-oriented, 'civil-engineer'-like as well as traditional. The key employees of the firm set up strategic goals for the next 3-5 years and then they act accordingly in order to reach the goals. This kind of traditional planning process has been the reality in Firm B ever since its start-up phase. This process has provided the firm with stabile growth and even over liquid balance sheet. Moreover the Firm has been able to internationalize its operations and grow organically without external funding. However, some negative as well as positive issues (see table 2) may realize for the firms using this kind of planning style. The strict planning process may affect so that the firm does not use all of its potential. New opportunities in changing market may be overlooked. Also, the competitors may act faster than this kind of slow-moving firm. Thus, new business opportunities may not be taken into account. Also, in radically changing market situation this kind of company may not have a plan B in order to change its business model in agile way. In a positive way, this kind of model may provide the firm with the possibility to avoid unexpected risks as the knowledge of the market deepens as

the firm acts in the same market with same products/services for a long period of time. Also, the model may provide the opportunity to maintain stable growth. Finally, it can be said that the clear goals are easy to communicate to personnel, financiers as well as to other stakeholders.

Table 2. The traditional planning style and its negative and positive issues.

Positive issues (+)	Negative issues (-)
<ul style="list-style-type: none"> • unexpected risks in new markets can be avoided • possibility to maintain stable growth • clear goals are easy to communicate 	<ul style="list-style-type: none"> • the firm does not use all of its potential • competitors may act faster and in agile way • the firm does not take into account new business opportunities

As a result two different – even controversial – planning styles were found from case KIF firms. These two firms represented knowledge intensive firms operating in their own, unique way. The both firms had growth potential, have been able to grow and are intended to grow in the future, too. Thus, in regard to growth either of these models may not be evaluated as ‘good’ or ‘bad’. In both case firms the planning activities played a vital, however different, role. However, it can be said that the styles suited for the management culture and business model of both firms. In regard to growth the main difference of these styles can be found (see picture 1). The traditional planning style enabled linear growth for firm B whereas the agile style in Firm A may provide the firm with growth leaps as the firm is ready to grasp for the new business opportunities.



Picture 1. The planning styles and the growth.

In sum, this research provided two local, context sensitive theories on planning activities and firm growth. As a result it was found that different planning styles enable firm to grow. Thus, first, it is essential for the entrepreneur to understand that planning activities are needed in growth firm. Second, it is important to understand the positive and negative impacts of the used planning style. Moreover, this is a challenge for all business development organizations supporting the growth firms. In the future it would be fruitful to deepen our understanding of the changes in planning styles and the effects on firm growth in different growth phases.

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**THE DYNAMICS OF LOCATION OF THE KNOWLEDGE INTENSIVE
BUSINESS: AN EMPIRICAL STUDY**

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Abstract

The main objective of the present research is to identify the existence of distinct types of Knowledge Intensive Business Service (KIBS) and to analyse possible differences between them as to the factors that influence the location of new KIBS firms. To this effect, we advance a conceptual research model of location factors. A survey involving 66 KIBS in the Beira Interior region (Portugal) was conducted. Data were submitted to two types of statistical analyses: bivariate and multiple analyses. We classified companies according to two types of KIBS: professional and technological and according the results it was possible to classify a typology of KIBS and identify the location factors as well as decision-making model for location of firms.

Key Words: KIBS, innovation, location factors, regional development

1. Introduction

Interest on economic information services goes back to 1980, at a time when regional development in Europe and North America was concerned with desindustrialization. Until then, those services were seen as mere subsidiaries of transforming activities. Over the last 20 years, special attention has been paid to the roles performed by those services. Desindustrialization has continued, yet, some services' sectors have shown a progressive rise (Wood, 2005).

Despite growing awareness that innovation is not confined to sheer technical processes and products, some recent research on innovative activities has focused its attention only on technical innovation and, in particular, on the transforming industries sector (Becker and Dietz, 2004; Huergo and Jaumandreu, 2004; Lynskey, 2004; Nieto and Santamaria, 2005).

The importance of the services industry has only been acknowledged recently (Gallouj and Weinstein, 1997; Tether, 2003). According to Tether *et al.* (2001) innovation in the service industry companies is perceived as something that occurs very slowly. Services are perceived as being incapable of innovation, ending up adopting innovation generated by transforming industry firms. Alongside Tether *et al.* (2001), Pavitt (1984) also believes that smaller services firms are less likely to develop R&D roles, thus becoming recipients of technology and innovation produced in other sectors.

Within the services industries, the rapid growth of Knowledge Intensive Business Service (KIBS) have exposed their major role in innovation processes (Muller, 2001; Howells and Tether, 2004; Toivonen, 2004; Koch and Stahlecker, 2006). The role played by KIBS in the innovation process is affirmed, above else, by the fact that they do not have a simple performing role in the innovating activity, such as meeting demand and, more specifically, their clients' wishes. Rather, they act as builders of "knowledge bridges", or "innovation bridges", between firms and science (Miles *et al.* 1995; Czarnitzki and Spielkamp, 2003). Nevertheless, few studies have been made on the innovative activity carried out by this sector of services (Koch, and Strotmann, 2008). In the opinion of Howells (2000), the fact that very few studies on innovation in the sector of services exist lies, basically, in the fact that this sector in particular is very heterogeneous in its origin, which disheartens many researchers. However, and according to Howells (2000) there has been a constant rise in the number of firms

operating in the sector of services. Particularly with regard small KIBS, their place as dynamic and core players in the “new” knowledge-based economies has been acknowledged. This position has been achieved thanks to their innovative creations, in their own benefit, which means that they have ceased to be perceived as mere adopters or users of new technologies developed by others. This recognition has fostered recent research on this sector of services – KIBS (Wong and He, 2005).

In this context, the present research aims identify the existence of distinct types of KIBS, and to analyse the possible differences between them as to the factors that influence the location of new KIBS firms in a particular region.

The research is structured as follows: next to this introduction, comes the nature and characteristics of the KIBS and their relationship to regional development, innovation. In the third section, theoretical approaches on firm’s location are developed, research hypotheses are formulated, and the research model is proposed. In the fourth section the research methodology is presented. In the fifth section, the analysis and discussion of the research results is presented, where the locations factors are identifies and the typology of KIBS developed. In the end, the final considerations, limitations and future lines of research are addressed.

2. KIBS: Characteristics and nature, Innovation, Regional Development and Location

Although the debate on the growth of KIBS swirls around their new specializations and the rise of the tertiary sector in general, it is becoming increasingly obvious that both the new manufacturing processes and the new services and innovations in general find their origin more and more on KIBS (KaraÅmerlioglu and Carisson, 1999; Tomlinson and Milles, 1999).

Hauknes (1999) draws our attention to a particularly significant question: what is, after all, Knowledge Intensity? (This question is posed in terms of the transactions’ conditions and provenance of services). This author suggests the existence of two dimensions of Knowledge Intensity, which are: (i) the knowledge one aims to obtain from a particular services supplier. Depending on the level of specialization in intensive knowledge on the part of the supplier, whoever requires a supplier of this type of services, will chose one type of supplier or another. (ii) the knowledge one aims to obtain from a particular intensive knowledge service. In this case, Knowledge Intensity

allows consumers to choose a service in detriment of another, taking into account its higher or lower degree of knowledge intensity.

Miles *et al.* (1995) distinguish three fundamental characteristics in KIBS: (i) these firms pay a lot of attention to professional knowledge; (ii) these firms wish to be, in their own right, primary information and knowledge resources, or use their knowledge to produce services that act as intermediaries between themselves, clients and their production processes; (iii) the services that KIBS offer firms are extremely important to the latter, in terms of competition and competitiveness.

Frell (2006) concluded that technological KIBS¹ employ higher qualified people, and that this relates to their level of innovation. In the case of professional KIBS, the author noticed that the relationship between them, suppliers and clients fosters innovation. As for the transforming industries, as it is not in their interest to invest in R&D, their level of innovation is extremely low (Freel, 2006).

According to Amara *et al.* (2008), KIBS arise out of knowledge-based services. In this type of industry, transactions take place at the level of knowledge, and outputs are often intangible. In most cases, innovations are the product of new knowledge combinations, instead of new combinations of physical artefacts.

Coffey (2000) stresses the growing interest in High-Order Producer Services (HOPS), as their important role in Western economies since the late 1970s and beginning of the 1980s has been amply acknowledged. As service producers, their rapid growth in this specific segment of the economy has been perceptible (Daniels, 1985; Coffey and Shearmur, 1997). On the other hand, their role in the competitiveness of regions has also been observed and deserved the attention on the part of regional geographers and scientists (Beyers and Alvin, 1985; Coffey and Polèse, 1987; Drennan, 1987 and Illeris, 1996).

Nevertheless, there is a great deal of difficulty in finding distinct definitions for KIBS and HOPS (High-Order Producer Services), as both expressions are used to define the services sector.

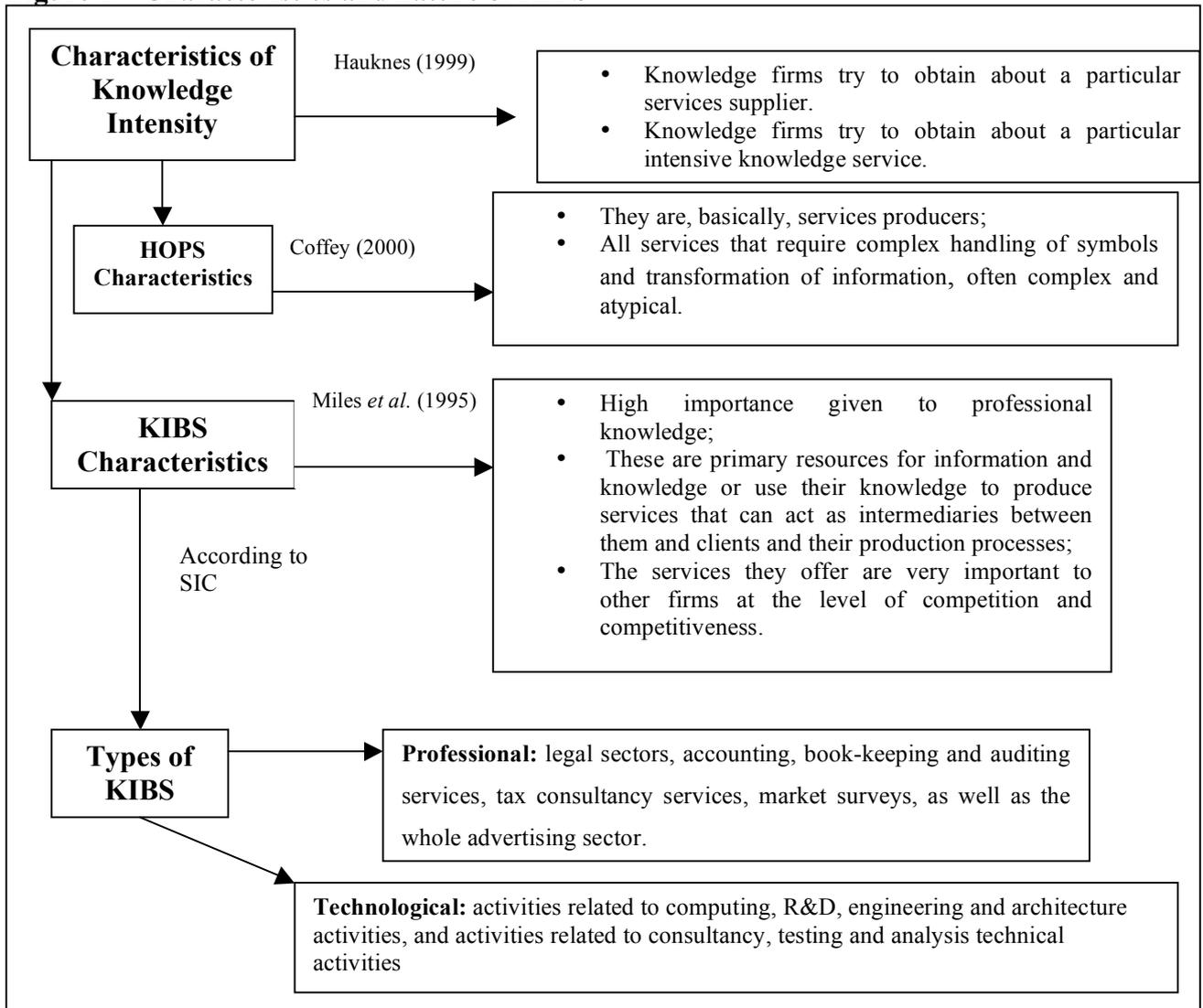
In other words, business services and producer services are sectors whose clients are mainly firms and rarely individual customers. HOPS are all those services that require complex handling of symbols and transformation of information, which is often complex and atypical (Reich 1992; Daniels 1985; Bryson, Daniels and Warf 2004).

¹ The difference between technological and professional KIBS will be explained in methodology section.

According to Alvesson (1995), the meaning of knowledge intensive” may be explained as service rendering firms that perform operations of complex intellectual nature, where the human factor assumes a vital importance.

Hence, the nature and characteristics of KIBS can be systematised as follows (figure 1):

Figure 1 – Characteristics and nature of KIBS



Source: Own elaboration

According to Wood (2005), research on regional innovation merely echoes national studies that focus primarily on regional competitiveness, as a process that is oriented and technologically pushed by innovation. However, the growing importance of innovation on institutions, especially that offered by KIBS, for that same regional

development has been acknowledged (Wood, 2005). According to the same author, the provision of information services for innovation purposes must be acknowledged as a service that is inbuilt within a scientific and technological services division, whose adoption by firms from other sectors is vital for its own success.

In actual fact, whereas non-technological innovations may or may not be stimulated or facilitated by new technologies, technological innovations always require other forms of innovation, including new designs and marketing strategies, and agreements between organizations. For Wood (2005), a process-based service may be:

- Innovations: these must be directed and defined if they are to be successful in specific situations, and the way they are to be applied and for what purposes must be taken into account;
- A service set up through the conjugation of the main individuals or groups, with technologies, creativity, management, financial and human resources, logistics, marketing and regulation specialists throughout the various production stages;
- Regulation specialists come not just from the main innovation in the organization, but equally from a wide range of external sources, including from other sectors;
- In the case of services in general, agencies may resort to temporary workers according to distinct sets of values, such as, for instance, in the public and private sectors;
- A specific service or transforming roles may sometimes lead to the adoption of innovation processes different from those initially expected.

These complex relationships have their corresponding geographical dimension, both within regions, through the articulation and knowledge exchange between places and regions, and at an international scale.

Distinct authors have mentioned the role of KIBS in regional innovation systems, especially as support activities in the transforming industries and SMEs in general (Cooke, 2001; Wood, 2005).

Some progress has been made regarding recognizing services, including KIBS, as contributors to the increase in technology and innovation (Den Hertog, 2000; Haukness, 2000; Muller and Zenker, 2001; Gallouj, 2002). According to Miles (2001), nowadays KIBS are acknowledged as playing a key role as intermediaries in the innovation of systems.

The relationship of KIBS with firms from different sectors has a visible positive influence on the latter (Freel, 2006). According to this author, this relationship increases

resorting to R&D, enhances the performance of staff, and encourages cooperation relationships, thus increasing the ratio of innovation.

In the viewpoint of Sheamur and Doloreaux (2008), there are two perspectives that indicate how KIBS contribute towards regional development: (i) the way KIBS interact with other local players with the aim of producing innovation and subsequent regional development. Thus, this first perspective suggests that KIBS should be involved in the development of regions as long as synergy effects occur in the very same regions; (ii) on the other hand, KIBS may be involved in regional development, but instead of being in the regions, they may be located elsewhere in the country, and so be involved at a distance.

From the two perspectives supported by Sheamur and Doloreaux (2008), we are inevitably led to the question of location of KIBS. The location of these firms and their contribution to local economies have been analysed by several researchers ('O hUallach'ain and Reid 1991; Coffey and Shearmur 1997; Gong, 2001). Their localization in the urban system, their sensitivity to the economies' general agglomeration (Eberts and Randall, 1998; Poehling, 1999; Wernerheim and Sharpe, 2003) and their tendency to set up around spatial clusters (Coe, 1998; Keeble and Nachum 2002), have been documented through several tools and methodologies. A large part of these studies has been motivated by interest in researching the dynamics of local economies, regional development and the reason why some regions grow faster and more than others (Moyart, 2005). According to Malecki, *et al.* (2004), KIBS are essentially located in cities, as the latter are the optimum places for corporate innovation, as well as for networks leading to innovation. Sheamur and Doloreaux (2008) present a distinct viewpoint, based on their study in Canada, whereby the sample was selected from Censuses carried out in 1991 and 2001. They selected KIBS from 152 urban agglomerations and KIBS from 230 rural areas. The authors then noticed that in the beginning of the 1990s, this service providing companies were, in their large majority, based in urban areas. The information yielded by the 2001 Census indicated, however, that these firms had moved out of cities into rural areas, thus leading to a drop in the KIBS sectors in urban agglomerations.

3. THEORETICAL APPROACHES ON FIRM LOCATION

According to Silva (2005a) the spatial distribution of economic activities results from opportunities and location strategies devised in accordance with particular

objectives. However, decision-making processes are complex and involve an important economic component, since a large part of human activities require the use and sharing of limited resources.

According to Capello (2007) there are two groups of theories (which she refers to as regional economics) that look into the issue of economic logic, which intends to explain the location of firms or, in other words, the existence of areas that are more developed than others: (i) Location theories: economic mechanisms that cause the distribution of activities in space; (ii) Growth and regional development theories: they focus on spatial aspects of economic growth and on territorial distribution of income.

On the other hand, Hayter (1997) set off to analyse the location of economic activity through three distinct approaches: (i) the neoclassical, which focuses mostly on the location theory and centres its analysis on profit maximization strategies and minimization of costs (transportation costs, human resources costs and external economies); (ii) institutional, which states that it is important to consider not just the firm's search for an appropriate location but also the institutional milieu it is part of (clients, suppliers, commercial associations, regional systems, the government and other companies); and (iii) behavioural, which focuses on situations of uncertainty and lack of information.

According to him, these three approaches have the purpose of demonstrating how complex the reasons that motivate the location of a particular economic activity are, and they allow us to analyse factors of location at a more "micro" level.

Galbraith (1985) studied 98 entrepreneurs of high technology firms in Orange County, California (USA). He concluded that high-technology firms, in their location decision process operate within a framework of factors that are different from those observed in traditional industries. These conclusions are similarly shared by Arauzo and Viladecans (2006) in their study on the level of spatial concentration of new firms (in the period 1992-1996) in the municipalities of Spanish urban areas. In fact, smaller cities appear to be preferred for the location of technology-based firms, as they offer a quieter environment, better quality of life and become highly advantaged by the presence of qualified individuals working in these industries.

Felsenstein (1996) based on a study on a sample of 160 firms, both in urban and non-urban areas in Tel Aviv (Israel), he analysed the trend of high-technology firms to choose urban areas as a location. The author concluded that the location of firms does not follow a strategy or a calculation; in other words, it is not a founded decision.

In turn, Ferreira, *et al*(2009) identified three types of approach on the location of technology-based firms (behavioural, neoclassic and institutional) and argue that the rurality constitutes no obstacle to the location of firms.

According to Hayter (1997) the location of many firms is explained by behavioural approach, since many entrepreneurs, when deciding on where to set up their firms, end up choosing the places where they were born, pushing neoclassical factors aside. According to Hayter, this perspective goes against economic principles, since only behavioural factors are subject to assessment. Nevertheless, this approach accounts for the appearance of the majority of small and medium-sized companies. Thus, the following research hypotheses, related to behavioural factors, are considered:

H1a: The founder's wish to live in this locality influences the location of KIBS.

H1b: The employees' wish to live in this locality influences the location of KIBS.

H1c: Proximity to the founder's residence influences the location of KIBS.

H1d: Access to good housing conditions influences the location of KIBS.

H1e: The founder's birthplace influences the location of KIBS.

H1f: Recreational and leisure opportunities influence the location of KIBS.

H1g: The climate in the region influences the location of KIBS.

H1h: The community's attitude to business influences the location of KIBS.

Several research studies, as will be shown, focus on the location factors of firms. However, few of these insights reflect on the motives which led firms of high technology to set up in rural areas. The reason behind this lack of information lies, probably, in the small number of firms located in rural areas. Nevertheless, and thanks to the development of information technologies, particularly the Internet, Grimes (2000) identified an increase in the number of firms which set up in those areas.

According to Ouwersloot and Rietveld (2000), one of the key factors for economic development is technological innovation: the introduction of new production techniques, products or services. These researchers concluded that the factors that make firms decide to set up in a particular region depend on the type of firms. In other words, for traditional transformation firms, the industrial composition of the place where they will be based is a key factor. If the firms are service-based, what influences them most in their choice of location is physical infrastructures and knowledge.

Holl (2004) focused his research on the impacts that the new transport infrastructures, in Spain, had on emergence of new transforming firms. Through empirical results, the author concluded that in a country such as Spain, where the

highway road system was developed recently (1980-1994) and where intra and inter-regional differences are clearly visible, access to road infrastructures makes all the difference when it comes to deciding where to set up a new firms.

Costa *et al.* (2004) analysed the mechanisms behind the location of new technology based firms in Spain and proposed that it was linked to the type of industry and the life cycle of the product on which the firm based its activity. Nonetheless, through their empirical study, they came to the conclusion that the most populated and developed cities have lost their attractive edge, regarding the location of firms, to their smaller and more rural counterparts.

Focusing now on Hayter's (1997) viewpoint, it can be said that, according to the neoclassical approach, the location of firms lies essentially on the power of economic forces. The truth is that, in practice, and depending on the profile of the entrepreneur, he may well ignore the power of these forces. According to the aforementioned author, this situation often has a perverse influence in the theories of researchers who strictly defend the neoclassical approach, given that, through "common sense", as well as a result of economic advantages, the entrepreneur, when choosing the location for his firm, takes into account all types of costs, thus deciding where to set up where costs are lower. It is precisely because of these issues, and because, in Hayter's view, this factor does not explain, in itself, the location of firms. Therefore, the following research hypotheses are formulated:

H2a: Distance from the capital of the municipality influences the location of KIBS.

H2b: The cost of real estate influences the location of KIBS.

H2c: Road infrastructures influence the location of KIBS.

H2d: Other physical infrastructures influence the location of KIBS.

H2e: The level of economic activity of the municipality/region influences the location of KIBS.

H2f: The level of specialisation of companies in the region influences the location of KIBS.

Elgen *et al.* (2004) analysed the role which public research institutes play in capturing/attracting new technology-based firms. They resorted to 20000 new German firms specifically on the basis of their deep knowledge of research institutions. The results demonstrated that these start-up high-technology firms tend to trust science with a high degree of intensity, which made them set up near research institutions. Audrestch

et al. (2005) stressed the importance of access to knowledge spillovers when new technology-based firms decide on their location. Their results revealed that new high-technology firms are influenced by factors other than regional traditional characteristics, such as the opportunity to access knowledge generated by universities.

Autant-Bernard *et al.* (2006) analysed the determining factors in the creation of new biotechnology firms in France over the last decade (1993-1999). Their results demonstrated the need for the existence of a large and diversified scientific basis inside a region to enable these firms, after they were set up, to continue their activity for many years.

Looking at the example provided by another country in the Iberian Peninsula, Spain, Alonso (1999) and Trullén (2001) argued that the major technology-based firms tend to group together in the periphery of large urban areas, particularly when these newly set up firms have over 100 employees, so that they can benefit from the technology created by other agents, at lower costs. According to Hayter (1997), there are also entrepreneurs who prefer to set up business near universities, research centres and governmental bodies, in order to have more adequate support to the activities they intend to develop within their firms.

Consequently, the following research hypotheses are considered:

H3a: The existence of a business incubator in the region influences the location of KIBS.

H3b: Access to knowledge generated by universities, technology parks or research centres influences the location of KIBS.

H3c: R&D, company or job creation incentives in order to locate business in this region influence the location of KIBS.

H3d: Technology fairs organised regularly in the region influence the location of KIBS.

H3e: The “role models” in the region influence the location of KIBS.

In sum and according to the literature review, we present our research model (figure 2). The model intends to highlight the main factors that influence location decision of KIBS.

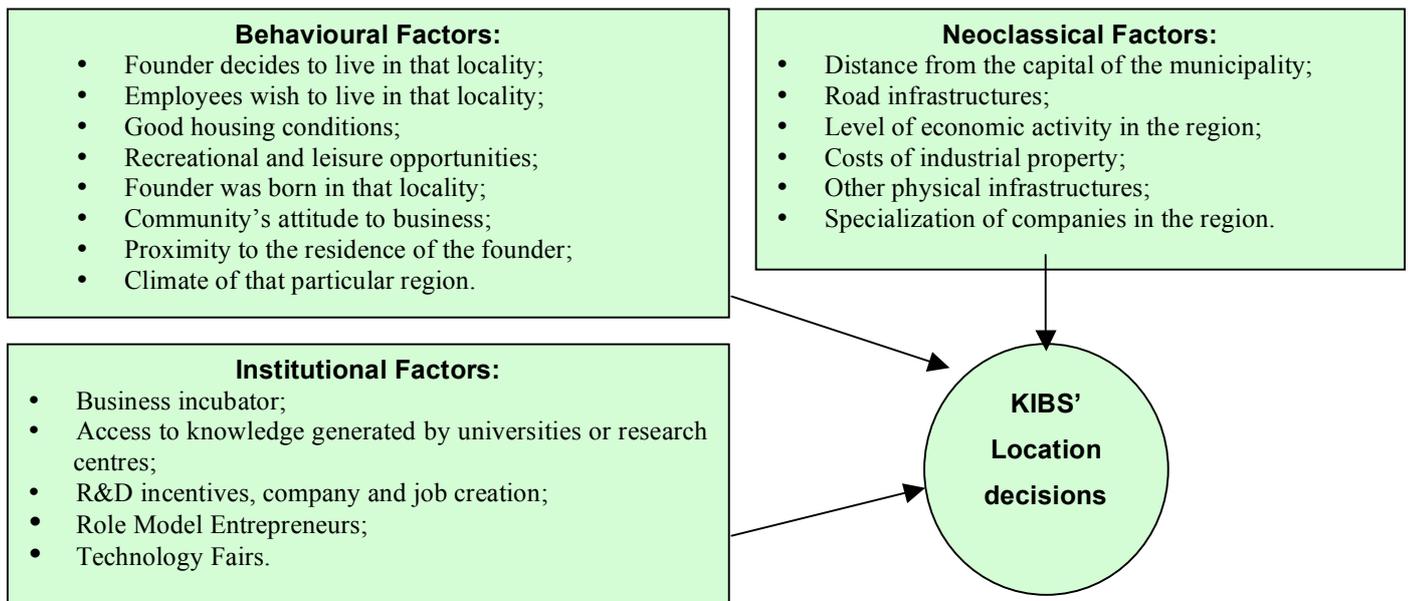


Figure 2: Proposed research model

4. Methodology

According to the Standard Industry Classification (SIC), the definition of KIBS is not uniform in the various existing studies. In line with this classification (SIC), KIBS may be divided into two groups: (i) Technological KIBS (t-KIBS) encompassing activities related to computing, R&D, engineering and architecture activities, and activities related to consultancy, testing and analysis technical activities; and (ii) Professional KIBS (p-KIBS) comprising legal sectors, accounting, book-keeping and auditing services, tax consultancy services, market surveys, as well as the whole advertising sector. Activities are selected according to Portuguese Classification of Economic Activities CAE² codes, as has happened in other research that used NACE codes, which correspond to the CAE (Muller, 2001; Shearmur and Doloreaux, 2008).

Data gathering were made through an inquiry by questionnaire and sent to 330 new firms that embody the studied population (KIBS). The response rate was 20% corresponding to 66 companies. To sum up, the table 2 summarize these methodological aspects.

² The CAE was obtained through consultation of “Boletim do Contribuinte”, Decree -Law no 381/2007, of 14 November.

Table 1 - methodological aspects

Region	Beira Interior (Guarda and Castelo Branco districts) – Portugal
Population	330 KIBS firmsss.
Sample unit	KIBS created between 2003 and 2007.
Size of sample	66 responses (20% response rate) corresponding to 77,3% of p-KIBS and 22,7% of t- KIBS .
Respondents	Entrepreneurs – firms owners .
Questionnaire model	The questionnaire is formed by closed questions, using a likert scale.
Statistical models used	Factor analysis of the main components; Mann-Whitney Test Statistics.
Data analysis	SPSS 15.0

5. Analysis and Discussion of Results

5.1 Identification of Location Factors

To enable us to identify the location factors of KIBS in the Beira Interior region, we subjected the 19 items of the questionnaire to a factorial analysis. Factorial analysis is a set of statistic techniques that aims to explain the correlation between observable variables by simplifying data by means of reducing the number of variables that are necessary to describe them. It presupposes the existence of a lesser number of non-observable variables that are subjacent to data (factors), which express the common denominator in the original variables (Maroco, 2003). This way, the main objective of using factorial analysis on data was to obtain a reduced number of factors that enable us to identify the structural relations between the nineteen variables that measure the importance of firm location factors.

In order to use the factorial model, there must be a correlation between the variances. If those correlations are small, it is unlikely that they share common factors. Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity test are two statistical procedures that enable us to gauge the quality of the correlations between variances, in order to conduct a factorial analysis. KMO is a type of statistics that compares zero-order correlations with partial correlations observed between variables, while the Bartlett's sphericity test checks the hypothesis of the correlation matrix being the identity matrix, in other words, it tests if the correlations between the original variables are sufficiently high to make the factorial analysis useful when estimating common factors. In this case, recommendation based on factorial analysis is acceptable (KMO=0,684). Bartlett's

sphericity test ($\div_{GL=171}^2 = 645,987$ and $p\text{-value}=0.000<0.001$) indicates that the variables are significantly correlated.

After evaluating the quality of the appropriateness of this model to the data, the actual factorial analysis was carried out. The main components' method was used in the extraction of factors. Kaiser's criterion was used to decide the numbers of factors to be extracted, i.e., the number of singular values above unity, which can be analysed analytically through the total variance table, and graphically through a Scree-Plot. In the components' matrix, coefficients with absolute values below 0,40 were eliminated. The Bartlett's method was used, that is, ponderated quadratic minimums to estimate the loads/weights to interpret the factorial solution, the Varimax rotation method was used in factor extraction, since it allows us to obtain a factorial structure in which one, and only one of the original variables is closely associated to one single factor, and loosely associated to the remaining factors (Maroco, 2003).

The factorial analysis for the nineteen variables is showed in table 3. It indicates the factorial solution for 5 factors: the weight/load of each item in the factor; the variance percentage explained by each factor; the interval consistency of each factor; the KMO value and Bartlett's sphericity test.

Table 2: Decision factors for the location of technology-based companies: factorial analysis of the main components, following Varimax rotation.

	Factor 1 Innovation and Incentives to the formation of firms	Factor 2 Individual Motivations	Factor 3 Characteristics of the locality	Factor 4 Economic expansion of the region	Factor 5 Conditions of the Surrounding Milieu
Business Incubator in the municipality /region	,921				
I&D incentives, creation of firms or of jobs to locate business in the area	,893				
Regular technology fairs in the area	,748				
“Role” models in the area	,707				
Access to knowledge generated by universities, technology parks or research centres	,635				
Other physical infrastructures	,617				
Company specialization in the municipality /region	,477				
Founder's wish to live in the locality		,900			
Proximity to founder's residence		,866			
Founder was born in the locality		,807			
Employees' or managers' wish to live in the locality		,719			
Community's attitude to business			,809		
Access to good housing conditions			,770		
Distance from the municipality's capital			,668		
Level of economic activity in the region				,882	
Road infrastructures				,829	

Cost of real estate					,481
Climate in the area					,763
Recreational and leisure opportunities					,560
Explained Variance (%)	21	16,97	13,16	10,83	7,89
Consistency α Cronbach	0,836	0,849	0,707	0,648	0,336

KMO = 0,684 and Bartlett's Sphericity Test = 645,987 (p-value= 0,000)

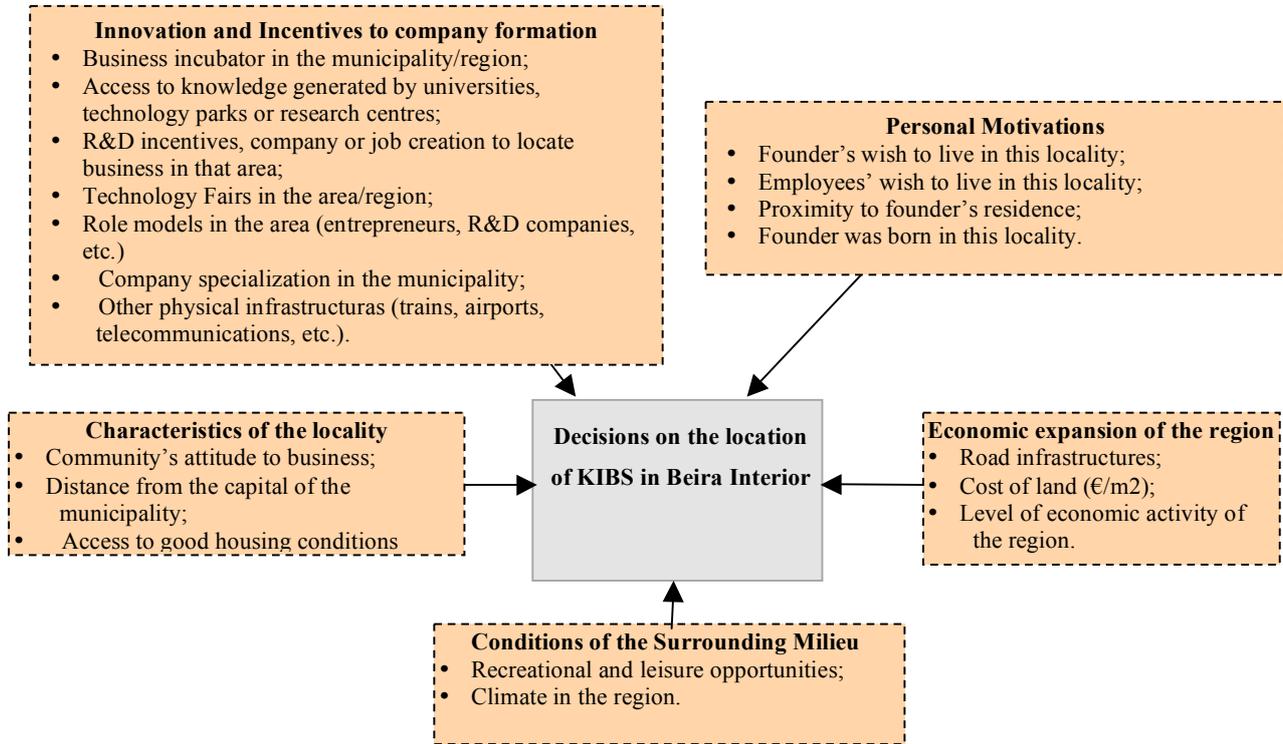
In accordance with the rule of retention of factors with singular values higher than 1, five factors were retained, which explain 69% of total variability: factor 1 explains 21% of the variance; factor 2 explains 16,97% of the variance; factor 3 explains 13,16% of the variance; factor 4 explains 10,83% of the variance; and factor 5 explains 7,89% of the variance. Factorial weights with absolute value lower than 0.40 were eliminated from the matrix of components.

The creation of scores requires verification of their internal consistency, and that scales are additive. On the one hand, the Cronbach's *alpha* coefficient for the 19 items was 0,638, which shows a reasonable consistency of the instrument. The analysis of the internal consistency of each factor also revealed acceptable *alpha* values for all the factors, with the exception of factor 5, which indicated an *alpha* value lower than 0.5. On the other hand, the testing statistical analysis ($F = 41.028$ with $p\text{-value} = 0.000$) associated to the use of the Tukey's additivity test allows us to reject the null hypothesis of absence of additive effect between items. Hence, we can conclude that the scales are additive, which means that each variable is linearly related to the value of the scale.

Once the factorial solution is achieved, it is necessary to interpret the factors that have been identified: factor 1 is related to the level of innovation (business incubator, proximity to universities and technology fairs), entrepreneurs that act as role models and incentives to the creation of companies. Factor 2 is associated to the company's founder personal motives (residence preferences on the employees' and founders' part, residence near the place where the company is located and place of birth). Factor 3 is linked to the locality's characteristics (attitude of the community to new entrepreneurs, housing conditions and distance from the capital of the municipality). Factor 4 refers to the possibility for economic expansion that the region can give (level of economic activity, existence of road infrastructures and price of land). And factor number 5 is associated to issues around the surrounding milieu (climate and leisure opportunities). The factorial analysis reveals that the proposed conceptual model has a slightly different application when used in the Beira Interior region, in what concerns factor aggregation.

Thus, and according to the factor analysis results, our empirical model is as follows (figure 3):

Figure 3 - Research model



5.2 Typology of KIBS

In order to extend our knowledge of the differences regarding the level of agreement of the 19 location factors of our study, and in accordance with the two groups of professional and technological KIBS, we used the Mann-Whitney test, which is an appropriate test for this measurement scale (Likert's scale, varying from "1-no importance" to "5-very important"). Accordingly, the aim is to test if there are differences regarding the importance of company location factors, if there are differences in the degree of agreement with factors relative to the type of KIBS. Table 3 shows the test statistics associated to the application of the non-parametric test in two independent samples.

Table 3: Mann-Whitney Test – applied to the nineteen Location Factors

Location Factors	Ch-square	g.l.	Assymp Sig.
E1- Founder's wish to live in this locality	4,276	1	0,039
E2- Employees or managers' wish to live in the locality	9,506	1	0,002*
E3- Proximity to the founder's residence	6,645	1	0,010*
E4- Access to good housing conditions	2,950	1	0,086

E5- Founder born in this location	5,158	1	0,023*
E6- Recreational and leisure opportunities	1,075	1	0,300
E7- Climate in the region	,001	1	0,970
E8- Community's attitude to business	4,817	1	0,028*
E9 - Distance to the capital of the municipality	3,951	1	0,047*
E10- Road infrastructures	3,714	1	0,054**
E11- Other physical infrastructures	,113	1	0,736
E12- Cost of land	12,345	1	0,000*
E13 Level of economic activity in the municipality /region	5,513	1	0,019*
E14- Specialization of firms in the region /region	,547	1	0,460
E15- business incubator in the municipality /region	,622	1	0,430
E16 - Access to knowledge generated by universities, technology parks or research centres	3,002	1	0,083**
E17- R&D incentives, company or job creation to set up business in the region	,929	1	0,335
E18- Regular technology fairs in the region	,135	1	0,713
E19- "Role models" in the region	,948	1	0,330

* = $p < 0,05$; ** = $p < 0,10$

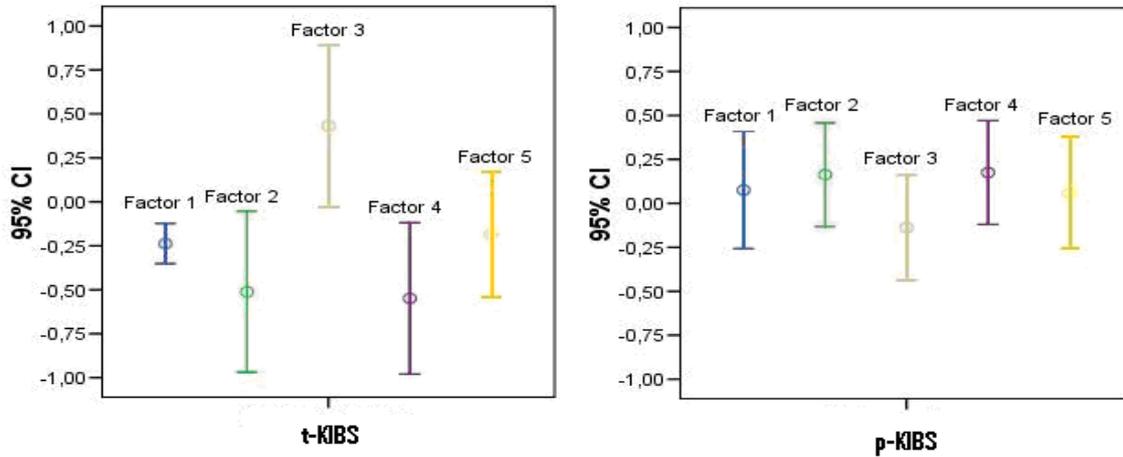
The analysis of table 3 enables us to conclude that the degree of agreement associated to each original factor for the two groups of KIBS, the professional and the technological, are significantly distinct regarding the following location factors: "Employees' wish to live in this locality", "Proximity to the founder's residence", "The founder was born in this locality", "Community's attitude to business", "Distance from the capital of the municipality", "Level of economic activity of the municipality/region" and "Company specialization in the municipality/region", for a 5% level of significance. It was observed that the factors "Road infrastructures" and "Access to knowledge generated by universities, technology parks or research centres" reveal differences between types of KIBS, for a level of significance of 10%. There were no significant statistical differences regarding the remaining factors.

The empirical model that results from the use of factorial analysis allows us to consider 5 latent factors that represent the information contained in the 19 original variables associated to the decision to locate KIBS in the Beira Interior region. A score was estimated for each factor, allowing the intensity of agreement of each individual relative to that particular location factor to be measured. One should check if the average scores associated to each factor vary according to the type of KIBS.

The analysis of the Error-bar graph allows us to see that the average importance of location factors differ according to the type of KIBS: the factors innovation and incentives to the creation of companies, personal motivation, economic expansion of the region and conditions of the surrounding milieu reveal a higher average score when it comes to professional KIBS and compared to technological KIBS; only the factor

characteristics of the locality appears to have a higher average influence on the location decision when it comes to technological KIBS.

Table 4: Error-bar to the score average of the KIBS location factors



According to the results, we are in a position to draw the verification of the research hypotheses:

Table 5 - Results of Tested Hypothesis by type of KIBS

Hypotheses	Type of KIBS	
	t- KIBS	p-KIBS
BEHAVIOURAL FACTORS		
H1a: Founder's wish to live in the locality influences the location of KIBS	Not Verified	Not verified
H1b: Employees' wish to live in the locality influences the location of KIBS	Not verified	Verified
H1c: Proximity to the founder's residence influences the location of KIBS	Not Verified	Verified
H1d: Access to good housing conditions influences the location of KIBS	Not Verified	Not Verified
H1e: The founder's birthplace influences the location of KIBS	Not Verified	Verified
H1f: Recreational and leisure opportunities influence the location of KIBS	Not Verified	Not Verified
H1g: The climate in the region influences the location of KIBS	Not Verified	Not Verified
H1h: The community's attitude to business influences the location of KIBS	Verified	Not verified
NEOCLASSICAL FACTORS		
H2a: Distance to the capital of the municipality influences the location of KIBS	Verified	Not Verified
H2b: Road infrastructures influence the location of KIBS	Not Verified	Verified

H2c: Road infrastructures influence the location of KIBS	Not Verified	Not Verified
H2d: Cost of land influences the location of KIBS	Not Verified	Not Verified
H2e: The level of economic activity in the municipality/region influences the location of KIBS	Not Verified	Verified
H2f: The specialization of firms in the region influences the location of KIBS	Not Verified	Verified
INSTITUTIONAL FACTORS		
H3a: The existence of a business incubator in the region influences the location of KIBS	Not Verified	Not Verified
H3b: Access to knowledge generated by universities, technology parks or research centres influences the location of KIBS	Not Verified	Verified
H3c: R&D incentives, company or job creation to set up business in the region influence the location of KIBS	Not Verified	Not Verified
H3d: Regular technology fairs in the region influence the location of KIBS	Not Verified	Not Verified
H3e: The “role models” in the region influence the location of KIBS	Not Verified	Not Verified

6. Final Considerations

In the present research, we aimed to focus on two theoretical topics, which, due to their complexity, have gained increased importance. We started by referring to the growing interest on the study of KIBS, due to their influence on innovation and regional development. Subsequently, we talked about theories on company location, and, on this point, we focused basically on three location theories: neoclassical, behavioural and institutional. It was precisely at this point that we formulated our research question, which we now intend to answer: *what are the reasons that make KIBS establish them in a particular region? And, in particular, what are the KIBS's location factors in Beira Interior?*

Based on the results obtained in the statistical tests made, it was possible to identify the factors that influence the location of KIBS in the Beira Interior Region, as follows: (i) Employees' wish to live in that locality, (ii) Proximity to the founder's residence, (iii) The founder was born in the locality, (iv) Community's attitude to business, (v) Distance from the capital of the municipality, (vi) Road infrastructures, (vii) Level of economic activity in the municipality/region, (viii) Specialization of firms in the municipality/region, (ix) Access to knowledge generated to universities, technology parks or research centres.

According to our model, we observed that the first four factors are part of the behavioural approach. Factors four to seven denote a neoclassical approach, whereas factors eight and nine pertain to the institutional approach. We may thus conclude that

with regard KIBS located in Beira Interior, personal reasons dominate when it comes to deciding on location and these factors are different for t-KIBS and p-KIBS. In other words, decisions were fundamentally influenced by behavioural and neoclassical factors, which mean that factors of an institutional nature weighted little in the location decision of KIBS.

Every study has unavoidable limitations which differ depending on deliberate or unconscious choices. In a general way, the limitations of the present study come from the following aspects: the small number of the studied population caused some limitations on the choosing and application of the some statistic techniques. Moreover, the nature of these data does not enable us to measure the effect on the KIBS of some important location factors.

Although these limitations are important and must be taken into account, we are nevertheless convinced that this study should contribute to a better understanding of location factors of KIBS and it can be seen as a further step to provide to the study and development of KIBS sector.

In sum, further research is needed to improve our understanding of the dynamics of location of the KIBS sector. Longitudinal studies and case studies are suggested. It should explore which endogenous and exogenous factors might explain why firms decide different location factors. At last, the replication in different service sectors of the proposal research model beyond the limited period retained in this research as well as the introduction of other location factors.

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Firm performance measurement in fast growth small-to-medium enterprises

by Caroline Swee Lin Tan and Kosmas X. Smyrnios

Utilizing a case study methodology, this study investigates ways in which fast growth small-to-medium enterprises (FGSMEs) measure firm performance. This investigation revealed that FGSMEs seem to adopt a multi-level approach involving different sources and contexts to performance measurement. Apart from the application of standard financial performance measures such as profits and growth, FGSMEs also utilize measures of customer satisfaction, attainment of industry awards, receipt of client reports, website popularity, number and quality of successful innovations adopted, objective employee performance indices, and staff retention. Founders highlight the importance of providing employees with flexible environments and career opportunities as a way to reduce churn. These organizational characteristics signal non-financial benefits and incentives of working in these firms to potential employees and customers. These findings are in accord with extant literature and the balanced scorecard perspective, advocating associations between performance measurement systems and management strategies.

Introduction

The main reason for undertaking this research concerns the dearth of performance measurement literature on fast-growth small-to-medium enterprises (FGSMEs). Performance measurement systems (PMSs) have been recognized as a crucial element to improving business performance in organizations (Garengo, Biazzo, & Bititci, 2005). Adages such as *What gets measured gets done* suggest that implementing appropriate PMSs ensures that actions are aligned to strategies and objectives (Kennerley & Neely, 2003). Research, so far, has concentrated primarily on large organizations (Zaman, 2003), and SMEs in general (Hudson, Smart, & Bourne, 2001).

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To understand SMEs and entrepreneurship fully, researchers need to take into consideration related variables (e.g., economies of scale, resource constraints) (Hills, 1999). We hold that different types of firms pursue diverse strategies depending on internal and external factors (Stokes, 2000). Hence, the overarching research question is, How do FGSMEs measure firm performance?

This research contributes to the PMSs literature in two ways. First, our work demonstrates that FGSMEs utilize a diverse range of performance indicators that concentrate on the people aspects of markets (customers) and organizations (employees), rather than a single focus on financial (ROI, ROE) indices. Second, FGSMEs appear to intuitively adopt an applied BSC approach, tailored to the needs of their enterprises.

The following section provides an in-depth analysis of the pertinent literature on FGSMEs and measures of performance, followed by a description of the present methodology, culminating in a discussion of findings.

Literature review

Fast Growth Companies

FGSMEs are also known as *gazelles*: companies that achieve a minimum of 20% annual compound sales growth over a 5-year period. According to Birch (1995), *gazelles* comprise 3% of all small companies. In Australia, FGFs tend to be emerging enterprises, usually less than 10 years of age, and comprise approximately 10% of all SMEs, contributing substantially to national revenue (Gome, 2004). For the purposes of our research, FGSMEs are defined as those entities that have achieved at least 20% growth in revenue over four years.

Researchers (Feindt, Jeffcoate, & Chappell, 2002; Johnson & Bishop, 2002) indicate that founders play a crucial role in the overall performance of fast-growth companies. In most instances, business creators are also managing directors/CEOs whose talents and ambitions are key success factors (OECD, 2002). This subset of business owners are considered the *crème de la crème* (Lesonsky, 2007). Barkham et al. (1995), in compiling a list of characteristics associated with fast growth company entrepreneurs, identified that they tend to be young, successful, owners of multiple firms (in fact, those who had several companies performed better), members of professional organizations, and the presence and influence of others led to accelerated growth. In attempting to separate entrepreneurial attributes from the characteristics of firms, Cooney and Malinen (2004, p. 10) opined that profiles of firms reflect decisions made by entrepreneurs, elaborating, *how can we separate the dancer from the dance?*

Current models of venture growth assume that leaders and top management teams can predict directions of growth and control complexities that are created as firms grow (Nicholls-Nixon, 2005). This investigator identified that leaders of FGFs are responsible for creating a vision, hiring the most appropriate people, and building the best infrastructure that encourages innovation and exploration. Similarly, Tan and Smyrniotis (2005b) found that firm leadership appears to be a starting point guiding organizational direction. A firm's proclivity towards a particular business orientation is dependent on leadership. For example, when leaders value their customers, learning, and innovativeness, these values will be reflected throughout the organization.

Management practices that facilitate rapid growth for larger, mature firms are somewhat different from those of emerging FGFs (Barringer, Jones, & Lewis, 1998). For

example, human resource management (HRM) practices in FGFs differ from those of slow-growth enterprises in terms of training, employee development, financial incentives, and availability of stock options (Barringer, Jones, & Neubaum, 2005). Notwithstanding, employee experimentation is part of FGF culture. Tan and Smyrnios (2005a) advocated that leaders possess an *it's ok to make mistakes* proclivity. In rapidly changing business environments, firms are required to create infrastructures that enable them to tap into the knowledge that is dispersed throughout their enterprise. Therefore, there is open sharing of information, emphasizing regular meetings to bring people together and update them on firm activities.

In general, FGFs strive to achieve a balance between financial results, long-term performance capabilities, and building and enhancing customer relationships (Tonge, Larsen, & Ito, 1998). FGFs are also market-oriented, cultivating strategies of differentiation which depend on close customer relationships and personalized contacts (OECD, 2002). Diligent efforts are made to comprehend customer needs to add unique value and buyer knowledge (Barringer & Jones, 2002). Similarly, customer focus, relationships, and satisfaction are accorded high priority.

Performance Measurement

Academic research on firm performance measurement is derived from a wide spectrum of disciplines, including accounting, economics, human resource management, marketing, operations management, psychology, strategic management, and sociology (Marr & Schiuma, 2003). Firm performance measures are defined as metrics employed to quantify the efficiency and/or effectiveness of actions (Tangen, 2003), but remain an issue for debate in business research (Fahy et al., 2000). A diverse range of measures used constitutes an additional source of methodological heterogeneity (González-Benito & González-Benito, 2005). Moreover, a variety of approaches applied to study performance in research settings together with a lack of agreement on basic terminology, make performance measurement further compound this topic area for strategic management researchers (Jogarathnam, Tse, & Olsen, 1999).

When undertaking entrepreneurship research, Murphy, Trailer, and Hill (1996) recommended that investigators explicitly state specific performance dimensions, provide theory-based rationale, and include multiple measures when feasible. Researchers should also incorporate control variables such as firm age and size, as firm performance can be considered ambiguous. Below is a review of the ways in which firms measure performance (PMSs).

One of the most popular approaches to measure firm performance is the Balanced Score Card (BSC), which was first introduced by Kaplan and Norton, based on a one-year study of 12 companies (Kaplan & Norton, 1992). These investigators opined that financial measures alone were insufficient, and other factors such as competence, knowledge, and customer focus were necessary. Principles of the BSC provide a holistic view of firms and examine four important areas: finance (how well firms are doing to satisfy the needs of owners or shareholders who are looking for returns on their investment), customers (how well are customer needs met, so that clients can recommend the business to others), innovation and learning (innovation & development progress in competitive environments), and internal business (how effectively & efficiently businesses balance satisfying customer satisfaction & making profits). In stressing

strategy alignment and performance measures, Kaplan and Norton (2005) advocated a balance between these four perspectives to ensure long-term survival and growth. Not surprisingly, since the BSC's inception, more than 50% of Fortune 500 companies use this tool to measure performance (Gumbus, 2005; Marr & Schiuma, 2003). Nevertheless, Ken Merchant, in an interview with de Waal (2005) indicated that the BSC is not suitable for all companies as there are too many performance indicators, making it difficult for managers to handle.

Other researchers (Vorhies & Morgan, 2005) evaluated performance using both *hard* quantitative financial measures and *soft* qualitative measures. The former concerns cost elements and tries to quantify performance solely in financial terms. However, many improvements are difficult to quantify directly in monetary value (Ghalayini, Noble, & Crowe, 1997). According to these researchers, three most common financial measures include profit margin/return on sales (which determine a firm's ability to withstand competition, adverse rising costs, falling prices, and future declining sales); return on assets (which determines the ability to utilize assets); and return on equity (which is payment of dividends to stockholders). *Softer* non-financial issues such as customer and employee satisfaction are complemented by *hard* measurement practice. Stone and Banks (1997) identified that large firms employing an average of 23,000 employees inclined to favor financial priorities. Their emphases seemed to be on profitability (43%), customers (24%), and employees (13%), indicating a top priority for profits.

However, customer-based measures are gaining popularity because of an enthusiasm for customer-led quality improvements, which ultimately lead to company profits. A common measure includes procedures and surveys on customer complaints (Stone & Banks, 1997). In the case of employees, surveys reflecting their perceptions of culture can form the basis for decision making at all levels. These surveys help to check prevailing firm conditions to support suggestions for change in working environments, or to indicate the state of employee welfare and feelings, so that the necessary feedback between distant workers can be obtained (Stone, 1996). *Soft* measures can also be used to monitor or induce cultural change, improve communications, morale, and team spirit.

For small firms however, subjective performance and non-financial measures appear to be more essential than quantitative measures as indicated by the number of telephone enquiries made, and intuitive quality measures adopted. Cash, rather than the maintenance of a smooth cash flow from profit is an important indicator to owner-managers whose objectives are to stay in business (Jarvis, Curran, Kitching, & Geoffrey, 2000). Contrary to these findings, Monkhouse (1995) reported that only 50% of SMEs use non-financial internal benchmarks, ranging in a descending order of importance from quality, competitive performance, resource utilization, flexibility, and innovation. Monkhouse (1995) concluded that non-financial benchmarks are *far from being over-used and abused* (p. 49).

Nonetheless, quantitative measures such as financial ratios, number of customer complaints, and staff turnover are easy to ascertain compared to qualitative measures such as firm morale, leadership, and customer perception (Pun & White, 2005). PMSs must be linked to an achievement strategy which can take a variety of forms: greater focus on stakeholder value, pleasing stakeholders, motivating people, and improving and innovating services and products (Pun & White, 2005). Table 1 summarizes main changes and trends in the development of PMSs, comparing traditional and extant

systems. The next section reports on the present methodology, followed by a discussion of findings in the light of extant performance measurement literature.

Table 1. Evolution of performance measurement systems

Traditional Performance Measurement Systems	Emerging Performance Measurement Systems
Based on traditional accounting systems	Based on company strategy
Based on cost/efficiency	Value-based
Trade-off between performance	Performance compatibility
Profit-oriented	Customer oriented
Short-term orientation	Long-term orientation
Prevalence of individual measures	Prevalence of team measures
Prevalence of functional measures	Prevalence of transversal measures
Comparison with standard	Improvement monitoring
Aims at evaluating	Aims at evaluating and involving
Hinders continuous improvement	Stresses continuous improvement

Sources. Based on Pun and White's (2005) evaluation of De Toni and Tonchia (2001), and Ghalayini and Noble (1996).

Method

Participants

Participants are the 2003 and 2004 *BRW Fast 100* Australian private and public firms (Gome, 2003, 2004). Inclusion criteria involved: less than 200 full-time employees, turnover of more than AUD\$250,000 in 1999/2000, 2000/2001, 2001/2002, and a single customer must not account for more than 50% of a company's turnover. Companies provide signed audited turnover figures over four consecutive financial periods (1999-2003; 2000-2004; 2001-2005), in order to calculate average growth rates for ranking purposes.

Procedure

Twenty-one CEOs/founders of 18 Fast 100 companies (Table 2) from the 2003 and 2004 BRW Fast 100 were interviewed (Three companies were founded as partnerships and each partner was interviewed separately). Two companies were interviewed twice over a one-year period for longitudinal purposes. Tape recorded semi-structured interviews of 2-3 hours at the CEOs' office involved a list of pre-determined questions, tapping market orientation (Narver & Slater, 1990), marketing capabilities and firm performance (Vorhies & Harker, 2000), and a checklist of areas/themes which emerged from previous interviews, which is part of the first author's PhD thesis. This study, however reports only findings related to firm performance measures. Specifically, CEOs were asked, "*How do you measure firm performance?*" and "*How/what is the performance of your business over the previous three years relative to your major competitors in relation to profitability? ROI? ROE? Customer satisfaction? Delivering value to your customers? Overall marketing effectiveness? Number of successful new products?*".

The general process for selecting interview participants was based on specific criteria: industry type, age of firms (e.g., 4 – 12 years), type of firm (public versus private; family versus non-family), growth rate/rank on the Fast 100 (e.g., firms that achieved growth rates greater than 100% versus companies that attained relatively moderate growth, that is, 35%-50%, and focus (local, regional, national, global).

Sampling and Data Analysis

Sample size was not decided *a priori*. An underlying principle is to select information rich cases which are worthy of further research (Patton, 1980). Number of interviews were dictated by the progression of theory development, known as theoretical sampling, whereby researchers jointly collect, code and analyze interview data, then decide which participants to interview next, in order to develop relevant theory as it emerged (Strauss & Corbin, 1998). A goal of theoretical sampling is to select cases that replicate/extend cases, and theoretical reasons that fit into various theoretical categories and/or provide examples of polar types (Eisenhardt, 1989). Sampling ceased at 21 founders/CEOs from 18 companies as it became clear that redundant data were being collected. The present investigator captured the desired breadth and depth of phenomena. In theory building, researchers seek comprehensive concepts, and it is not uncommon to rely on a deep understanding of a relatively few key informants (McCracken, 1988). Generalization is not sought in theory building, but rather is reserved for future theory-testing research (Flint & Mentzer, 1997).

Interpretation of interview transcripts is based on multiple readings of each transcript in order to capture a holistic image of participant's stories, followed by a part-by-part interpretation of key thoughts throughout each transcript. Each transcript was treated as part of a larger whole, comprised of multiple transcripts. In all cases, interpretations of parts are continuously compared to each other and the whole. Constant refinement of concept definitions and interpretations were tied to specific words and lines within transcripts. Codes, categories, and interpretations were integrated into theoretical frameworks.

Within case analysis. When multiple cases are used in a case study, each case must first be analyzed on its own (Yin, 1994). The objective of "within-case" analysis is utilized for researchers to become familiar with each case before making comparisons and drawing conclusions from a set of cases. The overall idea of within case analysis is to become quite familiar with each as a stand alone entity (Eisenhardt, 1989). Within-case analysis typically involves detailed case study write-ups for each site, often simply pure descriptions, but longitudinal graphs and tabular displays have also been used.

The format for a within-case analysis follows specific research questions. The analysis made use of data displays that serve to organize, compress, and assemble information in a way that allows researchers to draw conclusions (Miles & Huberman, 1994). Displays include extended text, matrices, graphs, and networks, and for single-case displays, data can be folded into multiple-case analysis when formats of displays in a multi-case study are comparable (Miles & Huberman, 1994).

Table 2. Fast 100 company demographics

RANK		COMPANY	SECTOR	YEAR FOUNDED	TURNOVER 2003/2004 AUD\$	NO. OF EMPLOYEES	TURNOVER GROWTH (%)
2004	2003						
4	DNP	Aconex	Online information management	2000	\$2,369,856	38	460.34
7	DNP	Boost Juice Bars	Smoothie operator/franchiser	2000	\$18,227,386	196	257.22
DNP	10	Global Dial	Telecommunications carrier	1994	\$5,339,000	34	162.72
103	12	Waterwerks Australia	Water feature manufacturer	1998	\$9,375,000	24	151.16
12	DNP	Mor Cosmetics	Body and bath products manufacturer	2000	\$4,680,000	14	169.44
35	44	Scigen	Biotechnology company	1999	\$6,040,000	44	83.51
DNP	41	Apex Steel	Steel manufacturer	1997	\$71,075,000	74	72.87
42	42	Realestate.com.au	Real estate web portal	1996	\$19,100,000	110	72.11
47	DNP	Liaise Marketing	Supermarket broker	1998	\$1,803,000	35	63.39
50	DNP	Sitepoint	Web development	1999	\$2,444,185	8	61.85
57	50	Reactive Media	Website design agency	1997	\$1,881,404	14	54.96
66	DNP	Smart Partners	Advertising agency	2000	\$3,778,069	32	50.27
72	70	Cableman	Premium electronic products installer	1997	\$2,570,000	10	46.45
76	90	MC Labour Services	Construction labor hire	1995	\$15,370,000	10	44.79
86	8	Total Cabling Solutions	Electrical cabling	1999	\$3,624,000	17	39.35
92	91	Andrew's Airport Parking	Airport parking services	1997	\$2,831,063	30	37.05
DNP	96	Dixon Appointments	Recruitment agency	1999	\$7,000,000	14	32.85

Note. Company number indicates Fast 100 ranking (1-100). Turnover for Companies ranked 10, 12, 41, 75, and 96 (2003) is based on 2002/2003 financial data. DNP = Did not participate.

Cross case analysis. Cross case analysis started when the within-case analysis was completed (Yin, 1994). Cross case analyses forces researchers to derive conclusions from a set of cases (Eisenhardt, 1989), that is, an emergent theory that fits the data in all cases. Cross-case analysis aimed at ordering and explaining, needs both variable and process-oriented strategies, complementing each other. Miles and Huberman (1994) noted that cases can often be sorted into explanatory “families” sharing common scenarios, but it is important to look carefully at deviant cases and not to force cross-case explanations. Yin (1994) recommended pattern matching as the preferred approach for analyzing data that is, comparing tabular summaries for each of the cases to identify patterns. This process involves comparing empirically-based patterns with a predicted one, and if patterns coincide, results can help a case study strengthen its internal validity (Yin, 1994). The analysis examined underlying definitions of constructs to ensure that comparisons are valid in all cases. This was done because *careful construction of construct definitions and evidence produces the sharply defined, measurable constructs which are necessary for strong theory* (Eisenhardt, 1989, p. 542). For multiple case studies, theoretical replication is achieved when patterns coincide across cases.

Findings and Discussion

Six main findings emanate from this research: performance measures are not relative to competitors; FGSMEs adopt a methodical approach to measurement of financial performance; the internal health of the business operations is audited in relation to set targets; firm performance evaluations have a strong employee and customer focus; and FGSMEs adopt a tailored multi-dimension approach to the measurement of firm performance.

Business research (Wilkund & Shepherd, 2005) utilizes performance evaluations such as gross margin, profitability, cash flow, and customer satisfaction relative to competitors as a measure of firm performance. However, a contextual analysis of interview data identified that FGSMEs do not measure performance in relation to competitors. Brad Giles, CEO of (TCS Cabling, ranked 8, 2003; ranked 86, 2004) explains: *We tend to think if we are spending time either looking in the rear view mirror to use a car analogy, we are looking the wrong way. We should be looking ahead. The same with our competitors: If we spend all the time looking side ways to see what they are doing, we should be looking ahead and working on our business. Not to say we don't take notice when they do something that is good, but, we have noticed that it would be very easy to get bogged down in ah, they are doing this, but what if they do that? And we just say no, let's just leave them all behind.*

Overall, FGFs tend not to be competitor oriented (Tan & Smyrnios, 2006). This proclivity is not to say that companies are unaware of competitors' strengths, weaknesses, and strategies. Contrary to large firms (e.g., Virgin Atlantic, Qantas) that regularly monitor each other's strategies (Washington, 2005), FGFs, while acknowledging an awareness of their competitors, state that being better than competitors is not a focus. FGFs aim to be the best in their field, setting their own standards on route to achieving strategic targets. It is particularly noteworthy that Armstrong and Green (2007) indicated that competitor-oriented objectives can be detrimental to firms' profitability.

The present findings also reveal that performance measurement undertaken by FGSMEs is more complex compared to those of slow-growth SMEs. For example,

Hudson et al. (2001) reported that SMEs complained that the measures produced an overload of data which was either too complex or outdated, and consequently unusable. In their qualitative study, only one SME reported a formal feedback system via monthly review meetings. By way of contrast, there is a strong indication that fast-growth enterprises in our cohort measure performance from financial, internal business, innovation and learning, and customer perspectives, which is in line with the BSC method. The concept of *balance* refers to a need to use different measures and perspectives that tie together, providing a holistic view of firms (Kaplan & Norton, 1996). Similarly, traditional methods of measuring company performance by financial indices alone have virtually disappeared from large enterprises (Basu, 2001). Non-financial measures are at the heart of describing strategy and developing a unique set of performance measures that clearly communicate strategy (Kaplan & Norton, 2005), and help in its implementation (Frigo, 2002).

Financial Indices/Perspectives

The BSC financial perspective addresses how organizations perform financially using traditional outcome measures such as ROE, cash flow, profit, ROI, and project and customer profitability (Kaplan & Norton, 2000). All FGSMEs in the present study indicated using this type of traditional financial measures. For example, Cableman (ranked 70, 2003; ranked 72, 2004) CEO, Anthony Elbaum explains: *I do a board report once a month. Our board report is very in-depth for what I call a small business. There is a word document within the board report which will set out the contents. We will just do a financial performance summary, a brief clipping of how the business is performing, cash flows, a report of each division, and the projects, the quotes, the ones we've lost and won. We've got our spreadsheet which has got balance sheets, cash flow, money that's owed to us, why it's owed, why it hasn't been paid, and what we are doing to get the money. We do a six weekly cash flow and we got time sheets - every job within the month, every person's hours for it and the costings thereof. I handle this myself. That's why I don't get much time to do anything else anymore. And then we've got a pipeline, so those projects under negotiation, those on the way, those that we've lost and those that are dead. So they are all on the way. And the green one's that are on the way. I space out the revenue, seeing when it's going to hit.*

Hence, our findings show that FGSMEs spend a significant amount of time and effort in analysing the financial health of their enterprise. This is in contrast to slow-growth Australian SMEs that tend not to analyse cash flows on a regular basis, relying on occasional 'back of the envelope' calculations. Financial summaries provided by accountants are supplied for mandatory reporting purposes rather than for financial management (Barnes et al., 1998). Other outcome measures such as ROI and ROE are not used as majority of the CEOs in this cohort operate in service industries. As a case in point, Marc Lunedei, CEO of MC Labour (ranked 90, 2003; ranked 76, 2004) stated: *We can't calculate our ROI because our investment is in our staff. And it's not like I said, "Here is \$1 million, I am investing in a business". It's my venture. So, it's a difficult one.*

ROI is also hard to measure as a large proportion of FGSMEs in this study started the business with less than \$20,000. For example, Tim Fouhy, founder of Reactive Media (ranked 50, 2003; ranked 57, 2004) explained: *It's kind of hard [to measure ROI]. We had no overheads when we started.* Brad Giles, owner of TCS (ranked 8, 2003; ranked

86, 2004) concurs with this stating, *We didn't really have a big investment, to look at it in terms of ROI. We started the business with \$1,000 and we could draw a wage after a month or two.*

Internal Business Perspective

Internal business performance indicators include traditional operational issues such as tender success rate, data rejection percentages, time per customer (Kaplan & Norton, 2000), on-time delivery, the number of new products launched and product defects (Zaman, 2003). FGSMEs seem to audit their business processes. For example, Liaise marketing (ranked 47, 2004, a supermarket broker) CEO, Tony Merlino stated that their organization measures manufacturer sales, market share and store visits to ensure their sales team are *doing the right thing. We need to measure speed to market - so when a new product is launched, how quickly we can get it on the shelf* [for the client/manufacturers].

Similarly, Dixon Appointments (ranked 96, 2003) uses a system of periodic auditing of all business processes. This system includes auditing key tasks that relate to service delivery in order to ensure that clients comply with agreed procedures. Dixon also analyses data and records: integrity reports are run weekly to ensure that records are accurate and comprehensive. These reports include candidate records, job records, and payroll integrity. Brad Giles (TCS Cabling, ranked 8, 2003; ranked 86, 2004) also monitors the number of hours worked versus the number of hours quoted, number of productive hours/week and sales opportunities.

Employee Focus

According to Kaplan and Norton (2000), innovation, learning, and growth perspectives involve improving employee satisfaction and commitment, and developing employees' technical skills and level of involvement in innovations. A review of the extant literature reveals a strong emphasis on employees in fast-growth enterprises (Nicholls-Nixon, 2005; Tan, 2007). Therefore, it is not surprising that these firms focus on involving employees as part of their performance measurement system. Staff thoughts and feelings are an integral part of FGSMEs. As a case in point, Tim Fouhy of Reactive Media (ranked 50, 2003; ranked 57, 2004) elaborates: *We've just had a company session called "What I feel like expressing?" It's basically a set of guidelines and rules, about how everyone sits and it goes round the circle to say what you feel like expressing. But, no one is allowed to interrupt. You get to fully say what you think. It could be like, "I think it's too dark in the office, I find it quite depressing because there is not enough natural light. That's what I feel like expressing", and that goes on to the next person. It goes round and we all take notes and we type all those up and we write action points of, we are going to buy more lamps, etc. that's something we just started and the staff responded really well to.*

In addition, when Mark Harbottle (CEO of Sitepoint, ranked 50, 2004) reviews staff performance, he asks employees two questions with three related options: *Tell me three things that I do well, and three things that I don't do so well. You get some really good information about how you are running the business. A lot of them say that they have a sense of ownership in the business. They are able to influence change and make decisions. They don't feel that they are being controlled, they have freedom and they are*

empowered to do the right thing I think if you do empower people and give them responsibility for the success or failure depends on them in that area, they will rise to the challenge usually, if you have the right people.

Sitepoint also embraces the application of Key Performance Indicators (KPIs) as a way of evaluating employee performance. These indicators include revenue growth (both generally and for the specific areas within which staff work); innovation (number of employee ideas executed); quality (e.g., reducing the number of errors found in their books; and *sitepoint.com* popularity growth. Staff bonus payments are based on assessment of performance measures assessed against KPI and agreed targets.

On a more formal note, Dixon Appointments (ranked 96, 2003) measures employee performance by incorporating a 360° feedback program. This method aims to achieve a three dimensional picture of how each employee is performing. The objective of this exercise is to improve organizational, functional, unit, and individual performance. Dixon values staff opinions and encourages candid feedback. The 360 degree appraisal usually comprises a broad range of respondents (three to eight people) chosen as reviewers by a participant for their knowledge and understanding of a participant's ways of working. Participants and managers also complete proformas to provide a self-assessment. This review is used to determine those areas in which employees are confident and fully proficient, and to identify deficiencies needing to be addressed through training. This review also helps to set goals, highlight achievements to-date, and to establish objectives and training needs for the next 12 months.

Customer Focus

FGSMEs are customer centric, regularly receiving feedback from clients and taking their requests and complaints seriously into consideration (Tan, 2007). As a cliché, it might sound that these organizations possess a commitment to customer centricity for at least some period of time (Shah, Rust, Parasuraman, Staelin, & Day, 2006), retaining customers by developing new products which continue to serve current customers as they change what they value. According to the BSC, customer perspectives address traditional marketing issues such as market share, customer satisfaction and service quality ratings, customer loyalty, and customer perceived value (Kaplan & Norton, 2000).

FGSMEs attend to matters swiftly with regard to end-customers. Dianna Burmas, co-founder of Mor Cosmetics (ranked 12, 2004) elaborates: *We get so much feedback from the consumer, through the website. We respond very quickly to our customers and if there was an issue, we attend to it very quickly; they always will email or write us a letter and thank us for the experience. One of our customers wrote, 'WOW! That was the quickest response! Within the hour, like I've got a response from you and you've sorted everything out, now you have a customer for life.* Smoothie Franchise Boost Juice (ranked 7, 2004) CEO, Janine Allis conducts full audits of customers, including a mystery shopper system and general spot checks on franchisees. Customer feedback is also provided by end customers. Janine explains: *We have a VIBE club newsletter that goes out every month. We get a lot of feedback there - 200 feedbacks a day, and that's mainly from every single store, which has our email address on it for people to contact us.* Similarly, Dixon Appointments adopts a total quality management process which emphasizes customer satisfaction and continuous improvement through collecting and managing client and candidate feedback. The aim of this program is to monitor levels of

customer satisfaction and provide feedback for organizational development. Independent surveys: every year, clients' opinions are surveyed to monitor the overall perception of performance and issues that are of value to clients. These surveys are conducted by an independent organization to ensure confidentiality and objectivity of findings.

Combination of Firm Performance Measurements

Overall, FGSMEs utilize a combination of financial and non-financial measures to evaluate performance against their predetermined goals and objectives. For example, Smart Advertising (ranked 66, 2004) utilizes three firm performance systems: financial performance ratios, client reports, and industry awards. Financial performance ratios are set as targets including salaries, income, and expenses. Smart Advertising relies on clients' business reports to indicate how well they are doing. Every six months, this agency undertakes formal appraisals with all clients. Industry awards obtained are viewed as an indication of how well Smart is performing vis-à-vis their peers. In addition, management regularly enters agency work for various advertising awards.

The BRW Fast 100 is considered to be a prestigious award for SMEs. Ben Lilley, CEO of Smart Advertising (ranked 66, 2004) elaborates, *The BRW Fast 100 is a great sign to staff that we are doing well, and they should be proud of their achievements. It's a good sign to the industry.* Similarly, Smart Advertising has been awarded *B&T 2003 Agency of the Year*, and *2004 Advertising Agency Employer of the Year*. The latter award was based on staff surveys. Awards are considered a *great sign to staff that we are doing well, doing things right, and they should be proud of their achievements for the business. It's also a good sign to the industry as well that Smart is a company is doing well and that people should want to work for.* These three systems, when combined provide a structure in which Smart Advertising can evaluate overall company performance. In 2005, all performance ratios improved from the previous year's. For example, growth was reported for solid client reports and excellence awards, and revenue rose by 30%.

In conclusion, performance measures that are not relative to competitors, financial indices, internal business perspectives, employee and customer focus and the use of multi dimensional performance measures can be regarded as PMSs that are based on a comparison of pre-determined goals and expectations, in line with the BSC perspective, tailored to suit the requirements of each firm.

Implications and Directions for Future Research

These findings hold important research implications including the application of multifaceted measures from diverse sources, treating SMEs as a diverse population, and the utilization of different performance measures for different cohorts of SMEs. There are three main implications. First, performance measurements are not undertaken ad hoc. For example, FGSMEs utilize combinations of financial and non-financial measures that provide a comprehensive view of the business to guide strategy development, implementation and communication, and provide reliable feedback for management control and performance, which is in line with the BSC perspective.

Second, business researchers seem to measure firm performance utilizing financial metrics or customer based valuations (Stone & Banks, 1997). Usually, these tools incorporate subjective views of CEOs or managers, but do not necessarily reflect the goals of their firms. In some areas of research, there appears to be a tendency to offer

simplistic views of firm performance (Tan, 2007). Therefore, when investigating FGMSEs, researchers should evaluate firm performance relative to pre-established firm objectives, comparing outcomes to expectations.

Third, relative performance measures might not be relevant to FGSMEs, as these organizations do not compare themselves with competitors. FGFs do not appear to be competitor oriented, choosing to focus on customers (Tan & Smyrniotis, 2006). These findings however, are consistent with Deshpande, Farley, and Webster Jr. (1993) who distinguished MO from competitor orientation, arguing that it can be antithetical for firms to focus on competitor strengths rather than customers' unmet needs. For example, one of the main performance measures used by CEOs to interpret HR related issues is their record of staff turnover/employee retention rates.

Further, researchers need to investigate performance measures being used by FGSMEs in specific industries and at different stages of organizational development. For example, Phillips and Shanka (2002) found that sales and revenue measures were widely used amongst younger businesses (up to 10 years of age) whereas profit and loss measures were widely used among businesses that have been in operation over 10 years, indicating different emphases based on age of firm.

A principal limitation of this study concerns nontesting of interrater reliability of codes and categories derived from transcript material. As noted earlier, the first named author undertook all interviews. However, the veracity of coding and identification of themes is warranted in future studies. Another limitation relates to the self-selection of participants. It is unclear how to get around this concern and ways in which to identify fast-growth companies amongst the millions of registered SMEs, without undertaking a very large random selection of companies, the procedure of which involves costs either way. Not making any adjustments for age of firm can be considered as a further limitation of this study. It is unclear to what extent younger versus older FGSMEs differ in terms of performance measurement. Finally, this research should be viewed as a preliminary investigation geared towards theory development pertaining to PMSs in fast-growth companies. The proof of the pudding lies in the replication of these findings.

In summary, FGSMEs measure performance utilizing financial information such as cash flow, balance sheets, and profit and loss statements. ROI and ROE are considered to be less important. FGSMEs also utilize measures of customer satisfaction, attainment of industry awards, receipt of client reports, website popularity, objective employee performance indices, and staff retention. Founders of FGSMEs highlight the importance of providing employees with flexible environments and career opportunities as a way to reduce churn. These organizational characteristics signal non-financial benefits and incentives of working in these firms to potential employees and customers. These findings are in accord with extant literature (Kaplan & Norton, 2000), advocating associations between PMSs and management strategies.

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Business Idea Development in Entrepreneurship Education:

A Semiotic Structuration Approach

by Seppo Luoto, Henri Hakala, Teemu Kautonen and Miia Lammi

Teaching entrepreneurship traditionally focuses on transferring a set of pre-determined skills to students and providing them with practical experiences about entrepreneurship. This paper proposes that developing the students' business ideas in a dialectic space, without pre-set ideas about the skills needed for entrepreneurial action, might be more appropriate for students that have not yet taken any cognitive steps towards entrepreneurship. The approach developed in this paper is referred to as semiotic structuration, which is a combination of Giddens' (1984) structuration theory and the ideas of signification and social semiotics. The social structuration approach is illustrated with a teaching experiment. This pedagogic approach appears promising as a practical tool for developing student business ideas in the early, pre-entrepreneurial stages of the entrepreneurial process. In particular, the process can potentially transform initial sketches of fairly traditional business ideas into potential opportunities by introducing new ways of thinking about the business idea.

Introduction

Opportunity recognition is commonly considered the first stage of the entrepreneurial process (Christensen et al., 2004; Timmons, 1999), which Bygrave and Hofer (1991) argue involves all functions, activities and actions associated with perceiving opportunities and creating organisations to pursue them. Reynolds (2000) distinguishes four separate stages in an entrepreneurial process: conception, gestation,

infancy and adolescence. The majority of entrepreneurship literature has focused on the latter three stages, beginning with the gestation phase where nascent entrepreneurs have already explicitly committed time and other resources related to organisational emergence (Carter et al., 1996). The conception stage, which relates to the *pre-entrepreneurial* phases of business idea development (Kyrö and Carrier, 2005), has received considerably less scholarly attention so far. Here, pre-entrepreneurial refers to those stages of the entrepreneurial process where the entrepreneurial intention and business idea do not exist, are hidden or latent.

Entrepreneurship education in the higher education system primarily targets students in the pre-entrepreneurial phase (Leskinen, 1999; Melin, 2001; Peterman and Kennedy, 2003). While writing a business plan is a common focus of entrepreneurship education in universities and polytechnics (Paasio et al., 2005), we argue that the business idea development process is not paid sufficient attention. In fact, there is only limited literature focusing on the pedagogy of teaching the specific competence of opportunity recognition, which is at the heart of the business idea development process (Nixdorff and Solomon, 2005). Recent work by Edelman et al. (2008) suggests that we should re-focus the way we approach entrepreneurship education for example through non-linear teaching approaches, divergent thinking processes and encouragement of idea generation (see also Honig, 2004; DeTienne and Chandler, 2004). Students could improvise, draw and make collages, among other things, in order to bring more creativity into the process of thinking about business opportunity (Edelman et al., 2008).

One approach to introduce more creativity to the business idea development process as part of teaching business planning is presented in this paper and illustrated with a practical application from a pre-incubator experiment at a Finnish university.

The approach is based on Giddens' (1979, 1984) theory of structuration, which is extended through the concepts of signification (Derrida, 1976; de Saussure, 1983) and social semiotics (Hodge and Kress, 1988; Lemke, 1995; Voloshinov, 1973). This semiotic structuration approach emphasises the role of language in the business idea development process. The paper first briefly reviews the conceptualisation of opportunity in the entrepreneurship literature and then introduces the semiotic structuration approach for facilitating business idea development in the context of entrepreneurship education. Next, a teaching experiment is presented to illustrate how the semiotic structuration approach has been applied in a Finnish higher education setting. Finally, we discuss some preliminary conclusions and ideas for further research.

Opportunity in Entrepreneurship Literature – From Discovery to Semiotic Structuration

Discovery and Creation

The process of business idea development is related to the concept of opportunity in the entrepreneurship literature. The literature on entrepreneurial opportunity can be roughly divided into two main traditions, which this study refers to as the 'Discovery Theory' and the 'Creation Theory'.

The 'Discovery Theory' has a long history stretching back to Kirzner (1973) and Casson (1982). This tradition tends to view entrepreneurship as a universal, ahistorical and positive phenomenon (Ogbor, 2000), which its advocates desire to culminate in a timeless and spaceless grand theory of entrepreneurship (Tornikoski, 1999). The discovery-based view assumes that opportunities arise from competitive imperfections

in markets due to changes in technology, consumer preferences or some other attributes of the context within which an industry or market exists (Kirzner, 1973). In other words, opportunities are assumed to emerge independently of entrepreneurial action, while the task of the entrepreneur is to be alert to the existence of these opportunities and to claim those opportunities that hold the greatest economic potential (Casson, 1982; Kirzner, 1997; Shane, 2003).

In the alternative 'Creation Theory', opportunities do not just wait to be found. Advocates of this tradition suggest an evolutionary perspective where opportunities do not exist until entrepreneurs engage in an iterative process of action and reaction to create them (Baker and Nelson, 2005; Gartner, 1985; Weick, 1979). The opportunity creation perspective suggests that entrepreneurs do not recognise opportunities first and act thereafter. In contrast, entrepreneurs act first, wait for a response for their actions from the market, and then adjust and act again. During the course of acting and reacting, entrepreneurs enact the opportunities they ultimately exploit (Weick, 1979). Consequently, entrepreneurs may end up exploiting opportunities that did not exist until they were created by their own actions. Thus, entrepreneurs themselves can be the source of competitive imperfections in a market or industry.

An alternative approach to conceptualise the entrepreneurial opportunity process used by a number of scholars recently (Bhowmick, 2007; Fletcher, 2006; Jack and Andersen, 2002; Sarason et al., 2006) is to apply Giddens' (1979; 1984) theory of structuration. The structuration approach emphasises the *interaction* between the individual and the environment and recognises them as *intertwined*, rather than separate entities in the process of opportunity construction. This approach allows us to go beyond the dichotomies of social systems such as subjective/objective, micro/macro and discovery/creation. It stresses the role of the individual agents

producing and reproducing the structure or ‘scripts’ in social life, which again interact with the individual. As far as business idea development is concerned, this means that the individual has the potential to create the structure and challenge conventional thought patterns related to the business idea. The semiotic approach to structuration, which is developed in the following section, serves as a basis to the ‘*pedagogy of creation*’, which looks at how different business idea constructions can be both deconstructed and reconstructed, and thus developed into new, perhaps more innovative, business ideas.

Towards Semiotic Structuration

The structuration approach recognises that social life is not the sum of all micro-level activity, while it cannot be completely explained from a macro perspective either. Thus its proponents adopt a balanced position, attempting to treat influences of both structure and agency (cf. the duality of agency and structure). The acts of individual agents reproduce the structure. There is a structure to be seen, but the elements of the structure are of human and social origin. For Giddens (1984), structures constitute rules and resources organised as properties of social systems. Rules are patterns people follow in social life whereas structural resources relate to what is created by human action, rather than something that is given by nature. Giddens (1984) writes about ‘ontological security’, referring to the trust people have in the social structure which facilitates a degree of predictability for the everyday actions that ensure social stability. However, agency can also lead to the transformation of society. Giddens has referred to this transformation ability in his works (1976; 1979; 1984) as the reflexive monitoring of actions. Reflexive monitoring is the ability to judge the effectiveness of actions in achieving their objectives.

In general, the structuration theory suggests that ‘scripts’ that are formed in social and business structures guide human action. A script is accepted and used if it works, and rejected if it does not. An action that is legitimate, competent and powerful will be repeated. When an action is repeated, group and individual actions become scripts and they appear to be structural because they are observed in many places. The application of the structuration theory to opportunity research suggests that entrepreneurship is both a recognition and creation of scripts: a selection of common scripts and production (by modification) of uncommon scripts. The entrepreneur's difficult task is to choose scripts that are legitimate within business and social structures, competent enough to compete and powerful enough to make a difference. Entrepreneurial activity is thus both enabled and constrained by the business and social structure.

Even though Giddens (1979) used language as an example for his structuration theory, the theory does not consider the role of language and signs explicitly. However, since we create reality to a great extent in language, it is the very place where we both discover and create opportunities. Against this backdrop, we develop Giddens’ structuration theory into *semiotic structuration*.

The view of seeing language as a dynamic entity, which modifies and constructs human life could already be seen in the writings of Wittgenstein (1969), Voloshinov (1973), Vygotsky (1978) and Bakhtin (1981). Vygotsky’s (1978) focus was on investigating the role of cultural mediation and such cultural mediators as word, sign, symbol and myth in the development of human higher psychic functions, personality and human consciousness. Here, Bakhtin (1981) stressed the multi-layered nature of language, which he referred to as heteroglossia. Voloshinov (1973) argued that signs have no independent existence outside of social practice. Hence, he saw signs as

components of human activity, which take their form and meaning from within human activity, thus making signification biased. Wittgenstein (1969), on the other hand, proposed that our 'language games' are a reflection of our 'forms of life'. By this he meant that a language rests on the way we do things in the world. How then can we study the language as a changing, dynamic entity that carries different signs within it?

For this purpose, de Saussure (1983) and his theory of signs and signification offers an appropriate starting point. He suggests a two-part model of the sign. The *sign* is the whole that results from the association of the *signifier* with the *signified*. The signifier is the form that the sign takes, whereas the signified is the concept that the sign represents. The relationship between the signifier and the signified is referred to as *signification*. A sign is a recognisable combination of a signifier with a particular signified. The meaning of signs is in their systematic relation to each other, instead of deriving from any inherent features of signifiers, or from reference to material things. De Saussure (1983) emphasised the negative, oppositional differences between signs. He argued that concepts are not defined positively in terms of their content, but by contrasting them with binary oppositions (such as nature/culture, life/death) against other items in the same system. This view suggests that the meaning is best characterised by the opposite, thus; things are what they are not. The mechanism of language is based on oppositions of this kind and upon the conceptual differences they involve. De Saussure (1983) also stressed the arbitrariness of signs, specifically the arbitrariness of the link between the signifier and the signified. Applied to language, this indicates that language does not actually reflect but constructs reality.

Derrida (1976), on the other hand, sought to blur the distinction between the signifier and the signified by discussing deconstruction as a technique for uncovering multiple interpretations. He argued that all text involves a degree of ambiguity that

makes a final and complete interpretation impossible. Also de Saussure (1983) wondered why a particular signifier rather than its workable alternative was used in a particular context. He noted that a characteristic of what he called associative relations was held *in absentia* (de Saussure, 1983). The social aspects of signification and the mechanisms behind these ‘absences’ became then the interest of social semiotics (Hodge and Kress, 1988; Lemke, 1995), which is related to the previous theorising by Vygotsky (1978), Bakhtin (1981) and Voloshinov (1973). The interest of social semiotics was to explore why some signifiers rule over other, absent signifiers, in spite of the language and signs being arbitrary.

In summary, seeing language as a social, dynamic entity we propose that subjects use different resources and structures in order to *construct* meanings. These resources are relatively stable, but can still be altered. *Deconstruction* then targets the habitual linguistic resources and makes the dominant linguistic structures visible through counter-terms, or ‘absent signifiers’. *Reconstruction* is about the transformation of these dominant constructions with the aim of facilitating change. Further, the reconstruction needs to be *legitimised* through the process of enactment. The following section translates these admittedly abstract concepts into a more practical pedagogic model, which applies semiotic structuration to facilitate business idea development as part of teaching business planning.

Applying Semiotic Structuration to Facilitate Business Idea Development

In the context of business idea development, we argue that the process of semiotic structuration occurs in four stages (Figure 1). The first stage is to *build awareness of the existing, dominant constructions*, ‘the normal thinking’ (de Bono, 1993) with regard to the business idea. The idea is seen as a group of constructs, and the first

stage of the process is about collecting and identifying the relevant constructs relating to the business idea found in the ‘scripts’, ‘discourses’ or ‘narrative warehouse in society’ (Hänninen, 1999), which are the cumulative product of a lifelong socialisation process (Berger and Luckmann, 1966). The current and dominant constructions are identified, and their background and scripts are clarified. The second stage is *forming the deconstructions*, which is about challenging and unmasking the current idea by proposing alternatives to the constructs of the business idea. Thirdly, making room for alternatives begins the *building of reconstructions*. Investigating the constructs of the business idea from different perspectives changes the perception of the idea. The aspects of the business idea previously taken for granted are taken apart by creating alternative ways to approach the idea. The final stage, *legitimation*, is about piloting and ‘acting as if’. The reconstructed idea, a new script, a concept or a signifier needs to be tested in order to prove its value – the business idea needs to be enacted (Weick, 1979). By organising legitimating behaviours and elements around the idea, such as prototypes or initial customers, the reconstructed idea may become legitimised in the mind of the (prospective) entrepreneur.

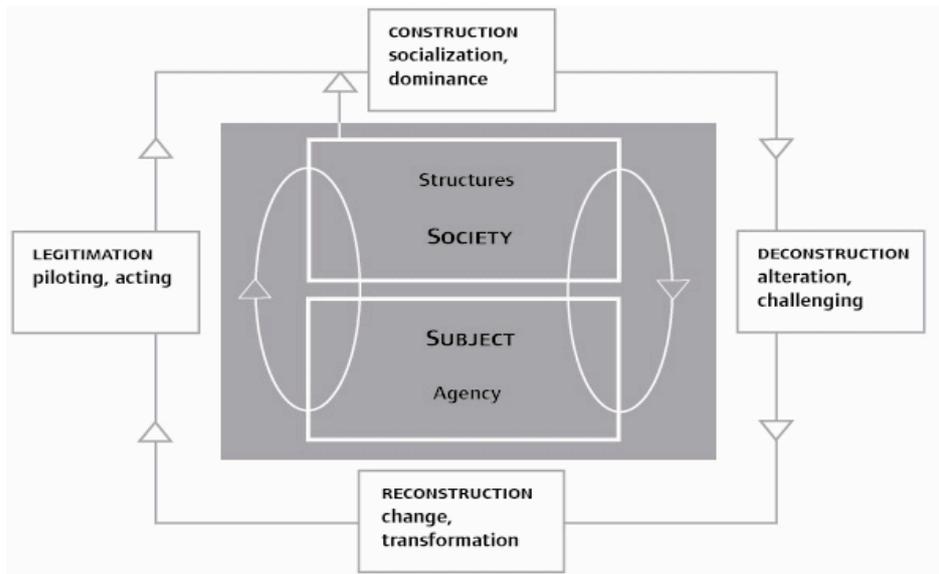


Figure 1 The semiotic structuration approach

The semiotic structuration approach is contrary to the traditional idea of education, which assumes that the ‘truths’ and ‘laws’ about the world, or in this case business idea development, can be transmitted effectively by teaching (Gorman et al., 1997). Rather it follows the alternative, or critical education approach, which focuses on the idea that knowledge cannot be transferred from one individual to another as such. Instead, the learner constructs knowledge in an interaction with the surrounding environment (Resnick, 1987) in a process of enactment (Weick, 1979) with the available linguistic resources in the narrative warehouse (Hänninen, 1999). This view, influenced by the works of Paulo Freire (1970) and Jack Mezirow (1991), also features the insight that constructions are dynamic and open during the interaction process. This involves questioning assumptions, beliefs and values, as well as considering multiple points of view, thus giving room for new understandings and also the opportunities to act upon them (Mezirow, 1991). This approach is manifest in the first and second stages of the semiotic structuration model in Figure 1.

More generally, this pedagogy is rooted in the cognitive and psycho-dynamic theories of the human mind, and the teacher's role is here seen more as supporting the learning process and arranging the learning environment, than transferring knowledge (Sarja, 1995). At a more practical level, the semiotic structuration approach to business idea development follows Bakhtin's (1981) idea of *dialogue*. In this context, dialogue can be defined as a communicative relationship between two or more human beings where the focus is on reflecting different views on a certain topic without trying to find any universal 'truths'. Bakhtin (1981) stresses the importance of diversity of language (heteroglossia) instead of normative, one-sided constructions (monoglossia) in any given situation. According to Huttunen (1999) this means the practice of tolerating the dynamic, open, changing and conflicting part of language, which brings into discussion a multitude of voices – even forgotten voices. The important element here is to de-centralise one's thoughts with the reflective process of moving between the different areas of thoughts and crossing the borders (cf. 'lateral thinking' in de Bono, 1991) towards the multiplicity of Bakhtinian voices. The aim is to develop a new relationship with one's experiences and thoughts and through that to understand them better and then open up new routes to provocative thought. Thus, the instructor's role in a business idea development process is to facilitate an open dialogue with the students, which challenges the obvious and routine use of language. The aspiration of this approach is also to elevate the power of language in the students' thinking, without attempting to influence and change their thinking all at once. Remes (2003) points out that this kind of focus can also reveal 'latent entrepreneurship' at the individual level, since the discussion and the methods are not closed and controlled but based on the reflectivity and wholeness of the human being.

In the following section, we illustrate the semiotic structuration approach to business idea development with a practical example from a pre-incubator experiment in the Finnish higher education setting. The concept of business incubation commonly refers to practical support programmes for nascent entrepreneurs with the aim of assisting them in locating the resources and supporting the processes required to set up a business (Hannon, 2005; Rice and Matthews, 1995). *Pre-incubation*, on the other hand, could be defined as a long-term process of enhancing the business development before incubation (Dickson, 2004). The underlying assumption is that business planning is a long-term and dynamic process and that the traditional educational settings are not sufficient to support this process (Gorman et al., 1997). The principal argument here is that the more practical the teaching and counselling service is, the more efficient it is as a way to enhance skills to entrepreneurship (Robertson, 2000). Here, the conventional orientation to entrepreneurship education with its pre-determined goals of enhancing entrepreneurial skills or making entrepreneurs, constitutes the dominant ethos.

However, there are other ways to approach the pre-incubation process. As argued by Hannon (2005), the long-term, individual pre-incubation process could serve as a suitable forum for other approaches. We contemplate the prospect for pre-incubation to be a ‘dialogic space’ where it is possible to reflect one’s thinking in a communicative relationship with an instructor, without the need to ‘enhance pre-determined skills’ related to entrepreneurship. This kind of pre-incubation idea is promoted in our illustrative case from the ‘Business Road’ programme in the Vaasa Science Park in Finland.

Opportunity Structuration in a Pre-incubation Setting: The Case of Creativelab

Pre-incubation in Creativelab

Vaasa Science Park provides a variety of services for university and polytechnic students related to the previously mentioned pre-entrepreneurial stage (Kyrö and Carrier, 2005). The umbrella brand for these activities is Business Road, which consists of a variety of seminars, lectures, workshops and guidance applying a broad range of resources, physical environments, know-how, networks and business planning services available at the participating universities and polytechnics. One of the services for students is called the 'Creative Workshop', which takes place in the CreativeLab facilities in the MUOVA research and development centre (www.muova.fi/en/). The idea of Creativelab is to offer dialogic and innovative physical environments for different purposes, such as reflection and 'out-of-the box thinking' (de Bono, 1991; Kristensen, 2004). The guideline in developing such workshop methods is based on multisensory, participatory and narrative ways of working. Pictures, music, plasticine, scenarios, drawings, stories, among other things, are the materials for generating, visualising and evaluating ideas. In our teaching experiment we connect these concrete learning environments to the ideas of semiotic structuration and apply these in the context of developing students' business ideas.

Creativelab is divided into four areas, which relate to the different phases of the creative process. The psychology of colours and different senses is taken into account in designing the environments. Themes of the four seasons follow through the four areas labelled as Breezy Stream, Dewy Meadow, Frosty Forest and Snowy Path. Breezy Stream is about visual senses, and group discussions and inspiration are at the centre of this spring themed, positive, liberating and activating yellow space. Dewy

Meadow, on the other hand, is a relaxing summer area for individual work, which makes possible the modification of ideas and encourages reflection too. Here, auditory senses are central and participants listen to relaxing music while diving into the subconscious on the green grass flooring. The third area, Frosty Forest, is designed for working in small groups, and the idea is to give the participants permission to be frivolous, generate silly ideas and play games. The theme is orange autumn and the sense of touch is emphasised through the tools available to the participants to create different illustrations of their ideas. The fourth area is Snowy Path, in which movement is essential: participants are moving, standing and working on whiteboards. The focal sense is balance and the colour is a broadening and cooling blue.

At the time of writing (August 2008), 25 groups of 4-6 students have gone through the semiotic structuration process of their business idea at Creativelab. The principal aim of the Creative Workshops is thus to facilitate and develop the competence of business idea development as part of the student's coursework focusing on business planning. Behind this approach also lies the idea of teaching for entrepreneurship rather than just about entrepreneurship. The early results have been promising, and some groups have proceeded to the next stages of making their agentic initiatives and legitimising their behaviour. However, as these phases are currently in progress, they will be the subject of further research, while the following example only illustrates the first three stages of the semiotic structuration process. We chose one group's structuration process as a concrete example for this paper. However, the outcomes of the other 24 groups are very similar and we consider the outcomes of the chosen group as typical and representative, rather than particularly successful.

Illustration of the Semiotic Structuration Model

The focal group of six students attended the Creativelab as part of their coursework for the 'Writing a business plan' module at the University of Vaasa, which was integrated into the Business Road programme. The process commenced with the group briefly explaining to the facilitator the kind of business idea they had in their minds. This group had identified the need for a service for arranging children's birthday parties in the Vaasa area. The preliminary discussion lasted approximately ten minutes in the Breezy Stream area of Creativelab. The facilitator wrote down the preliminary idea in bullet points and students were asked to prepare a one-page summary of the idea. After that, the process quickly moved on to discuss the students' current thinking with regard to their topic of birthday parties. Working with the facilitator, the students summarised their thoughts about the business idea in keywords onto the flipchart. These current and dominant constructions and scripts related to birthday parties demonstrated some 'self-evidence' related to the idea. These included: 'birthday parties are held somewhere' (in a concrete physical place), 'birthday-parties are held for children', 'in birthday-parties there is something to eat and drink', 'birthday parties last a couple of hours', 'people are invited', 'an invitation letter is given' and 'program and catering is arranged'.

At the next stage of deconstruction the facilitator challenged the group with counter terms to the dominant constructions identified earlier. These were fairly simple binary oppositions to the ideas the group had expressed about birthday parties such as: physical space for parties vs. mental or virtual parties; parties for children vs. parties for youngsters, adults or elderly; parties lasting a couple of hours vs. parties lasting minutes or days; parties need program and catering vs. no program or no catering; parties need invitations vs. no invitation, uninvited parties. This phase also

contains the idea of revealing the ‘hidden’ or ‘absent signifiers’ related to the concept of birthday parties available in our ‘scripts’ or ‘narrative warehouse’ (Hänninen, 1999).

For the reconstruction stage, students were invited to the Dewy Meadow area of Creativelab. The objective of this phase was to search for different alternatives and potentially change the idea to simply organise traditional children’s birthday parties. The facilitator put forward some random inputs, different concepts and words for the group. These were not pre-selected, but came randomly from a larger selection. The concepts and words in this case were: self-service, aftersales, design management, outsourcing, crowd-sourcing (meaning, for example, that the public may be invited to develop a new technology or carry out a design task), word of mouth, virtuality, environmental aspects, cross-selling, new format, pedagogies, learning, transformation and change. But they could also be other words or concepts – the idea is to help the thinking to ‘jump out of the usual lines’ or ‘out of the box’ as de Bono (1991) described in his concept of lateral thinking.

Thereafter the group was asked to associate the words and concepts one by one to the idea of birthday parties, and they were given 30 minutes for discussion at the group level. The discussion was documented on a white board by the facilitator and resulted in the following reconstructed ideas about birthday parties:

- virtual birthday (filming, memorising) & gifts
- virtual examples of parties
- virtual invitation cards
- thematic & experiential parties
- birthday gift catalogue for different segments
- birthday party advisor service
- educative parties at schools
- parties for 30th and 50th birthdays

- crowd-sourcing of topics on the web
- funny birthday videos on a website and voting
- one minute parties/reminder to the birthday girl/boy
- aftersales – contact with party participants with photos and greetings
- parties for retired people

Utilising the illustrative tools in the Frosty Forest section of Creativelab, the group summarised their new approach to birthday parties in a few central concepts. Three concepts central to the development of the business idea emerged from the new ideas generated previously. The simple idea of catering for different customer segments (parties for 30th and 50th birthdays) became a major consideration. Similarly ‘virtuality’ became both a platform for organising parties and a distribution channel. Thirdly, the common thinking about birthday parties as one special occasion was transformed into ‘the birthday party as a longer, experiential process’. In sum, the role of pre-incubation here was to support and empower the students through dialogue, by making the group expand their thinking about birthday parties.

The main workshop session at Creativelab concludes when the students present a pictorial summary of their newly reconstructed business idea. However, the group is given homework to sum up their core idea again, but this time in words and with reference to the reconstructive session. The task is to reconsider once more the simple questions of business planning – *what, why, to whom* and *how* the business is to be done – thus moving the group from initial loose ideas to creating an agentic initiative. Also further reconstructive ideas may surface after the workshop and the idea should be left open for new developments.

The final stage of the semiotic structuration model is the legitimisation of the initiative (Tornikoski, 2005). This means the ‘acting as if’ stage of the entrepreneurial process, including different legitimating behaviours and elements such as the

acquisition of initial customers, piloting, product development, team building, networking, selling and recruitment. Through the completion of a successful legitimisation, the entrepreneur should proceed to the incubation phase of the entrepreneurial process and eventually establish the new business formally. At the time of writing this paper, out of the 25 student groups that had gone through the constructive, deconstructive and reconstructive stages, two groups had started the agentic initiative. Further, four groups have expressed an interest in moving onto legitimising their idea, and individual plans to do that are being drawn up as part of the pre-incubation process.

Concluding Remarks

This paper contributed to the discussion on entrepreneurial opportunity in the context of entrepreneurship education. More specifically, the paper described and illustrated a pedagogic process of semiotic structuration that can be used to enhance the process of business idea development as part of teaching business planning. Theoretically, the process is based on a combination of Giddens' (1979; 1984) ideas of structuration, seeing language as social and dynamic (Bakhtin, 1981; Volosinov, 1973; Vygotsky, 1978), signification (Derrida, 1976; de Saussure, 1983) and social semiotics (Hodge and Kress, 1988; Lemke, 1995). The process was applied in a pre-incubation setting with an illustrative case from a Finnish pre-incubator initiative.

The application of the semiotic structuration approach suggests that early configurations of business ideas in the pre-entrepreneurial stage (Kyrö and Carrier, 2005) can be developed into new kinds of business ideas through the process of semiotic structuration. The case illustrates that the deconstruction and reconstruction of thinking related to different (current) business ideas may reveal 'hidden structures'

and open up ways to new signifiers. By revealing the hidden structures the pre-entrepreneurs have in mind, through the process of deconstruction and utilising semiotic tools to introduce new signifiers into the thinking process, the sketches of fairly traditional business ideas can be transformed into potential opportunities. Thus, the semiotic structuration process may potentially lead to more innovative ideas and business opportunities. The tentative results from our piloting of the semiotic structuration model with student groups in Creativelab appear promising. Instead of simply working towards a coursework business plan with a business idea as it first occurs to them, students create new ideas and reflect them back to the realities in the market – in other words, they enact opportunities. The underlying structures are uncovered, challenged and altered into new business opportunities. Moreover, as the students appear truly committed to ‘put in the extra hours’, we are convinced that the semiotic structuration process makes some sort of a mark in their heads compared to the processes found in a traditional classroom setting.

However, without further evidence we do not of course know whether the reconstructed business ideas would be more successful than the initial ones when applied in the ‘real world’. Even with longitudinal data it is very difficult to demonstrate the effects of this process in terms of business success, given that most students do not start a business – at least not while they are still studying. This is a common problem in evaluating entrepreneurship education initiatives (Lundström and Stevenson, 2005). On the other hand, the pedagogic aim of the business idea development exercise is not limited to guiding students towards starting up in business. The benefits of learning techniques for creative thinking may also manifest themselves as entrepreneurial and innovative activity when an employee. Even if we do lack proper empirical evidence on the effectiveness of the semiotic structuration

approach, the gut feeling based on reading hundreds of student authored business plans is that the business plans written by students who have participated in a Creative Workshop outperform their peers in terms of the innovativeness of their business idea.

Business idea development is a very complex process influenced by a wide variety of factors, which need to be further studied and elaborated. Our tools for semiotic structuration need further enhancement and a more rigorous theoretical foundation. However, evidence on whether it ‘works’ can only be collected by experimenting. Whether the resulting semiotic structuration model then serves only as a practical teaching tool or whether it develops further into a theoretically solid model, remains to be investigated in further research. Future studies could approach the process of business idea development on a stage-by-stage basis, following the semiotic structuration model. For instance, there is a need to enhance our understanding of the dominating ‘scripts’ for the different objects under discussion in the context of business idea development. Deconstruction of these dominant structures is not easy and further practical tools to unravel and challenge these scripts need to be developed. Moreover, we do not have sufficient understanding of what affects and increases the ‘out-of-the-box’ thinking in real-life settings. How do the environment and the different tools applied affect this? What is the role of the facilitator in these processes? Finally, policy makers and the enterprise support community would benefit from understanding what kind of methods and processes could be used to increase the likelihood of agentic initiatives being formed as a result of the business idea development process, and what role semiotics can play in that context.

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Business Models in SME Context – Research, Implications and Way Forward¹

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Abstract

Ventures fail despite the presence of market opportunities, novel business ideas, adequate resources and talented entrepreneurs. One possible explanation is the fundamental model driving the business. However, little attention has been paid by researchers to the business model concept. During the years 2007-2008 there has been a noticeable increase in this interest. However, most of this recent research is either industry-specific or does not take an SME-focus. This paper discusses and illustrates what are the key implications of business models for both SME research and SME-development. The paper argues that since the “dot.com crash” the importance of business models has increased again. The paper looks at the business model concept from an SME-perspective. The paper illustrates the origins of the business model thinking and how it has evolved. It is strongly pointed out that the key concept, business model, has numerous definitions and purposes. We will also illustrate different business models briefly to show how most of the business models are rather static constructs. Recent literature, however, points out the importance of dynamic business models, i.e. that business modelling should be seen as a continuous process rather than creation of an artefact. This process should yield several sub-constructs rather than one static model. Business models are shown to be a problematical concept academically, but understood correctly, a valuable tool for SME-development. In the conclusions, we will draw together from the literature review, which are the key issues that SMEs and people working in the field of SME development – whether practitioners, educators, policy makers or researchers - should understand about business models.

1. Introduction

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Ventures fail despite the presence of market opportunities, novel business ideas, adequate resources and talented entrepreneurs. One possible explanation is the fundamental model driving the business. However, little attention has been given by researchers to business model concept (Morris, Schindehutte & Allen 2005). During the 2007-2008 there has been a noticeable increase in this interest (see for example Rajala, R. , Westerlund, & Rajala, A. & Leminen 2008). However, most of this recent research is either industry-specific (for example Rajala & Westerlund 2008) or does not take a SME-focus (for example Chesbrough 2007).

SMEs are a demanding field of research because of their heterogeneous nature. SMEs should not be considered as smaller versions of large corporations, but instead they face somewhat different challenges. The business strategies of SMEs may vary greatly from the ones of larger companies, especially in their early growth phase. It is important to realize that the importance of small and medium-sized enterprises (SMEs) cannot be ignored. SMEs play an important role in the European economies by their contribution to both employment and economic growth. SMEs represent 99 % of all enterprises in the EU and provide around 65 million jobs and they can be considered as an essential source for entrepreneurial spirit and innovation. (EU 2004) (Puhakainen & Malinen 2000)

The purpose of this article is to investigate the business model-concept from the SME perspective. The research is based on literature review, seeking to understand the importance and implication of business models for SMEs. This is not a straight-forward task, since the whole business model concept is less than clear and even the basic purpose of business model varies.

2. Views on business models

2.1 Business model definitions

There are almost as many definitions for a business model concept as there are authors. Even though this is a very tired metaphor, in this case it illustrates well the problem any researcher faces when trying to define this concept. In this chapter we illustrate a few definitions, selection of examples has been based on either their popularity or contrasting nature.

Timmers (1998) defines a business model as

- an architecture for the product, service and information flows, including a description of the various business actors and their roles; and
- a description of the potential benefits for the various business actors; and
- a description of the sources of revenues.

Chesbrough and Rosenbloom (2002) focus on the operational aspects of the business model.

In their view, a business model should:

- articulate the value proposition and its relation to intended market segment
- define the value chain of the firm required to create and distribute the offering outlined in value proposition
- determine the complementary assets needed to create the offering and support its position in the value chain
- position the firm within the value network context, including the identification of potential complementors and competitors
- estimate the cost structure and profit potential associating the business model concept to value creation and
- formulate the means whereby a firm will gain and hold an advantage over its rivals linking the business model concept to strategy

Yip (2004) echoes similar thoughts. For him, a business model consists of:

- value proposition
- nature of inputs

- how to transform inputs (including technology)
- nature of outputs
- vertical scope
- horizontal scope
- geographic scope
- nature of customers
- how to organize

Rajala & Westerlund (2007) refer business models to the ways of creating value for customers, and to the way a business turns market opportunities into profit through sets of actors, activities and collaboration.

Basically all the examples above take more or less the same approach, answering the “who”, “what”, “when”, “where”, “why”, “how”, “with whom” and “how much” questions any organization needs to be able to answer to provide anything. There are differences, for instance Rajala & Westerlund stress the importance of networks and networking, but they are minor.

Morris et al. (2005) take a different approach and distinguish three categories of business models: economic, operational, and strategic level where the perspective becomes more comprehensive as one progressively moves from economic to the operational and from operational to strategic levels.

Magretta (2002) claims that terms business model and strategy are among the most sloppily used terms in business, and that they are often stretched to mean everything – and end up meaning nothing.

Furthermore, Magretta (2002) argues that when business models are used correctly they actually force managers to think thoroughly about their business. Business models’ strength as a planning tool is that they focus attention on how all the elements of the system fit into a working entity. Business models fail to work if they fail either the narrative test (i.e. models are built on

faulty assumptions about customer behaviour) or the numbers test (the business model is financially untenable). It should be noted that there are business models with untenable revenue logics – in the traditional sense – but which are still successful. Recent examples, such as Facebook or Youtube, point out the importance of acquiring customers and selling the company to supplement some bigger corporations operations. Regarding these examples, it is also worthy to point out that there is very little research on Internet-communities in business-model context. Communities are naturally a demanding issue in business modelling, since it is very hard to foresee the end results if community plays a significant role in the business model.

2.2 Business models and strategy

Business models are a way of improving doing business under uncertainty (Osterwalder & Pigneur 2002). Business models can be seen in a certain sense as managerial equivalent of the scientific method – start with a hypothesis, which is then tested in action and revised if necessary (Magretta 2002.)

In order to guarantee smooth strategy execution, firms require a very clear communication of concepts between the stakeholders. Business models can play their part here. Figure 1 illustrates that a business model can be the conceptual and architectural implementation (blueprint) of a business strategy and represent the foundation for the implementation of business processes and in this case information systems. Business models thus describe the logic of a “business system” for creating value that lies behind the actual models. The theoretical foundations of business models are built most directly to Porter’s value chain and strategic position concepts, and Barney et al. resource-based theory (Morris et al. 2005; Rajala & Westerlund 2007).

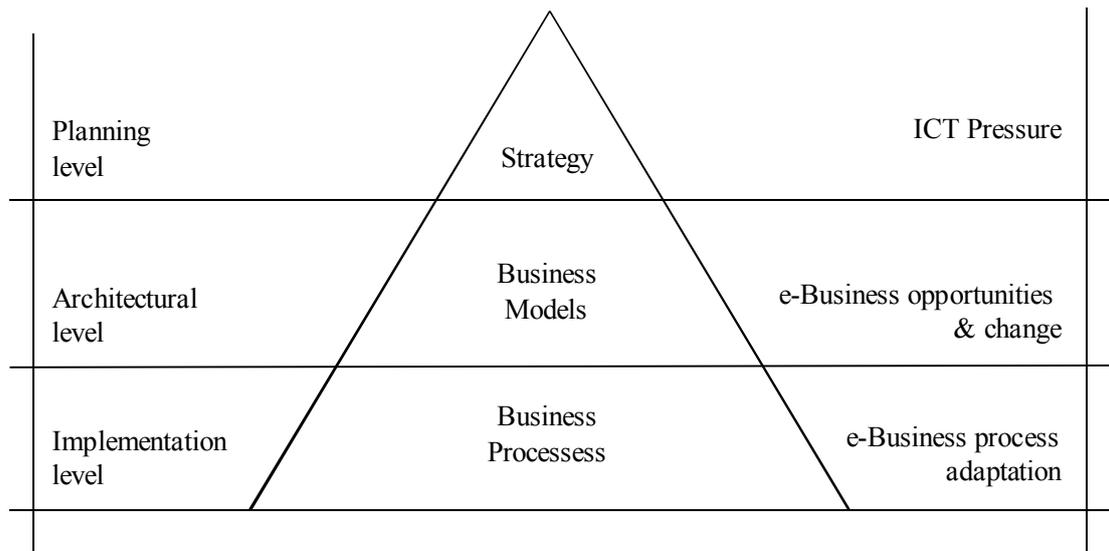


Figure 1. Business Logic Triangle (Osterwalder & Pigneur 2002)

However, it is important to notice that as strategy is generally seen as a dynamic concept (i.e. in modern world there are few strategies that survive unchanged the test of time), the business model concept should also be dynamic. Mitchell and Coles (2004) propose that even more important than the created business model (as an artefact) is the process of business model innovation. They claim, based on their empirical research, that the most successful companies were those that frequently changed their business model to create new competitive advantages. This is very deeply in contrast with Porterian thinking of finding a defensible, favourable position in the value chain. However, it echoes the thoughts of recent strategy literature, such as Eisenhardt and Sull (2001).

Eisenhardt and Sull (2001) illustrate basic differences between Porterian and resource-based approaches and add the third approach, namely simple rules. Their point of departure is that as business is getting more complicated, strategies must simplify:

“In stable markets, managers can rely on complicated strategies build on detailed predictions of the future. But in complicated, fast-moving markets where significant growth and wealth creation can occur, unpredictability reigns. It makes sense to follow the lead of entrepreneurs and

underdogs – seize opportunities in the here and now with a handful of rules and a few key processes. In other words, when business becomes complicated, strategy should be simple.”

	Position	Resources	Simple rules
Strategic logic	Establish position	Leverage resources	Pursue opportunities
Strategic steps	Identify an attractive market Locate a defensible position Fortify and defend	Establish a vision Build resources Leverage across markets	Jump into the confusion Keep moving Seize opportunities Finish strong
Strategic question	Where should we be?	What should we be?	How should we proceed?
Source of advantage	Unique, valuable position with tightly integrated activity system	Unique, valuable, inimitable resources	Key processes and unique simple rules
Works best in	Slowly changing, well-structured markets	Moderately changing, well-structured markets	Rapidly changing, ambiguous markets
Duration of advantage	Sustained	Sustained	Unpredictable
Risk	It will be too difficult to position as conditions change	Company will be too slow to build new resources as conditions change	Managers will be too tentative in executing on promising opportunities
Performance goal	Profitability	Long-term dominance	Growth

Table 1: Three approaches to strategy (Eisenhardt and Sull, 2001)

If we accept the linkage between strategy and business model concept, it follows that business models can also be classified between the “strategic schools” they are based on. Also, if strategy is seen as a dynamic process, business models should probably be seen in similar light. Our earlier thoughts on communities and business models echo similar thoughts.

2.3 Business models and SMEs

There have been relatively little academic publications on SMEs and business models. For example, a search to ProQuest-database (narrowed to scholarly articles) gives only 25 results. Moreover, most of the results do not actually focus on combining these two concepts, but either BM or SME has minor role. Almost all available research is based on individual cases or illustrating the benefits of e-business for SMEs. Bearing in mind the heterogeneous nature of SMEs, we could classify SMEs in numerous ways. Typical classifications include at least the following types:

- survival
- growth (linear vs. unpredictable)
- local focus
- born global
- succession

When we add the larger business-context to the picture, we can add at least the following elements affecting SMEs and their business models.

- industry (for example e-business, mobile services are typical)
- change-situation (for example adding service business elements, going international)
- tight value system vs. open networks
- closed vs. open innovation (see especially Chesbrough 2003, 2006)

When you combine the variety of business model definitions with heterogeneous nature of SMEs and add the different business contexts in which even seemingly similar SMEs operate the picture becomes rather foggy. The number of permutations becomes a burden for any classification or generalization efforts. This is probably the reason for the lack of available academic material.

3. The background of the research

As indicated before, the business model literature is fragmented and there is not a common view on what the concept means. Business models can be classified on their (operational) level, their key purpose and by other attributes.

In our own research and company development work we have repeatedly found out that SMEs try to emulate the business models of bigger companies. For instance, for a technology manufacturer, the natural course to the markets is the establishment of sales offices in other countries. A company of ten employees thus tries to emulate a much bigger company. In our view, such companies should first at least considerate other business models as a way to the markets (affiliate, alliance-based for instance). Other issue is that we have found out that SMEs try to create static business models and do not usually see the need for constant innovation and change. Static position in a tight value system seems to be the hidden ideal behind many of the managers, even through their business context might demand something else.

It should also be pointed out, that modern ICT allows bigger companies to compete in the fields in which the SMEs have traditionally held competitive advantage. Personalization of information and products, local knowledge and so on are now possible for larger companies due to the use of databases, Internet and communities (Puhakainen, 2001). This is clearly a risk for some SMEs.

Also, community based business models seem to offer great possibilities, not only to few winners but also as supplementary operations to more traditional companies. There are examples from clothing industry, where users/customers do practically all things in the Internet: design, vote on designs, market to each other and finally order. These companies have even outsourced production so operations are extremely cost effective. This kind of thinking is portable to more traditional sectors.

4. *Examples of business models*

Examples of business models and their descriptions can be found in the in numerous case-studies (most not academic) but as well in the Internet. For example, Wikipedia lists the following examples, (of which we will illustrate only the key elements):

- The subscription business model
 - Revenue comes mainly from subscriptions to the main product or service. Game industry uses this model a lot, both as a key model and as a supplementary model. Examples: World of Warcraft.
- The razor and blades business model (bait and hook)
 - Classical lock-in strategy. Buy something (cheaply) and be married to it, only designed “blades” fit to the main product or service.
- The pyramid scheme business model
- The multi-level marketing business model
 - Both of the above border on the criminal side in peoples’ minds. Some ideas of their hierarchy and revenue logics can however be used in more “acceptable” business models.
- The network effects business model
 - Also a classic. Facebook, youtube, Fax, Gsm. Anything that complies with the Metcalfe-law.
- The monopolistic business model
- The cutting out the middleman model
 - This is very typical from the Internet-era. Dell and other direct sellers. Still very viable in certain situations.
- The auction business model
- The online auction business model

- eBay but as well auctions as a marketing magnet and/or supplementary source for revenue
- The bricks and clicks business model
 - Physical store and Internet-operations combined
- The loyalty business models
 - CRM-focus
- The collective business models
- The industrialization of services business model
- The servitization of products business model
- The low-cost carrier business model
 - RyanAir and other. Single channel strategy, low costs.
- The online content business model
 - Very few examples nowadays outside adult entertainment and scientific e-libraries.
- The freemium business model
 - Give free, charge for services etc.
- The premium business model
- The direct sales model
- The professional open-source model
- Various distribution business models

Some of the above fit the before-mentioned business model definitions better than others.

Some on the other hand are very simple descriptions of the firms' activities (for closer details on each model, see http://en.wikipedia.org/wiki/Business_model).

These models illustrate the value proposition, revenue generating mechanism and the place of the company in the value network. They are basically sound and widely used models, but there is one problem which was very typical during the e-hype period: the models are mutually exclusive or at least there is no discussion on the simultaneous use or how to combine them into new hybrid models.

There is also a problem in the static nature of the constructs above. Most business models are shown as static, once created constructs. For example Mitchell & Coles (2004) and Yip (2004) stress the need of continuous business model innovation and refinement. This move away from static models can be voluntary (search for new markets etc.) or forced (changes in business environment render current business model obsolete)

5. Which business model fits to the context of the company?

As illustrated, the business model concept is rather fuzzy from academic perspective. There have been some efforts in creating a more “rigorous” business model concept but it may be questioned whether these efforts are really creating value, at least from SME development perspective. For instance, Morris et al. (2006) use cluster analysis and illustrate the existence of four generic business models. This is a typical effort for more rigour. However, they strongly point out that the dynamics of model evolution remain elusive. We have also pointed out in this paper that business model evolution and dynamic business models are important factors. In some cases static models will surely work. However, just by looking at the issue from SME strategic perspective and the strategic goals, it is probable that very different models are needed for these situations.

SME-specific strategic goals:

- survival

- growth (linear vs. unpredictable)
- local focus
- born global
- succession

But we must also take into account the business contexts:

- industry (for example e-business, mobile services are typical)
- change-situation (for example adding service business elements, going international)
- tight value system vs. open networks
- closed vs. open innovation (see especially Chesbrough 2003, 2006)

Additionally, we should also include the strategic school or basic strategic way the firm is managed. According to Eiserhardt and Sull, these are:

- Position (Porterian)
- Resources (RBV, Barney)
- Simple Rules (Turbulent, complicated markets)

So, the key issue here is to understand the need of defining what a business model means when working with SME business development. The shared belief of the concept is crucial in this field. We suggest that any concrete business model (document) should clearly point out the purpose of the artefact (typically a document) and illustrate what business model means in its context.

Other key issue is to understand the importance of the process of developing business models. Going through a number of business models may give ideas and possibilities of adapting parts of them to the own model. And if we accept the business model evolution, the focus is more

on process of constantly developing a tailored model to each company than choosing something ready.

6. *Conclusions and implications*

The key contribution of the paper is to illustrate that understanding of different business models and associated revenue logics (and value networks) gives both SME-managers and people involved with SME-business development tools and greater possibilities in defining further routes for most SME businesses.

The key findings are:

- Business model definitions vary markedly. Before embarking on any discussions or company development tasks, there should be a common understanding what the key concept means.
- Based on the literature review, we have shown that generally the business model should answer to the following questions: “who”, “what”, “when”, “where”, “why”, “how”, “with whom” and “how much”. These are the questions any organization needs to be able to answer to provide anything.
- Business models can be valuable tools for both planning and communicating what the business is all about. However, it is important to notice that in most cases, the process of building and developing a business model is more important than the actual construct. Static business models can be dangerous. Dynamic business models are more a process than a construct.
- Existing business models could and should be adapted to the strategic context of the firm. Stable vs. turbulent markets demand different business models.
- Many illustrated business models contain elements that could help SMEs in both survival and growth strategies or preparing for new, turbulent (simple rules) strategy-

based operations. Especially the use of multiple revenue streams (derived from existing business models) can strengthen the position of the company in the value chain or network.

- Finally, even if SMEs do not see the importance of applying business model-thinking to their operations, it is still useful to understand what business models are all about. The emergence of innovative business models for bigger companies might pose an unforeseen risk for SMEs in their traditionally “safe fields of operations”.

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A Study on Enhancing Export Insurance Use Rate in SMEs

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This study is to find out the practical way to run the Export Insurance Act in order that the export SMEs can overcome the facing danger.

For attaining the goal, this study is to analyze documents filed a protest against the Export Insurance Cooperation from 2001-2005 and is to describe the occurring problem in SMEs

As a result, we propose the following concrete ideas. First, the denial procedures improvement of the objection review. Second, it replies to objection practices to improve itself. Third, the interactive reduction policy is based on the disclaimer's determination. Forth, defeat of the moral hazard of insurance contractors. Fifth, need to analysis the reaction about objection to the policy holder. Finally, need to specification of council personality.

Measuring Entrepreneurial Management and Linking it with Performance: An Empirical Study in Australia

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According to behavioral definitions of entrepreneurship, everyone is regarded as an entrepreneur who follows a distinct management style that can be associated with commitment to opportunity, flexibility, and acting beyond one's resources. Major contributions to this field have been made by Howard Stevenson. Behavioral definitions have the advantage that they can be applied for all situations in business life, including starting a new venture, SME management, and corporate intrapreneurship. Nevertheless, empirical research particularly on Stevenson's behavioral approach remains very little. A survey of existing literature shows that Stevenson's behavioral entrepreneurship definition so far was only used once in empirical research (Brown, Davidsson, Wiklund 2001). The aim of our paper is to test the variability and reliability of the study by Brown et al. and to take research on step further: We want to link entrepreneurial management with firm performance, assuming that companies which follow core principals of entrepreneurial management outperform those which show a more administrative management behavior. We questioned managers in Australia to test the validity of the constructs and to explore any correlations with performance.

Track: 14. Other SME Related Issues

Alliance partners' relationship in SMEs: the role of behavioral attributes and the impact on knowledge transfer

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To acquire knowledge, organizations and people need not only absorptive capacity but also the ability to deal with socially construed organizational barriers. The quality of the relationship between partners, researchers have found, is a major contributor to effective knowledge transfer. This study examines the relationship between social and behavioral attributes and two types of knowledge transfer such as explicit knowledge and tacit knowledge. The results indicate that trust and commitment do not influence the transfer of either explicit or tacit knowledge. However, conflict resolution and cooperation play a key role in the transfer of both types of knowledge.

Track: 14. Other SME Related Issues

A Study on Private Information Protection and Related Issues in SMEs

by Mihyun Ahn, Dongho Won, Seungjoo Kim

Small and medium-sized enterprises (SMEs), which account for 99percent of all Korean corporations, have played a crucial role in boosting the country's economic development and, especially, in activating business information development in the 1990s, thereby bolstering productivity and work efficiency. However, SMEs' levels of information protection are relatively low, leaving them open to Internet hacking and virus attacks, as well as making them a route for attacks by third parties. As such, they have not undertaken sufficient preparations, either technically or administratively, to protect against information attacks.

In particular, corporations have in recent years been gathering and storing an increasing amount of customers' private information through both online and offline routes in an effort to conduct publicity and marketing analyses, but SMEs' information protection activities remain insufficient, leading to the occurrence of diverse private information intrusion accidents. Moreover, as the number of online shopping malls and other small-operation Internet service firms continues to increase, concern over private information attacks is spreading.

Furthermore, the Ministry of Public Administration and Security last year increased the number of targets of mandatory private information protection businesses to 14 categories - from telecommunication service providers, hotels, and large marts, etc. - to include oil refining companies, job arrangement centers, marriage service agencies, and so forth. As such, at home and abroad, corporations are increasingly required to take technical and administrative measures to protect private information. Thus, SMEs should now raise their awareness of this issue and undertake the necessary measures to protect private information.

This study examined a range of statistics and surveys on the information development and levels of information protection of Korean SMEs in order to explore their efforts to protect private information and their defense capabilities. It defined private information, discussed the necessity for the protection of private information, and examined methods of calculating the value of private information. It also reviewed domestic and overseas examples of major violations of private information to ascertain and explain the size of such damage and its adverse impact on businesses.

Furthermore, the study took a look at the trends of domestic and overseas regulations on private information protection, and examined the overview of domestic SMEs' efforts to protect private information and related problems through surveys and statistics.

In addition, it examined SMEs' tasks of private information protection from both the social and legal perspectives and presented practical measures to enable SMEs – lacking in costs and information protection experts – to reinforce their private information protection.

Keywords : Small and medium-sized enterprises (SMEs), Private Information protection, Social and legal perspectives on private information, Private information protection activities

Introduction

According to the statistics released by the Small and Medium Business Administration (SMBA) (April 2008), the number of Korean small and medium-sized enterprises (SMEs) stood at 3,022,053, or 99.9percent of the country's total number of companies (3,017,787), and SMEs accounted for 87.5percent of the country's total employment, as of 2006. This high representation on the part of SMEs can be seen not only in Korea, but also in Japan where the number of SMEs stood at 5,652,091, or 99.1percent of the country's total number of companies, as of 2006, and in Germany where the number of SMEs stood at 2,901,, or 99.7percent of the country's total, as of 2000.

SMEs come in diverse types and sizes. In the case of Korea, by business, as of 2005, wholesalers and retailers accounted for 28.6percent of the total number of SMEs, lodging and restaurants 20.7percent, transportation 11.2percent, and manufacturing 11.3percent; while the four major sectors – manufacturing (25.4percent), wholesalers and retailers (21.3percent), lodging and restaurants (15.2percent), and transportation (7.0percent) – accounted for 68.9 of the total number of SMEs. Notably, 50percent of SMEs are located in the greater Seoul area including Seoul, Gyeonggi-do and Incheon City.

By size, 2,671,928 SMEs or 88.4percent of the total number of SMEs are small businesses with a workforce of fewer than five people, 251,721 (8.3percent) are small-sized firms, and 94,138 (3.1percent) are medium-sized firms. Notably, small and medium-sized manufacturing firms with a workforce of more than five people, as of 2006, accounted for 49.4percent of the total output, 47.8percent of the total roll-out amount, and 51.1percent of the total value-added, and as such they play a crucial role in Korea's economy. Not only in Korea, but also in Japan, Taiwan, and the USA, SMEs accounted for a high share of the manufacturing sector (SMBA 2008).

Category	Korea (2006)	Japan (2005)	Taiwan (2006)	USA (2005)
Number of SMEs (SM manufacturing firms as a percentage of the total number of SMEs)	117,569 (99.4)	273,289 (98.8)	132,354 (96.7)	298,286 (89.5)
Employment (1,000 people)	2,192 (75.9)	5,823 (71.5)	2,105 (75.9)	6,039 (44.2)
Roll-out amount	4,151,357(100 million won) (47.8)	145,958(1 bn yen) (49.4)	380,035(10 million yuan) (31.5)	- (-)
Statistical criteria	Employees (firms) 5 – 300 people	Employees (firms) 4 – 300 people	Sales (enterprises) Under 80 million yuan	Employees (firms) Under 500 people

SMEs' contribution to the national economy is forecast to rise further still in the future. In a joint research program conducted in 2003 by the SMBA, the Korea Institute for Industrial Economics and Trade (KIET) and the Korea Development Institute (KDI) on the development vision of SMEs and a strategy for fostering them, SMEs' output share increased from 47.5percent (1999) to 48.6percent

(2004), to 49.5percent (2005), and to 53.0percent (2008). Their exports increased from USD 49 billion (1999) to USD 90.4 billion (2004), USD 92.1 billion (2005), and USD 104.1 billion (2008). On the assumption that the technological level of SMEs in the developed nations was 100, the data forecast that the level of Korean SMEs would increase from 73.8 (2004) to 80 (2008) (SMBA, KIET, KDI 2003).

In terms of the number of businesses and the number of employees (between 2001 and 2006), SMEs' contribution ratio stood at 103.5percent and 116.9percent, respectively; a similarly high contribution on the part of SMEs could be seen in Japan, the USA, Taiwan, and the UK (Kbiz 2008), too, each of which showed a ratio of around 95percent as of 2006.

Notably, SMEs' contribution to national growth and economic development is increasing year on year; as of 2000, with regard to SMEs' contribution to economic development in the manufacturing sector, the number of firms and the number of employees accounted for over 96percent of the total, while in the output and the value-added categories, SMEs accounted for 52.7percent and 52.9percent of the total, respectively, outpacing large companies (SMBA 2008). Given these statistics, the key players in bolstering national economic development, employment and technological innovation are shifting from large companies to SMEs. Indeed, they are becoming major national economic growth engines.

One such key growth engine with regard to SMEs is the introduction of IT. According to an evaluation of SMEs' levels of informatization conducted in 2008 by the Korea Technology and Information Promotion Agency for Small and Medium Enterprises (TIPA), after the introduction of IT, SMEs cut their operation, maintenance, labor and manpower costs by over 70percent and, notably, improved their work efficiency by 40.2percent, showing a continued qualitative work improvement (TIPA 2008).

As SMEs focus increasingly on the introduction and utilization of IT, they can increase the volume of their information and diversify both the types and the channels of that information. However, SMEs' level of information protection is lower than that of large companies, leaving their IT systems exposed to various hacking attacks and intermediary routes for hacking. Notably, if an SME's IT system becomes infected with a worm virus, the corresponding damage will not be limited to the SME itself, but may well spread to wider society via the Internet; thus, it is vitally important to protect SMEs' information (Nara Economy 2004). Moreover, in recent times not only conventional threats to information protection by hacking and viruses, but also new threats to information protection via web applications, Internet search engines, and wireless networks have been on the increase. Technical and managerial preparation against these threats is lacking. Notably, enterprises are increasingly gathering and storing customers' private information via online and offline routes in order to conduct publicity and marketing analyses, but information protection activities are deficient, while small-operation Internet service businesses such as online shopping malls are emerging rapidly, leaving SMEs vulnerable to information protection, making them the targets of various types of private information encroachment. Such concerns are multiplying.

This study analyzes the statistics and survey data on the informatization and information protection efforts of Korean SMEs to examine their levels of information protection and their ability to defend themselves against attacks. As new crimes using private information have been on the increase recently, and social awareness and legal regulation are being reinforced with regard to the collection, storage and disposal of private information, the study defines private information and examines the necessity for protecting private information, as well as the economic value of private information. It also reviews the trends of domestic and foreign regulations on the protection of private information, and the current status of Korean SMEs' protection of private information and the related problems. Furthermore, it explores the issues surrounding SMEs' protection of private information from the social and legal perspectives, as well as methods of reinforcing private information protection that can be applied to

those SMEs which lack experts on information protection and the necessary funds.

Overview of SMEs' Informatization and Information Protection

Overview of SMEs' Informatization

According to a survey conducted by TIPA in 2008, SMEs' levels of informatization have continued to increase since 2004, thereby narrowing the informatization gap between SMEs and large companies. Details by year are as follows (TIPA, 2008).

	2004	2005	2006	2007	2008
SMEs (score: 100 points)	47.91	50.33	51.42	52.04	53.60
Large companies (score: 100 points)	70.23	70.24	70.39	73.53	70.23
Gap (percent/100percent)	68.2percent	71.7percent	73.1percent	70.8percent	76.3percent

According to this survey, 65.3percent of Korean SMEs have created a network environment, 28.9percent own their servers, and SMEs employees have on average access to 0.64 PCs. As such, SMEs enjoy high levels of informatization in terms of the number of PCs, servers and networks. Notably, their server ownership ratio is 28.9percent, although this figure increases to 37.8percent when leased servers are included. Also, 56.1percent of SMEs run their own websites for the purpose of corporate publicity and gathering customer opinions. With the upgrading of SMEs' informatization systems, IT systems are being more widely used as a means of conducting key corporate activities - such as personnel and wage affairs, cost management, customer management, inventory and logistics management, decision-making, and technology development (TIPA 2008) – rather than as a means of support.

Also, according to the EU's informatization equipment ratio in manufacturing and service businesses, in most of the EU member states, including Germany and Greece, SMEs' ownership ratios in terms of computers, intranets, and EDI, and the use and ownership of websites, are no lower than those of large companies (SMEs' survey and statistics of SMBA 2001)

Equipm ent	Size	Germa ny (perce nt)	Greece (perce nt)	Spain (perce nt)	Italy (perce nt)	Luxemb urg (percent)	Austri a (perce nt)	Portug al (perce nt)	UK(perce nt)
Use of compute rs	Averag e	96	85	91	86	91	92	89	92
Use of compute rs	Small-sized enterpri ses (10~49 people)	94	84	90	85	89	91	88	90
Use of compute rs	Mediu m-sized enterpri ses	97	96	96	95	99	99	97	99

	(50~249 people)								
Use of computers	Large enterprises (Over 250 people)	96	98	100	99	99	100	99	100
Use of intranets	Average	44	22	31	21	22	27	28	27
Use of intranets	Small-sized enterprises (10~49 people)	34	19	28	18	18	21	27	23
Use of intranets	Medium-sized enterprises (50~249 people)	56	48	49	41	37	50	38	39
Use of intranets	Large enterprises (Over 250 people)	57	64	72	68	42	67	58	61
Use of EDI	Average	25	5	4	5	17	15	20	15
Use of EDI	Small-sized enterprises (10~49 people)	17	4	2	4	13	11	20	11
Use of EDI	Medium-sized enterprises (50~249 people)	32	13	12	12	27	30	26	26

Use of EDI	Large enterprises (Over 250 people)	41	16	38	31	36	49	38	46
Access to the Web and ownership of websites	Average	83	51	67	66	55	76	72	63
Access to the Web and ownership of websites	Small-sized enterprises (10~49 people)	77	49	63	63	52	73	71	59
Access to the Web and ownership of websites	Medium-sized enterprises (50~249 people)	90	70	89	86	63	91	88	79
Access to the Web and ownership of websites	Large enterprises (Over 250 people)	89	84	97	94	70	91	94	90
Ownership of website	Average	67	29	7	9	41	54	30	50
Ownership of website	Small-sized enterprises (10~49 people)	57	27	5	8	36	49	30	45
Ownership of website	Medium-sized enterprises (50~249 people)	78	52	13	14	57	76	44	69

	people)								
Ownership of website	Large enterprises (Over 250 people)	86	54	35	22	67	86	59	80
Ownership of a third party's website	Average	21	8	29	26	13	26	2	11
Ownership of a third party's website	Small-sized enterprises (10~49 people)	23	8	27	24	12	25	2	11
Ownership of a third party's website	Medium-sized enterprises (50~249 people)	19	14	39	42	14	30	5	13
Ownership of a third party's website	Large enterprises (Over 250 people)	17	14	47	43	11	30	3	16

Overview SMEs' Information Protection

As shown in the above statistics, SMEs' levels of informatization and IT utilization have been upgraded, but their IT system and information data protection activities remain very weak. According to a survey on SMEs' levels of informatization conducted by TIPA in 2008, a hefty 25.9percent did not conduct such basic information protection activities as responding to viruses, and only 40.9percent took action to block spam mails intended to interfere with work productivity and halt the spread of vicious programs (TIPA 2008). Notably, in the case of spam mails, according to a news article released by the Korean information protection solution firms in 2009, the volume of spam mail received in the first quarter of 2009 accounted for 92percent of the total amount of mails received. As the amount of spam mails is increasing heavily year by year, it is essential to comprehensively block virus mails and spam mails in consideration of corporate productivity (Digital Times 2009).

Details on the status of information protection by corporate size are available from the survey on information protection conducted by the Korea Information Security Agency in 2008. The survey indicated that enterprises with a smaller number of full-time employees have fewer established

information protection policies and guidelines, fewer exclusive information protection teams, and fewer designated members of information protection staff, as well as implementing fewer information protection education programs (Korea Information Security Agency 2008).

Field	5~9 people	10~49 people	50~249 people	Over 250 people
Ratio of established information protection policies and guidelines	25.7percent	34.6percent	56.5percent	77.1percent
Ratio of established exclusive information protection teams	7.5percent	13.5percent	28.4percent	39.3percent
Ratio of designated information protection staff	7.4percent	13.3percent	25.7percent	34.8percent
Ratio of implementation of information protection education programs	7.9percent	15.7percent	27.4percent	34.2percent

Furthermore, with regard to the implementation of actual information protection measures, enterprises with a smaller number of full-time employees are less well equipped with information protection solutions such as antivirus vaccines, intruder blocking systems, intrusion prevention systems, and virtual private networks, thus showing low levels of technical protection and defense (Korea Information Security Agency, 2008a).

Information protection solutions	5~9 people	10~49 people	50~249 people	Over 250
Anti-virus vaccines	23.5percent	33.6percent	54.2percent	84.6percent
Intrusion blocking systems	24.4percent	33.1percent	52.9percent	76.2percent
Intrusion prevention systems	8.4percent	12.5percent	19.3percent	44.5percent
Virtual private networks	7.4percent	15.5percent	31.7percent	60.8percent

The survey indicated that smaller-scale enterprises do not make any real response to incidents involving information security intrusion, and that when such incidents do break out, they make fewer emergency contacts, and have fewer established plans to respond accordingly; thus, the absence of an adequate information protection policy and the lack of human resources, educational programs, and technical security action leads to a diminished ability to respond to cases of information protection intrusion (Korea Information Security Agency 2008a).

Response	5~9 people	10~49 people	50~249 people	Over 250
Do not conduct any real response activity	67.1percent	63.2percent	43.0percent	38.3percent
Make emergency contact to respond to the accident	9.0percent	14.6percent	25.3percent	39.4percent
Establish plans to respond to intrusion incidents	9.1percent	14.4percent	19.9percent	35.5percent

In 2006, Jungduk Kim, Hangbae Chang and Sungyul Ryo conducted a study on information protection management systems in consideration of the characteristics of SMEs' information protection measures, based on visits to 20 SMEs and a study on related literature as follows (Jungduk Kim, Hangbae Chang and Sungyul 2006).

Category	Overview of SMEs' information protection
Awareness of information	Widespread belief that, despite the absence of information protection, no

protection	real problems will effect the corporate work.
Education and training on information protection	Education on information protection is conducted irregularly.
Information protection policy	Lack of efforts to quantify information protection policies and guidelines
Investment in information protection	Limited investment made in informatization and IT systems.
Network security	Vulnerabilities are not diagnosed or recorded, and information protection systems are not structured.
Computer security	Responsibility for data backup, operating system patches, and other security management activities is assigned to individuals.
Response to security accidents	Plans guaranteeing an effective response to security accidents are not properly established.

According to a survey titled ‘Cyber Safety and Security for Small to Medium Enterprises in New Zealand’ published by NetSafe, a non-profit organization based in New Zealand which offers education on information protection and cyber safety to children, parents, schools, organizations and corporations, 89percent of the 131 SMEs surveyed leave sensitive data more or less unprotected due to the non-installation of information protection software solutions and a general lack of security policy and education. Over 50percent of the respondents did not install intrusion detection systems and anti-virus vaccines or have them updated automatically (NetSafe, 2005).

In incidents involving information protection intrusion resulting from the low levels of corporate information protection, smaller enterprises experience diminished productivity due to a lack of prevention ability or initial response ability, as well as damage that requires recovery work or which cannot be recovered at all. The details are as follows (Korea Information Security Agency 2008).

Response	5~9 people	10~49 people	50~249 people	Over 250 people
Diminished productivity	23.7percent	24.6percent	19.5percent	18.6percent
Damage requiring recovery work	26.8percent	28.0percent	16.2percent	11.9percent
Irrecoverable damage	9.9percent	12.5percent	7.4percent	2.9percent

Thus far, an overview of SMEs’ information protection efforts and the related adverse ripple effects has been presented. This will be followed by an in-depth review of private information protection, a key social issue within the broader category of corporate information protection.

Outline of Private Information and Its Economic Value

A comprehensive view of private information protection can be found in the OECD’s eight principles of private information protection. Based on the insights that as economic cooperation between nations increases, internationally exchanged information also becomes increasingly important, and that concerns over the leakage of private information could greatly hinder the development of e-business, the OECD enacted a unified guideline on private information protection in 1980, dubbed the “OECD Guidelines on the Protection of Privacy and Trans-border Flows of Personal Data”. These guidelines define private information as any information relating to an identified or identifiable individual. Domestic and overseas laws and systems on private information protection are based on the eight principles included in the above guidelines: Collection Limitation Principle, Data Quality Principle, Purpose Specification Principle, Usage Limitation Principle, Security Safeguards Principle, Openness

Principle, Individual Participation Principle, and Accountability Principle (OECD Guidelines on the Protection of Privacy and Trans-border Flows of Personal Data 1980).

Under Korea's Law on the Promotion of Information Network Usage and Information Protection, which concerns the protection of private information in the private sector, private information is defined as information relating to living individuals, and refers to the signs, characters, voices, sounds, images and so forth that enable one to recognize specific individuals via their name, resident number, etc., as well as information which, when combined with other information, enables one to recognize a specific individual even though the information by itself makes it impossible to recognize that person. Private information is defined and interpreted differently depending on the scholar and the related norms, but in its 2007 key information protection issue, "Study of an Analysis of the Economic Value of Individual Information," the Korea Information Security Agency based its definition on overseas norms. The detailed definition by nation differs but general definitions are similar (Korea Information Security Agency, 2007a).

OECD/Guidelines on the Protection of Privacy and Trans-border Flows of Personal Data	Identified or identifiable information relating to individuals.
EU/Personal Data Protection Directive	Information about an identified or identifiable natural person; provided that an identifiable person refers to the person who can be directly or indirectly distinguished by referring to an identification number, or to one or more of physical, psychological, mental, economic, cultural and social status.
Hong Kong /Private Information Law	The type of information that is directly or indirectly related to living individuals, that can be directly or indirectly used to identify individuals, and that can be accessed or handled.
Japan / Private Information Protection Law	Information relating to living individuals, that enables one to identify specific individuals by their name, birth date, and other descriptions contained therein.
UK / Information Protection Law	Information relating to living individuals which enables one to identify them by the related information or combining the related information with other information which the information manager possesses or will possess.
Canada / Privacy Law	Regardless of types of recording, identifiable information relating to individuals.

Diverse controversies over the scope of private information may occur, beginning with whether or not an Internet IP address constitutes a piece of private information, but the importance of private information is being highlighted at home and abroad, and the utilization of UCC contents, CCTVs and Web cameras is on the increase, thereby increasing the possibility of privacy encroachment while the scope of private information continues to expand.

Concerns over private information and private information protection have been consistently raised at home and abroad, activating research into analyses of the economic value of private information and private information protection. For instance, in the study titled 'Analysis of the Loss Value of Private Information Leakage Using CVM' and conducted by Hae-Chun Rhee and KyungAe Ahn in 2008 with the aim of calculating potential losses arising from information leakage, the compensation for damages by type of private information intrusion incident was estimated, the number of private information leakages and the corresponding damage cases filed in Korea between 2005 and 2006 was surveyed, and

the total scale of the damage was calculated. The survey indicated an estimated willingness to pay of 7.56 million won per case: given that the number of private information leakages in Korea in 2006 was 4.28 million, the corresponding potential loss amounted to about 32 trillion won (Hae-Chun Rhee, KyugAe Ahn 2008).

Another study which measured private information from a different perspective is available in the Korea Information Security Agency's 2007 key information protection issue, "A Study of the Methodologies Used to Calculate Private Information Protection Value Using CVM." The research, using CVM (Contingent Valuation Methods), calculated the respondents' average WTP (willingness of pay) to avoid the social loss of damages caused by private information leakage; the WTP to prevent private information leakage was estimated at 3,914 won per month on average, while the annual private information value was estimated at 1.298 trillion won (Korea Information Security Agency 2007b).

As discussed above, as awareness of the importance of private protection is raised around the world, each nation is strengthening the regulations on private information protection that apply to operators. The fact that governments are increasingly applying legal regulations on private information protection to corporations indicates that consumers and citizens are calling for such measures. As such, this trend means that, in connection with corporations' safe handling of customers' private information, the performance of certain technical, physical and managerial activities that are required from the institutional, legal and social perspectives is increasing. The next chapter examines the private information protection activities and regulation trends required of corporations at home and abroad.

Private Information Protection Trends At Home and Abroad

As an information-based society is advancing, and the private information is increasing its economic value, the gathering and use of private information are widely conducted across all sectors of our society. Also, as encroachment on private information such as leakage, misuse and abuse of private information recently continue to rise, this not only intrudes on citizens' privacy, but also causes mental and monetary damages including name thefts and fraudulences using phone calls.

After the 1970s, developed nations and international organizations grew keenly aware of the importance of protecting private information protection. Most EU member nations, as well as Canada, Australia and Japan enacted private information protection laws, and are now operating independent private information protection organizations. Also, after OECD adopted eight principles of private information protection in 1980, UN, EU and ILO enacted principles of or guidelines on private information protection or guidelines in 1990, 1995, and 1996, respectively (Korea Information Security Agency 2006a).

Japan – with the aim of harmonizing the protection and use of private information – established legal systems on private information protection in private and public sectors, and has implemented five private protection laws since April 2005 (Seung-woan Chai 2007).

The USA - on the basis of discussions on privacy protection which continued since the 1960s – proclaimed Privacy Act in 1974. Also, the USA enacted and are implementing private information acts in numerous sectors of finance, communications, education, medicine, video monitoring, worker information, child private information, and driver privacy. France enacted the Act of Processing, Accumulation and Freedom of Information in 1978, which later was revised six times, and today applies the law to the private information automatically processed by computers in the public and private sectors as well as to private information treated as hand-written files (Sung-Jig Cho 2002).

Spain, on the basis of the EU's guideline on data protection, the Data Protection Act (LORTAD) in 1992, which regulates the information on files owned by public institutes and private companies. The law includes such contents as the rights to correct and delete private information stored in computers,

and provision of private information to third parties subject to agreement and for purpose of gathering. Sweden, on the basis of the EU's guideline on data protection, enacted Personal Data Act in 1998, which regulates "physical human beings" and "natural person" with regard to the structuring and use of automated data files in both public and private sectors (Yongseok Yang, 2008a).

In Korea, pursuant to individual laws in public administration, information and communication, and credit sectors, the act of private information processing is regulated, but there are no principles of private information protection and the criteria for processing private information that regulate the nation and society as a whole. This creates dead spots of private information protection where private information protection laws are not applied, as well as causes confusion due to different criteria between individual acts. Thus, the Ministry of Public Administration and Security is pushing to enact a private information act that regulates the principle of processing private information in public and private sectors and that meets international standards, in order to further prevent damage caused by encroachment upon private information, to create an environment to use private information safely, and to guarantee individuals' rights and interests (Ministry of Public Administration and Security 2008a).

The envisaged private information protection act will apply to all SMEs from the current manufacturing businesses. In actuality, under current laws, public institutes are regulated by the Act on Public Institutes' Private Information Protection; telecommunication operators, providers and mediators of information using the services of telecommunication operators, the providers of wire and wireless communications, broadband Internet, portals and other telecommunication services, some quasi operators such as hotels and large marts are regulated by the Act on Information and Communication Network Use Promotion and Information Protection, etc., helping eliminate the dead spots of private information protection.

Along with efforts to enact the private information protection act, in October 2008, the public notification on the planned revision of Enforcement Ordinance of the Act on Information and Communication Network was issued, under which the scope of business operators who should observe the Act on Information and Communication Network Use Promotion and Information Protection, etc. will expand from telecommunication operators to marriage agencies, oil refiners, job agencies, video rental shops, and housing construction companies, as well as to businesses engaged in a large quantity of sensitive information such as resumes, health, and properties, and businesses of services which a large number of people use (Ministry of Public Administration and Security 2008b).

SMEs' Private Information Protection Overview

In 2006, KISA and Korea Association of Information and Telecommunication (KAIT) surveyed 100 SMEs across the nation in games, financial services, shopping malls, lodging, job information services, information services and communities to examine their private information protection status. As a result, those SMEs had an average 864,204 pieces of private information. However, 56percent established and implemented security policies recognized by their CEOs, and when retrieving private information, 25percent marked the retriever name and retrieval date. As such, they took private information protection measures as required of private business operators under the Korean law with low levels. 50percent took security measures using encryption technology, and 50percent blocked intrusion and installed and operated intrusion blocking systems. 53percent also stored access records, and 45percent diagnosed vulnerabilities. They implemented private information protection measures required of private businesses under the Korean law with low levels (Korea Information Security Agency, KAIT 2006).

Notably, let us take a look at small-operation industries which have a large quantity of private information. In 2007, KISA's "study on status of personal data protection in the homepage of

international matchmaker agency and improvement plan” surveyed 186 international marriage information agencies which operated their websites and collected members’ name, e-mail and other private information. 177 or 95percent of them had only less than five employees. Only 9 or 5percent of them had over 5 employees. They, through their websites, collected an average 10.5 pieces of essential and optional information such as name, mobile phone number, address, education, height and photo. As required under the Act on Information and Communication Network Use Promotion and Information Protection, etc. only 30 respondents or 16percent notified users of the collection of private information, the purpose of using private information, holders of rights to such information, and the period of owning and using private information. Also, only 2 respondents or 1percent installed security servers for their websites. Notably, 111 respondents (60percent) allowed non-members to access foreign females’ profiles for the purpose of publicizing themselves. Accessible information included photos (103 respondents or 55percent), names (85 or 46percent), age (75 or 40percent), height (48 or 26percent), and education (47 or 25percent). Moreover, they disclosed information on family relationships, birth dates, marriage or not, religion, etc. As such, international marriage information agencies collect and use a large quantity of sensitive information, but take lax managerial and technical measures to protect such information (Korea Information Security Agency 2007).

As discussed above, concern over private information is increasing at home and abroad, but SMEs’ levels of protecting private information are low. The next chapter examines SMEs’ pending issues with regard to private information protection.

SMEs’ Pending Issues With Regard to Private Information Protection Strengthening Legal Punitive Regulation

First, legal punitive regulation should be strengthened. As discussed above, domestic and foreign nations and organizations implement a wide range of regulations and guidelines on private information protection. Also, as the importance of private information is being stressed, business operators are further required to protect such information, and violation thereof faces gradually stricter legal punishment.

The Act on Information and Communication Network Use Promotion and Information Protection, etc., which governs information protection in the private sector in Korea, was revised in June 2008, and went into effect in December 2008. Under the revision, the information and communication service providers shall provide user information to third parties subject to agreement of users with a view to preventing encroachment on private information, fines shall be imposed on telecommunication operators in breach of the private information protection regulation to effectively sanction acts of intrusion, some violations tantamount to fines shall be the subject of criminal punishment, and fines shall be increased. Furthermore, under the revision, users shall be provided with a choice other than using their resident numbers to join membership in telecommunication services, a fine equivalent to one-hundredth of sales shall be imposed on violators of the private information protection regulation, and serious violators who also fall into the targets of being fined shall be subject to criminal punishment. With the strengthened regulation, the government expects to manage private information more safely and to decrease claims with regard to private information encroachments (Korea Communications Commission 2008).

Spain shall fine up to £ 600,000 to violators of data management regulation under its laws, and may abolish or freeze related databases (Yongseok Yang , 2008a).

In the case of Britain, ICO (Information Commissioner’s Office) may enforce an order to abolish an organization’s database on private information, and may evaluate an organization’s handling of private information, and if necessary, notify it demanding particular requirements. If such an organization does

not comply with such a notice, it may face a trial, a fine of up to £ 5,000, or an unlimited fine by Crown Court. Also, the ICO may file warranties with the court to investigate organizations which are suspected of breaching the Data Protection Act (1998) (Yongseok Yang , 2008b).

Raising the People's Awareness of Private Information Protection

Second, the people's awareness of private information protection should be bolstered.

KISA's Private Information Intrusion Report Center has received a growing number of private information intrusions and related consultations; the number increased drastically from 2,050 in 2000 to 25,965 in 2007. This big increase comes as people's concerns over private information protection have been raised (IT DAILY, 2009).

Also, with the increasing awareness of private information protection, it is now a social issue, and there are a growing number of lawsuits being filed against private information intrusions, a considerable number of which target companies which collect, use and store private information. This indicates individuals' enhanced awareness of the ownership and protection of their private information (IT DAILY, 2009).

An array of class actions against private information intrusions against Internet service providers and oil refineries are ensuing. For instance, In 2006, a famous Korean online game company, NCSoft leaked private information of their game users, leading to a class action by the affected users against the company.

The court, in the ruling, ordered the NCSoft to pay 500,000 won in damages to each defendant (SBS News 2006).

In 2008, the Internet service provider Auction, the oil refinery GS-Caltex, and the Internet service provider Hanaro Telecom leaked their customer private information, and 141,000 users, 41,000, and 11,000, for a total of 200,000, filed class action these companies, respectively. They claimed cumulative total damages of 210 billion won (Asia Economy 2008).

Proposal to Strengthen SMEs' Private Information Protection

As discussed above, private information is essential for SMEs to manage their customers and to boost their competitiveness, medium-sized business operators should inevitably collect and use private information to conduct corporate activities. However, even one-time erroneous leakage of individuals' financial information, diagnostic information, and personnel affairs information will degrade their public profile and competitiveness, leading to financial losses, and thus the protection against private information leakages is considered crucial for corporate management (Korea Information Security Agency 2007d).

However, due to lack of concern over and awareness of private information protection, SMEs do not properly manage private information protection, and notably, due to poor financial structure, they make low human and material investment in protecting private information (KISA, KAIT 2006).

In 2006, KISA developed a guideline for such SMEs to voluntarily take cost-efficient information protection measures, which are outlined as follows. Levels of information protection necessary for SMEs are determined according to IT environments, and to that end, the class of information protection is determined according to informatization-related IT environments and levels of information asset protection, and the class of information assets is determined to according to IT environments. The guideline classifies IT environments into three types, that is SM1, SM2 and SM3, according to levels of informatization, and such types are defined and requirements for information protection under each related key work are outlined as follows (Korea Information Security Agency 2006b).

Definition and requirements for information protection

SM1	Definition : Enterprises which manage customers and handle in-house work simply on the basis of PCs Requirements for information protection : Protecting individual PCs and stored data
SM2	Enterprises which handle personnel and financial affairs and manage processes using in-house networks Requirements for information protection : Protecting individual PCs and stored data + Protecting work support servers + Protecting in-house networks
SM3	Enterprises that connect to B2B, B2C and other external networks to conduct e-business Requirements for information protection : Protecting individual PCs and stored data + Protecting work support servers + Protecting in-house networks + Protecting the provision of services to external sources

The guideline recommends four levels of information protection activity, that is S1, S2, S3 and S4 in five fields of PCs, servers, networks, data security, and security management. The four classes of information protection, that is S1, S2, S3, and S4 are defined as follows.

Class of protection	Definition
S1(Basic security)	No cost investment is made. At this level, only the basic security functions that are provided by PCs and server operating systems are used.
S2(Medium security)	Without further cost investment, at this level, advanced functions provided by the operating system are used. Low-price vaccines, intrusion detection systems, and other individual security solutions are used to shut off attacks.
S3(Advanced security)	With a certain cost investment, at this level, patches are managed, ISP security services are used, other basic integrated management is conducted, and automation functions are used. IDS, IPS and medium-level-price individual security solutions are used to detect attacks.
S4(Highly advanced security)	At this level, backup lines are structured to speedily recover from intrusion accidents. Company-level ESM, monitoring and integrated security solutions are used to monitor and respond to attacks.

The guideline recommends the following information protection activities for SM1 type enterprises.

	Required levels of information protection activity	Recommended guideline
PCs	S1, S2	Update operating systems, Manage accounts and passwords, Manage shared folders, Install screen savers, Install web browser security function, install e-mail security function, Install intrusion shut-off systems and pop-up shut-off function, Managing booting disk, Install security function for wireless LAN, Install passwords for documents, Remove services that do not require operating

		systems ,Managing events and logs Install virus vaccines and Spy ware removers, Install Personal intrusion shut-off systems, Spam mail blockers
Servers	S1	Update operating systems, Manage accounts and passwords, Manage shared folders, Install file security systems
Networks	S1	Use operating systems to configure private networks, Use IP routers to configure private networks
Data security	S1	Use operating systems to configure backups, Use file servers to configure backups
Security management	S1	Establish rules to prevent and respond to intrusion accidents, Manage documents and media, Install electronic systems patches

The guideline recommends the following information protection activities for SM2 type SMEs.

	Required levels of information protection activity	Recommended guideline
PCs	S1, S2, S3	Information protection activities recommended for SM1 type SMEs Patch management systems, Integrated security systems
Servers	S1, S2	Information protection activities recommended for SM1 type SMEs Control server access, Set user authority, Remove unnecessary services, Install security function via TCP/IP, Setting security options, Web server security, Mail server security, Database server security, DNS server security, Security operating systems
Networks	S1, S2	Information protection activities recommended for SM1 type SMEs Routers, Switch, Intrusion blocking system, VirusWall, Spam blocking systems
Data security	S1, S2	Information protection activities recommended for SM1 type SMEs Back up operating systems, Back up database servers, Web server backup, Back up mail servers, Back up DNS servers
Security management	S1, S2	Information protection activities recommended for SM1 type SMEs Manage employees – working in the office or outside it, and leaving the office - and visitors, Education and training, Electronic systems patches, Safely repairing, abolishing and reusing electronic systems, Preventing and responding to fires

The guideline recommends the following information protection activities for SM3 type SMEs.

	Required levels of information protection	Recommended guideline

	activity	
PCs	S1, S2, S3	Information protection activities recommended for SM1 and SM2 type SMEs
Servers	S1, S2, S3	Information protection activities recommended for SM1 and SM2 type SMEs Integrated patch management systems, Inspecting vulnerabilities
Networks	S1, S2, S3, S4	Information protection activities recommended for SM1 and SM2 type SMEs Integrated network management systems (NMS), Integrated security systems (ESM), Security control services
Data security	S1, S2, S3, S4	Information protection activities recommended for SM1 and SM2 type SMEs, Duplexing systems, Remote backup and duplexing lines
Security management	S1, S2, S3	Information protection activities recommended for SM1 and SM2 type SMEs, Planning risk management

On the basis of the guideline's recommendation for information protection requirements, this study proposes the following requirements for private information protection by informatization type. Each informatization type is defined, and requirements for private information protection which are necessary under each informatization type are defined as follows.

	Definition and requirements for private information protection
SM1	Definition : Enterprises which manage customers and handle in-house work simply on the basis of PCs Requirements for private information protection : Protecting PCs for processing private information and stored data, protecting online and offline data, and complying with managerial requirements under laws
SM2	Enterprises which handle personnel and financial affairs and manage processes using in-house networks Requirements for information protection : Protecting PCs for processing private information and stored data and protecting online and offline data + Protecting servers for processing private information + Protecting in-house networks + Complying with managerial requirements under laws
SM3	Enterprises that connect to B2B, B2C and other external networks to conduct e-business Requirements for information protection : Protecting PCs for processing private information and stored data, protecting online and offline data + Protecting servers for processing private information + Protecting in-house networks + Collecting private information via networks, protecting processing servers and data management servers + Complying with managerial requirements under laws

On the basis of the guideline's recommendations above and the Act on Information and Communication Network Use Promotion and Information Protection, etc., private information protection activities by corporate informatization type were defined. To that end, private information protection activities are arranged as specified under Korea's current Act on Information and Communication Network Use Promotion and Information Protection, etc. (National Laws Information Center 2008), and KISA's 2008 manual for private corporations' private information protection (Korea Information Security Agency 2008b) .

When collecting, using and providing private information	Give prior notification and get agreement when collecting and using private information
	Limit the collection of sensitive private information
	Provide a method other than using a resident number to join membership
	Limit the use of information other than for the purpose agreed upon by users
	Give prior notice and get agreement when providing private information to third parties and commissioning third parties to handle private information, and transferring private information following assignment and merging
When managing private information	Designate exclusive staff for handling private information
	Establish and disclose policy for handling private information
	Establish and implement internal management plans to handle private information safely
	Install and operate intrusion blocking systems and access control systems to shut off unauthorized access to private information
	Take steps to prevent forgery and alteration of access records
	Take security steps using encryption technologies that enable storage and transmission of private information safely
	Take steps to prevent computer viruses' intrusions by installing and operating vaccine software
	Take other necessary protection measures to secure the safety of private information
	Limit staff in charge of handling private information
Abolishing private information and user rights	Ban leakage of private information
	Achieve the agreed-upon purposes, then destroy private information
	Allow the withdrawal of the agreement on the collection, use and provision of private information, as well as an access to private information
	Get a legal proxy's agreement in the case of children aged under 14

Based on the above contents, the following private information protection activities are recommended to SM1 type SMEs.

	Recommended guideline
PCs	Limit P2P sharing installation in PCs handling private information Install Internet security function in PCs handling private information Install vaccine software capable of curing viruses, spyware, and so forth in PCs handling private information Update and inspect vaccine software in PCs handling private information Install screen savers in PCs handling private information Managing events and logs in databases handling private information Apply personal intrusion blocking systems to PCs handling private information Manage shared folders in PCs handling private information
Servers	Give minimum access authority to databases on private information Change DB system access authority when changing staff for handling private information Manage individuals' passwords in servers for private information Manage shared folders in servers for private information

	<p>Ensure the security of file systems in private information servers</p> <p>Structure a security server for servers which send and receive user private information and authorization information</p> <p>Install vaccine software capable of curing viruses, spyware and so forth in private information database systems</p> <p>Update and inspect vaccine software in private information database systems</p> <p>Specify the purposes of retrieving private information from private information database systems, and minimize retrieval items</p>
Networks	<p>Configure private networks using operating systems</p> <p>Configure private networks using IP routers</p> <p>Install intrusion detection systems in private information systems</p>
Data security	<p>Back up records of access to private information database systems in different storage systems</p> <p>Encrypt one-way authorization</p>
Security management	<p>Give prior notice and limit the use of information to purposes agreed upon by users when collecting and using private information</p> <p>Give prior notice and get agreement when providing private information to third parties and commissioning third parties to handle private information, and transferring private information following assignment and mergers</p> <p>Designate staff in charge of handling private information</p> <p>Establish and disclose policy for handling private information</p> <p>Establish and implement plans for managing private information</p> <p>Minimize staff for handling private information</p> <p>Ban leakage of private information</p> <p>Achieve agreed upon purposes, the destroy private information</p> <p>Allow the withdrawal of the agreement on the collection, use and provision of private information, as well as an access to private information</p> <p>Get a legal proxy's agreement in the case of children aged under 14</p>

The following private information protection activities are recommended to SM2 type SMEs.

	Recommended guideline
PCs	<p>The private information protection activities are recommended for SM1 type SMEs.</p> <p>Patch management systems in PCs handling private information</p> <p>Integrated security systems in PCs handling private information</p>
Servers	<p>The private information protection activities are recommended for SM1 type SMEs.</p> <p>Install access control in private information servers</p> <p>Remove unnecessary servers from private information servers</p> <p>Install security function in private information servers via TCP/IP</p> <p>Install security options in private information servers</p> <p>Ensure the security of private information web servers</p> <p>Ensure the security of private information databases</p> <p>Install the security operation systems in private information systems</p> <p>Specify the purposes of retrieving private information from private information database systems, and minimize retrieval items</p>
Networks	<p>The private information protection activities are recommended for SM1 type SMEs.</p> <p>Configure private networks using operating systems</p>

	Configure private networks using IP routers Install intrusion detection systems in private information systems Install routers and switches Install VirusWall Install spam blocking systems
Data security	The private information protection activities are recommended for SM1 type SMEs. Back up records of access to private information database systems in different storage systems Encrypt one-way authorization Back up operating systems in private information systems Back up private information database servers Back up private information web servers
Security management	The private information protection activities are recommended for SM1 type SMEs. Manage employees – working in the office or outside it, and leaving the office - and visitors Education and training

The following private information protection activities are recommended to SM3 type SMEs.

	Recommended guideline
PCs	The private information protection activities are recommended for SM1 and SM2 type SMEs. Inspect vulnerabilities of PCs handling private information
Servers	The private information protection activities are recommended for SM1 and SM2 type SMEs. Integrated patch management systems in private information servers Inspect vulnerabilities in private information servers Structure a security server for servers which send and receive user private information and authorization information
Networks	The private information protection activities are recommended for SM1 and SM2 type SMEs. Integrated network management systems (NMS) Integrated security management systems (ESM) Security control services for private information systems
Data security	The private information protection activities are recommended for SM1 and SM2 type SMEs. Ensure the duplexing of private information systems Ensure a remote backup of private information systems and a duplexing of lines
Security management	The private information protection activities are recommended for SM1 and SM2 type SMEs. Plan risk management including when private information leakage accidents occur Provide a method other than using a resident number to join membership

Conclusion

Thus far, we analyzed domestic and overseas statistics and surveys with regard to SMEs' informatization status and information protection levels to examine SMEs' information protection levels and defense power, and to identify the recent trends of bolstering social awareness and legal

regulations with regard to the process of collecting, storing and abolishing private information. In this study, private information and its economic value also were defined. Furthermore, domestic and overseas trends of regulation on private information protection were examined, and Korean SMEs' private information protection status and problems were defined through surveys and statistics.

On the basis of such examination results, key issues faced by SMEs with regard to private information protection were studied from the social and legal perspectives. Also, to study a method to strengthen private information protection with SMEs which are lacking in costs and related experts, we used KISA's guideline on SMEs' information protection which offers cost-efficient information protection methods according to SMEs' informatization types, as well as Korea's private information protection laws in the private sector, and KISA's 2008 manual for private information protection for private corporations, among other sources in recommending private information protection activities according to SMEs' informatization levels.

The proposal herein is expected to boost the awareness of SMEs' investment and efforts towards private information protection and to help recognize necessary activities in order to secure essential legal reference.

These results are based on Korea's laws being enforced and Korean guidelines; however, since the related Korean law includes the guideline on private information recommended by OECD, and Britain, Japan, and other nations comply with OECD's recommendations with regard to laws relating to private information protection, the proposal herein is expected to be useful for other nations to promote their SMEs' information protection activities. But, since each nation differs in details of private information protection laws, the findings of this paper need to be customized to apply to other nations' situations.

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A Research Framework for Exploring Corporate Governance in SMEs¹

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Abstract

Governance is now a major area of study in the finance, accounting, and management disciplines that draws on a number of research frameworks and is attracting an increasing level of attention within the small business and entrepreneurship domains. As is often the case with phenomenon associated initially with large firms, the benefits associated with greater attention to governance issues in large firms are assumed to translate directly to small firms. Such assertions often lack a grounding in the theory and research that surrounds our understanding of the small firm. Nonetheless, in an environment of entrepreneurial dynamism it is still essential to ensure the advice provided to small businesses is based on appropriately structured and conducted research. This paper provides an overview of SME based research that identifies the difficulty of making simplistic assertions about the benefits of corporate governance activities and presents a framework for the future study of governance in SMEs.

The first area of difficulty is that corporate governance is not only the structure that facilitates internal control (such as a advisory board) but is also the process by which the controls are applied (incorporating internal controls etc.). A clear identification of the focus is therefore an essential precursor to research in this area.

A second area of difficulty is identifying the range of issues that need to be considered. These include governance in organizational contexts [institutional, ownership structures and life cycle stages], the scope of corporate governance [boards and target groups] and other internal governance mechanisms [reporting systems and executive remuneration]. Clearly the framework to guide research into corporate governance in SMEs needs to be multifaceted.

The framework proposed in this paper builds on the issues identified by Uhlaner *et al.* (2007) and encourages researchers to clearly define the scope of their research and to recognize the limitations associated with the diverse range of contextual differences. Such a framework also has relevance to practitioners and policy makers in that it highlights the complexity of issues such as governance, and identifies the difficulty and danger of making simple assertions about understanding and solving complex problems.

¹ This paper is a development of a recent research symposium presentation by the author and contains blocks of replicated text from that paper (Gibson, 2009).

A Research Framework for Exploring Corporate Governance in SMEs

Introduction

Governance is now a major area of study in the finance, accounting, and management disciplines with an increasing level of attention within the small business and entrepreneurship domains (see, for example, Brunninge *et al.* 2007; and, Lubatkin *et al.* 2005). Influenced most recently by corporate collapses and subsequent regulatory responses, much of the emphasis has been on large publicly traded firms. As is often the case with phenomenon associated with large publicly held firms, the benefits associated with greater attention to governance issues in such firms are assumed to translate directly to small privately held firms. For example, Jeffrey (2008) claims that “it has become clear ... that an active and vigilant board of directors, an effective system of internal controls, and a control conscious environment are essential to the viability and health of any organization or institution, whether publicly traded, *privately held*, operating as a nonprofit, or located domestically or internationally” (p.52; emphasis added).

Such assertions often lack a grounding in the theory and research that surrounds our understanding of the small firm. In an environment of entrepreneurial dynamism it is still essential to ensure the advice provided to small businesses is based on appropriately structured and conducted research. The intent of this paper is to provide an overview of SME based research that identifies the difficulty of making simplistic assertions about the benefits of corporate governance activities; assesses the advantages and disadvantages of governance activities in privately held firms; and, presents a framework for the future study of corporate governance in SMEs.

Defining Governance

The research frameworks that guide governance understandings are categorized by Sundaramurthy and Lewis (2003, p.398) as taking either a control approach or a collaborative approach. The control approach views governance structures and processes as being based on discipline and the scrutiny of management and has at its core agency theory. As Al Farooque

(2009, p.2) suggests, in this agency domain “corporate governance research aims to mitigate agency problem at the firm level and enhance financial performance through a set of optimal governance mechanisms”. The collaborative approach views governance structures and processes as being based on services to advise and enhance strategy and is more akin to stewardship theory. An alternate suggested by Mason and O’Mahony (2008, p.35) is a post traditional concept that recognises the rule making is bound by both the law and the social force of moral and ethical persuasion and that there is a need to address corporate governance within the context of wider patterns and processes of societal governance.

As is often the case when studying a social or business phenomena, a commonly accepted definition of the object or activity of interest is hard to find. Ramaswamy *et al.* (2008, p.25) provide the following general definition:

Corporate governance is the set of processes, policies, laws and institutions affecting the way a corporation is directed, administered or controlled. This complicated structure of rules and regulations is there to encourage the efficient use of resources and to require accountability of those resources. Elaborate systems and processes to deal with matters such as delegation of authority, performance measures, assurance mechanisms and reporting needs require the expenditure of time, effort and resources.

The Organisation for Economic Cooperation and Development (OECD, 2004, p13 as cited in Mason and O’Mahony, 2008, p.32) has consistently suggested governance is:

a set of relationships between a company’s management, its board, its shareholders and other stakeholders [that] provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.

While both of these definitions probably reflect more of a control perspective of governance, they do, in conjunction with the research frameworks used to explore governance, raise two areas of difficulty. The first is that governance is not only the structure that facilitates internal control (such as an advisory board) but is also the process by which the controls are implemented (incorporating internal controls etc.). A clear identification of the focus is therefore an essential precursor to research in this area. A second area of difficulty is that the definition links the nature of the governance systems to differing resources commitments which raises concern with the scope and context of factors that influence governance structures and processes. For example,

Uhlener *et al.* (2007, pp.231-135) identify “several aspects that might be considered in researching governance in the privately-held firm, including governance in organizational contexts, the scope of corporate governance and other internal governance mechanisms”. These two areas of difficulty are elaborated, with a focus on SMEs, in the sections that follow.

The Structure of Governance

As Uhlener *et al.* (2007) indicate a lot of attention to corporate governance in privately held firms has focused on the role of boards. But, as suggested in the discussion above, boards are only one aspect of governance structure. Indeed there is evidence to suggest the number of structured boards in privately held firms is extremely low because “[in] most SMEs ... owners ... have direct and detailed insights into internal processes of the firm. As a result, there is less need for the control function of the board and many SME boards exist on paper only” (Brunninge *et al.*, 2007, p.297). Hence, while boards may be an important governance structure in large publicly traded firms they may not be so important in small privately owned firms.

Another important structural difference is the variation in board structures across cultures, “ranging from two-tiered supervisory and management boards in Germany, to insider-dominated boards in Japan, to mixed boards in the United States” (Li and Harrison, 2008, p.607). These differences are reinforced by Barnett and Maniam (2008, p.29):

Striking differences [exist] in the corporate governance structures in the United States and Europe. Even within Europe there are two drastically different systems in place, with the shareholder model in the UK and the stakeholder model in Germany, France, Belgium, Italy, Portugal, Sweden, and Switzerland. The shareholder model, which both the United States and the United Kingdom follow, is based on the principle that the goal of the firm should be to maximize shareholder value, and thus the governance standards are aimed at protecting the shareholder. In contrast to this is the stakeholder model, used by Germany, which believes that the firm has a duty to protect all stakeholders, such as employees and lenders.

The shifts and differences across cultures reflected in the above comments (which are focused on large rather than small firms) indicate a likelihood that discussions about governance structures such as boards across different cultures need to identify the particular structure that represents “normal” practice and not to presume research results from exploring structure in one culture can

easily be transferred to another. There is also clearly a connection with the control versus collaborative research debate.

Note also that boards are not the only structural aspect of governance. Another important structural mechanism is the data collection and reporting system that informs stakeholders (including debt providers, non-working owners, family members etc. as well as shareholders) about the outcomes of governance processes (Uhlener *et al.* 2007). Prominent in such mechanisms for large firms is the financial reporting system; however the nature of the small firm is that reliance is often on informal mechanisms in which, if they exist at all, financial systems are extremely rudimentary (Gibson and Cassar, 2002). Consequently, considering governance structures in privately owned firms needs to be approached with a clear understanding of the different objectives and motivations that are reflected in extant structures.

Finally, in considering the structure of governance it is important to consider the processes they support. Ong and Wan (2008, pp.317-318) suggest four critical board roles (monitoring, service, strategy, and resource provision) that are also served by other structures such as information systems. Each of these is elaborated below:

Monitoring. Monitoring is a very crucial governance process drawing on the board (or an alternative structure) and access to information to analyse how CEOs etc. are chosen and rewarded; the evaluation of CEOs and company performance (within a risk managed environment); and, how stakeholders expectations can be realised. Given the absence of a clear distinction between ownership and management in many privately held firms, this aspect of governance processes may not be as critical as it would appear to be in large firms

Service. More directly focused on the board structure, the service role pertains to board members giving advice to top managers and is clearly allied with the collaborative research approach. Such a role is often identified as a benefit to privately owned firms of having an advisory board. The question, in the more informal environment of privately

held firms, is whether such advice needs to come, or can come in a cost effective way, from formal boards or whether it can be accessed informally through network ties etc.

Strategy. The board's role in strategy ranges from articulation of strategy mission to review of strategy and is an extension of the service role. However, as strategy is a broad term, board members are often unsure as to what constitutes strategy; although as Brunnige *et al.* (2007, p.304) suggest "firms' willingness to change strategically is affected by their governance". They show "the benefits of outside directors and the value they add in terms of cognitive diversity, relationships with important external stakeholders and legitimacy is particularly important to closely held firms" (emphasis added, p.304). These are perhaps valid comments in respect of large publicly traded firms but not necessarily beneficial in a privately owned firm pursuing inputs to strategy from less formal mechanisms.

Resource provision. Again more directly focused on the board, the resource provision role refers to the ability of a board in bringing resources to the firm. These benefits include providing legitimacy, providing experience, linking the firm to important stakeholders or other important parties, and facilitating access to resources such as capital. As for the other processes identified above, it will not necessarily follow that those benefits will flow any more effectively to privately held firms than their reliance on other networks.

The Scope and Context of Governance

As indicated previously, a second area of difficulty that arises from a concern with governance is identifying the range of issues that need to be considered. The issue of the nature of the firm has already been signaled. Uhlaner *et al.* (2007, pp.231-232) identify the following as organisational contexts that are issues to be considered in researching governance in privately held firms.

Institutional context. This captures the cross-cultural country differences previously discussed which identify the clear need to consider institutional contexts in developing and reporting research.

Sector characteristics. Important here are the variations likely across different industry sectors because of different technologies, patterns of ownership, the nature of resources and differing competitive environments. Each may influence the structure and process of governance.

Ownership structure. Again this has already been identified in the preceding discussion. This is both an important element of the defining characteristics of governance structure and scope but also a critical contextual variable. It is important, for example, to understand what variations might exist in the proportion of ownership of privately held firms (eg by individuals, employees and/or family members) and also how those proportions influence and are influenced by other aspects in the structure and scope of governance.

An important aspect of ownership structure not previously raised is the introduction of family members. Le Breton-Miller and Miller (2008, p.41) suggest there are “divergent views ... about the conduct and performance of major owners. Consistent with agency theory, the entrepreneurship literature argues that such owners pursue value maximizing growth strategies and achieve superior performance Much of the literature on family business, by contrast, suggests that family major owners may neglect or even exploit smaller ones and favor parochial utility maximizing agendas that limit firm performance”.

Life-cycle. Just as we understand that firms progress through (a sometime extremely difficult to define) life cycle pattern, it is to be expected that the governance structure and scope will differ between, for example, firms in their start up phase and those having reached maturity or those preparing for a change in ownership through the intervention of venture capitalists.

An additional context is that of *firm size*, which has been implied in some of the previous discussion but warrants clear identification as a contextual variable. In small firms, governance structures and processes are likely to be less diverse and less complex and less formalized than in larger companies. However, the small firm sector is not homogenous and firms classified as small may in fact be of significant size. These will range from small undertakings with very few employees to extremely large undertakings in respect of scope and resource utilization and will cover simple to complex ownership structures ranging from partnerships to family owned blocks in publicly traded firms.

Conclusion - A Research Framework

The framework proposed in this paper (see Figure 1) builds on the issues identified by Uhlener *et al.* (2007) and encourages researchers to clearly define the scope of their research and to recognize the limitations associated with the diverse range of contextual differences. Such a framework also has relevance to practitioners and policy makers in that it highlights the complexity of issues such as governance, and identifies the difficulty and danger of making simple assertions about understanding and solving complex problems. As Young and Thyl (2008, p.102) argue: “a holistic multi-dimensional approach is required which attempts to capture the full array of variables – those internal to the firm and those part of the broader environment – to understand why certain types of behavior occurs and to provide a new way forward in governance analysis”.

The framework proposed here does not claim to be nearly sophisticated enough. Each focal point (structure and process) needs to be more clearly defined and fully developed. Similarly the contextual variables need much more detailed development. Nor has there been any discussion of the rationale for governance (the stakeholder well being box in the framework). However the framework does highlight the importance of identifying and distinguishing between structures and processes and of considering research in the light of a range of contextual influences. Within such a framework we need to develop a clear understanding of the what, why, when and how of governance in privately owned firms.

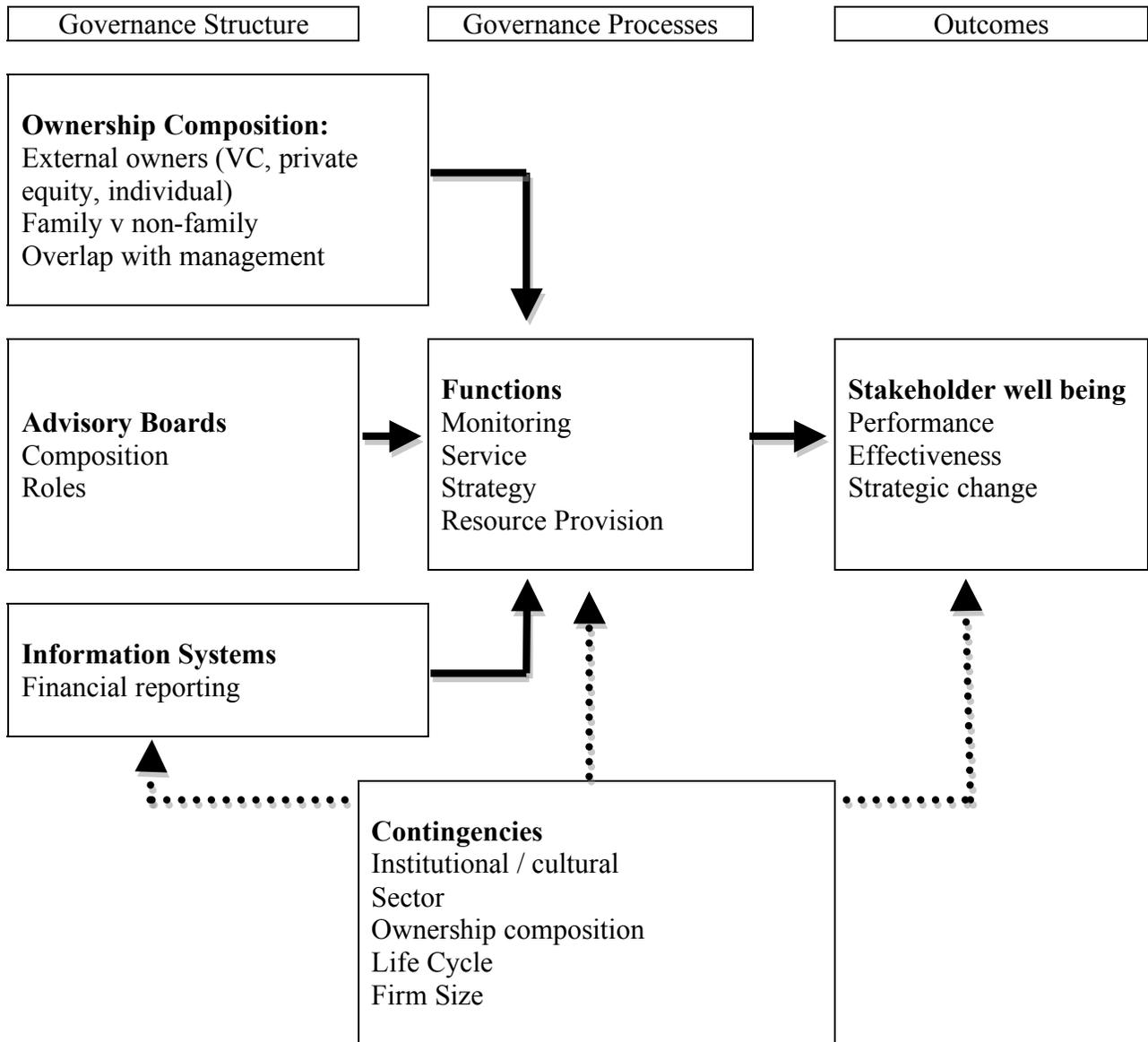


Figure 1: A proposed research framework for exploring governance in privately owned firms

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AM I THE ENTREPRENEURIAL TYPE?: FROM SCIENTIFIC VALIDATION TO PRACTICAL APPLICATION OF AN INSTRUMENT OF ENTREPRENEURIAL POTENTIAL

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SUMMARY

The purpose of this paper is to present the in-depth process used to develop an entrepreneurship awareness tool that is easy to administer and readily accessible to people in different age groups. We first describe the methods used to operationalize the variables chosen and explain the selection and overall representativity of the 2000-person sample group. We present the different results obtained on the basis of the socio-demographic characteristics of these respondents and explain our use of the measurability data required to ensure the validity and reliability of the evaluation instrument. Lastly, we highlight the process of analysis used to break the instrument down into a user-friendly reference tool catering to different publics and able to be used on a range of support systems. This self-evaluation tool allows respondents to establish their personal profile and compare themselves with other entrepreneurs. The questionnaire evaluates ten characteristics, divided into three categories: motivations, aptitudes and attitudes.

INTRODUCTION

The “Am I the entrepreneurial type?” questionnaire was created to assist individuals who are considering starting their own business. Our goal was to supply this group with an up-to date and scientifically valid tool that enables users to create their own personal profile and compare themselves with the profiles of currently established entrepreneurs. The questionnaire evaluates ten characteristics, broken down into three categories: motivations, aptitudes and attitudes. The paper describes the key elements on which the questionnaire was based, the steps taken in its development, and the methods used to validate it.

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Conceptual model

Entrepreneurial profile

Many factors come into play when a business is being set up, but people often believe they do not have what it takes to start their own business. It has been argued that only one out of ten individuals has the attributes needed to become an entrepreneur. On the basis of this argument, a good many people could actually start their own business and succeed in doing so. The “Am I the entrepreneurial type?” self-evaluation questionnaire can help people unsure about their own entrepreneurial potential to better define their personal characteristics and give them the confidence they need to follow through with their goals. Because it is based on a number of studies examining the characteristics and attitudes of entrepreneurs, the self-assessment enables respondents to compare their own values and personality traits with those of successful entrepreneurs and self-employed individuals. (For a detailed analysis of this review, see: Gasse and D’Amours, 2000).

Most entrepreneurs share certain personality traits. Still, it cannot be assumed that individuals can be entrepreneurs simply on the basis of attributes they share with other entrepreneurs, as these characteristics are merely a fraction of an individual’s whole personality. While they resemble each other in certain ways, all entrepreneurs have their own particular contexts and situations to deal with (Solomon, G.T. and Winslow, E.K., 1998). At the same time, it can reasonably be supposed that people with profiles that reflect those particular personality traits will normally be more inclined to start their own businesses. If these same people also demonstrate aptitudes and adapted behaviour patterns similar to those of successful entrepreneurs, they will in all likelihood find the challenges easier to meet. Nonetheless, a number of predispositions have a critical influence on the rapidity with which a business is established and the resulting outcomes (Gough, 1988).

This questionnaire was developed to raise awareness of key factors that need to come into play when starting a business or taking a project forward. The results may evolve over time, depending on situations particular to different individuals and, in particular, on their perception of their own personal aptitudes and attitudes. It should be remembered that this self-evaluation

instrument does not encompass the entire personality, only the characteristics relating to an eventual career in entrepreneurship.

No expert will claim that there exists such a thing as a tool for predicting the future. Clearly, it would be inappropriate to use the questionnaire as an indicator for predicting business creation (Palmer, 1971); too many other elements (personal background, external circumstances, resources, etc.) can interfere. The results of the questionnaire are designed to foster awareness of entrepreneurship and support personal reflection, while helping would-be entrepreneurs identify their strengths and weaknesses. People’s personal backgrounds and external triggers that can stimulate business creation must also be taken into account. The model and its different components are shown in Figure 1. Each characteristic that contributes to the model is explained in more detail in the section that follows.

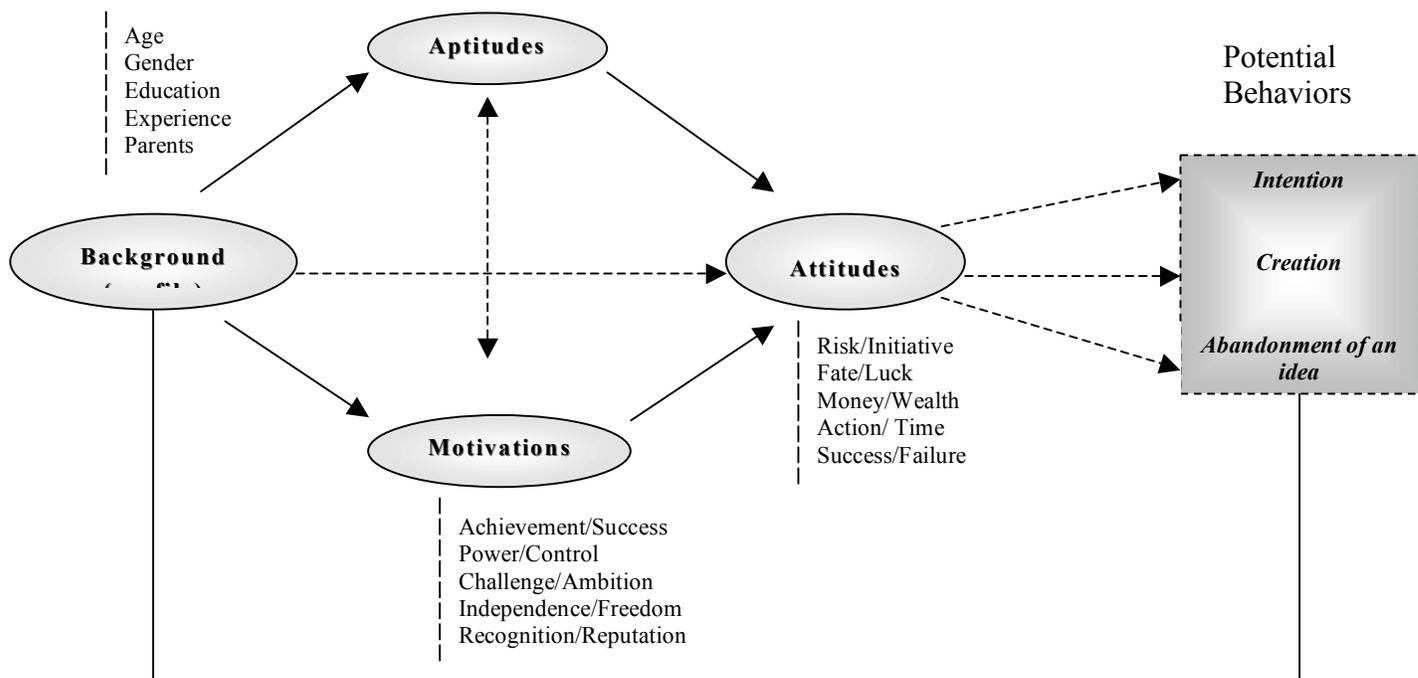


Figure 1: The conceptual model

Major elements

▪ *Background*

There are certain elements in people's backgrounds, such as having previously worked in a small business or having a family member or close friend who is self-employed, that play a significant role in entrepreneurship (Collins, Moore and Unwalla, 1964). Once you have demystified the business world, it is much easier to become a part of it. It is important for prospective entrepreneurs to understand what is entailed in establishing and operating a small business, have a solid social network, and be familiar with the target sector. Education can help stimulate creativity and autonomy, while the more technical aspects of the business can be learned along the way (Rejskind, 1980). Certain cultures encourage and value business development and financial success (McClelland, 1961). These cultures are usually traditional, and therefore depend on the prosperity of their businesses as ways to foster economic self-sufficiency and social progress.

▪ *Motivations*

The greatest motivation for creating one's own business is above all the need for achievement and self-fulfilment. The need for power can also be present, but is less apparent (McClelland, 1965). Creativity and autonomy are two motivational factors that seem to be the cornerstone of all business development projects. A significant number of different motivations can be identified with the entrepreneurial drive in an individual:

1) The desire to take up new adventures:

- Enjoys rising to new challenges.
- Likes to set own goals.
- Wants to establish own criteria of excellence.
- Wants to fully develop his/her potential while focusing on efficiency and results.
- Wants to control the resources linked to project success and analyze the results obtained.
- Enjoys working closely with experts and specialists to constantly improve performance (*Hornaday et Aboud, 1971*).

2) **The need to be in control**

- Does not have to obey to other's people orders.
- Manages and influences others in ways that fit with his/her own plans.
- Mobilizes resources and staff around his/her goals.
- Takes charge and accepts responsibility of personnel issues.
- Enjoys competition and victory.
- Craves to be in the spotlight and hold a prestigious reputation (McClelland et Winter, 1969).

3) **Likes to be independent:**

- Does not see him/herself as vulnerable or easily imposed upon.
- Does not conform and stays away from pre-established mandates and prohibitions.
- Wants to be the sole decision-maker and have liberty to take action.
- Is not dependant on emotional and social support, and has purchasing power.
- Seeks situations that are conducive to creativity and taking initiative (Stoner et Fry, 1982).
-

4) **Likes original ideas and wants to make a difference:**

- Imagines new ways to liven up day-to-day rituals and procedures.
- Looks for efficient ways to work.
- Welcomes creative ideas and takes pleasure in putting them into action.
- Is on the lookout for new innovative products (Lessem, 1983).

▪ *Aptitudes*

Aptitudes are a natural or acquired ability to learn or understand a given concept. An aptitude is a form of skill, that is acquired and developed throughout assorted life experiences, and can be called upon in different circumstances. There is a long list of aptitudes that are conducive to entrepreneurial behaviour. An entrepreneur possesses a number of aptitudes:

1) **Has confidence in his/her potential:**

- Believes in his/her capacity to succeed in different endeavours.

- Considers him/herself qualified enough to respond to challenges and make critical decisions.
- Is confident in obtaining high-quality results.
- Sees own abilities in a positive spotlight .
- Demonstrates the attributes of a leader who can persuade others to follow him/her.
- Has a positive self-image (Brockhaus, 1980).

2) Exudes energy and vitality:

- Has strength and endurance to work long hours,
- Enjoys having a million things to do and be constantly busy.
- Adopts a demanding work schedule and expects as much from his/her employees.
- Enjoys being in production mode.
- Is capable of planning, organizing, mobilizing and controlling.
- Focusses on one task at a time (Kets de Vries, 1977).

3) Follows through on what he/she begins:

- Is tenacious in the pursuit of goals.
- Perseveres when problem-solving.
- Does not let him/herself be intimidated by difficulties or obstacles.
- Is not afraid by hard work.
- Channels all efforts into success and avoids failure (Panday and Tewary, 1979).

4) Has the capability to experience elevated stress levels:

- Pushes the boundaries of his/her endurance, of working in difficult and/or unusual conditions without it hindering his/her performance.
- Tolerates uncertainty.
- Has the potential to quickly adapt to various situations.
- Is not afraid of change.
- Sees stress as a positive element, an incentive to act, a signal to double his/her efforts, a stimulant.
- Revels in the rush that is brought on by stressful situations (Kets de Vries, 1977).

5) **Has the capacity to see relationships between situations:**

- Can identify key elements and their connection to each other.
- Carries a personal vision.
- Demonstrates the ability to identify and solve complicated problems.
- Has the capacity to examine situations objectively.
- Uses intuition when applying facts or principles to new situations.
- Can quickly and clearly envision the desired results.
- Considers many solutions when attempting to solve a problem.
- Borrows ideas from other spheres of activity.
- Adapts readily in a multi-tasking environment (Deeks, 1976).

▪ ***Attitudes***

Attitudes are influenced by perception. They are either conscious or subconscious opinions that are formed based on hypothetical or real situations. If they do not trigger any action or intent, they will definitely adapt and develop further. Many perceptions may have a significant impact on entrepreneurship and there are particular attitudes that suggest some individuals are highly likely to create their own business. Certain attitudes indicate that a person is prone to create his/her business. A prospective entrepreneur:

1) **Sees competition as an efficiency factor:**

- Likes to compete with opponents of the same strength.
- Uses competition as a positive stimulant, to improve personal performance.
- Has the strategic ability to successfully compete against an opponent(s).
- Enjoys evaluating and outwitting an opponent(s) (Bruno and Tyebjee, 1982).

2) **Understands the need for change when striving for success:**

- Prepares to become adaptable to situations and creates situations where change will occur.
- Likes to adjust to diversity.
- Is vigilant and responsive to opportunities created by change.

Definition of the characteristics

The table that follows gives definitions for each of the characteristics included in the questionnaire. Each characteristic is assigned to one previously described categories: motivations, aptitudes and attitudes.

Table 1: Definition of the characteristics referred to in the Questionnaire

MOTIVATIONS	<p>Motivations are factors that determine behaviour. They are the underlying reasons that induce someone to act.</p>
	<p><i>Achievement/success</i> The need to achieve is demonstrated by a desire to progress, excel, perform. A person who has this characteristic likes to set his own objectives and get feedback about what he is doing to excel. Such people are often very competitive, especially with themselves.</p>
	<p><i>Challenge/ambition</i> Challenge and ambition are closely related to the need to achieve. These people are constantly looking for ways to take on difficult projects, achieve their dreams. They have a constant need to learn.</p>
	<p><i>Independence/freedom</i> People who are looking for independence and freedom want to be their own boss and able to make their own choices, set their own constraints – in short, make decisions independently.</p>
	<p><i>Power/control</i> People who like power and control are often imbued with the desire to lead and influence. In concrete terms, such people want to organize and coordinate actions and mobilize resources. They also like to arouse admiration and acquire social status.</p>
	<p><i>Recognition/reputation</i> People who have a great need for recognition like to be publicly recognized for what they do. They want to be an authority in their field, a respected member of their community.</p>
APTITUDES	<p>Aptitudes are natural inclinations, competencies, abilities. Certain aptitudes predispose someone to be an entrepreneur.</p>
	<p><i>Self-confidence/enthusiasm</i> Self-confidence gives someone a belief in his own resources and abilities, makes him proud of himself. Someone who has self-confidence knows his own value, and is optimistic about his ability to achieve.</p>
	<p><i>Perseverance/determination</i> Perseverance is demonstrated by persisting in one's efforts, constant determination to find solutions to problems. People who persevere and are determined will display tenacity and are able to bounce back quickly.</p>

	<p><i>Tolerance for ambiguity/stress management</i> This is an important characteristic in an entrepreneurial profile. People who can tolerate ambiguity are able to handle and manage the stress created by uncertainty. They are very adaptable.</p>
	<p><i>Intuition/flair</i> It is harder to describe intuition. It has to do with a sense of timing, the ability to identify opportunities. Such people usually trust their intuition and instinct when making decisions.</p>
	<p><i>Creativity/imagination</i> Creativity often is evidence through someone who is curious, inquisitive, and able to anticipate things and to imagine various solutions to a problem.</p>
ATTITUDES	<p>Attitudes are made up of perceptions, our feelings about something. They are judgments we make, ways we look at things.</p>
	<p><i>Attitude towards risk/initiative</i> Attitude towards risk dictates whether someone views taking initiatives positively or negatively. In general, entrepreneurs are willing to take calculated risks that involve them personally. In other words, they make sure they take initiatives that they think they can control and manage effectively.</p>
	<p><i>Attitude towards fate/luck</i> Some people attribute their success to luck, others attribute it to their own efforts. People with an entrepreneurial profile tend to believe they have the power to influence events by the actions they take.</p>
	<p><i>Attitude towards money/wealth</i> One's perception of money and wealth may or may not be favourable to starting a business. In general, entrepreneurs do not pursue wealth at any cost. However, they realize that sales are an indicator of success for both the business and the entrepreneur. Thus, money and wealth are part of the business environment and, as such, the entrepreneur knows he has to take them into account.</p>
	<p><i>Attitude towards success/failure</i> No one is consistently successful in life. However, those who can learn from their failures are one step ahead of those who cannot. Entrepreneurs usually have the ability to bounce back and find something positive in every situation, failures as well as successes.</p>
	<p><i>Attitude towards action/time</i> One fundamental characteristic of the entrepreneur is being action-oriented. Eagerness to take action and diligence are fairly common traits of entrepreneurs. They believe they have to act to be successful.</p>

DEVELOPMENT OF THE INSTRUMENT

Review of Literature

Many self-evaluations are available to help determine entrepreneurial potential. Most often, the variables used in these evaluations are: personal achievement, self-confidence, creativity,

perseverance, intuition, risk-taking, fate, action, independence, tolerance to ambiguity, challenges, success and leadership. However, the structure and composition of the evaluations do not have enough variety. Some are more complete than others; others more scientific; some use numbered measurement scales (for example from 1 to 5); others, dichotomous scales (yes/no, true/false); Whatever the method, we have reviewed the variables of all these tests to verify their statistical validity.

- **Short-form evaluations**

Many of the self-evaluation instrument are short questionnaires that use the main elements and notions attributed to entrepreneurship to establish a personality profile. Obviously, because of the simplicity of these questionnaires, they are often used as a tool to raise entrepreneurship awareness, while having no statistical value whatsoever.

- **Long-form evaluations**

Some self-evaluation instruments are much longer, consisting of approximately 50 to 70 questions. These questionnaires are much more structured and include a long list of variables. Despite the fact that these tests contain a large amount of assertions and examine more factors than the previous ones, their statistical validity remains, nevertheless, weak.

- **Statistically valid tests**

This last category contains an especially long questionnaire, but is validated by much statistical analysis. For example, «L'évaluation de mes qualités entrepreneuriales»³, developed by Université de Sherbrooke's *Centre de recherche interuniversitaire sur l'éducation et la vie au travail* (CRIEVAT) was submitted to Cronbach's alpha test. The tool confirmed reliable internal coherence. Yet, despite the fact that the questionnaire was made up of factors and dimensions taken directly from scientific literature, no test was performed to determine its scientific validity against its capacity to discriminate. In other words, it failed to highlight the remaining population's entrepreneurial profile.

Among the different tests that have been reviewed, only the Inventory of Entrepreneurial Characteristics (ICE: Inventaire des Caractéristiques Entrepreneuriales), published by the

³ The evaluation of my entrepreneurial capacities

Fondation de l'entrepreneurship and the Inventory of the Entrepreneurial Profile of Research-based Entrepreneurship (Inventaire du profil Entrepreneurial des Chercheurs-Entrepreneurs), both developed by Yvon Gasse, had initially been subjected to a series of statistical tests (Cronbach's alpha, T-test, correlations, etc.) to determine internal and external validity.

Our conclusion is therefore that, while there exist many different tools for assessing the same entrepreneurial characteristics, categories and variables, very few of these evaluations are statistically valid.

The preliminary version of the questionnaire

After the review of current literature dealing with the subject, we drafted the first version of the questionnaire⁴, which contained 90 assertions. As presented in this model, the questionnaire is structured into three parts: motivations, aptitudes, and attitudes. Each part is divided into five characteristics. Finally each characteristic is measured by six assertions. The first version of the test included the following elements: age, education, gender, area of dwelling, profession and profession of parents, business and SME experience, and Aboriginal descent. This data allowed us to ensure the representation of the sample vis-à-vis the Canadian population. More importantly, it allowed us to present the geographic distribution and representation of the Aboriginal community.

The pre-test

We began by giving a pre-test using a hard copy of the questionnaire, distributed to a sample group of 30 people. The pre-test enabled us to determine whether or not the questions were easy for respondents to understand. Once this part of the pre-testing was complete, we proceeded with a broader pre-test, using an electronic version of the questionnaire made available on the website of the Business Development Bank of Canada.

In total, we compiled data from 2,000 respondents from different regions in Canada, and abroad, completed over the Internet. For statistical reasons, we were obliged to discard 15 of those questionnaires because of nonsensical answers that would potentially have negatively affected the

⁴ The initial version of the questionnaire is available from the authors of this text.

validity of the test. As a result, our assessment of the internal and external reliability and validity of the self-evaluation instrument was based on a total of 1,996 respondents.

Respondents Profile

The table that follows shows the profile of the 1,996 respondents who answered the questionnaire in its pre-test phase. The data used was drawn from the information obtained in the socio-demographic portion of the questionnaire.

Table 2: Socio-demographic Data for the Pre-test Sample

Age	Average	32 years old
Gender	Male	62.5%
	Female	37.5%
Area of dwelling	Outside of Canada	8.1%
	Ontario	39.0%
	Quebec	22.8%
	Atlantic Provinces	4.7%
	Pacific Provinces	25.0%
	Territories	0.4%
Language	English	68.5%
	French	21.9%
	Other	9.7%
Aboriginal descent	Yes	7.1%
	No	92.9%
Education	None	0.8%
	Elementary School	0.5%
	High school	30.7%
	College studies	28.7%
	University studies (Bachelor degree)	24.5%
	University studies (Master degree)	8.8%
	University studies (Doctoral degree)	1.1%
	Postdoctoral studies	0.1%
	Professional degree	2.5%
	Certificate or Part-time Student (University)	1.6%
	Presently studying	0.7%
Profession	Student	27.5%
	Intermediate officer	7.2%
	Senior administrator	9.5%
	Full-time worker	16.3%
	Part-time worker	4.7%
	Independent worker	10.9%

	Owner-Business executive	12.7%
	Agricultural worker	0.8%
	Professional	10.6%
Business experience	Yes	12.7%
	No	87.3%
SME experience	Yes	52.0%
	No	48.0%
Profession of parents	At least one parent is an entrepreneur	40.0%
	None	60.0%

The data shows that the geographic distribution and profile of the respondents is generally consistent with that of the Canadian population. Only the Maritimes provinces seem to be underrepresented. Under-representation also seems to be the case in the identification of other languages used, and for the presence of Aboriginal populations. In addition, we noted that the proportion of women respondents was lower than the number they represent in the actual population.

Measurability

We assessed the measurability qualities of the instruments to determine how it would perform as a field instrument. Measurement problems arise from imperfect tools and imperfect tools produce errors. The assessment of the measurability qualities of an instrument of this kind enables us to establish to what extent and where errors occur. Errors tend to significantly reduce the relationships between the main variables, making them seem weaker than they actually are (Jacobwitz et Vilder, 1962).

- **Reliability measurements**

An instrument's reliability is its ability to reproduce similar results from one experience to the next. The primary indicator of reliability, and currently used test for reliability, is the Alpha internal consistency coefficient. This method measures the covariance of all the items simultaneously. To ensure reliability, Alpha internal consistency coefficients (Cronbach, 1951) were applied to the questionnaire as a whole, in addition to the various categories, and the specific characteristics identified within it. Detailed results can be found in Table 3. These same calculations were applied to the final version of the questionnaire and, for comparison purposes, the distribution of Alpha coefficients is also presented for the 50-item scale. The coefficients

were satisfactory for all these components. In the final version of the questionnaire, all coefficients were superior to .50, a level considered more than acceptable for this type of instrument. Alpha coefficients were particularly high in reference to the three categories and the overall scale. The final version also showed a higher level of internal consistency for almost all the characteristics.

Table 3: Values Based on Cronbach’s Alpha Coefficient for the Overall Instrument, the Characteristics and the Categories used in the 90-Item Version and the 50-Item Version.

<i>Dimensions</i>	<i>Initial version (90-statement)</i>	<i>Final version (50-statement)*</i>
<i>Dimension : Motivations</i>	.8442	.8212
Achievement / Success	.3190	.6214
Power / Control	.6630	.6610
Challenge / Ambition	.4869	.5229
Independence / Freedom	.5290	.5073
Recognition / Reputation	.6461	-
<i>Dimension : Aptitudes</i>	.8682	.8709
Perseverance / Determination	.5641	.6290
Self-confidence / Enthusiasm	.6523	.5443
Tolerance for ambiguity / Stress Management	.6085	.6194
Creativity / Imagination	.7343	.7428
Intuition / Flair	.3867	-
<i>Dimension : Attitudes</i>	.7199	.6991
Risk / Initiative	.3098	-
Fate / Luck	.5278	.5672
Money / Wealth	-.0478	-
Action / Time	.4596	.6365
Success / Failure	.4289	-
<i>TOTAL</i>	.9269	.9277

*Characteristics where no Alpha value is given are those that were eliminated from the final version of the instrument.

- **Validity measures**

Validity is an instrument's capacity to appropriately measure designated concepts. However, validity cannot be expressed by a simple number. Many precautions must be taken to ensure an adequate level of validity (Gough, 1988).

At the outset, we approached the concept of entrepreneurship using a combination of intrinsic concepts: categories of attributes and the characteristics proper to each of them. Each of the 15 characteristics was assessed on the basis of six items, representing as many facets as possible of the definitions given for these concepts. The validation approach enabled us to ensure that the items in fact related to the concepts they were supposed to measure. Furthermore, the statistical analysis enabled us to reduce the number of items for certain characteristics or assign items to characteristics to which they were more appropriately belonged. This same approach was used to assign the characteristics themselves to the three main categories. In other words, validation not only allowed us to ensure that the concepts referred to are precisely defined; it also meant that the evaluation instrument could be refined and reduced down to its simplest form.

One of the main concerns when developing this kind of instruments is to ensure that the chosen categories effectively discriminate between respondents. Hypotheses are formulated, and the validation procedure allows us to see if they are supported. In this case, we saw it as essential that the categories identified give prominence to attributes found in entrepreneurs and business executives. We believed that entrepreneurs would demonstrate superior results when compared with the general population in terms of characteristics, categories and the overall construct (Gasse, 1983).

We carried out an initial analysis of answers by respondents based on their occupation group and were able to establish that specific groups produced similar results. As a result of this observation, we grouped the categories in the following way:

- 1- Owner-managers + Top managers
- 2- Independent workers + Agricultural workers
- 3- Middle managers + Professionals
- 4- Full-time workers + Part-time workers

5 - Students

Table 4 presents the means obtained for each of the above-mentioned groups. As can be seen in this table, group 1 (Owner-managers and Top managers) obtained higher scores for the majority of the characteristics than respondents in the other categories. This difference is statistically significant.

Table 4: Means for the Characteristics, Categories and Total Scores for both the 90-Item Questionnaire and the 50-Item Questionnaire, by Respondent Group.

<i>Characteristics</i>	<i>1</i>		<i>2</i>		<i>3</i>		<i>4</i>		<i>5</i>	
	<i>90</i>	<i>50</i>	90	50	90	50	90	50	90	50
<i>Motivations</i>	96,4102	62,9636	96,0114	62,4872	95,6193	62,0846	93,5499	59,9309	91,6458	57,4932
<i>Achievement / Success</i>	18,6286	16,7961	18,4217	16,3932	18,2659	16,6073	18,0742	16,0409	17,3659	14,9785
<i>Power / Control</i>	20,5825	17,3859	20,2707	17,1624	20,5529	17,3414	20,5529	16,5652	19,2231	16,0998
<i>Challenge / Ambition</i>	19,0874	16,6311	19,3732	16,6268	19,1390	16,4864	18,7673	16,0588	18,4521	15,5675
<i>Independence / Freedom</i>	19,0874	12,1505	19,3732	12,3048	18,6798	11,6495	18,2276	11,2660	17,7241	10,8474
<i>Recognition / Reputation</i>	18,9515	-	18,7635	-	18,9819	-	18,8210	-	18,8806	-
<i>Aptitudes</i>	97,7888	67,8252	96,6011	66,7037	96,4230	66,9577	93,5422	64,5882	91,0117	61,9335
<i>Perseverance / Determination</i>	19,6529	14,1845	19,5470	14,0855	19,3112	14,0121	19,0230	13,6522	18,6693	13,0646
<i>Self-confidence / Enthusiasm</i>	20,5534	13,4320	20,3647	13,1425	20,2266	13,1118	19,6803	12,6522	19,1311	12,1703
<i>Tolerance for ambiguity / Stress management</i>	18,7476	19,2524	18,1510	18,6638	18,3505	19,0483	17,4604	18,1969	16,7750	17,4266
<i>Creativity / Imagination</i>	20,9563	20,9563	20,8120	20,8120	20,7855	20,7855	20,0870	20,0870	19,2720	19,2720
<i>Intuition / Flair</i>	17,8786	-	17,7265	-	17,7492	-	17,2916	-	17,1644	-
<i>Attitudes</i>	93,8398	36,9248	93,4473	36,6724	93,9124	36,9668	91,9872	35,6215	89,1996	34,0431
<i>Risk / Initiative</i>	19,0267	-	18,8291	-	18,8066	-	18,1944	-	17,4247	-
<i>Fate / Luck</i>	20,3859	20,0291	20,3447	19,8803	20,5347	20,0393	20,1483	19,2481	19,3953	18,2192
<i>Money / Wealth</i>	16,2670	-	16,1595	-	16,5076	-	16,0409	-	15,3112	-
<i>Action / Time</i>	18,3131	16,8956	18,2023	16,7920	18,2417	16,9275	17,8056	16,3734	17,4168	15,8239
<i>Success/ Failure</i>	19,8471	-	19,9117	-	19,8218	-	19,7980	-	19,6517	-
<i>TOTAL</i>	288,039	167,714	286,060	165,863	285,955	166,009	279,079	160,141	271,857	153,470

The observation about statistical significance is not in itself a definitive demonstration that the questionnaire as a whole, together with its different categories, can be defined as an effective discriminatory tool. To confirm its validity in this regard, we carried out analyses of variance to evaluate the power of discrimination of the questionnaire as a whole. Table 5 gives the results obtained from the analyses of variance, and these results are conclusive as to the levels of discrimination achieved.

Table 5: Results Obtained from the Analysis of Variance of the 50-Item Questionnaire

	<i>Mean square inter.</i>	<i>Mean square intra</i>	<i>F</i>	<i>Prob.>F</i>
Motivations	9349,890	106342,639	43,763	,000***
Aptitudes	10214,518	134192,454	37,888	,000***
Attitudes	2811,039	36429,656	38,408	,000***
TOTAL	62542,641	643127,156	48,405	,000***

*** $p < 0,001$

▪ **Analysis of Items and Categories**

To complete the final version of the questionnaire, we eliminated 40 of the items it had initially contained. We used specific tests and procedures to determine which items should be removed.

Items with a negative Alpha coefficient and a weak or non-significant correlation were automatically set aside. Where performance on a scale (Cronbach’s Alpha), was an issue, we chose to eliminate certain categories or non-performing sub-sets, and reassign some items to new categories or sub-sets that offered more performance. We also used the average inter-item correlation for each characteristic to analyze its performance level.

Table 6: Average Correlations for Categories in the 90-Item and 50-Item Questionnaires

		Pearson average correlations	
Scales		90 items	50 items
Motivations	<i>Achievement / Success</i>	0,416	0,625
	<i>Power / Control</i>	0,610	0,651
	<i>Challenge / Ambition</i>	0,518	0,580
	<i>Independence / Freedom</i>	0,508	0,631
	<i>Recognition / Reputation</i>	0,596	-
Aptitudes	<i>Perseverance / Determination</i>	0,557	0,684
	<i>Self-confidence / Enthusiasm</i>	0,599	0,586
	<i>Tolerance for ambiguity / Stress Management</i>	0,581	0,645
	<i>Creativity / Imagination</i>	0,654	0,660
	<i>Intuition / Flair</i>	0,470	-
Attitudes	<i>Risk / Initiative</i>	0,366	-
	<i>Fate / Luck</i>	0,543	0,561
	<i>Money / Wealth</i>	0,256	-
	<i>Action / Time</i>	0,492	0,635
	<i>Success/ Failure</i>	0,501	-

As can be seen in Table 6, modifications to the evaluation instrument resulted in most of the characteristics increasing their Pearson correlation coefficients between the two questionnaires. Furthermore, a comparison of the values in Tables 6 and 7 for the 50-item scale, shows that the average correlation for each characteristic (Table 6) is superior to the correlations between each of the characteristics (Table 7). In other words, it can be concluded that the items measuring each characteristic have been assigned to the appropriate dimension within the evaluation instrument.

Table 7: Correlations between the Characteristics, the sub-Scales and the Overall Scale of the 50-item Questionnaire.

	ACH	POW	CHAL	IND	MOT I	PERS E	SELF	TOLE	CREA	APTI	FATE	ACT	ATTI	TOTAL
ACH	1,000													
POW	0,442	1,000												
CHAL	0,529	0,532	1,000											
IND	0,398	0,360	0,383	1,000										
MOTI	0,787	0,775	0,797	0,687	1,000									
PERSE	0,593	0,527	0,575	0,392	0,688	1,000								
SELF	0,531	0,427	0,515	0,425	0,623	0,583	1,000							
TOLE	0,521	0,436	0,482	0,418	0,610	0,585	0,521	1,000						
CREA	0,538	0,555	0,565	0,448	0,692	0,681	0,581	0,562	1,000					
APTI	0,653	0,584	0,639	0,509	0,784	0,834	0,788	0,832	0,859	1,000				
FATE	0,477	0,364	0,421	0,392	0,543	0,482	0,416	0,458	0,500	0,560	1,000			
ACT	0,538	0,518	0,574	0,309	0,640	0,635	0,501	0,452	0,588	0,646	0,382	1,000		
ATTI	0,607	0,523	0,590	0,425	0,706	0,664	0,547	0,547	0,547	0,721	0,858	0,803	1,000	
TOTAL	0,757	0,702	0,751	0,608	0,926	0,812	0,738	0,752	0,822	0,940	0,675	0,741	0,848	1,000

The performance analysis for the items corresponding to each characteristic was verified with a 50 X 50 correlation matrix. The values indicate that the items have higher correlation values in relation to the total score of the characteristic in which the value is located than with the total scores of each of the other characteristics in the category. This operation enabled us to ensure that every item on the scale was placed where its performance best fit within the scale.

A similar procedure was used to establish the correlations between the characteristics and the categories. The correlation matrix in Table 7 confirms that the correlation values are statistically

significant for both the characteristics and the categories; this indicates that the overall scale of the questionnaire is coherent and valid.

Finally, an Edwards test was used to measure the levels of discrimination in the questionnaire. For this test, we selected 27% of the lowest scores in the sample and 27% of its highest scores and then ran a T-test on the means scores for each item, to ascertain whether there was any statistically significant difference between the means for each group. The Edwards test results were all statistically significant at a level lower than .01. These results confirm that, as anticipated, the items effectively discriminate between groups (Edwards Personal Preference Scale, 1960).

▪ **Measures of Equivalence**

To determine the level of equivalence between the original 90-item questionnaire and the 50-item one, we calculated the correlations between the sub-scales and the overall scales. The high correlation level that can be seen in Table 8 supports our conclusion that the 50-item version of the questionnaire is very similar to the 90-item questionnaire. In other words, as a result of the statistical analyses we had carried out, we were able to substantially reduce the length of the questionnaire with minimal loss of information.

Graph 8: Correlation between the sub-scales and global scales of the 90-statement and 50-statement questionnaire.

	MOTI 90	APTI 90	ATTI 90	TOTAL 90	MOTI 50	APTI 50	ATTI 50	TOTAL 50
MOTI 90	<i>1,000</i>							
APTI 90	<i>0,741</i>	<i>1,000</i>						
ATTI 90	<i>0,667</i>	<i>0,739</i>	<i>1,000</i>					
TOTAL 90	<i>0,898</i>	<i>0,927</i>	<i>0,873</i>	<i>1,000</i>				
MOTI 50	<i>0,916</i>	<i>0,785</i>	<i>0,728</i>	<i>0,903</i>	<i>1,000</i>			
APTI 50	<i>0,730</i>	<i>0,967</i>	<i>0,737</i>	<i>0,909</i>	<i>0,784</i>	<i>1,000</i>		
ATTI 50	<i>0,675</i>	<i>0,720</i>	<i>0,868</i>	<i>0,828</i>	<i>0,706</i>	<i>0,721</i>	<i>1,000</i>	
TOTAL 50	<i>0,861</i>	<i>0,925</i>	<i>0,833</i>	<i>0,972</i>	<i>0,926</i>	<i>0,940</i>	<i>0,848</i>	<i>1,000</i>

These steps were repeated a number of times before the final form of the self-evaluation instrument was adopted. This final version of the questionnaire contains 10 characteristics and 50 items.

We should point out that, in the final questionnaire, we retained only the most significant items relating to the socio-demographic profiles of respondents. As a result, the only questions asked in this regard relate to gender, age, education and small-business experience.

CONCLUSION

Through the “Am I the entrepreneurial type?” questionnaire, we have created a self-evaluation instrument for people wanting to evaluate their entrepreneurial potential.

The questionnaire was developed using rigorous and precise methodology. We drew on the available scientific literature to carry out a number of analyses to test the validity of the model. The instrument evaluates specific motivations, aptitudes and attitudes largely associated with the entrepreneurial profile.

The goal of the self-evaluation instrument is to raise awareness among respondents as to the importance of personal characteristics when deciding whether or not entrepreneurship is right for them. No tool exists for predicting the future, so this is not a diagnostic test. The results of the self-evaluation instrument analyze the attributes of different respondents, based on their answers to the questionnaire. The self-evaluation instrument could be used as a tool to guide participants in their decisions about setting up a business. It could, for example, help them identify and work to improve specific weaknesses, orient their search for business partners with a range of strengths that complement their own, lead them to opt for a project that better suits their style...etc. Starting a business is a long-shot project that has its fair share of joys and frustrations. Some people have what it takes to be an entrepreneur, while others do not. This self-evaluation instrument is an important step in the decision-making process. Its purpose is not to discourage would-be entrepreneurs; it is intended to support them in making responsible and more informed final decisions!

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HOW COMMUNITIES CAN BREED ENTREPRENEURSHIP

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The study examines the prerequisites of establishing favourable conditions for small and medium enterprises in rural municipalities in Central Europe (Austria, Czech Republic, Hungary, Slovakia and Slovenia). On the basis of 2,000 questionnaires and more than 60 qualitative interviews, we provide a portfolio of measures to be taken for municipalities in the countries surveyed. The results show how the respective local conditions can and must be used as a sound foundation for an individual development strategy on a regional level. Finally, recommendations for a successful know-how transfer between municipalities in Central Europe are presented.

Track: 4. Entrepreneurship and Economic Development

Growth and Economies of Scale Among Timber Haulage Companies*

by Juho Soirinsuo and Pekka Mäkinen

Growth is important for any public economy and the Finnish government has initiated many projects to support and encourage companies to grow. However, research has been done surprisingly little on how growth affects small and medium-size timber haulage companies' profitability. The study investigates economies of scale and cost structures among timber haulage companies in Finland with the aid of their financial statements 2001-2006. The research sample is 30 limited companies that showed an increase in turnover during this time period. The companies were classified into three groups based on their size in 2006. The findings of the study revealed that economies of scale exist in the timber haulage sector, but only to a certain point. Greater organizational costs erode the benefits of growth, which makes the growth of bigger companies financially unprofitable. However, it was found that the sector may be polarized.

Introduction

Truck transportation is the most important timber transportation means. About 80 percent of the Finnish forest industries' roundwood is delivered to mills by truck. Nearly all of the roundwood used by these industries spends some time on wheels during transportation. Truck transportation will retain its position thanks to its speed, flexibility and inexpensiveness. (Mäkinen, 2001)

Approximately 850 timber haulage companies operate in Finland. These own about 1700 timber trucks and employ about 2600 drivers. The sector's turnover is close to EUR 319 million. Timber haulage companies are mainly small family companies each owning on average of 1-3 trucks. The entrepreneur

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him/herself usually participates in the haulage work along with the employs. (Parkkonen, 2007) About 56 percent of the companies have only one truck (Rieppo et al., 2008). The ten largest timber haulage companies own an average of 12 trucks each (MetsäTrans, 2008).

One of the biggest developments in the sector during the last two decades was deregulation in 1991. Until 1991, means testing was used by the Ministry of Transport and Communications, provincial authorities and the trucking associations to regulate the entry of new entrepreneurs into the sector (Mäkinen, 1997). The second big change in the sector occurred more recently when large timber procurement companies began to outsource more of their activities to so-called key or area entrepreneurs, who have taken on increasingly larger areas of the business (Rieppo et al., 2008).

The capital-intensive timber haulage sector has suffered from low profitability and increased competition since deregulation (Mäkinen, 1997; Väkevä, 2004). One of the greatest problems in the sector in recent years has been rising costs (Parkkonen, 2005). This has already negatively affected the profitability of the sector and has created a situation in which it is necessary for the companies to continuously improve their business and strategy in order to survive.

Strategic management theory suggests that a business unit's performance is both directly and indirectly related to the industrial environment in which it competes, the resources it controls, the strategy it uses to align available resources with environmental opportunity, and the organizational structure, processes and systems it employs to implement its chosen strategy (Hofer and Schendel, 1978; Porter, 1980, 1985; White and Hamermesh, 1981). Penrose (1959) presents three explanations why the firm may grow and why there may be limits to the growth of the firm; internal conditions (managerial ability), external conditions (product or market factors), and combined internal-external (uncertainty and risk). In her view, management was the key limited resource. The resource-based view of a company's competitiveness is founded on the assumption that a company's resources and their utilization explain the company's competitiveness better than industrial or sectoral factors (Barney, 1986; Olavarrieta and Ellinger, 1997).

Cost leadership is one of the most substantial strategies, because of the sector's highly centralized customers and sophisticated differentiated services. According to Parkkonen (2007), close to 90 percent of all timber haulages are done for one's three biggest clients. In order to achieve a low-cost advantage, an organization must have a high relative market share (Porter, 1980; Bauer and Colgan, 2001).

This study focuses on growth, economies of scale, and cost structures among the largest growth-orientated timber haulage companies in Finland from the point of view of profitability. First task of the study was to find out how economies of scale occur in the sector. Second, we focus on the costs and development of the cost structure as companies grow. Third, we study how the growth itself affects the companies' profitability as well as the requirements for profitable growth in the sector. Growth is very important field to study because much of the growth of industry comes from the growth of existing establishments, rather than from new ones (Kumar et al., 2001; Mäkinen et al., 2002).

Timber haulage is a service sector where companies transport timber from point A to point B – from the roadside to the mill. The work demands much professional skill from the drivers, because some of the driving is done on very challenging terrain. This highly competitive sector could be called a *bulk-service sector* where costs determine the profitability of the business, which is why it is essential

to study how the economies of scale and the development of the cost structure affect growth-orientated companies' profitability.

Mäkinen (1993, 1997, 2001) has investigated the profitability and competitive strategies of timber haulage companies. At Metsäteho Ltd Väkevä (2004) studied factors affecting the productivity of the timber haulage sector. Mäkinen examined the relationship between strategy and competitiveness; further success and profitability were studied. Mäkinen found that customer relations and strategy have played a large role, but growth was ignored in the study. A study by Väkevä was based on the OKO (2003) statistics from the timber haulage sector. The study encompassed the whole sector in addition external factors that affect the development of the sector's profitability. Corsi et al. (1991) conducted a study on the strategies employed by motor haulage companies engaged in the general freight sector before and after deregulation. This study is intrinsically interesting because it observed in the United States in 1987 a strategy aiming at cost leadership was the weakest alternative. Scheraga (2005) conducted a wide study about blending of strategic dimensions and customer satisfaction in the LTL (less-than-truckload) motor carrier industry. Among others, this study focused on the evaluation of the impact of economies of scale on the profitability.

Methods

Entrepreneurship

Entrepreneurial studies have been based on a wide variety of definitions of the term "entrepreneurship". In fact, definitions of the term entrepreneur have been abundant since Cantillon in 1725. Entrepreneurship is a mechanism by which society converts technical information into products and services (Shane and Venkataraman, 2000). In this study the entrepreneur is seen more as a Kirznerian (Kirzner, 1973; Shane, 2003) than a Schumpeterian (Schumpeter, 1934) entrepreneur in opportunity discovery. Kirzner argues that the core issue of entrepreneurship is the discovery of hitherto unexploited opportunities, thus, in contrast to Schumpeter, taking care of market disequilibria. The entrepreneur discovers an opportunity (Shane and Venkataraman, 2000) for growth in timber haulage business and exploits the opportunity by his/her resources (Barney, 2002; Conner, 1991; Penrose, 1959, 1995). These resources are, for example skilled personnel, skilled manager (the entrepreneur), expedient machinery and good customer relationships. Gick (2002) summarizes the perspectives of Schumpeter and Kirzner as being complementary. Kirzner focuses on individual action; Schumpeter focuses on the market process.

Entrepreneurial opportunities come in a variety of forms. Although an opportunity for entrepreneurial profit might exist, an individual can earn this profit only if he or she recognizes that the opportunity exists and has value (Shane and Venkataraman, 2000). Entrepreneurial opportunities differ from the larger set of all opportunities for profit, particularly opportunities to enhance the efficiency of existing goods, services, raw materials, and organizing methods, because the former require the discovery of new means-ends relationships, whereas the latter involve optimization within existing means-ends frameworks (Kirzner, 1997). At any point in time, only some subset of the population will discover a given opportunity (Kirzner, 1973). According to Douhan et al. (2007) Kirzner does not advocate a growth theory where entrepreneurs appear as a stock-variable alongside others resources such as capital and labor, but this does not mean that his theory is irrelevant for the study of long-term

growth. “Economics explain that where there are unexploited profit opportunities, resources have been misallocated [...] Entrepreneurship corrects [such] waste” (Kirzner, 1982).

Materials and Methods

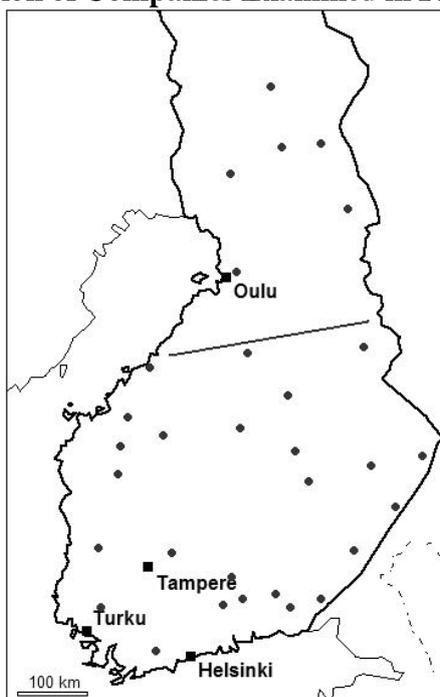
The study focuses on the largest limited companies in the sector which have had a growth in turnover from the year 2001 and which supplied financial statements for the time period in question. It examines limited companies as they most often have more easily accessible material as well as a high relative market share which makes it possible to achieve economies of scale. The sample includes 30 of the largest timber haulage entrepreneurs in the sector. The research method was a purely financial analysis in which the material studied was comprised of financial statements from the years 2001 to 2006. A few of the entrepreneurs, however, were not able to supply financial statements for one or two years (Table 1).

Table 1.
30 Available Financial Statements from the Selected Companies.

	2001	2002	2003	2004	2005	2006
Yearly data, number	28	30	30	30	29	26
Yearly data, percent	93.3	100	100	100	96.7	86.7

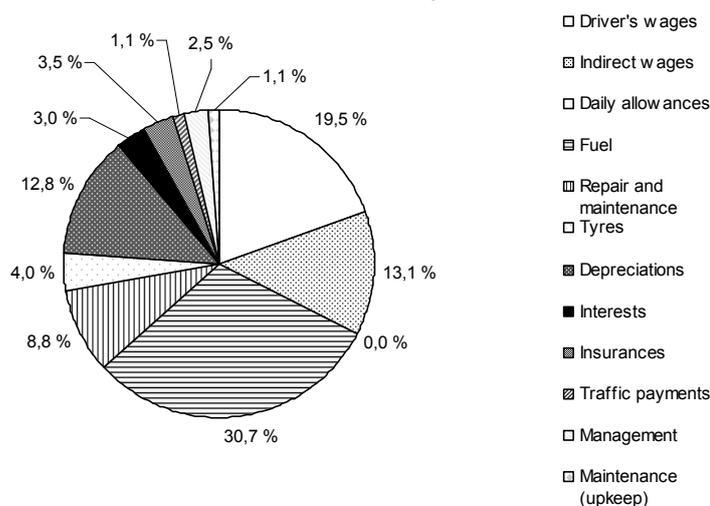
The selection criteria included limited companies and growth. In this way, the sample included a significant number of the largest growth-oriented companies in the sector. The entrepreneurs were selected from all over Finland; however, most are located south of the Kokkola – Kajaani axis. The most northerly company is located in Sodankylä (Figure 1).

Figure 1.
Location of Companies Examined in Finland.



The costs of a timber haulage company are many, and are shown in the financial statements as four main cost sources: purchases (for example parts, maintenance, fuel), wages (for example wages, pension contributions, indirect employee costs), other fixed costs (for example upkeep, rent, insurances), and capital costs (for example interest, depreciation). Clearly the highest costs in the sector consist of wages and fuel (Figure 2).

Figure 2.
A Timber Haulage Truck's Cost Index in 2006 According to K. Palojärvi (Personal Communication, February 12, 2008).



External services are not costs as such because they are mainly subcontracts. The outsourcer plays a kind of “*intermediary*” role. Problems with the financial statement analysis arise because there are no clear or universally accepted guidelines regarding the determination of certain costs and their sources. Companies might place the same costs under a different cost source. Therefore this study focuses on bigger cost aggregates, which clearly makes for better reliability.

Because the study focuses on economies of scale and cost efficiency, and because the research sample consists of growth-orientated companies, the companies involved are divided into three groups, which are compared with each other. The classification is done based on turnover in 2006. Costs and their change are calculated in relation to turnover. How growth affected the groups while they grew to different sizes can be studied this way. The groups were of the following numbers:

1. Under EUR 1.5 million, 11 companies
2. EUR 1.5 - 2.5 million, 10 companies
3. Over EUR 2.5 million, nine companies.

Profitability was measured by net income percentage and internal financing. Internal financing shows how much a company's actual business generates cash flow financing. In other words, it indicates the actual sum of money which remains in the company to be used for investments, working capital financing and payment of loans. Internal financing should also be large enough to satisfy shareholder demand for dividends (Salmi, 2006). However, internal financing is not so informative a number in itself, but it is still quite useful for measuring companies in the same sector.

It is assumed that one of the reasons for companies' eagerness to grow is their aim of achieving economies of scale and better competitive advantage in pursuit of cost leadership, or just greater profitability through good cost control.

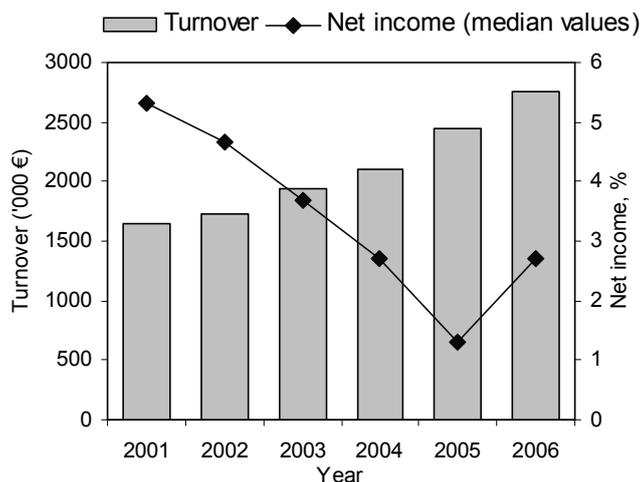
Results

The Sector and the Research Sample

The entrepreneurs in the study represent approximately 3.5 percent of the total number of entrepreneurs in the sector, but almost a quarter of the total turnover. This points to the importance of these companies in the sector. The research sample includes a significant part of the sector's large growth-orientated companies, seeing that most of the companies in the sector are small one-truck companies who are not necessarily even interested in growing. The 21st century has offered many opportunities and challenges for the sector. The new key or area entrepreneur system has also offered better opportunities for growth. However, success in profitable growth demands more business skills on the part of the entrepreneur.

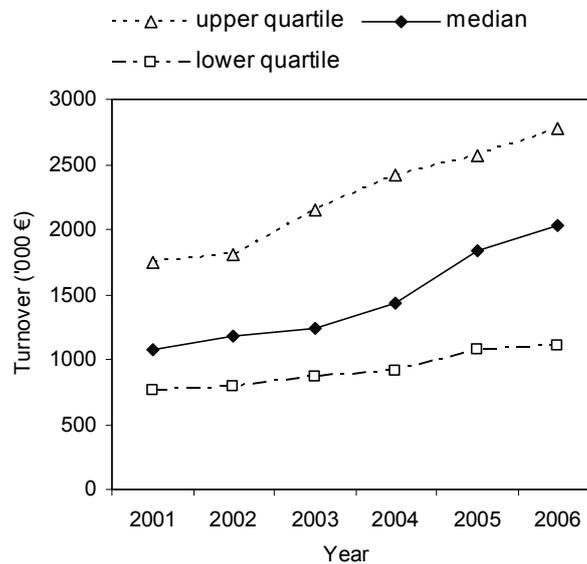
On average, turnover in the companies studied grew 11 percent yearly, in other words 67 percent from 2001 to 2006. The period was challenging for the companies as the median net income percentage dropped from 5.3 to 2.7 percent (Figure 3). As well, the absolute net income for the fiscal period dropped from EUR 73,000 to EUR 48,000 on average in 2006.

Figure 3.
The Average Turnover and Percent of Net Income of Companies Studied.



Differences in turnover among the companies also grew during the same period. Some of the companies grew over 200 percent while the slowest growing companies grew only about 10 percent (Figure 4). The year 2005 was exceptional: because of the paper mill strike there was a slight decline in timber haulage companies' net income. However, the companies grew the fastest in that year, an average of 16.4 percent.

Figure 4.
Development of Turnover 2001-2006.



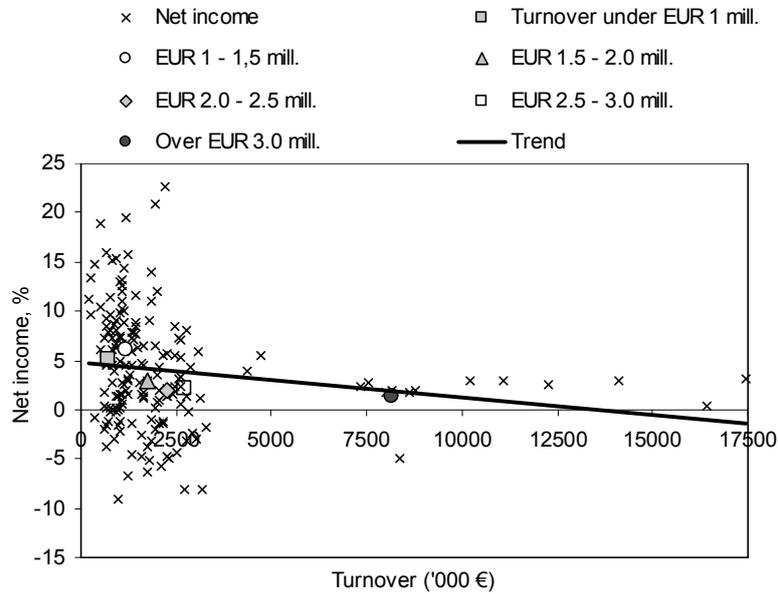
The major cost source was wages, which absorbed an average of 32.9 percent of turnover from 2001 to 2006. The second biggest costs were purchases at 22.5 percent of turnover and other fixed costs at 13.1 percent of turnover. From the capital costs, financing costs (interest) were 1.1 percent and depreciations 9.6 percent of turnover. Companies purchased external services at an average of 17.3 percent of turnover. Different cost sources developed very dissimilarity. This affected companies in many ways depending on their strategy.

Growth, Economies of Scale and Profitability

When all the companies' net income percentages and turnover from 2001 to 2006 are placed in a same diagram, it can be observed that the most profitable company size was EUR 1.0 - 1.5 million (Figure 5). The companies' average net income was 5.2 percent when turnover was under EUR 1 million and 6.0 percent when turnover was EUR 1.0 - 1.5 million. Any larger company size weakened the net income percentage; when the size of a company was over EUR 3.0 million the average net income was only 1.3 percent. According to these results, it appears profitable for companies to grow when their turnover is under EUR 1 million, but they should not grow over EUR 1.5 million if their goal is to improve profitability.

Figure 5.

Turnover, Net Income and Average Net Income in Different Size-Categories from All Companies Under Investigation from 2001 to 2006.



The dispersion in the net income percentage was close to six until company size reached EUR 2.5 million. The greatest dispersion was in the company size of EUR 1.5 - 2.0 million, 6.43. Among companies of over EUR 3.0 million, the dispersion was only 3.38. Even though the large companies were not the most profitable, according to the dispersion they were still quite stable money-makers.

It is also interesting to note that only one company with turnover over EUR 4.0 million made a loss one year. The situation does not exclude the possibility that the sector can offer economies of scale for a company larger than in the research sample. However, there is very little proof to back this assumption since in this sector no companies of such a size exists in Finland. It remains to be seen if a company larger than those in the research sample would gain greater benefits from economies of scale than what a small company with under EUR 1.5 million turnover can gain from effectiveness.

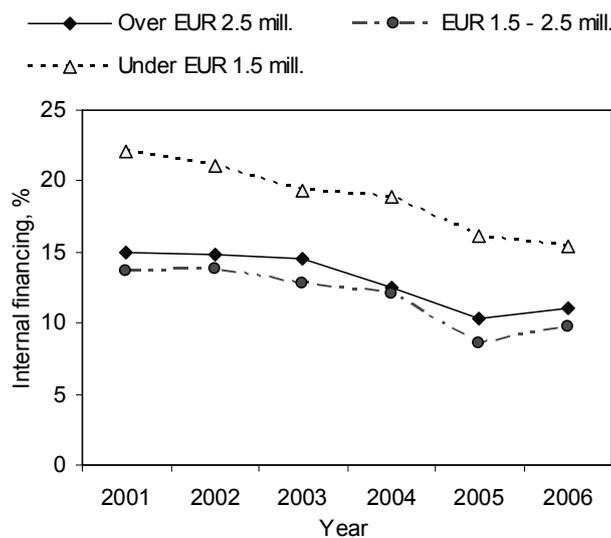
Between the three main groups in the study, growth of turnover was much the same, about 64 - 70 percent from 2001 to 2006. The annual growth was directly proportional to capacity level, in accord with Gibrat's law. According to Gibrat's law of proportional effect, the growth rate of a company is independent of its size (Sutton, 1997). However, smaller companies managed to grow a little faster than larger ones (Table 2). Smaller companies were most profitable in 2001 and the gap grew between the groups in 2006. Companies with turnover under EUR 1.5 million (Group 1) had a 54 percent better net income percentage in 2001 and a 405 percent better in 2006 compared to a Group 3. It can also be seen that the small companies with turnover under EUR 1.5 million managed to grow their absolute income in Euros by 20 percent, while the absolute income of other groups fell as the companies grew. The large and medium-sized companies' absolute income fell 55 percent and 74 percent respectively. The best absolute income in 2001 was achieved by the large companies, but by the small companies in 2006. The growth increased the absolute income among the small companies despite the decline in the net income percentage.

Table 2.
The Effect of Growth and Size in Profitability.

Group	Average turnover in 2006 ('000 €)	Average turnover growth from 2001	Net income percentage in 2001	Net income percentage in 2006	Net income change, %
1. Under EUR 1.5 mill.	1096,9	70,30 %	8,5	5,1	-40,10 %
2. EUR 1.5 - 2.5 mill.	2016	64,00 %	2,7	0,5	-83,60 %
3. Over EUR 2.5 mill.	5276,4	65,60 %	5,5	1	-81,70 %
Average	2657,1	65,90 %	5,7	2,3	-59,20 %

Internal financing was weakened across the board since 2001. The biggest decline was again in 2005, an average of 20 percent. The small companies clearly gained the best internal financing, but declined 30 percent since 2001. Internal financing declined 27 percent among the large companies since 2001. As well, internal financing averaged over one percentage point better among the large companies compared to the medium-sized ones, but over five percentage points weaker compared to the small companies (Figure 6).

Figure 6.
Development of Internal Financing.

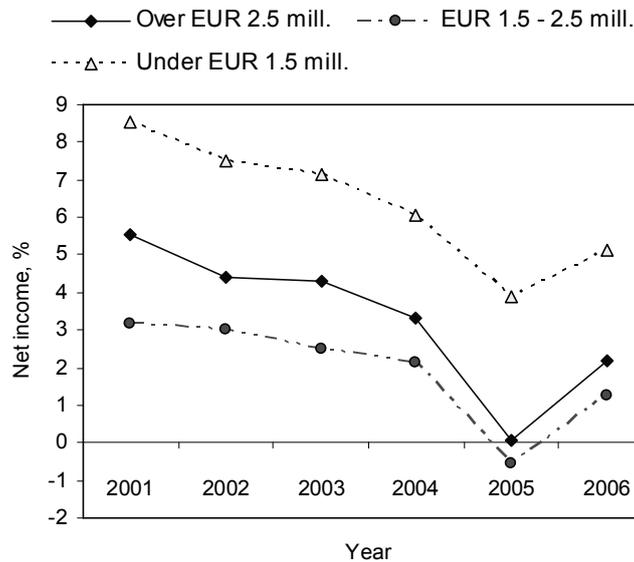


When comparing internal financing it can be seen that the small companies were more vulnerable in the changing business environment. Thus when growth-orientated companies consider investments and change their strategy based on their specific target percentage of internal financing, unexpected changes in the markets can have major consequences.

Since 2001 growth had not improved the profitability of the research sample. From the groups, the small companies in Group 1 managed to grow more than the other two groups. They managed to keep their net income percentage above the sector's average since 2001 (Figure 7). The large companies gained continuously less net income, an average of 3.1 percentage points from 2001 to 2006. It can be assumed that the difference in the occurrence was not short-term, but depended on the organizational

dissimilarities. The growth had such a negative impact on the companies which increased turnover to over EUR 1.5 million that the benefits were non-existent from the point of view of profitability.

Figure 7.
Development of Net Income Ratio.



The year 2006 was much better in the sector despite the fact that the overall trend in the 21st century has been one of decline. However, the paper mill strike in 2005 affected most dramatically the large and medium-sized companies, whose net income percentages crashed 97 percent and 126 percent respectively. Among the small companies, the drop was more moderate.

The group of small companies was the most profitable and benefited the most from the growth. The large and medium-sized companies grew ineffectively. Their growth either resulted from bad decisions or occurred on the basis of weak arguments. The results show that it is problematic to try to improve a company's profitability by economies of scale in the timber haulage sector. Among the large companies growth needed more investments, more new employees, and more administrative work than it did among small companies. It is also possible that it was harder to control the process of growth in large companies. Small companies could probably focus and control the process of growth better in their smaller flexible organizations.

Growth and the Cost Structure

As mentioned earlier, profits are determined greatly by costs. Companies usually aim for cost savings by growing, hoping that savings will improve their profitability. From our research sample only six companies made losses in 2001 and nine companies made over 10 percent of net income in 2001. In 2006 ten companies made losses and only two companies made over 10 percent of net income. Only five companies managed to improve their profits from 2001 to 2006 and the other 25 companies experienced weaker profits.

It is worth focusing now on the companies' cost structures and the development of these as the companies grew. There was very little difference in wages, depreciations, and interest between the groups' costs in 2006. It is surprising that the share of wages and depreciations in the groups are so close to each other (Table 3). Companies over EUR 1.5 million used many more external services compared to the small companies. Small companies managed both wages and depreciations with lower costs, by a total of one percentage point. In addition, these companies did not have to use subcontracts (external services) to manage the workload. From the results it can be observed that in relation to workload the large companies are less effective.

Table 3.
Companies Cost Structure in 2006 and its Change from 2001.

Turnover	Wages	Purchases and other fixed costs	Depreciations	Subcontracts	Interests
Under EUR 1.5 mill.	32,1 % (10,9 %)	49,8 % (13,9 %)	10,7 % (-20,5 %)	0,9 % (31,4 %)	0,8 % (-28,4 %)
EUR 1.5 - 2.5 mill.	33,2 % (9,1 %)	50,2 % (-0,5 %)	8,7 % (-14,7 %)	6,8 % (78,3 %)	1,3 % (9,7 %)
Over EUR 2.5 mill.	33,4 % (-0,7 %)	34,7 % (-1,2 %)	10,4 % (8,0 %)	19,1 % (56,3 %)	1,1 % (-28,8 %)

There were big differences between the groups' subcontracts as well as purchases and other fixed costs. The growth strategy between the groups is clearly different. The bigger the companies grew, the more they relied on outsourcing. Companies over EUR 2.5 million increased their purchases of subcontracts drastically to almost one-fifth of their turnover in 2006. This is also a good example of the entrepreneurial actions taken in order to try to develop company's business model and profitability. However, companies under EUR 1.5 million grew almost without any subcontracting. Outsourcing partly explains the differences in purchases and other fixed costs: companies did not need to buy fuel, for example when certain services were bought from another company.

Small companies which grew organically without subcontracting operated the most effectively. They took on only as much work as they could manage with their own trucks. The small companies carried out the growth process carefully, with increased workload matching increased capacity in the long term. Rising costs of fuel and higher wages were a big risk for these companies – especially if the contracts were not flexible.

The growth of the larger companies with turnover over EUR 1.5 million was partly based on subcontracting. The amount of subcontracting was especially significant among the largest companies in the sector. In terms of profitability these larger companies were clearly weaker than the smaller companies. According to the results, it is clear that companies with turnover over EUR 1.5 million cannot operate as effectively as the smaller companies. It is also probable that the usage of subcontracts does not guarantee even the average income of the sector. Further, it is possible that so much work is available that even the small companies can choose between contract offers. This might put pressure on the large companies' pricing of subcontracts and raise fees, which in turn may drive the sector into a situation where the most profitable working method is to carry out a contract using only one's own resources and at as low a cost as possible.

Conclusion and Discussion

The results of the study were somehow surprising – at least if compared to growth-orientated companies in other sectors. For example, it was observed in an earlier study on forest machine entrepreneurs that subcontracting is a quite profitable means of growth (Soirinsuo and Mäkinen, 2009). In the timber haulage sector the margins are low and profitable growth does not allow for many mistakes. It became clear that Group 1 became the most profitable. Also the difference between groups widened as the companies grew in the different size categories. It is possible that high level of variable expenses brings diseconomies of scale.

These results support the results by Scheraga (2005). He pointed out that economies of scale, as reflected in the size dimensions, may not have the usual positive effect when it comes to perceived quality of service in the road haulage sector. Customers perceived the smaller, regional carriers as being more responsive and flexible. Scheraga also noticed that high debt seemed to reduce carriers' ability to undertake investments and reduced the price per ton that carriers could charge.

Based on the results, the most significant variations in the cost structures were external services. The differences in companies' depreciation and wage costs were quite small, which shows that the truck and personnel resources were at the same level. However, the small companies were able to manage their workload effectively without subcontracting. At this point, it can be said that outsourcing contracts in the sector is questionable if the aim is profitable growth.

There is considerable evidence in the change of the cost structure that a high level of outsourcing as a growth strategy is seldom profitable. Companies with turnover greater than EUR 1.5 million outsourced much of the work. In fact, the larger the company, the more it outsourced. However, the study showed a negative correlation between outsourcing and profitability. It is possible that the larger companies' taking on of so many contracts compared to the sector average meant that organizing them required considerably more work and resources. In a low-margin and highly competitive sector known for its meagre profit margins, this will have a noticeable impact on companies.

However, it is possible that the sector can offer greater economies of scale if a company would grow larger than any in the research sample. From the research sample the small companies were the most profitable, but the most unprofitable group was the medium-sized companies -- not the large ones. However, the difference between the medium-sized and large companies was small. For example, a company with a turnover of EUR 25 million or more could be highly profitable, but no timber haulage companies of this size operate in Finland – at least not yet.

The small companies managed to become quite profitable without subcontracting. Among these smaller companies, administrative costs were relatively lower and growth answered an increased long-term demand in the market. The small companies managed to make higher profits compared to the sector average despite strong growth in the period. It could be said that hard times separate the grain from the husks. In the sector, largeness does not guarantee better profitability because of high and rising costs. However, it is profitable for small companies to grow to a certain extent, because they can reallocate their resources very effectively. Good profitability in the sector demands optimization of resources, personnel and workload.

Problems occur when a company is growing and acquiring trucks during good market conditions. A slowdown in demand can drive a company into difficulties: the workload decreases, and the trucks sit in the parking lot while depreciating in the financial statements. According to the results, this is a problem especially to the larger companies with static management. Small companies are more dynamic and can adapt more quickly to changing economic and market conditions.

The limitation of economics of scale emphasizes a cost-efficient strategy and good managerial skills. Growth after a certain point increases the amount of administrative work as well as the amount of time and work needed to negotiate with subcontractors. This can easily erode the benefits of the growth. The large number of companies in the sector increases price competition, which rewards companies for being more efficient and further, forces them to improve their business and innovate in order to survive. The main finding of the study does not support the assertion that significant growth in this sector brings higher profits and cost savings.

The conclusion of this study is that economies of scale exist in the timber haulage sector, but they are limited. This means that it is profitable for small companies to grow (even quite fast) and acquire more trucks when the workload increases. Profitable growth occurs in the sector when resources are used efficiently and contracts are not outsourced. Costs compared to turnover start to rise after company size reaches about EUR 1.5 million in turnover. A company with a turnover of EUR 1 - 1.5 million and an average of 5-6 trucks can run its business very effectively. If a company's strategy includes unlimited growth as a primary objective, the growth is usually not profitable.

One of the biggest problems in the analysis of financial statements is that it is based entirely in the given numbers. The net income percentage in the official financial statement does not tell the whole truth about a company's profitability. The core of the problem in the timber haulage sector lies beneath the depreciations and in many other periodic costs. For example, a truck's acquisition price is deducted in depreciations in a time specified by management or law. Who knows how many years the truck will bring in earnings?

The present study did not go deeply into the human factors why these companies grew or succeeded in so different ways. Nor did it focus on the internal factors affecting growth. One purpose of the study was to create, in an effort to assist further studies, a clear picture of a competitive strategy – growth – and the diversity of its effects on companies. Actually, these effects assist a firm in gaining a better appreciation of environmental opportunities and company resources in order to formulate a strategy that leads to a sustainable competitive advantage (Hofer and Schendel, 1978). The aim of further studies will be to concentrate on growth-orientated companies' internal (that is external factories on the financial statement) success factors, which affect their existence and performance in the future.

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A Connotation for Control: Women Business Owners Seeking Balance AND Growth

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Abstract

Many policy makers, business support providers and researchers frequently describe the goal of work-life balance in the same breath as their descriptions of “lifestyle” businesses and non growth-oriented firms. Recently conducted research among women business owners in the United States seeking to grow their enterprises to the million-dollar level dispels this assumption, showing that the goals of balance and growth are not mutually exclusive.

Two nationwide online surveys were conducted among members of the “Make Mine a Million Dollar Business” community, an Internet-based support network of women business owners seeking to grow their businesses to the million-dollar level. The first was conducted during the month of August 2007, with a total of 1,162 surveys completed. The second was conducted during the month of April 2008, with a total of 1,127 surveys completed. The surveys covered several topics, among them business owner goals and motivations, the issue of work-life balance, and level of business achievement.

When asked about their primary motivation for starting their business, the top reason given is work-life-balance (followed by “being my own boss”). Analysis of these responses combined with motherhood status and level of business accomplishment reveals that “balance seekers” are no less accomplished in their business growth, running counter to the assumption that women business owners who start businesses in order to find greater balance in their lives are not as interested in growing their enterprises as women who start their businesses for other reasons. In addition, the women who feel they have achieved a high level of work-life balance have likewise achieved a similar level of business growth, as defined by firm revenues and employment.

The results of this study have particular value for entrepreneurial support organisations, which may be proffering business advice and counsel on the basis of an incorrect assumption that women who say they have started or wish to start a business to achieve greater “balance” are not interested in learning more about strategies for growth. This study would indicate that growth-oriented advice aimed at nascent entrepreneurs – even those who are seeking greater balance in their lives – could pay off with significant economic and social benefits to business owners, entrepreneurial support organisations, and to the community at large.

This research should contribute to a greater understanding of the gender-based differences in meaning ascribed to certain terminology. While “balance” to some may mean eschewing competitiveness for nurturing, for others the word may indeed connote greater control over one’s destiny – a destiny that includes managing a growth-oriented enterprise.

Key Words: women business owners, business growth, work-life balance

Introduction

Around the world, more and more women are getting into business. In the United States, for example, the number of women-owned firms grew by 20% between 1997 and 2002, twice the 10% rate of growth of all U.S. businesses. (U.S. Census Bureau, 2006) In the United Kingdom, Canada, and in other countries where there are regular business censuses or surveys, a similar rise in the number of women entering into self-employment is seen.

And yet, on average, women are less likely than men to be entering into business ownership, and when they do their firms are seen to be smaller than the average business. The extensive work done by the Global Entrepreneurship Monitor consortium has found repeatedly that, in nearly every country studied, entrepreneurship rates for women are typically half those for men, and business survival rates are lower, especially in lower and middle income countries. (Allen, et al, 2008) Women are also likely to own smaller businesses, as defined by employment and revenue size. (See Orser, B. for a Canadian study addressing this issue.)

In some measure, the gender difference in firm size may have to do with the relative youth of women-owned firms, but many have also posited that women business owners are not as oriented toward growing their firms as men business owners may be. Both academic researchers and the popular press alike combine discussions of the issue of “work-life balance” with parental status and a supposed desire to work fewer hours. It is also frequently stated that many women (inferring more women than men) operate “lifestyle” businesses – meaning that their enterprises are oriented toward income replacement or household income enhancement rather than toward wealth-creation. Thus, the term “lifestyle

business” has taken on a somewhat pejorative, less-than-serious, anti-growth connotation, and “seeking balance” has come to connote a lower and slower business growth trajectory.

This paper will focus on the relationship between seeking and obtaining greater work-life balance and the achievement of business growth among a unique population of women business owners, showing that, among these women at least, these two goals are not necessarily mutually exclusive and, indeed, are not particularly strongly correlated. Balance and growth can go hand in hand, and “seeking balance” is seen to be a connotation for control rather than a reason to relax.

Survey Respondents and Methodology

The research upon which this paper is based was conducted among a unique population of women business owners – those who have joined an online community of women who are seeking to grow their enterprises to the million-dollar level. The initiative, “Make Mine a Million-Dollar Business” (abbreviated as M3), was launched in the United States in 2006 by [Count Me in for Women’s Economic Independence](#), a non-profit organisation which provides capital to women-owned enterprises, and is supported by a number of corporations, among them [American Express OPEN®](#), which underwrote the surveys. Womenable would like to thank them for granting their permission for the public release of this analysis, paper and presentation. For further information about the “M3” initiative, visit www.makemineamillion.org.

Two surveys were conducted online among this community of women business owners, the first in August 2007 and the second in April 2008. The size of this population of women business owners now numbers nearly 60,000. When the 2007 survey was launched the survey population was 26,000, and had grown to just under 50,000 at the time of the second survey. The interview periods, survey populations, response rates, and survey error margins are indicated in the following table:

Online Survey Statistics	August 2007	April 2008
Interview period	9 August- 2 September, 2007	3-21 April, 2008
Survey population	26,000	48,000
Number of completed interviews	1,162	1,127
Response rate*	27%	19%
Error margin (95% confidence)	+/- 2.8%	+/- 2.8%

* Among delivered/opened surveys.

The women in this community differ from the average woman business owner in the United States in several important ways: 1) their firms are younger but larger than average, 2) they themselves are younger than the average woman business owner, and 3) they are more ethnically diverse. (See table below.)

	The “M3” Population	Average Woman Business Owner
Firm Age		
In business more than 5 years	25%	58% ²
Not yet started the business	5	0
Firm Size		
Percent with employees	55	14 ¹
Percent with \$100,000+ in revenues	54	13 ¹
Personal Characteristics		
Percent under 45	46	24 ²
Percent women of colour	31	23 ¹

¹ U.S. Census Bureau, 2002 business census

² 2008 membership survey, National Association of Women Business Owners

In addition, by definition, these women business owners are more likely than average to be oriented toward and focused on business growth issues. Thus, the findings in this analysis cannot be generalised to the national population of women business owners in the U.S. It is nonetheless a very unique and therefore very interesting subgroup of the American woman business owner population.

Research Questions

Three key questions will be investigated in this analysis:

1. Are women business owners who seek to grow their enterprises to the million-dollar level concerned at all with the issue of work-life balance?
2. How do balance-seekers differ from others in terms of business and personal characteristics, and level of focus on business growth?
3. Do women business owners who seek or achieved greater work-life balance grow their firms at a different pace than non balance-seekers, or do the business accomplishments of balance-seekers lag those of other women business owners?

In addressing these issues, we will analyse the responses to three key questions in concert with current business age and size (as measured by employment and business turnover), and personal characteristics such as age, marital status and motherhood status. The questions are:

1. Which of the following comes closest to describing why you started (or will start) your business? (five answer categories given: to have work-life balance; to be my own boss; to build a legacy/achieve recognition; to provide for my family; none of these quite fits, the most important reason is: _____)
2. Which ONE of the following statements do you most agree with? 1-I have been continually focused on growing my business since day one; 2-my focus on growth is inconsistent; 3-my focus on growth is secondary to other considerations
3. On a scale from 0 to 10, where 0 means your business is driving you and you have no balance and 10 means you feel you have things mostly under control and have the “balance thing” figured out, where do you stand on the “balance achievement scale”?

First, though, a word about the meaning of “balance” and “work-life balance.” These terms, while used frequently, do not have a widely agreed-upon meaning. It is generally accepted, however, that balance does not necessarily mean an equal weighting of attention paid to different aspects of life, nor are the relative importance of factors the same for each individual. One useful definition of balance or work-life balance to consider is “meaningful daily achievement AND enjoyment in each of four important life quadrants – work, family, friends and self.”¹

Key Findings

The Desire for Balance and Growth

The desire for greater balance in one’s life may be a common and frequently plaintive longing, but does it exist even among women business owners who are seeking to grow their firms to the million-dollar level? The short answer is, “Yes, definitely!” While the majority of women seeking to grow their businesses to the million-dollar level gave non balance-seeking reasons for launching their enterprises, the most frequently mentioned reason for wanting to launch their business was the desire for greater work-life balance.

When asked why they decided to start their business, a 29% plurality of women seeking to grow their businesses to \$1 million in revenues and beyond said that they did so in order to have more work-life balance. Another 22% did so to be their own boss, 13% were driven by the desire to build a legacy and achieve recognition, and 11% launched their enterprise to provide for their families. One-quarter said that none of these reasons quite fit, including 5% who started their businesses to fulfil a dream or passion, 4% who wanted to make a difference, and 16% who had various other reasons.

Defining the Balance-Seekers

What types of women business owners are most likely to be seeking greater balance in their lives? While seeking greater balance was the most frequently offered business motivation mentioned by most members of the Make Mine a Million Dollar Business (M3) community, balance-seekers are more likely than non-seekers to be:

- Married/partnered rather than single
- Mothers of children under 18

¹ For an interesting discussion on the issue, see <http://worklifebalance.com/worklifebalancedefined.html>.

- Caucasian

Over two-thirds (68%) of balance-seekers are married or partnered, compared to just 60% of non-seekers, a statistically significant difference ($F=6.2$, sig .01). Women who started their firms primarily to seek greater work-life balance are also more likely than other women business owners to be mothers, and to have children at home – either pre-school or in primary or secondary school. Fully 67% of balance-seekers are mothers, compared to 60% of those who started for other reasons, and just over half (51%) of balance-seekers have minor (pre-school, primary or secondary school aged) children, compared to just 39% of non balance-seekers. ($F=1.5$, sig .002).

Balance-seekers (70%) are also more likely to be Caucasian than non-seekers (63%), but there may be other factors at work driving this racial difference.²

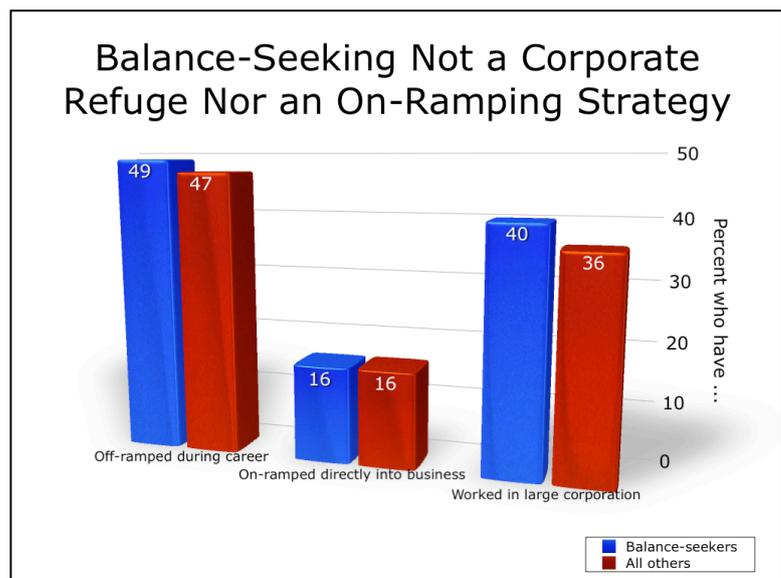
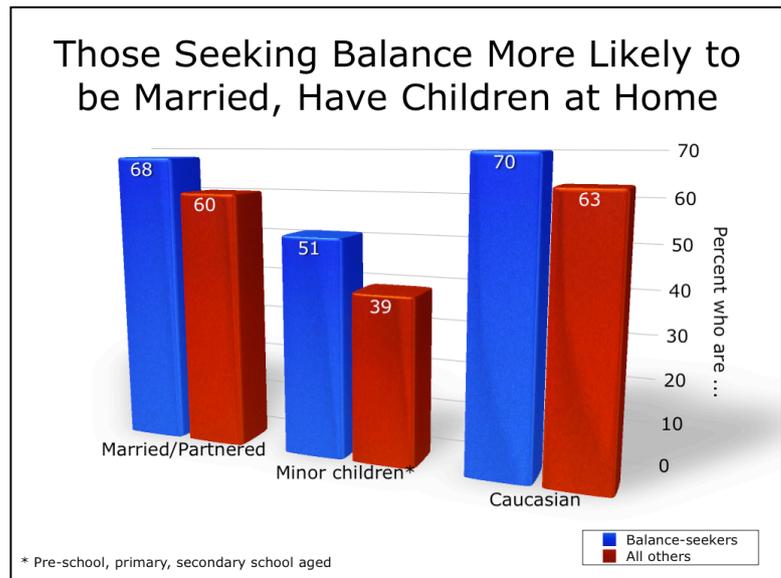
Seeking greater work-life balance is, then, impacted by the existence of children at home, and the expression of that desire may be fostered by the existence of a second income. It does appear to be more of a life stage than a life time business goal; those seeking balance are younger on average than those who have started their businesses for other reasons. But, since the members of the M3 community are in the early stages of their enterprises (52% have started their firms within the past three years), it remains to be seen whether this goal will remain as the business and their families mature.

When looking at the industry distribution of women in the M3 community, it is seen that the vast majority (90%) are in service-related businesses, with the largest prevalence in retail trade (18%) and professional/scientific/technical services (12%). There is no significant difference in the types of businesses that balance-seekers have started compared to those launched by women who have other motivations for entrepreneurship.

It also does not appear that women who are motivated by finding greater work-life balance are launching their enterprises to seek refuge from their work experiences in a large corporate environment, nor is the desire for greater balance more prevalent among women who have voluntarily “off-ramped” at some point in their careers. Just over one-third (36%) of M3 members worked in a large corporation just prior to starting their enterprise, and 48% say that at one point in their careers they voluntarily “off-ramped” for six months or more – taking time away from the workforce for personal reasons such as child care, elder care or the furtherance of their education.

Forty percent (40%) of those seeking balance worked for a large corporation immediately prior to launching their enterprise, as did 36% of those who have some other motivation for starting their business. Put another way, just under one-third (31%) of those who started their businesses just after leaving a position in a large corporation started with the primary motivation of seeking greater balance, as did 29% of all M3 members – not a statistically significant difference.

So, too, just under half of both balance-seekers (49%) and non balance-seekers (47%)



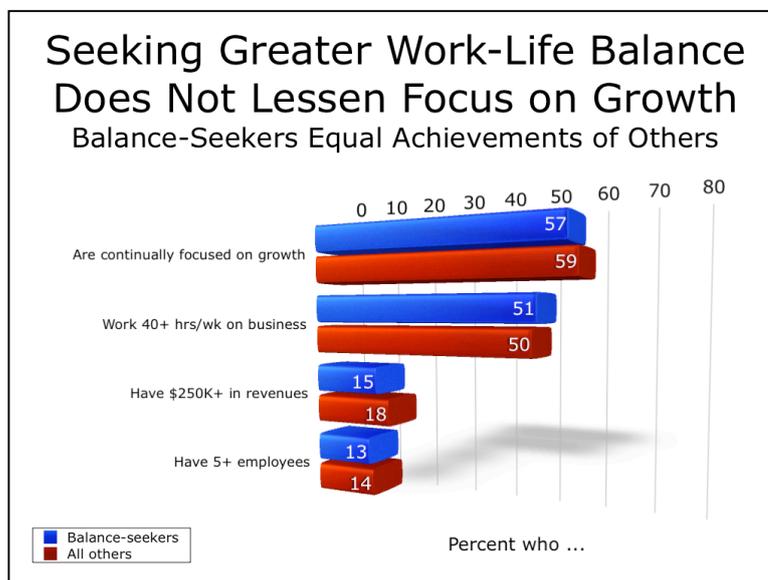
² In a previous M3 analysis performed by Womenable looking at issues of ethnicity, it was found that women of colour are much more likely than Caucasian women to be motivated by making a difference in their communities, and take greater pride in being role models. In addition, some women of colour in the M3 community are younger and less likely to have children (Asian Americans) and some are less likely to be married or partnered (African Americans) – all of which are mediating factors in the expression of a desire for work-life balance.

have “off-ramped” at some point in their careers. And an identical 16% of each group on-ramped directly from their time away from the workforce into business ownership.

Therefore, those who say their primary business motivation is seeking greater work-life balance are no different from those who started their businesses for other reasons in terms of their large corporation experience, nor are they more likely to have off-ramped during their careers or on-ramped into entrepreneurship. Seeking balance thus does not appear to be a reaction to a harsh corporate environment nor a way to ease back into the workforce through self-employment.

Balance and Business Achievement

The third and perhaps most important research question remains: do women business owners who seek greater work-life balance grow their firms at a different pace than non balance-seekers? In other words, does having a goal of greater work-life balance dampen business growth, and do those who have achieved greater balance do so at the cost of firm size? The answer, among these growth-oriented women business owners, is an emphatic “No!” There is no significant difference between those who started their enterprises in order to *seek* greater balance and all other M3 members in their degree of focus on growing their business or in the size of their enterprises, nor is there a significant difference in level of business accomplishment among those who have *achieved* greater work-life balance than among those with low levels of balance in their lives.



To begin, seeking greater work-life balance does not mean that a woman is less interested or less focused on growing her business. When asked how focused they are on growing their enterprise, a 58% majority of all members of the Make Mine a Million Dollar business community say that they “have been continually focused on growing my business since the first day I started it.” Another 29% admit that their focus has been inconsistent, and one in eight (13%) state that their focus on growth is secondary to other considerations. There is no significant difference between balance-seekers and those who are motivated by other reasons in their response to this question: both balance-seekers (57%) and those who are motivated by other factors (59%) are equally likely to say that they have been continually focused on the growth of their businesses since day one.

Similarly, those who started their enterprises to achieve a higher level of work-life balance are not spending significantly less time managing their firms than are those who started for other reasons. Half of both balance-seekers (51%) and non-seekers (50%) are currently working at least 40 hours per week, 26% and 18%, respectively, are working between 30 and 39 hours, and 23% and 22%, respectively, are working less than 30 hours a week in their enterprises.

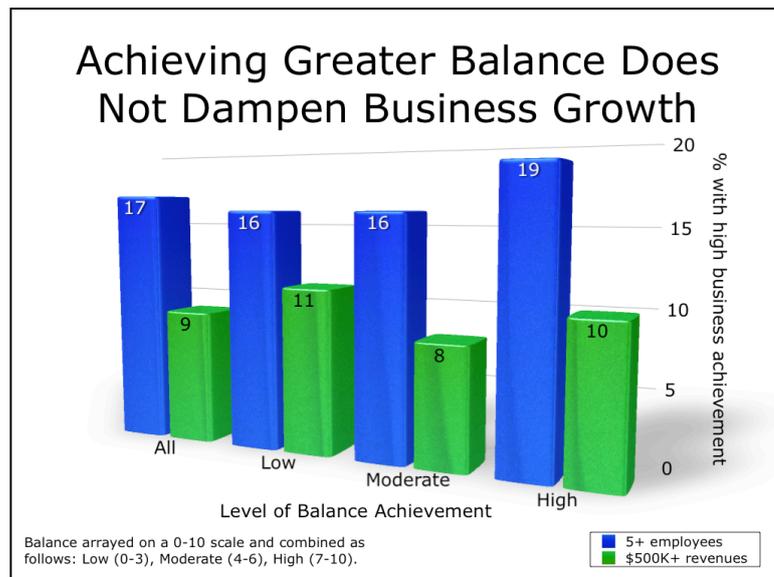
Since their level of focus on growth and amount of time spent in the business is not significantly different, it stands to reason that their business outcomes would likewise be similar – and they are. The share of firms owned by balance-seekers that has reached the \$250,000 revenue mark is virtually the same as the share among all other M3 members – 15% and 18%, respectively. In addition, employment achievement is similar: 13% of balance-seekers and 14% of non-seekers employ five or more workers.

What if the desire for greater work-life balance is different from the achievement of that goal? Since the number of hours worked in the business is not significantly different between balance-seekers and non-seekers, has their desire for greater work-life balance not yet been realised? Maybe we would only see significant differences in business size between those who actually have achieved a greater level of work-life balance and those who have not reached that goal.

The second M3 survey, conducted in April 2008, asked a direct question about how much balance these women feel they have in their lives. When asked to place themselves on a 0 to 10 scale, where 0 meant that their business ran them and they had no balance and 10 meant that they felt they had “the balance thing” figured out, women placed themselves just above the midpoint, with an average of 5.5. One-third (33%) of these growth-oriented women business owners felt they had achieved a high level of balance (7-10 on the scale), 49% a moderate level of balance (4-6), and 18% felt that they had a very low level of balance in their lives (0-3 on the scale).

An analysis of the revenue and employment levels of these three groups reveals that there is no significant difference in level of business accomplishment between the women with high levels of balance in their lives and those with low or moderate levels of balance. In other words, the achievement of a high level of work-life balance has not dampened business growth – nor has focusing on the business to the detriment of personal relationships had a beneficial impact on their business' bottom line.³

Therefore, women business owners who feel they have achieved a high level of balance in their lives have not sacrificed higher business growth to reach that point. Nineteen percent (19%) of them employ five or more workers, and 10% generate \$500,000 or more in annual revenues. Similarly, 16% of women business owners with low levels of balance in their lives employ five or more workers and 11% generate \$500,000 or more in annual revenues.



Conclusions and Implications

An analysis of a population of women business owners who seek to grow their enterprises to and beyond the million-dollar level reveals that a desire for greater balance in their lives is the single most frequently cited motivation for the launch of their entrepreneurial endeavours. Thus, in the minds of many of these growth-oriented women business owners, growth and balance are not mutually exclusive; indeed, both goals are integrally related.

Seeking balance does appear to be related to life stage: mothers with minor children are among those most likely to desire more balance in their lives. However, significant shares of growth-oriented women business owners of other ages and stages of life are also motivated to start enterprises to improve their chances of finding greater balance.

The notion that the desire for greater balance means that a woman business owner is not as interested in or focused on growing her business is dispelled by our analysis of this unique survey population. Indeed, neither the *desire* for greater work-life balance nor the *achievement* of greater balance has dampened the business accomplishments of the women in the M3 community: sales and employment levels of “balance-seekers” and non-seekers alike are quite similar.

We suggest that the term “work-life balance” has been used incorrectly and has, consciously or unconsciously, come to connote a less serious approach to business ownership and a lower level of focus on business growth and wealth creation as entrepreneurial goals. While “balance” to some may mean eschewing competitiveness for caring or child-minding, for this population of women business owners the word may instead *connote greater control* over one’s destiny – a destiny that includes managing a growth-oriented enterprise.

This points not only to a misattribution of the term “balance” but to a need for more research into the broader issue of gender differences in the way business owners describe their motivations, goals, desires and measures of success. It may well be that many women entrepreneurs have a different lexicon which they use to describe their entrepreneurial visions and values. The current entrepreneurial dictionary and thesaurus have been largely male-defined and may not adequately take into consideration gender-based differences in meaning.

The results of this analysis should also have significant implications for entrepreneurship educators and support organisations, policy makers, and women’s business association leaders. For entrepreneurship educators and support organisations, these findings indicate that paying attention to fostering and supporting business growth very early – even among women who are seeking greater balance in their lives – may be advisable. Business counsellors and educators should not assume that women business owners who are seeking greater balance are uninterested in or are eschewing business growth.

³ Which reminds this author of the lyrics from a 1974 song by the late Hoyt Axton: “Work your fingers to the bone and what do you get? Bony fingers, bony fingers.” <http://www.rhapsody.com/hoytaxton>

Policy makers would do well to foster both policies and programmes that bring greater attention to avenues to business growth, and encourage more dialogue about the strategies that entrepreneurs can employ to achieve both balance and growth.

Finally, women's business association leaders can play an integral role in bringing more attention to how women business owners approach business growth, the ways in which women business owners verbalise their entrepreneurial plans and perspectives, and the different vision and voice that women bring to business ownership – especially where the counter-intuitive topic of harmonising balance and growth is concerned.

This analysis should contribute to these efforts.

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**Women Entrepreneurs in a Male Dominated Business Environment:
A Pan-European Perspective**

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Introduction

Beginning with the 1970s, the number of women entrepreneurs owning and managing their own businesses has increased considerably in both industrially developed and developing countries. In this context, we have also noticed a commensurable growth in research that focuses on women entrepreneurs and their economic activities. In her seminal article, Brush 1992:6 argued that "... despite the tremendous growth in the number of women-owned enterprises and their increasing aggregate impact on society and the economy, there are few studies researching women business owners in general, comparing them to other groups of employed or non-working women, or comparing them to men". In contrast, most of the extant literature on entrepreneurship focused on men and their businesses. Kalleberg and Leicht (1991:138) succinctly noted that "...almost all our knowledge of entrepreneurship and the success or failure of small businesses comes from studies of men".

In his review of gender and entrepreneurship research in the UK, Matlay (1994) postulated that prior to the 'oil shocks' of the early 1970s, men tended to occupy powerful positions in society and were able to influence and dominate the socio-economic and political infrastructure of the country. They also influenced the availability and distribution of research funds and therefore its direction and content. Similarly, the vast proportion of early research on entrepreneurship and small business development in Europe was dominated by men and focused largely upon their own needs, interests and economic activities (Matlay, 1995). He further argued that, in order to remedy this imbalance in the specialist knowledge, more empirically rigorous research was needed on women entrepreneurs and their characteristics, needs and *modi operandi* (Matlay, 1997).

Recently, the position on female entrepreneurship seems to have improved considerably. Henry and Johnson (2007:1), state that "...female entrepreneurship, as a subject of academic research, has attracted a considerable amount of attention in recent years, and is fast becoming a primary focus for scholars, practitioners and government alike". Unfortunately, however, topicality and vogue often proves a mixed blessing for the research community and this also appears to be the case with women entrepreneurship (Matlay, 2005). First, the resultant growth in related research and dissemination is not consistent in terms of content, quality or focus. Second, the rapid expansion in women entrepreneurship research and increase in related publications has resulted in a fragmented and divergent body of knowledge. Third, there are considerable conceptual and contextual limitations inherent in the extant research which, individually and cumulatively, tends to undermine attempts to generalise and/or compare results across space, time and cultures. We concur and support Carter and Marlow's (2007:11) assertion that "...despite a growing enthusiasm among researchers and policy makers to focus on issues relating to gender and enterprise, and a marked increase in the number of studies investigating the area, there has been a failure to build adequate explanatory theories, particularly around the concept of gender and how the experiences of female entrepreneurs reflect those within the wider socio-economic context".

In this chapter we set out to examine the growth in business start-ups attributable to women entrepreneurs operating in the tourism industry in Eastern, Central and Western Europe. Tourism in Europe is a fast growing and rapidly changing industry, comprised almost entirely of small and medium sized enterprises (Thomas, 2004). Traditionally, it was largely dominated by male family and household members and supported by their business and social networks (Matlay, 2004). Increasingly, however, women are starting and developing small tourism businesses, both in collaboration and in competition with their male counterparts, sometimes within the same family or household. Based upon the preliminary results of 81 illustrative case studies of women entrepreneurs in Europe, we investigate, conceptualise and contextualise the rapid rise of female entrepreneurs within the wider socio-economic and political context of an 'enlarged' Europe (Kogan *et al.*, 2008). We believe that the results of this qualitative research study would prove useful to a range of stakeholders, including entrepreneurs, policy makers, academics, researchers and students.

Female Entrepreneurship in a Male Dominated Society

The dramatic rise in female entrepreneurship in contemporary Europe cannot be realistically or adequately investigated, let alone explained or theorised, as a new and isolated phenomenon. It is our contention that theory building in this as well as other aspects of entrepreneurship should be conceptualised in the wider body of knowledge. Furthermore, it must also be contextualised in empirically rigorous, comparable and cross-disciplinary research. A large proportion of the burgeoning mass of publication on entrepreneurship in general and female entrepreneurship in particular suffers from inherent definitional, conceptual and contextual limitations that render it problematic in terms of generalisation across time, space and cultural dimensions (Matlay, 2005). In contrast, however, a growing number of empirically rigorous articles have recently been published in peer refereed journals. In addition, some high quality research monographs have also been commissioned on female

entrepreneurship and related topics (see, for instance, Fielden and Davidson, 2005; Welter *et al.*, 2006; Carter *et al.*, 2007). These, together with comparable statistical data, form the conceptual basis of our review of the specialist body of knowledge appertaining to female entrepreneurship.

Historically, women have been excluded from a variety of social, economic and political accounts, including entrepreneurship and small business development (Carter, 1993). As a result, their input has been largely ignored, marginalised or minimised by a mostly male oriented and biased research (Wilkins, 1987). Stevenson (1990:439), argues that consequently "...what is known about female entrepreneurs is for the most part based on male centred notions and little attempt has been made, until very recently, to "discover" the underlying constructs of the of the experiences of female entrepreneurs and how it is they emerge into the entrepreneurial arena". In their exploration of women entrepreneurship, Kephart and Schumacher (2005) point out that, during the 1950s and 1960s, general research on women focused narrowly upon (i) their numbers re-entering the workplace; and, (ii) the type of jobs that they held. During this period, women were categorised as 'support staff' and few held professional and managerial positions. Little was known about their ambitions and progression toward managerial or executive positions (Morrison *et al.*, 1992). During the 1970s and 1980s, the number of women holding professional and managerial positions has increased dramatically. In Europe and elsewhere, just over 50% of professional and managerial positions were held by women, including working mothers (Parkhouse, 2001; van der Boon, 2003; Metcalfe, 2005; Duffy *et al.*, 2006). Importantly, during the 1990s and the first half of the first decade of the new millennium, there has been a considerable growth in the number of self employed, amongst both males and females. Female entrepreneurship appears to have grown faster than male business ownership (Joona and Wadensjo, 2008). Similar growth has also been observed in the number of small business start-ups during the same period (Cowling and Taylor, 2004; Parker, 2004).

The growth in female entrepreneurship in recent years has been attributed to various 'pull' and 'push' factors affecting the unemployed and other economically inactive segments of the wider population (Wagner, 2005; Caliendo and Uhlendorff, 2007). Previous research has highlighted that unemployed or economically inactive women were more likely to consider entrepreneurial options than those who were in paid employment (Evans and Leighton, 1989; Martinez, 2002). Furthermore, workplace discrimination, dissatisfaction with work conditions and limited progression prospects appear to have 'pushed' a growing proportion of women employed in full- or part-time jobs into considering or taking up entrepreneurship as a feasible alternative to paid employment (Jenkins and Johnson, 1997; Hout and Rosen, 2000). Recent changes in the socio-economic and political structure in Eastern and Central Europe have resulted in entrepreneurial opportunities becoming open and more approachable to both genders of the population (Matlay, 2004; Matlay, and Mitra, 2004). The 'pull' of new and lucrative entrepreneurial opportunities seems to have impacted considerably upon economically active women, in general, and those entering or returning to the labour market, in particular (Bennett and Dann, 2000; Verheul *et al.*, 2008).

A career in entrepreneurship might be more attractive to women because of its inherent potential for flexibility in working hours and the possibility of combining income generating work with household duties (Sexton and Bowman-Upton, 1990; Hochschild, 1997). Even taking into consideration recent changes in gender roles, earning flexibility remains an important lifestyle aspect for a large proportion of

women who choose to combine work and the responsibility for a household (see Boden, 1999; Hundley, 2000; Leung, 2006). A host of lesser factors can also influence the rate of female entrepreneurship growth and these often involve a range of social, economic, educational and religious aspects that are specific to a given country or region (Scherer *et al.*, 1989; Verheul and Thurik, 2001; Verheul *et al.*, 2008).

Cromie and Hayes (1988) claimed that entrepreneurship could empower women to overcome discrimination and employment barriers by facilitating self-employment or business ownership. Other researchers point out that even when considering self-employment or becoming actively engaged in entrepreneurship, women can face barriers related to education, training, finance and family obligations (see, for instance, Birch, 1987; Aldrich, 1989; Loscocco and Leicht, 1993; Laferrere, 2001; Arum and Muller, 2004). Most authors, however, agree that although female entrepreneurship in Europe and in other industrially developed regions has been growing steadily for the last three decades, men still predominate in employment, self employment and business ownership (Blossfeld and Hakim, 1997; Hakim, 1998; Lohmann, H., 2001; OECD, 2004; DiPrete *et al.*, 2006). A number of reasons have been put forward to explain the persistence of male dominance in business start-up and ownership. For instance, entrepreneurship is generally considered riskier than employment. Recent research has shown that women are generally more risk averse than men (*cf.* Verheul *et al.*, 2008).

In theory, entrepreneurship offers flexibility and choice in working hours as well as opportunities for part-time work. In practice, however, in most dynamic and fast growth industries, flexibility equates to long working hours and large workloads. Thus, entrepreneurs engaged in emerging or growth oriented sectors of economic activity tend to work even longer hours than their employed counterparts (Meager and Bates, 2001; Fraser and Gold, 2001). Increasingly, this trend is also visible in traditional as well as new economic sectors that rely mainly or exclusively on project-based contract work and freelancing, such as tourism, construction and the creative industries (McManus, 2001; Gill 2002). Moog and Backes-Gellner (2009) claim that men tend to invest more in social capital and have access to larger social networks. This could partially account for a lower propensity among women to become involved in entrepreneurship in those sectors that depend considerably upon social capital and networking (Cromie & Birley, 1992). Furthermore, in some European countries, women could face higher liquidity constraints than men or experience heightened supplier and consumer discrimination (Eastough and Miller, 2004; Leung, 2006). Such constraints could account for the lower representation of women in ethnic minority entrepreneurship (Hussain and Matlay, 2007a; Hussain and Matlay, 2007b).

In their overview of women entrepreneurship, Taylor and Newcomer (2005) focus on the characteristics and experiences that define and contextualise the 'modern' female entrepreneur. The career orientation and experience of these women is contextualised in, and constrained by, a male dominated world in which "... societies around the world expect men to be career-oriented breadwinners and women to assume primary responsibilities for home and family as their roles" (Taylor and Newcomer, 2005:18). In this context, for many modern women who choose entrepreneurship as a career, starting and managing a business invariably becomes a way of seeking family security while balancing their dual responsibilities for work and family (Taylor and Kosarek, 1995). A number of authors have questioned the realism of this 'balancing act' and point out that although women entrepreneurs search for and/or develop innovative approaches to achieve a better equilibrium

between work and personal relationships, most admit sooner or later that it is an impossible goal to achieve or maintain in the long term (see, for instance, Moore, 2000; Ensher *et al.*, 2002). Others argue that both male and female entrepreneurs have similar entrepreneurial motives and tend to face comparable opportunities and constraints in the market place (Birley, 1989; Bowman, 2006).

The personal and work experiences of both men and women appear to influence not only entrepreneurial choice, but also the structure and strategic direction of their businesses. According to McMullen, (2001) the mostly positive personal and work experience of men who chose entrepreneurship as a career can result in their replicating the structures and environments with which they are familiar. In contrast, the negative experiences of women entrepreneurs appears to induce structures and strategies that differ considerably from the traditional male dominated, autocratic and authoritarian corporate systems (Sullivan, 1999; Gundry and Welsch, 2001). Thus, women entrepreneurs aim to create business structures and environments that largely reflect their beliefs, attitudes and expectations. In particular, they are keen to minimise conflict amongst employees and create constructive organisational cultures that incorporate a mostly content workforce (Robinson, 2001).

According to Taylor and Newcomer (2005), there are three business structure models that best explain the organisational choice of female entrepreneurs. First, the 'River of Time' model, which reflects the tension between career versus personal achievements of women and their concern about family and personal relationships (*cf.* Powell and Mainiero, 1992). Second, the 'Integrated Perspective' model which focuses on power relationships, in both the personal and professional life of a woman entrepreneur (*cf.* Brush, 1992). Third, the 'Projection Theory' model which considers the psychological factors that impact on women entrepreneurs, including their needs, perceptions desires, fears and conflicts as well as their impulses and responses (*cf.* Cohen *et al.*, 1996). In its diverse forms and manifestations, organisational structure and related cultures can impact significantly upon business strategy in general and growth orientation in particular (Matlay, 2004). The size and heterogeneity of the small business sector can accommodate a variety of organisational structures and related business sizes, locations and economic activities. Its diversity ensures a speedy and dynamic response to new entrepreneurial opportunities as well as changing economic circumstances (Ricketts, 2002).

There is, however, no agreement in relation to the impact of gender upon growth strategies. In her review of the impact of gender upon entrepreneurship, Bowman (2006:2) points out that "...much of the research on female entrepreneurs suggests that women do business differently: they have different motivations, and are not interested in growth because they want to better manage their work and family responsibilities". In the context of entrepreneurial activities, family responsibilities are often perceived as a hindrance to organisational development in general and firm growth in particular (Greene *et al.*, 2003). In contrast, Morris *et al.*, (2006) argue that the family orientation of female entrepreneurs represents different business growth patterns rather than a barrier to organisational development. Growth strategies, and more specifically rapid expansion, are often described as the prerogative and stated objectives of self-serving and aggressive male entrepreneurs who place the quest for profits or for a 'rich harvesting' over and above family obligations and social relations (Lewis, 2006).

Such stereotyping of male entrepreneurs has been recently challenged as both arbitrary and unrealistic (Matlay, 1997) or overly simplistic in its generalisation (Jonson, 2002). There is a danger in the tendency to dichotomise entrepreneurship by

casting entrepreneurs into either super-women or self-centred men. This could result in a 'mythological snowballing' effect that is already visible in the popular and business media, which perpetuates entrepreneurial myths that cannot be empirically proven or supported (Nicholson and Anderson, 2005). The effects of a male dominated business environment in Europe are well documented and acknowledged as an economic reality (Johnson and Turner, 2000; Mercado *et al.*, 2001). Following the recent socio-economic and political changes in Europe, the business environment is opening up and male domination appears to lessen its grip upon society in general and the marketplace in particular. The longitudinal research study upon which this chapter is based has been documenting these changes and provides a unique and empirically rigorous perspective on entrepreneurial activity in the tourism industry of an enlarged Europe.

Research Sample and Methodology

In this chapter we outline the preliminary results of 81 illustrative case studies of women entrepreneurs in Europe, who operate in the traditionally male dominated tourism industry. These cases were selected from a large international commercial tourism database that holds current information on over 3.8 million tourism organisations worldwide. The selection of cases and analysis of emergent qualitative data was based on an original 'rotating matrix' approach that was conceptualised and first implemented by Matlay (1997). It identifies, compares and contrasts factors, characteristics and organisational aspects of respondents and their firms on a 'close-' as well as 'nearest-match' bases during a given period of time (January – December, 2007). Both similarities and differences are highlighted for further investigation, on a continuous basis, until the results comply and satisfy a 9 x 9 'rotating matrix'.

The rotating matrix approach generates an empirically rigorous and replicable set of qualitative data that fulfil and extend the requirements of the comparative case study method (Yin, 1987; Easton, 1992). Matlay and Westhead (2005, 2007) successfully employed the rotating matrix approach to case study analysis to identify, compare and contrast innovative approaches to e-Entrepreneurship in the fast growing European tourism industry. Importantly, the analysis for these articles was carried out within as well as between virtual teams of e-Entrepreneurs that were closely and distantly matched on organisational, social and geographical bases. This method was adapted for the purpose of this study in order to generate results that provide complete, replicable and empirically rigorous sets of comparative data on female entrepreneurship that can be generalised across Eastern, Central and Western Europe.

Data, Analysis and Discussion

Two decades since Stanworth *et al.*, (1989) first raised the issue, and despite considerable growth in relevant research, the question of who becomes an entrepreneur and why s/he persists on this career path remains largely unanswered. In terms of gender and entrepreneurship research, this issue is fundamental to theory formation. In terms of research, entrepreneurial genesis and incidence are considerably more immediate than other aspects such as numbers, size, location and economic activity attributable to women entrepreneurs. Early research on the motivation to become an entrepreneur showed that there was no tangible difference

between women and men entrepreneurs in their initial reasons for embarking on this career choice (Brush, 1992; Carter, 1997). Interestingly, however, in most industrially developed countries entrepreneurship is considered a highly masculine activity, despite socio-economic variations and diverse cultural influences (Ahl, 2004; Charles and Grusky, 2004). In applying the rotating matrix approach to investigate the entrepreneurial motivation of women entrepreneurs we built upon three interrelated theoretical dimensions: (i) Kirzner's (1973; 1979) opportunity recognition and market orientation perspective; (ii) Harper's (2003) theory of entrepreneurial discovery, and (iii) the model of entrepreneurial opportunity proposed by Sarasvathy *et al.*, (2003: 145) that incorporate 'recognition', 'discovery' and 'creation' perspectives on new venture creation. Thus, the three dimensional matrix within which we rotated the personal, organisational and operational characteristics of the 81 case studies in our research sample focussed on three basic scenarios:

1. *Opportunity Recognition*, where both supply and demand already exist within the targeted niche market. Women entrepreneurs recognize these opportunities and seek to supply products and services, either through an existing firm or a new start-up.
2. *Opportunity Discovery*, where only one side, either supply or demand, already exists and the matching side needs to be discovered. Women entrepreneurs focus upon the exploitation of existing or latent niche markets.
3. *Opportunity Creation*, where neither supply nor demand for specific products and services exist and both need to be 'created' by women entrepreneurs. Knowledge, product, service and/or process innovations are employed in the creation of new niche markets.

The results emerging from this research study confirm that a wide variety of 'push' and 'pull' factors have contributed to the growth in women entrepreneurship in the tourism industry across Eastern, Central and Western Europe. Interestingly, the personal perceptions of these women emerged as the single most important factor to determine their transition from domestic work, unemployment and paid employment into self employment and/or business ownership. It should be noted, however, that there are considerable commonalities as well as differences in perceptions amongst the respondents in the research sample. The majority of these were relatively easy to identify and the related causal links could be clearly determined and evidenced. Some aspects, however, and in particular those relating to their domestic and family relationships remained obscured and proved difficult to explore in any detail. Overall, the qualitative data that we collected provide a wealth of empirically rigorous information on why women chose entrepreneurship as a full- or part-time career and how their personal perceptions influenced their choice as well as determined most aspects of their pre- and post- start-up business activities.

Women's perception of their status and position in society appears to have played a crucial role in their initial decision to embark upon an entrepreneurial career. Their reaction to societal conventions and expectations within a largely male dominated European culture emerged as a commonality across the whole sample and provided a plausible explanation not only for embarking on an entrepreneurial career but also for these women's choice, timing and resilience in overcoming both implicit and explicit barriers to business ownership. Importantly, these women's reaction against actual or perceived gender discrimination held consistent across a wide range of age, educational achievement, marital and employment status variations

as well as cultural, political and geographical differences. Just over one third of the sample chose entrepreneurship as a result of ‘push’ factors, such as a need for a second income in the family, job loss, redundancy and short-term unemployment. Some of these women were forced to consider entrepreneurship as a result of their spouses, partners or parents losing their income or being forced to sell their farms and businesses. We could locate no instances of long-term unemployed women embarking upon entrepreneurial activities.

About two thirds of women in the sample claimed to have been ‘pulled’ into entrepreneurship as a result of various opportunities and ‘fortuitous’ circumstances. Some of these respondents reacted to opportunities provided by socio-economic and political changes, such as the fall of communism and the opening of trade within greater Europe. Others benefited from their direct or indirect involvement in family, business and/or social networks which provided new or more lucrative business opportunities. The removal of travel and residency restriction across the enlarged European Union allowed a number of these women the follow their partners or other close family members in search of new or better entrepreneurial outlets for their knowledge, skills or talents. The demise of the male dominated system of centralised command and control in Eastern and Central Europe resulted in a growing relaxation of the social restrictions and economic exclusion of women from business management. This coincided with a period of massive increase in economic restructuring and related entrepreneurial activities, which encouraged as well as facilitated a commensurable growth in female business ownership. Following changes in the political systems in Eastern and Central Europe, distant family links have been established or renewed and this also resulted in an increase in cross border opportunities for entrepreneurial women who benefited from extended family networks. It should be noted, however, that there were considerable variations in the extent and speed of economic liberation and the transition process. The timing and progress of accession to the European Union varied considerably across Eastern and Central Europe and these affected some aspects of women entrepreneurship.

Structural changes in the socio-economic and political infrastructure in Europe during the early 1990s facilitated *opportunity recognition* amongst new and established entrepreneurs. Small scale entrepreneurial activities flourished in the fast growing tourism industry, largely unaffected by the recessionary conditions that prevailed during this period in continental Europe. The growing volume of tourism related traffic and the emergence of new European destinations ensured that demand persistently outstripped the supply for related products and services. The downsizing and privatisation of large, state-owned tourism enterprises in Eastern and Central Europe and the flurry of joint ventures with Western European partners further boosted the demand for tourism related products and services. Furthermore, rapid advances in Information Technology (IT) and developments in Information and Communication Technologies (ICTs) resulted in a significant lowering of entry barriers across Europe and the emergence of a wide variety of lucrative niche markets outside the influence, interest and reach of large organisations and multinational corporations. New entrepreneurial outlets and organisational forms emerged in a concerted drive to satisfy demand across a wide spectrum of tourism and related economic activities. These included, amongst others, micro- and small agro-businesses, home based firms, virtual teams of e-Entrepreneurs and a wide variety of ‘for and by women’ type of organisations.

These favourable conditions also accounted for a significant growth in entrepreneurial activities that were based in *opportunity discovery* and *creation* drives

amongst women entrepreneurs. It appears that growing demand, the lowering of entry barriers and developments in IT and ICTs have, individually and cumulatively, facilitated the emergence and development of a wide range of women owned businesses along side or in competition with their male counterparts. Moreover, these conditions appear to have undermined and in some cases considerably diminished the traditional and long-standing male domination of the tourism industry in Europe. Nevertheless, some forms of gender discrimination still persist. For instance, access to start-up and development finance continue to be restricted in some regions of Europe and the worsening 'credit crunch' affecting traditionally male oriented and controlled financial institutions in Europe has had a negative impact upon some of the respondents in the research sample. Similarly, while availability of general support and training does not appear to be gender oriented or restricted, the quality and availability of specific advice and incubation facilities seems to mostly benefit male entrepreneurs. A shortage of business premises and prime locations for 'tourism traffic' in various areas of Europe has also highlighted the persistence of male dominated and oriented networks in this industry. Women entrepreneurs are finding it increasingly difficult to secure the outlets and premises that they need, in particular in prime or premium locations and popular tourist destinations.

In response to such gender bias and discrimination women entrepreneurs are increasing relying on their own or family resources and have built complex network of business assistance and support. These can be formal or informal and are often based locally or regionally. Interestingly, however, some entrepreneurial and support networks are geographically widespread and can cover a whole country or countries. A number of women entrepreneurs in the sample are members of mixed gender virtual teams of e-Entrepreneurs or have founded women only partnership. The number of women ran consultancies and support organisations have also grown considerably since the early 1990s. These provide general business support as well as more specialist advice and expertise. The increase in the number of specialist accountancy and law firms ran by women for the benefit of female entrepreneurs is symptomatic of the growing demand for such services. We have noticed, however, a decline in demand for tourism products and services experienced by most women entrepreneurs in the research sample. The worsening credit crunch and rumoured Europe wide recession appears to have negative affected these women entrepreneurs and their clients. It would be interesting to see what effect recessionary conditions will have on the businesses in the sample. We intend to approach these businesses again in January 2009 and interview these women entrepreneurs for a longitudinal case study research programme.

Concluding remarks

In this chapter we have examined the reasons behind the growth in business start-ups attributable to women entrepreneurs operating in the traditionally male dominated tourism industry in Eastern, Central and Western Europe. It emerges that that a wide variety of both 'push' and 'pull' factors have contributed to the growth in women entrepreneurship in the tourism industry in Eastern, Central and Western Europe.

The perceptions of women entrepreneurs emerged as the most important factor to determine their transition from domestic work, unemployment and paid employment into self employment and/or business ownership. For instance, women's

perception of their status and position in society played a crucial role in their initial decision to embark upon an entrepreneurial career. Their reaction to societal conventions and expectations within a largely male dominated European culture emerged as a common theme across the research sample. Their reactive tendencies and related decision making processes could provide a plausible explanation for these women embarking on an entrepreneurial career and also for their choice, timing and resilience in overcoming both implicit and explicit barriers to business ownership. Importantly, perceived gender discrimination held consistent across a wide range of age, educational achievement, marital and employment status variations as well as cultural, political and geographical differences.

About two thirds of women in the sample claimed to have been 'pulled' into entrepreneurship as a result of various opportunities and 'fortuitous' circumstances. Some of these respondents reacted to opportunities provided by socio-economic and political changes, such as the fall of communism and the opening of trade within Europe. Others benefited from their direct or indirect involvement in family, business and/or social networks, which provided new or more lucrative business opportunities. Just over one third of the sample chose entrepreneurship as a result of 'push' factors, such as a need for a second income in the family, job loss, redundancy and short-term unemployment. Some of the respondents were forced to consider entrepreneurship as a result of their spouses, partners or parents losing their income or being forced to sell their farms and businesses. We could locate no instances of long-term unemployed women embarking upon entrepreneurial activities.

The worsening credit crunch and imminent Europe wide recession appears to have negatively affected these women entrepreneurs and their clients. The authors intend to continue their research and investigate the effect that recessionary conditions might have on the businesses in the sample.

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Embedding Work-Integrated Learning into a Traditionally Theoretical Course of Social Entrepreneurship towards Enhancing Graduate Employability

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Abstract

Several reasons including Government policy, employer demand, shortage of skills in Australian labour market, and the needs of students dictate that employability is high on the agendas of Australian higher education institutions. The aim of this paper is to present a critical evaluation of the decision of an undergraduate programme in Entrepreneurship in an Australian University to introduce a work-integrated learning module to one of its core courses on Social Entrepreneurship. A course experience survey was undertaken on 60 students to explore their expected learning in terms of skills, knowledge and abilities at the beginning of the course. A post course experience survey was also carried out to assess the students' actual learning outcomes. The findings suggest that embedding a work-integrated learning module to a course on social entrepreneurship help students to understand the scope, demands and constraints of the non-profit sector and recognise the changing roles of such sector and related managerial challenges. It also help students develop maturity, team building, emotional intelligence, communication and interpersonal skills required to build social capital and succeed in today's globally competitive and volatile business environment. The higher education providers could consider work-integrated learning as part of the response to the employability agenda in a climate where employers are increasingly demanding graduates to have entrepreneurial skills.

Key words: Social Entrepreneurship, Graduate Employability, Work Integrated Learning

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Abstract

Several reasons including Government policy, employer demand, shortage of skills in Australian labour market, and the needs of students dictate that employability is high on the agendas of Australian higher education institutions. The aim of this paper is to present a critical evaluation of the decision of an undergraduate programme in Entrepreneurship in an Australian University to introduce a work-integrated learning module to one of its core courses on Social Entrepreneurship. A course experience survey was undertaken on 60 students to explore their expected learning in terms of skills, knowledge and abilities at the beginning of the course. A post course experience survey was also carried out to assess the students' actual learning outcomes. The findings suggest that embedding a work-integrated learning module to a course on social entrepreneurship help students to understand the scope, demands and constraints of the non-profit sector and recognise the changing roles of such sector and related managerial challenges. It also help students develop maturity, team building, emotional intelligence, communication and interpersonal skills required to build social capital and succeed in today's globally competitive and volatile business environment. The higher education providers could consider work-integrated learning as part of the response to the employability agenda in a climate where employers are increasingly demanding graduates to have entrepreneurial skills.

Aim of the Study

Several reasons including Government policy, employer demand, shortage of skills in Australian labour market, and the needs of students dictate that employability is high on the agendas of Australian higher education institutions. In response to Government's employability agenda and the strategic aim of the program to enhance social capital as well as develop entrepreneurial skills, the Bachelor of Business Entrepreneurship (BBE) program at RMIT University has introduced a series of work integrated learning courses with the aim of providing its graduates with appropriate skills and capabilities in meeting the demands of an increasingly dynamic business environment.

The aim of this paper is to present a critical evaluation of the decision to introduce a work-integrated learning module to one of its core courses on Social Entrepreneurship. It seeks to examine why the programme has taken the approach of embedding work-integrated learning into what has traditionally been taught as a purely theoretical course, despite being branded as a practitioner oriented course.

Skills Development and Graduate Employability

Over the past 20 years a dramatic shift has taken place in the way policy makers and students foresee higher education and the role of universities. The idea that one goes to a university to become “intellectually enlightened” has been rapidly substituted with the notion that the primary purpose of higher education is to service the industry (Yorke 2006; Gunn et al. 2008). In keeping with this view, employment and skill development are seen as central to the role of universities. For example, the intent of RMIT Work Integrated Learning (WIL) policy (2007) is to make a significant contribution to all of RMIT graduates’ work and industry-readiness, specifically their development of the core skills and capabilities of practice. The policy focuses on students’ “learning by doing in context and with feedback” with the expectation that the experience of the workplace will also improve the employability of the graduates (RMIT WIL Policy 2007). This vision of higher education’s role in workplace preparation seems to include creative elements that call upon students to engage with material presented to them and then develop their own thinking, apply this to real world situations and manage their own learning (Gunn et al. 2008; Moreland 2006; Candy 1990).

In response to the changing role of higher education various pedagogical constructs in the field of learning and teaching have emerged. One view is that our teaching philosophy and instructional practices should integrate more democratic and egalitarian views of education that open the possibility of different kinds of learning, and in turn would have dramatic effects on student motivation and engagement (Brookfield 1995; Weimer 2002). Students should be taught to not only be *competitive* but also *cooperative* in their approach to learning. At the core of our teaching philosophy should be *constructivism*, which emphasizes learners' actively constructing their own knowledge rather than passively receiving information transmitted to them from teachers and textbooks (Biggs 2003). Constructivism prescribes a whole new level of student involvement with content where content becomes the means to knowledge rather than the end. Obviously, less knowledgeable and experienced learners will interact with content in less intellectually robust ways, but the goal is to involve students in the process of acquiring and retaining information. In this process, the *role of the teacher/educator*

should cease to be the exclusive content expert, but rather the *learning facilitator* making the essential contributions to the students' learning process by being much more around the classroom than in front of it (Weimer 2002). Teachers should facilitate and inspire students to take *responsibility for their own learning*, be self-directed and life-long learners during their formal educational experience and use these skills throughout their professional and personal lives. The principles of work integrated learning is also built on these tenets and further advances the notions of individuals generating meaning, theory, understanding and wisdom from real life experience; and constructs of the adult learner as self-directed and managing, competent, reflective and autonomous, able to abstract out and articulate their learning from the everyday routines of practice and/or work projects (Brookfield 1995; Sobiechowska and Maisch 2007). The changes to the content and delivery of the course on Social Entrepreneurship and the integration of work integrated learning was an attempt to enhance student motivation and engagement with the course through offering a learning experience that is both informing and provide students with the opportunity to build social capital and develop the holistic capabilities of practice that are valued by employers and the community at large (Sivan, Leung, Woon and Kember 2000).

The Context/ the Content and Module Delivery

“Social Entrepreneurship” is a core course in the BBE programme which is offered in the second semester primarily to the third year students. This is a practitioner oriented course where methods and techniques used by social entrepreneurs from various industry sectors are examined. The resourcing requirements and orientations of both for-profit and not-for-profit organisations in the pursuit of “social” opportunity are compared. On completion of this course the students are expected to be able to:

- Develop a critical understanding of the concepts underpinning Social Entrepreneurship
 - Demonstrate an understanding of the scope, demands and constraints of the non-profit sector
 - Recognise the changing roles of not-for-profit organisations, their relationships with key stakeholders, and related managerial challenges
-

- Understand a range of strategic and operational issues faced by those who create and manage not-for-profit organisations
- Develop knowledge about how to start a social enterprise or work in the sector.

The Programme Team inherited a two hour lecture and one hour tutorial mode of delivery for the course, more so as it was a standard mode of delivery across all courses in the School at that point in time. With a view to make the two hour lectures relevant and interesting, the course content was organized in three categories, such as the theoretical underpinnings of Social Entrepreneurship, the practicalities, and application of social entrepreneurship in different industries. In the tutorials students analysed a number of case studies on social entrepreneurs from across the globe in relation to the issues covered in each week's lecture and in the end summarised their learning. The following assessments were designed for the course:

1. Individual – Class Quiz (10 percent)
2. Individual - Participation in tutorials (10 percent)
3. Group - Presentation of social entrepreneur profile (10 percent)
4. Group - Work project report and presentation (30 percent)
5. Examination- Take-home essay and questions (40 percent)

Issues Related to Course Design and Assessments

A number of issues faced in delivering the course were as below:

1. The two hour lecture and one hour tutorial mode did not appear to be most appropriate to maintain student motivation, and encourage deep learning and higher order thinking amongst students;
 2. The assessment tasks, particularly the class quiz and the presentation on the social entrepreneur profile appeared to be inadequate in addressing the learning outcomes for the students.
-

Although at least 80 percent of the students were regularly turning up for lectures and sitting through the lecture till the end it was very challenging for the course coordinator cum lecturer to develop lecture materials that were rich in content and interesting for the students at the same time, because contents that are important are not always interesting. One of the strategies to keep students engaged in the class was to ask questions relevant to the lecture content to generate open discussions and encourage students to make comments on possible applications of the content by either reflecting on their own experience, or by making creative propositions. The other strategy, which worked particularly well, was to invite guest speakers from not-for-profits.

There were bigger challenges in managing students at the tutorials. Since there was an allocation of 10 percent of the total course weight for participation in tutorial, students were regularly turning up for the tutorials but not necessarily undertaking the required studies for the tutorial. It was expected that there would be some useful discussions at the tutorials around the case studies and students would bring their different perspectives which in effect would make the discussions more interesting. In reality, very few students came to the tutorials prepared, that is, having read the case and thought through the answers to the case study questions to contribute to tutorial discussions.

The students in general appreciated “social entrepreneurs”, but were not keen to commit seriously to the concept of social entrepreneurship. Their primary focus was to develop knowledge and skills for “for-profit” entrepreneurship. It was thus difficult for the course team to get all the students motivated to do the required readings and exercise the higher order thinking for this course. Of course there were some who took a lot of interest in the course and were driving discussions in the class and at the tutorials, but the number was limited. Students performed particularly poorly in the class quiz and the presentation on the profile of a social entrepreneur. Their engagement with these two assessment tasks was rather mechanical. There was little evidence of higher order thinking amongst students in relation to these assessment tasks. The Course Experience Survey (CES) also generated mixed results with students appreciating the knowledge obtained through the course but not feeling confident about its application for reasons that the learning did not take place in a relevant context. This prompted the course team to review

the course content and the delivery mode and the possibility of introducing a work integrated learning component through not-for-profit industry linkage.

Combining Work Integrated Learning and Problem Based Approach

RMIT BBE programme team initiated collaboration with a nationally reputed not-for-profit organization working for the disadvantaged youths who agreed to act as a host organization to offer work integrated learning opportunities for the students. It was agreed that the students would undertake an investigation of the major focus for Corporate Social Responsibility (youth / education focus) of a cross section of the private sector with a view to assisting the not-for-profit to develop their corporate relations strategy.

The course adopted an enquiry and problem based approach which requires students to..... “move beyond the cognitive understanding to ‘knowledge in use’ (the ability to translate their knowledge into practice in real organizations)” (Kloppenborg and Baucus 2004 cited in Gunn et al. 2008, p.77). Research suggests that such an approach enhances student learning in terms of depth of knowledge, and the ability to use the knowledge in real life context (Kloppenborg and Baucus 2004) though not necessarily in the breadth of learning (Rhem 1998 cited in Gunn et al. 2008, p.77).

Course Content and Delivery

The course content was redesigned around three important areas of knowledge/skills pertaining to social entrepreneurship support to which was evident in the CES undertaken with students in previous semester. These were 1) the knowledge of the theories and processes required to effectively set-up and/or work in a not for profit organization, 2) understanding of the scope, demands and constraints of the non-profit sector in Australia such as, Corporate Social Responsibility (CSR) from the perspectives of major corporations and what they look for in partnering with not-for-profits, and 3) application of the conceptual knowledge and understanding of the opportunities and challenges within the not-for-profit sector in real life context. Firstly, students were offered weekly lecture sessions on theoretical

underpinnings as well as various strategic and operational issues faced by those who create and manage not-for-profit organisations. Secondly, guest speakers from various not-for-profits and corporations were invited for the dual purpose of getting the speakers to share their understanding of and experience in the sector as well as enabling students to build social capital. Thirdly, several sessions including a workshop was organized with key people of the host organization to enable students to understand its history, its vision and the mission, its target group, board of trustees and other strategic and operational issues with a view to undertake the required research project. A total of 60 students undertaking this course were distributed into 10 groups and were assigned different segments of the private sector by market capitalisations to investigate the following issues in-depth with a view to developing corporate relations strategy for the host organization.

- Identify those with a CSR youth / education focus opportunities
 - CSR objectives for organisations
 - Emphasis on staff engagement
 - Public relations / brand recognition
 - Community impact / genuine altruism
 - Level of accountability and reporting required
- Who these companies are funding
 - Amount of funding available
 - Time frame for funding;
 - frequency and duration of funding rounds

- Criteria for funding

What criteria do these businesses use in selecting their not-for-profit partners?

- Staff survey
 - Organisation's leadership preference
 - External panel
 - Independent foundation
- Identifying key sponsorship/CSR contacts
 - Who have they successfully sponsored/partnered with in the past? Case study examples?
 - What makes a not for profit a more attractive partner for sponsorship purposes, that is, what can they do to increase their chances of being sponsored?
 - Build profile on 3-5 opportunities contact names, organization structure and so on.

Students were also required to attend tutorials every week to report progress of their research and resolve any team-based or research related issues.

Assessment Strategy

In keeping with the literature on problem-based approaches, the course was designed with a focus on “desired outcomes” (Kloppenborg and Baucus 2004, p.614). The course team was aware that because students were offered limited formal input (such as, written briefings on the two research phases) to provide focus and direction to their investigation, such approach could be less accepted by the students as they are used to a more traditional structured learning approach (Kloppenborg and Baucus 2004, p.623).

The course was assessed through four assessment items beginning with an interim reporting/presentation (30 percent) of the first phase of research. This task was designed to assess students’ knowledge of the theories and processes required to operate a not-for-profit, with particular emphasis on the host organization, define the value proposition of Phase 1 research to both the host organization and to the student themselves in light of their learning outcomes, provide evidence of using the best possible means to collect data that may include both primary and secondary sources and systematically present findings on key research issues. The second assessment required students to undertake a peer to peer progress reporting (15 percent) in order to assess their maturity, team building, emotional intelligence, communication and interpersonal skills. This process can be seen as part of their personal development as well as development of the holistic capabilities of practice that are valued by employers. Students were also assessed on their participation and attendance in tutorials (15 percent) as it was critical for the students to regularly meet with their team members, report on their progress, identify any bottlenecks and find solutions through intra and inter team collaborations. Finally, students were required to submit their final report and do presentations (40 percent) on recommended strategic approach to seek private sector funding to the Board of Directors of the host organization. This task was designed to assess students’ ability to apply their knowledge and understanding of the scope, opportunities and constraints of the non-profit sector into formulating practical strategic directions for a real life not-for-profit organization. Both the host organization and the Course team as two important stakeholders jointly evaluated the final assessment.

Student Evaluation of the Module

In week two of the semester, after students had received adequate information about the course and its learning outcomes through the course guide, as well as in the lecture, the course team undertook a pre-course experience survey with the students to capture their initial response to the redesigned course, in particular to the work integrated learning mode, and the skills and capabilities they expected to develop through the course. There was an overwhelming support to the work integrated learning mode introduced in the course. Below are some of the responses of the students towards the work integrated learning mode:

I welcome the change and believe it is the best method for teaching the contents of this course. A purely face-to-face method would not be as effective as I am finding the work integrated learning. Indeed a great way to “apply” what we learn.

I expect the work integrated learning mode to be effective for our learning as it appears to be suitable for the nature of this course.

This is a good initiative. The concept of problem based learning through working in teams in a real life context is excellent. We will be faced with real life problems and be required to identify ways to address them in a team. Sounds exciting!

I feel I will be more engaged in this course through the work integrated learning and get more out of it. I am excited about the opportunity to do research on a real life issue commonly faced by not-for-profits. The overall learning environment for the course seems more relaxed as opposed to purely face-to-face learning modes. I like the idea of spending more out-of-class time in groups towards achieving a final set of goals and learning outcomes.

In response to the question what skills and capabilities the students hoped to develop from completing the course, the most frequently mentioned skills and capabilities were:

- Understanding of how a not-for-profit works, with particular emphasis on the strategic and operational issues
- Research skills
- Networking with knowledgeable and inspiring individuals in the not-for-profit sector
- Team building skills
- Interpersonal skills such as, how to liaise with corporate executives
- Written and/or verbal strategies that is effective in seeking information for clients

In addition to the formal CES that is undertaken for each course by the School, the course team also administered a post course experience survey with the students at the end of the semester to seek their feedback on specific issues pertaining to the course that is not captured in the formal CES. Because

of the specific focus of the course on work integrated learning, we were particularly interested on student feedback about a number of issues, such as, positive aspects of participating in a industry project, skills and capabilities developed through the course, the future value of work integrated learning module for a course on “social entrepreneurship” to students in the programme, among others. Some of the responses are quoted below:

I truly enjoyed working on this project. There is a definitive feeling of the work being real and very important to many people. The application of research and creative thought was awesome. The students in our programme would benefit immensely from learning about social entrepreneurship in real life context through work integrated learning.

My most valuable takeout from this course is a better understanding of the role of not for profits in the community. This course has also enabled me to develop more refined team management skill and communication skill. I believe I have also grown more confident about my emotional intelligence. Learning is lot more rewarding when we get to learn by being in touch with the context.

It was a highly collaborative learning experience that allowed many minds to come together to solve a problem commonly faced by the not-for-profits. Working with a not-for-profit has been an eye opener and has provided much insight into the role and the value of the sector. I feel my research skill, team building skill, public relations skill, communication and presentation skills have all been further developed through participating in this course.

Conclusions and Implications

The feedback from the students indicates that there are clear benefits for them in undertaking work-integrated learning modules, particularly in a course like *Social Entrepreneurship*. The students develop understanding of a range of strategic and operational issues faced by those who create and manage not-for-profit organisations with a view to developing social capital, the ability to start a social enterprise or work in the sector (Noble 2001). Students are also found to have developed other notable skills employers demand such as maturity, team working, emotional intelligence, communication and interpersonal skills (Phipps et al. 2001) required to build social capital and succeed in today’s globally competitive and volatile business environment. In addition, the approach is found to facilitate and inspire students in taking responsibility for their own learning, becoming self-directed and motivated to be life-long learners during their formal educational experience and use these skills throughout their professional

and personal lives (Brookfield 1995; Weimer 2002; Haugh and Rubery 2005). The findings highlight that higher education providers could consider work-integrated learning as part of their response to the employability agenda, in a climate where employers are increasingly demanding graduates to have entrepreneurial skills. Further research with larger sample across programmes might confirm if a clear link exists between students' undertaking work-integrated learning and graduate employability.

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Social Intrapreneurship: the case of small nonprofit firms in Australia and NZ

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Abstract

Intrapreneurs are those employees who identify and pursue opportunities in a firm. A new breed of intrapreneurs, those with a social mission, is emerging in both for-profit and nonprofit firms. The processes that these intrapreneurs use to effect their social mission are yet unexplained in the literature. We investigate the nature of social intrapreneurship, illustrating it with a number of case studies. We conclude that social intrapreneurship can be a powerful way to identify and introduce innovation strategies, if driven by a vision and managers and staff working incrementally to secure resources and implement change to increasingly networked social enterprises.

Keywords: Social intrapreneurship, Innovation, Nonprofit firms, Social enterprise

Introduction

Coined by Pinchot (1985), intrapreneurship is often defined as entrepreneurship within an existing firm (Antoncic & Hisrich, 2003), that is the process that individuals inside an firm use to identify and pursue opportunities (Stevenson & Jarillo, 1990). Intrapreneurship is related to a number of concepts, such as corporate entrepreneurship (Zahra, 1991), innovation (Drucker, 1985), and intrapreneurial strategy-making (Hart, 1991; Lumpkin & Dess, 1995; Verreynne & Meyer, 2007). This paper focuses on a concept which we argue is closely related to this, namely the independent entrepreneurial action of individuals in firms with a social mission, and terms it ‘social intrapreneurship’.

The concept of social entrepreneurship has become fashionable in academic and popular literature. Viewed as entrepreneurship driven by a social mission (Weerawardena & Mort, 2001), it explores and utilizes opportunities to provide social value to clients in nonprofit and for-profit firms. Similarly social intrapreneurs are present in firms with and without social missions. Therefore social intrapreneurs work in existing firms, which provide them with the resources of the firm to implement their social innovations. However, in small firms these resources may be limited. Social intrapreneurship as a concept has received some attention in the popular press and in online blogs and conversations, but as an academic topic it has hardly been investigated (e.g. Mair & Marti, 2006).

The purpose of this paper is to investigate the nature and application of social intrapreneurship in small nonprofit firms. In doing so, a literature review focusing on innovation, intrapreneurship, social enterprise and social intrapreneurship is undertaken, supported by three case studies on the nature and outcomes of social intrapreneurship. In each firm, a particular activity is highlighted as an example of social intrapreneurship because of its newness to the market (Johannessen, Olsen & Lumpkin, 2001). A number of themes are emphasized to inform

our theoretical understanding of this developing concept. The paper concludes with a discussion in which the implications for researchers and practitioners are considered.

Theoretical background

Social intrapreneurship has its foundations in the literature on innovation and entrepreneurship as well as social enterprise. Within this field, there is a growing recognition of the role of intrapreneurs in the development of an entrepreneurial organizational culture and innovation outcomes for firms (Antoncic & Hisrich, 2003; Pinchot, 1985; Stevenson & Jarillo, 1990). The following review provides a brief background on innovation and intrapreneurship, before focusing on the emergent literature on social entrepreneurship, and more specifically, social intrapreneurship. It also introduces the social enterprise, a type of firm where we contend that social intrapreneurship thrives.

Innovation

Innovation is a central construct of entrepreneurship (Miller & Friesen, 1978) and is more than invention; it also includes the successful commercialisation of the invention. Innovation in firms varies from willingness to experiment to a passionate commitment to master the latest in new products or technological advances (Lumpkin & Dess, 1996). Innovation strategy is often seen as a willingness to support creativity and experimentation which may lead to the introduction of new products/services, or the development of new processes (Dess & Lumpkin, 2001). These authors further explain that momentum is a pervasive force in firms, and that a firm with a propensity for innovation will become more innovative over time unless there are key obstacles acting to stop it. These obstacles may come from scanning or control systems that reveal it to be wasteful or expensive, analysis of decisions, environmental conditions and

structural factors (Miller & Friesen, 1982). Innovation is often developed emergently by intrapreneurs.

Intrapreneurship

Intrapreneurship, as suggested earlier, is the entrepreneurial behaviour of employees in existing firms. Intrapreneurship can take place at any level of the firm where entrepreneurial processes are introduced by owners/managers of firms (Mintzberg, 1973). Therefore, what essentially distinguishes intrapreneurship from entrepreneurship is first and foremost the context in which entrepreneurial act takes place (Carrier, 1996). Fostering intrapreneurship may be both a deliberate and an emerging strategy (Mintzberg, 1978) that is either a deliberate active strategy on the part of the owner-manager, or perhaps as a result of the process of reflection triggered by intrapreneurial behaviour within the firm, in which case it is developed emergently (Carrier, 1996). Within the study of intrapreneurship, Antoncic and Hisrich (2003) elucidate the main contributions have been in raising awareness and understanding of the role of entrepreneurship in existing firms for the revitalization and performance of those firms (Antoncic & Hisrich, 2004; Zahra, 1991), improving the understanding of successful intrapreneurs (Pinchot, 1985; Jennings Cox & Cooperl, 1994; Green, Brush & Hart, 1999); new corporate ventures in their context (Fast & Pratt, 1981; Krueger & Brazeal, 1994); and improving the understanding of entrepreneurial firms (Hanan, 1976). Most studies on intrapreneurship have focused on intrapreneurial activity within large firms; however, there is a very clear need for intrapreneurship in small and medium sized enterprises (SMEs) due to the pressures of scale on resources. Although unexplored, the need in small nonprofits or social enterprises may even be more critical.

Social enterprise

Nonprofit or third sector firms have an illustrious history. As early as the mid 1800s they started to generate income through business activities to supplement or complement their social mission activities (Alter, 2007). Business activities have supported the sustainability of nonprofit firms, particularly in times when other sources have declined, such as those currently experienced. Social enterprises bridge the divide between traditional nonprofits and cooperatives. Social enterprises include community firms, worker and other cooperatives, development trusts, credit unions, building societies, and community foundations among others (Smallbone, Evans, Ekanem & Butters, 2001). There are a number of well known examples of social enterprise, including Grameen Bank and Fair Trade, and their prominence has triggered increased academic interest in these firms since the 1980s (Kerlin, 2006)

Social enterprise comes in a variety of forms, for example purely philanthropic or hybrid firms (Alter, 2007). Hybrids vary in intensity of mission motive and profit motive. True social enterprise is more than a nonprofit with an associated income activity. Social enterprise is therefore defined as a venture created to provide social value, yet managed with financial discipline, innovation and operations similar to a for-profit firm (Alter, 2007). Social enterprise therefore use entrepreneurship, innovation and other market approaches to generate social impact. EMES, a group of European social enterprise researchers, explain that social enterprise can be viewed as a firm which aims to benefit the community, formed by people from the community with no or limited interest from capital investors (Nyssens, 2006). Social enterprise displays many of the characteristics of entrepreneurial firms (Miller 1983), such as placing a high value on autonomy, risk taking and innovation.

Smallbone et al. (2001) identify a number of characteristics and themes common to the 20 case firms that they studied. In terms of characteristics they identify a niche focus on a specific

product, service or customer, and resilience and willingness to make short term sacrifices by workers/members. Securing soft loans or grants; extensive use of networks with intermediary firms; commitment to wider social contributions; sharing resources with private sector firms; use of participative strategy-making processes; and the use of business support are common themes that these authors identified. Definitional, entrepreneurship and intrapreneurship are important in these firms, as explained next.

Social entrepreneurship

Entrepreneurship is associated with new venture creation (Drucker, 1985), usually by individuals or teams, but also the creation of new business units or other ways which grow existing firms (Morris & Kuratko, 2002). In both contexts it concentrates on opportunity identification or creation (exploration) and opportunity exploitation (Drucker, 1985). Drucker also highlights the differences between small business ownership and entrepreneurship, explaining the importance of innovation as an important feature of entrepreneurship. He further suggests that entrepreneurship does not need a profit motive, and therefore, a social motive is acceptable.

Social and business entrepreneurs differ in a number of respects (Dees, 1998). Most important is the motive of these entrepreneurs, with business entrepreneurs focusing on profit, and social entrepreneurs on the creation of social good – thus, a social mission. This does not mean that social entrepreneurs do not attempt to create a profit (more accurately referred to as a surplus), but only as means to an end. The markets in which the two types of entrepreneurs operate are also different. Business entrepreneurs function in competitive markets with customers who are willing and able to pay, and where the entrepreneur can attract resources – both underlying the creation of value and ultimately profit. Social entrepreneurs exist because

markets do not always function as perfectly as described above. Markets do not value social improvements and benefits for which people are unwilling or unable to pay. To social enterprises, these markets are often complicated to navigate, with income higher in good times, but demand higher in down times.

Dees's (1998) seminal work on the meaning of social entrepreneurship highlights the confusion that exists around the concept. In this paper we define it by addressing the context and elements of the concept. Social entrepreneurship first occurs in the context of the *nonprofit firm* or social enterprise, through for example innovative funding strategies. Second, *any firm* can be socially responsible, and can do this in creative ways. Third, social transformation or the alleviation of social problems *in society* can also be addressed in entrepreneurial ways (Mair & Martí, 2006). Social entrepreneurship includes elements such as a mission to create and sustain social value; identifying and exploring opportunities to fulfill that mission; using innovation, experimentation and learning; being proactive; and exhibiting a sense of accountability (Dees, 1998). The outcome of social entrepreneurship is change and improvement in the social sector. Mort, Weerawardena and Carnegie (2002) add that social entrepreneurship should address the creation of social value and feelings of virtuous behaviour, coherent unity of purpose and action in morally complex situations; exploring opportunities; and displaying innovation, pro-activeness and risk-taking behaviours.

Social entrepreneurs and entrepreneurship have always been around us, creating and growing firms with a social mission such as churches and charities. Also within business ventures, social entrepreneurs have created projects and divisions which aim to provide social good. Our definition of social entrepreneurship focuses on the processes and behaviours that underlie this concept, which serves our purpose of examining entrepreneurship within existing firms, that is, intrapreneurship. This is done next.

Social intrapreneurship

Drawing on our discussion of intrapreneurship and social entrepreneurship, social intrapreneurship is social entrepreneurship which occurs in existing firms and can refer to new venture creation or process/product/process innovation (Mair & Martí, 2006). Social intrapreneurs use business skills and knowledge to accrue and utilize resources in order to achieve social outcomes. Their approaches to solving social problems are typically innovative and often lead to outcomes beyond the intended goals. Successful intrapreneurs therefore change the firm internally, but may also change the external landscape. However, as yet the understanding of social intrapreneurship is in its infancy. Therefore, next we attempt to clarify the processes and issues around social intrapreneurship through an empirical study of three small nonprofit firms.

Research method

The case studies presented in this research were compiled as part of a larger research project with the objective to understand how strategy and drivers of organizational growth and performance in a number of firms, undertaken in New Zealand and Australia. One such way that has been highlighted is the contribution that intrapreneurial employees can make to the strategic direction and especially the innovation outcomes of the firm (Verreynne & Meyer, 2007). The research design utilises a descriptive explanatory case study approach to generate an understanding of organizational settings. Ogbonna and Harris (2002, p. 39) explain that ‘researchers should concentrate on understanding the ways through which organizational members construct and reconstruct their ‘reality’ (Smircich, 1983), rather than seeking to establish abstract variables to quantify their experiences (Schein, 1996)’.

In each firm, a particular activity is highlighted as an example of social intrapreneurship because of its newness to the market (Johannessen, Olsen & Lumpkin, 2001). Data gathering took place at the case firms during 2007 to 2009 using structured interviews lasting 60 – 90 minutes with managers and employees from each of the case firms. Interviews were transcribed and coded thematically and used with secondary data to build theoretical categories as a basis for analysis (Strauss & Corbin, 1990).

At Switzer the Human Resource Manager, three other division managers and three staff members as well as the General Manager, who was interviewed twice during two separate visits, were interviewed. At Auckland City Mission, a manager, three staff and the CEO, who was interviewed twice, were interviewed. For both of these cases, the data gathered related to the overall organizational strategy and the seven productivity drivers as promoted by the New Zealand Department of Labour (2007). At Youngcare, data consist of secondary data and an interview with one of the directors of the firm. Data were gathered on issues such as leadership and management, organizing work, networking and collaborating, investing in people and skills, encouraging innovation and the use of technology, creating productive workplace cultures, and measuring what matters.

Interviews were transcribed and coded thematically within each interview by highlighting key components and making preliminary margin notes to ‘isolate certain themes and expressions that can be reviewed with informants... maintained in their original forms throughout the study’ (Miles & Huberman, 1994: 6). Notes and interviews were used to build theoretical categories as a basis for analysis (Strauss & Corbin, 1990). By repeated reading, coders worked to identify issues that were emphasized, repeated or highlighted in each section of the texts. Whenever possible the most common phrase used by respondents was used to capture the theme and its meaning (Miles & Huberman, 1994).

The following cases illustrate the use of social intrapreneurship as a process through which risky, innovative ideas were created in a dynamic manner by the General Manager of Switzer Jackie Simkins (Jackie), the CEO of Auckland City Mission Diane Robertson (Diane) and the directors of Youngcare respectively, which were implemented emergently by managers and staff. We highlight a number of themes which emerged from our analysis of the data as the cases are presented. Themes are presented as they are introduced in the three cases, and where themes repeated in more than one case, the same theme number is used again.

Case Study 1: Claud Switzer Memorial Home

The Claud Switzer Memorial Home provides relief and welfare for older people within the Kaitaia region. Established in 1950, it has grown from 15 beds to 72. It has 70 staff with an average age of 45 years, 95 per cent of which are female and 50 per cent Maori. The remaining staff are from the Pacific or Britain, or are New Zealand European.

Theme 1: Social entrepreneurs and intrapreneurs have a clear vision of where their firm is going and how their innovative behaviour can contribute to that vision

The vision at Switzer is to provide leadership in the care of older people, and a range of services for their changing and diverse needs. Due to its geographical location in the Far North of New Zealand and difficulty with managing capped levels of funding, Switzer faces a number of challenges. It has proved difficult to attract staff to the gerontology sector from an already tight labour market. In addition, it is difficult to find suppliers to service equipment. Switzer also needs to maintain and develop secure relationships with multiple stakeholder groups in order to effectively manage the home.

Theme 2: Intrapreneurial initiatives are often a result of a pressing need experienced by staff and/or management

Staff at Switzer provide a high level of care for residents who are very dependent. The nature of the work is physically and emotionally demanding, and staff work across a large physical area. For several years now Switzer has experienced almost 100 per cent occupancy and has long waiting lists. Jackie says that, with the approach of the baby boomer generation, 'The people we care for are getting older and frailer, much more dependent. Our staff workload is going up all the time.' The work at Switzer was physically intensive as staff were manually lifting residents between different areas several times a day. This incurred higher risks for residents, including skin tears, strains, and the indignity of being hauled around.

Theme 3: Social intrapreneurship can take place at any organizational level, whether it is managerial or operational

The risks were also very real for staff. From 1999 to 2004, manual lifting lead to 283 lost work days due to injuries and strains experienced by staff, particularly to their backs. The situation became increasingly untenable in light of the ACC 16kg limit as a best practice standard for patient handling. Staff turnover peaked at 32 per cent. The situation had to change as the Jackie wanted to reduce staff and resident injuries, and improve staff retention. The challenge for managers at Switzer was to find ways of organizing their physical environment and workforce structure to respond to the growth in demand for their services; in other words, working smarter not harder.

Theme 4: For social intrapreneurship to have positive outcomes, top management support is essential

In response to the Accident Compensation Corporation's best practice weight limit for lifting, General Manager Jackie Simkins developed a key strategy: a no-lift policy, which meant an end to manual lifting of residents by staff. The Board of Trustees supported her proposed change, which aimed to improve productivity and reduce injuries in the workplace.

Theme 5: Social intrapreneurship inevitably leads to product/service/process/systems innovation

New equipment such as high-low beds, hoists and slippery-sams were installed to facilitate new approaches to moving and handling residents. Not all equipment needed to be replaced, as some very simple ideas for modifying existing equipment and facilities provided significant gains.

Theme 6: Innovation results in change which may lead to resistance. It is important to illustrate the benefits of innovation to overcome such resistance

Initially a few staff were resistant to the no-lift policy as use of equipment was perceived as a slower way of moving and handling residents. To overcome this resistance, managers used patience and dialogue to explain why this new approach to handling was required. All staff received training on the new lifting procedures and how to use the equipment. Caregiver Loretta Haare says, 'We more or less, especially the old hands, had to re-educate ourselves to stop, think and assess your situation'. Through encouragement and enforcement, the transition to the no-lift policy was achieved within a few months.

Theme 7: Successful intrapreneurs are able to secure resources and support to ensure the successful introduction of new products/services/processes

Once staff realised the benefits of the new policy, particularly the reduction in fatigue and workplace injuries, they began to self-police the policy to ensure manual handling was avoided. For Switzer the no-lift policy has led to very real productivity gains. For the five years from 1999 there were 28 workplace injuries resulting in 283 lost work days, 175 of which were sick leave days. There were also 108 back-to-work rehab days in this period. The direct cost was \$22,480. When the no-lift policy was introduced in early 2004 there were no injuries (they have had a couple of injuries in the last year, but they have been very minor and not resident related). Jackie said 'Investing in equipment that makes the job easier and reduces the number of accidents means staff can start getting more pleasure out of doing the job. You keep them longer, which balances up the cost of new equipment'. Staff turnover has also dropped to as low as 15 per cent. 'Our primary aim is to keep our workers here,' says HR Manager Sally Maria.

Switzer is now seen as a leader in the industry in moving and handling, and attracts funding from a wide range of sources and has won several Health and Safety Awards. Switzer continues to provide a safer work environment for staff and a high quality care experience for residents within their fixed funding levels. 'Happy staff makes for happy residents, which decreases the workload because they're more cooperative' says Clinical Manager Mary Herbert. Management at Switzer have plans to attract additional funding to enable them to install a greater number of hoists and high/low beds. The current plan is to renovate an old wing to build 20 new beds, which will all be hospital size with hoists attached to the ceilings. They also wish to install an eight-bed rehabilitation short stay unit.

Case study 2 - Auckland City Mission

Established in 1920, Auckland City Mission (ACM) is a dynamic social service firm that recognises the importance of successful partnerships with all stakeholders to achieve best

outcomes for clients. The ACM provides marginalised Aucklanders unique and specialised health and social services including a community food programme, drop-in centres, housing assistance, and support to overcome addictions. Over the life of the ACM, its advocacy role has increased, as has the work directly in the community offering relevant solutions to individuals and families experiencing a temporary set back or who have a long-term problem that requires expert attention. The ACM has 60 full and part time staff and approximately 40 core volunteer staff.

Theme 1: Social entrepreneurs and intrapreneurs have a clear vision of where their firm is going and how their innovative behaviour can contribute to that vision

Diane strongly believed that it was vital to be very clear about their purpose and for everyone to understand the direction of the ACM. Establishing clear standards and objectives assist staff in knowing exactly what they should be doing and enables the work they perform, and the outcomes achieved, to be measured against these. Managers and team leaders went through the process of very clearly listing for social workers the types of interventions that they do so that they can analyse factors such as time management of staff. This required a changed approach to recording information. For example, staff previously would write ‘I did a home visit’. Now they are challenged to write the outcome in terms of the intervention, rather than just the activity conducted. This has enabled staff to identify more clearly what work they do and the outcomes achieved.

Theme 2: Intrapreneurial initiatives are often a result of a pressing need experienced by staff and/or management

When Auckland City Missioner Diane Robertson joined the firm in 1995 the Mission was over a million dollars in debt, with only 15 core staff. Another major challenge was the high staff turnover as many staff were there only on a short term basis. Turnover was compounded by the fact that social work has not been highly paid despite the work being highly skilled, and that within the social service industry, the ACM was not seen as the agency of choice for which to work. The staff turnover and debt levels were particularly concerning given that the mandate of the ACM is to provide effective interventions 365 days a year to ensure clients received high quality services. Diane recognised that for them to perform to the desired standard to best help clients, the Mission needed to be reorganized with robust planning, good systems, clear processes, dedicated professional staff and a strong culture of teamwork.

Theme 8: Intrapreneurs are apt at identifying changes in the environment and tend to view these as opportunities, rather than threats

As society has grown more complex, issues faced by Mission clients due to economic, political and social forces outside the control of the individual, impact on individual and family circumstances to affect their well-being. It cost the ACM \$4.3 million every year to provide services to meet the diverse needs of its clients. Only 7.4 per cent of this is government funded so the other 92.6 per cent needs to be raised through fundraising efforts. There are two significant challenges for the ACM. Firstly, to raise a substantial amount of funding among greater competition from a range of firms all seeking public donations. Second, to ensure that each dollar received is used in the most productive way possible to improve the lives of marginalised Aucklanders.

Theme 3: Social intrapreneurship can take place at any organizational level, whether it is managerial or operational

To ensure the ACM could achieve its objectives, Diane's first endeavor was to take time to review structures and processes in place to determine the best way to change from a traditional 'charity type' mindset to being a highly organized professional service firm. In order to make it financially viable all aspects of the business were reviewed, which then enabled Diane and her team to create the Strategic Plan in 2003. This took over two years to develop, during which 17 meetings were held with every staff member including volunteers.

Theme 9: Social intrapreneurs not only identify opportunities, but also develop solutions which explore these opportunities

The firm was redesigned as an inverted hierarchy which meant that Diane's role as CEO was defined as supporting the managers of each service, who in turn hold up their staff, who work for their clients. The clients are at the top of hierarchy and were given a voice in the management of the ACM through structures such as the Homeless People's Management Committee. Stressing the rights of clients was important in the new culture of the ACM says Diane, because, "We are here because they are here. They are not here because we are".

Theme 10: Social intrapreneurs are able to utilise networks of firms to overcome the liability of smallness and resource restrictions

To form strategic alliances to support the ACM's work, Diane joined several external boards. Every year Diane and her team conduct a review of all the boards she is a member of to determine if they are still an appropriate place for her to be. "We have really clear thinking about what is strategically important, where should we be, and how we should be placed", says Diane.

Representation on external boards has enabled the ACM's advocacy work to be taken into the corporate and business sector which very few nonprofits have actually managed to do. Diane has also learned an enormous amount about business and models of governance and gained access to the skills, knowledge and resources of other board members. Serving on boards provided Diane with excellent environments in which to receive validation of the skills she has as a CEO.

Theme 5: Social intrapreneurship inevitably leads to product/service/process/systems innovation

A new staffing approach was introduced to support the changes made to the structure and culture of the ACM. Previously they relied heavily on volunteers, but finding volunteers with the right skills became more difficult due to the highly skilled nature of much of the ACM's work, and due to the time pressures put on peoples' lives limiting the amount of volunteer work they could perform. The 40 core volunteer staff are managed in the same way as other staff; also having job descriptions and employment relations agreements.

A change made to the firm of work at the ACM is that managers now manage across services rather than managing their own individual areas. Previously when they managed their own service the ACM was often left without 'out of hours' or weekend coverage which meant that Diane or others often used to get called in at short notice on nights and weekends. To alleviate this problem, managers were put on a roster which meant that while they manage their services as normal, one week in four they are rostered on a weekend. A benefit of this approach to staffing is that they have been able to develop consistency of practise across all services; all managers now knowing how various services work.

Theme 11: Social intrapreneurship is more likely to succeed in firms with organizational cultures which support entrepreneurial behaviours

To foster this new approach some simple changes were made such as putting all managers into one office. The managers sharing an office cultivated a strong team culture. Senior management shifted away from daily operational concerns, to concentrate on resourcing, empowering and supporting staff to do the best job they can. Strong team spirit was built in several ways including sending team leaders on training courses together rather than individually.

Well organized systems and a team culture have enabled more professional services to be delivered of a consistent standard which has been hugely beneficial to clients of the ACM. Staff have become more accountable for outcomes achieved with clients which has created increased job satisfaction and led to stronger relationships between staff and clients, underpinned by mutual respect. New approaches to rostering and cross-skilling have provided more consistency in service delivery by ACM staff. Two full staff meetings are held each year. Although it is quite an undertaking to bring everyone together, these are excellent forums in which to celebrate long serving staff, including volunteers.

Theme 12: Operational efficiencies are often the purpose or outcome of social intrapreneurship

Previously there had been little structure in some of the client service areas. If clients came in for a food parcel they could come back a thousand times as nobody knew what was happening explains Diane. When Diane came to the ACM she developed a database to hold client records which were created from interviews. These interviews became part of a new process staff followed with anyone who came for help. This enabled them to act in a more systematic manner rather than just giving charity out. While previously there had been no record keeping relating to distribution of food parcels, implementation of the database provided high quality information for which they could analyse trends such how many food parcels were distributed each month. Higher quality information enabled staff to offer interventions that were

more realistic for clients. The database has been a real asset over the past 10 years, so this year it has been used in all the services to enable quality information to be captured. This has focused managers' thinking about how data can be collected without it being too onerous for staff; data that is about the quality of the work that they do and which can be used to support decision making and quality improvements.

Benchmarking against international best practices and models also facilitated staff development. By conducting research over the internet and travelling overseas to visit similar firms, staff have learned from other firms. Diane feels that such benchmarking can work two ways as she believes that sometimes you need to send your staff overseas not just to learn from others, but so they see how well ACM is doing comparably. Visiting social service firms overseas has enabled staff to come back with ideas about things that could be integrated at their own firm, such as different models for working with the homeless discovered by travelling to Sydney, Melbourne and Britain. Thus benchmarking has been about opening themselves up to other ways of working.

Theme 13: Social intrapreneurship has measureable benefits for the social enterprise if successfully implemented

Another measure indicating the ACM has improved productivity and performance is a reduction in the number of complaints received. The New Beginnings Shops and the Food Distribution centre have been reorganized over a number of years. Prior to this reorganization, managers spent a good quarter of their time on complaints received about those particular parts of the Mission's services. Now if they get two complaints in six months that would be substantial.

The number of complaints have reduced because the service became well organized with strong management, clear procedures and a highly committed team. The manager of the food

distribution centre worked to support his staff on a personal level, making sure they received good personal support as well as clear boundaries. Positive feedback received in the form of letters from clients is also a measure of success. “It is great when somebody writes to me and says I had a major catastrophe in my life and it was a dreadful experience having to come to you, but your staff made it very respectful. When we get that we think we are right on the button” says Diane.

Organizational changes are also measured from staff feedback. Diane stresses the importance of walking the floor to remove the hierarchical filtering of information. Discussing changes with all staff communicated to them that senior management wanted to know how the new practices are working. “If systems are robust and people follow them, then you can actually see the change in attitude as the organization is working well”, says Diane.

Clear practices that are well measured have enabled staff to be more effective in providing services better tailored to meet clients’ needs. Capturing and recording data around key activities has enabled managers to analyse trends particularly over the last ten years and thereby tailor services for maximum effectiveness. Increased revenue, secure relationships with key stakeholders and a reduction in the number of complaints from clients are all significant indications that the services are well organized. The focus moving forward is to continue documenting extremely clear operating procedures for managing their services and to enable them to map changes in clients’ lives.

Theme 7: Successful intrapreneurs are able to secure resources and support to ensure the successful introduction of new products/services/processes

At the ACM workplace productivity is measured by the amount of funding received, the efficient and effective use of the revenue, the number of healthy relationships we have and not

losing people's support either financial or non-financial. Their advertising agency does their work pro-bono, so for the Fundraising Manager, productivity is about not just bringing in revenue, but also keeping people onboard. Without the support of the public, the ACM cannot exist so the expectation was made clear that managers had to have alliances with the other firms that led to the Mission enhancing their own services. To measure such alliances every month managers are required to record what groups they visited and the reason for doing so.

Theme 14: Social intrapreneurs not only come up with new product/service ideas, but also innovate in terms of processes such as fundraising and marketing

The fundraising team is constantly having conversations about how they can do it better and conduct frequent analysis of fundraising activities. Through analysis they determined that it was not worthwhile dropping envelopes into people's letter boxes, as it has often cost them more than the revenue it has generated. For the first time in 2006 they tried a new strategy for fundraising which involved selling people's time/services on Trademe (New Zealand's version of eBay), which got a lot of younger people knowing more about the Mission. "It really changed people's perception of us and it has been very effective" explains Fundraising Manager, Alexis Sawyers.

Theme 15: Social intrapreneurs are able to use experiences from previous jobs, international travel, etc. to nurture innovation

International experience and knowledge has been brought into the ACM through its diverse workforce. For many years the ACM has recruited new immigrants and others who have found it difficult to get jobs, for a variety of roles, particularly in administration. One of the Accounting Clerks speaks eight languages. Two doctors employed at the ACM completed New

Zealand qualifications and then went on to work at Starship hospital. Given that the ACM has faced a tight labour market due to the shortage of qualified social workers they have had to look at other ways of training people. A benefit of having such highly skilled staff including social workers, psychiatrists and counsellors is that these staff not only have provided highly effective services to clients, but have also conducted internal training activities to upskill other staff.

Case study 3 - Youngcare

Starting out in 2005, Youngcare is a small nonprofit which provides care for young Australians with high care needs. When 23 year old Shevaunne Conry's multiple sclerosis needs became too great for homecare, she and husband David set out to find her full time care, just to realize that there were limited options available. David, with three friends, Simon Lockyer, Nick Bonifant and Matthew Lawson founded Youngcare.

Theme 8: Intrapreneurs are apt at identifying changes in the environment and tend to view these as opportunities, rather than threats

These young social entrepreneurs saw an unfulfilled need in the market – 6500 young people with no appropriate care options – an opportunity that was unrealized. The need for care designed for youths was profound, and living in age care homes, the only other option, meant that friends seldom visited, and that young people had limited options to go out or participate in age appropriate recreational activities – often leading to depression.

Theme 1: Social entrepreneurs and intrapreneurs have a clear vision of where their firm is going and how their innovative behaviour can contribute to that vision

From the outset the four young entrepreneurs had a clear vision. While the espoused mission read ‘to provide a dignified and relevant lifestyle for young people requiring nursing care’, their communicated vision for the firm was far more ambitious, namely to have apartments in each state within the next seven years, as well as to provide holiday accommodation for young Australians with high care needs and their families. In December 2007, the first Youngcare apartments were opened in Brisbane. A year later, plans are advanced for the construction of further apartments on the Gold Coast and in Sydney.

Theme 10: Social intrapreneurs are able to utilise networks of firms to overcome the liability of smallness and resource restrictions

Youngcare has moved quickly to develop strong networks and ties in/with government, business and the wider community. Their relationships with *government* has led to two large grants – one of \$2.7 million from the Federal and Queensland governments to build the Brisbane apartments, and one of \$3 million from the Queensland government to build care services apartments on the Gold Coast.

Social Ventures Australia (SVA) chose Youngcare as one of eight nonprofit firms to receive funding and planning support over a five year period on the basis of their innovativeness and ability to drive transformational social change. This further provided Youngcare with access to SVA’s networks as well as partnerships with nonprofit firms such as The Adam Scott Foundation, which benefits disadvantaged young people. Youngcare has also supported other charities such as the Fire and Flood Benefit concerns held in 2009 – also an unusual approach usually reserved for for-profit firms.

Youngcare's ties into large *corporates*, for example FKP Property and Suncorp, has further strengthened their position. These firms have also found similarities with Youngcare, highlighting for example road statistics for youths.

Theme 14: Social intrapreneurs not only come up with new product/service ideas, but also innovate in terms of processes such as fundraising and marketing

One of the best examples of social intrapreneurship in Youngcare has been their use of branding and other marketing practices which extends beyond those generally used by nonprofit firms. Youngcare has also targeted its market well for donations, using rock concerts, road races such as The Bridge to Brisbane (from which they received \$306 000 in donations), Oktoberfest 2008, fashion shows, Individuum (an investment firm for the youth), rugby teams' support (e.g. NRL One Community campaign), and participation in Crewzing Regatta 2008.

Theme 12: Operational efficiencies are often the purpose or outcome of social intrapreneurship

Youngcare has used media such as newspapers and the internet well to reach a large audience on a limited budget. Press releases, media stunts, and free advertising space from Quest Newspapers have provided opportunities for cost efficiencies as well as exposure in traditional media. On the internet, all forms of advances, for example video clips, are used to reach a wide audience. Radio stations targeting youths, such as Triple M Brisbane, have also supported Youngcare.

Discussion and conclusion

Our initial investigation of three case firms provides us with some insights into social intrapreneurship. In particular, fifteen themes, as summarized in Table 1, which describe the

nature of this process emerge from our case. These themes are aggregated into a number of dimensions which guide our discussion.

Table 1: Summary of themes and case firms

Themes	Switzer	ACM	Young -care	Aggregate dimensions
Theme 1: Social entrepreneurs and intrapreneurs have a clear vision of where their firm is going and how their innovative behaviour can contribute to that vision	√	√	√	Vision
Theme 2: Intrapreneurial initiatives are often a result of a pressing need experienced by staff and/or management	√	√		Opportunity
Theme 8: Intrapreneurs are apt at identifying changes in the environment and tend to view these as opportunities, rather than threats		√	√	
Theme 9: Social intrapreneurs not only identify opportunities, but also develop solutions which explore these opportunities		√	√	
Theme 3: Social intrapreneurship can take place at any organizational level, whether it is managerial or operational	√	√		Organizational infrastructure
Theme 4: For social intrapreneurship to have positive outcomes, top management support is essential	√			
Theme 6: Innovation results in change which may lead to resistance. It is important to illustrate the benefits of innovation to overcome such resistance	√			
Theme 11: Social intrapreneurship is more likely to succeed in firms with organizational cultures which support entrepreneurial behaviours		√		
Theme 5: Social intrapreneurship inevitably leads to product/service/process/systems innovation	√	√		Innovation
Theme 14: Social intrapreneurs not only come up with new product/service ideas, but also innovate in terms of processes such as fundraising and marketing		√	√	
Theme 7: Successful intrapreneurs are able to secure resources and support to ensure the successful introduction of new products/services/processes	√	√		Resources
Theme 15: Social intrapreneurs are able to use experiences from previous jobs, international travel, etc. to nurture innovation		√		
Theme 10: Social intrapreneurs are able to utilise networks of firms to overcome the liability of smallness and resource restrictions		√	√	Networks
Theme 12: Operational efficiencies are often the purpose or outcome of social intrapreneurship		√	√	Performance outcomes
Theme 13: Social intrapreneurship has measureable benefits for the social enterprise if successfully implemented		√		

The above cases are examples of social intrapreneurship undertaken by the CEOs/GMs to develop, fund and implement the risky, yet innovative strategies. Firms in the nonprofit sector

face several pressures, particularly lack of funding, increased demand due to an ageing population and a the problems of attracting and retaining staff in the tight labour market.

At Switzer these factors created the pressure to find a ‘new way’ to do business for the improvement of quality of care for clients and safer work for staff. The ACM faced the challenges of significant debt and high staff turnover. Such pressures required major reorganization with robust planning, good systems, clear processes, dedicated professional staff and a strong culture of teamwork to enable them to perform to the desired standard to best help clients. Youngcare were face by an under-served opportunity in the market which they decided to satisfy in a pro-active, innovative manner. Our exploratory study of three cases provides us with some insights into an organizational process which has thus far been under explored. Discourse on social intrapreneurship is largely absent from the extant literature, as described earlier. The themes identified above are discussed next.

As is often the case with entrepreneurial behaviours, external and internal factors created the need for change. In the Switzer case, the impact of the 16 kilogram best practice weight limit set by ACC escalated the need to find new ways of lifting patients to mitigate the health and safety risks. Also the culmination of the increased physical demands of the work, ageing workforce and dangers of manual lifting created a pressing need to find a new approach to moving residents. The physical risks to residents of skin tears, and the absenteeism from back strains experienced by staff lead to lower productivity, as defined by management at Switzer as being about continuous quality care of residents. At ACM the issues faced by their clients due to economic, political and social forces outside the control of the individual, impact on individual and family circumstances to affect their well-being, created even greater urgency for the ACM to reorganize to reduce debt, increase funding, and deliver better services. At Youngcare, Shevaunne Conry’s illness identified the lack of care facilities of young Australians with high

care needs, propelling her husband and friends into action to develop apartments in all the major cities in Australia. In all cases, the problem warranted a novel approach, and set a process that was intrapreneurial in motion. We defined this process as such because of the existence of a number of pre-conditions, including the emergent nature of the process, the innovative solution, the acceptance of risk by the firm and the pro-active manner in which they dealt with the problem (Weerawardena & Mort, 2006).

Although social intrapreneurship can take place at any organizational level, the new no-lifting policy was formulated firstly by the General Manager, with most staff buying into the new approach fairly quickly, with the assistance of training and encouragement. Staff experienced the benefits of the new system as it was much better for their bodies and improved relationships with clients thus making the work easier. Working smarter not harder also led more staff to stay at Switzer, rather than looking for less physically demanding work in other sectors, thus achieving many of the productivity goals established by the Board of Trustees and management at Switzer. The ACM was redesigned was Diane and her team as an inverted hierarchy which meant that Diane's role as CEO was defined as supporting the managers of each service, who in turn hold up their staff, who work for their clients. Also at Youngcare, it was the directors who identified and pursued the opportunity. These results make an important contribution to what has previously been considered a 'black box'. Others such as Dess et al. (1997) and Verreynne and Meyer (2007) only suggest that intrapreneurial employees contribute to strategy-making, but do not emphasize the potential role of managers as the actual intrapreneur, not only the person who supports the initiative.

Support by those in Governance roles is vital for the successful adoption and implementation of any new strategy in a firm. Through these case studies, we also identified the importance of such support for the success of social intrapreneurship, supporting the definition of

Verreynne and Meyer (2007). For such a major change in process as outlined in the case, the Boards needed to support the pursuit of the new strategies in a number of areas such as seeking external funding, purchase of new equipment, hiring of expert staff and work redesign. At Switzer the Board of Trustees in the first meeting realised the business case for the strategy in terms of raising productivity and addressing key issues faced by the whole sector, such as difficulties in attracting staff, and an ageing workforce. The supports was therefore more likely to be the result of external pressures in this case, rather than from a supportive culture for innovative action, which would be important for the long term success of this approach. However, in the other two cases, the importance of a supportive organizational culture is supported.

The outcome of the use of a social intrapreneurship is inevitably product/service/process/systems innovation. In the case of Switzer, process innovation came through the creation of the no-lift policy since it was a risky idea, new to the sector, and which was developed and implemented emergently by employees (Bourgeois & Brodwin, 1984). The case therefore demonstrates how intrapreneurship can transform business practices through the introduction of new technology, redesign of work processes, and comprehensive training to deliver improved client service resulting in significant improvements in organizational performance (Antoncic & Hisrich, 2004; Zahra, 1991).

At ACM the design of the client interview process and database was a new innovation that underpins a more strategic approach to client management and service delivery, enabling the firm to act in a more systematic manner rather than just giving charity out. Gaining higher quality information enabled staff to offer more suitable client interventions, thus alleviating social problems in an entrepreneurial ways (Mair & Martí, 2006), as well as improving overall

knowledge management for the ACM. In both ACM and Youngcare, innovation also came in the form of new approaches to branding and marketing for nonprofits.

As expected, the innovative new processes were met with initial resistance. With such significant change managers realised the importance of advocating the benefits of new work approaches as staff need encouragement to change work practices. Furthermore, strong leadership is required when adopting radical new approaches to work processes to work through resistance from staff (Zhao, 2005). Close relationships with residents contributed to staff adopting the no-lift policy as they could see the benefits not only for themselves, but also for the residents. At ACM the CEO found that removing the hierarchical filtering of information by discussing changes with all staff communicated to them that senior management wanted to know how the new practices are working and worked to overcome resistance to change.

We highlighted that successful intrapreneurs are able to secure resources and support to ensure the successful introduction of new products/services/processes. In the case of Switzer, the innovation strategy required investment in new lifting equipment. Jackie had to apply for several grants from external funding agencies. Obtaining grants allowed for the incremental purchase of hoists, which were implemented and used by staff with clients emergently. Given the funding constraints, transformative change was achieved over time through the incremental investment in new equipment. At ACM, new fundraising ideas such as the Trademe Campaign enabled them to reach new markets such as young people to increase donations. To ensure successful return on investment, all fundraising activities of the ACM are closely evaluated, thus exhibiting a sense of accountability (Dees, 1998) which is vital for social enterprises. To get buy-in for the strategies outlined in the cases above timely measurement of the benefits of new processes is vital for calculating the return on investment. ACM and Youngcare also secured resources through

extensive networking with government, large corporate firms and other nonprofits and small firms.

A number of other themes are also highlighted. Particularly, operational efficiencies and measureable outcomes seem to be important outcomes of social intrapreneurs. These are illustrated in AMC and Youngcare, which have both used their innovative actions to improve their bottom line.

Implications of research

This paper investigates the nature and application of social intrapreneurship in a SME through the case studies of the Claud Switzer Memorial Home, Auckland City Mission and Youngcare. It has several implications from an academic and educational perspective. Firstly, it contributes knowledge on the nature of social intrapreneurship from a qualitative perspective, to the field which has been under-investigated in the literature by highlighting a number of themes which clarifies the process in nonprofit firms. Therefore it contributes to a richer appreciation of the social intrapreneurship process and theoretical advancement of intrapreneurship in general. Second, the development of theory and knowledge from this paper will aid our understanding of the process of specific groups of intrapreneurs such as ‘nursepreneurs’ (McHarg, 2006) and social workers for how social intrapreneurship can be undertaken in other resource constrained small firms.

Practitioners can also gain through the best practice cases presented and the processes highlighted in this paper. This research also supports policy-makers who are increasingly looking at nonprofit firms to solve some of the societal and environmental issues with which they cannot cope in entrepreneurial manners. This research project will aid other business and

entrepreneurship researchers to conduct further research that will aid in economic and social policy, and best practice cases.

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‘Keeping the Business Running’. Evidence of Sustainability Practices in New Zealand Small Firms

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Abstract

Sustainability practices have been predominantly developed in the context of large corporations and therefore largely fail to engage small and medium-sized enterprises. There is a perceived need to understand sustainability from the perspective of small firm owner-managers. The focus of the present study is to understand how small business owners define sustainability in the context of their firm and explore how they put this understanding into practice. This paper reports on a qualitative study based on face-to-face interviews with 50 owner-managers of firms with less than 50 employees. Using Spence & Rutherford’s (2001) framework it is argued that the small firms in our sample showed a wide and diverse range of sustainability practices, but tended to under-emphasise their environmental and social engagement and to use language different to that of ‘sustainability’. From the analysis recommendations are drawn that might assist policy makers and practitioners in the design of sustainability programmes for SMEs.

Introduction

The small and medium enterprise (SME) sector is already widely recognised for its significant contribution to the economy, but in recent years SMEs have also attracted increasing attention when it comes to their environmental and social impact. Further, SMEs are increasingly criticized for being highly resistant to voluntarily improving their environmental and social performance, to behave reactively rather than proactively, and to display poor overall up-take rates of sustainability programmes (Observatory of European SMEs 2002, Rutherford et al. 2000, Revell and Rutherford 2003).

Definitions of corporate sustainability (CS) are very broad and do not take into account specific business contexts. Some commentators claim that this plethora of definitions is of little practical relevance to organisations (Mareewijk 2003). This seems to be particularly important in the context of SME research, given the heterogeneity of this sector. However, theories and practices on corporate social responsibility (CSR) and CS have been predominantly developed for and in large firms (Jenkins 2006). Although the specific characteristics of small firms are acknowledged, for example resource constraints, personalised management style, lack of formal structures and ownership structure (Storey 1994), attempts to engage small

firms in sustainable practices have centred on the modification of conventional approaches to sustainability to fit the needs of small firms. Assumptions are often made that measures to engage SME firms in CSR or CS can be scaled down versions of those developed in large firm contexts (Jenkins 2006). As a result many of the programmes that have been developed are not relevant for SMEs and therefore making it difficult for SME owner-manager to buy into it.

This paper argues that a more comprehensive and successful course is to embrace a “bottom-up” which means to develop the theory and practice of sustainability from the perspective of SME owner-managers (Jenkins 2006). The focus of the present study is to understand how small business owners define sustainability in the context of their firm and explore how they put this understanding into practice. There is a perceived need to understand sustainability from the perspective of small firm owner-managers in relation to their business practices and to understand sustainability in its entirety, including social as well as environmental aspects.

Defining Sustainability

There are diverse and often competing definitions of CS. The concept of CS arose out of the environmental movement and in particular the Brundtland definition that emerged in 1987.

Sustainability development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development, 1987, p.43).

Although this definition is still frequently used, over time two very different ways of defining and conceptualising CS have developed. An ecological view of CS identifies sustainability within the environmental responsibility dimension of business (Montiel 2008). Starik and Rands (1995) define ecological sustainability as:

The ability of one or more entities, either individually or collectively, to exist and flourish (either unchanged or in evolved forms) for lengthy timeframes, in such a manner that the existence and flourishing of other collectivities of entities is permitted at related levels and in related systems (p.90)

Environmental management scholars also reflect this orientation towards environmental responsibility. Topics of interest in the corporate environmental management field include environmental management systems; ecological responsibility, corporate greening; corporate environmental responsiveness and eco-entrepreneurship (Montiel 2008).

However, other definitions of sustainability broaden the concept outside the domain of environmentalists and ecologists to include economic and social phenomena. Increasingly corporate sustainability is defined as a tri-dimensional construct. A triple-bottom line approach to corporate sustainability emphasises the balancing of three different but inter-connected variables - economic responsibility, social equity and environmental integrity (Bansal 2005). The central theme in this definition is the interdependence between economic growth, environmental considerations and social justice factors. Here the emphasis is on achieving human development in an inclusive, connected and equitable manner. Key components emphasised are inclusiveness, connectivity, equity, prudence and security (Gladwin and Kennelly 1995).

With their shared economic, environmental and social concerns it seems that CSR and CS are converging. The conceptualisation of CSR that integrates social, economic and environmental dimensions and the triple bottom line approach of CS are very similar.

Furthermore much of the management literature uses CSR and CS to refer to social and environmental management issues. In the light of this plethora of definitions we refer to corporate sustainability as *“company activities – voluntary by definition – demonstrating the inclusion of social and environmental concerns in business operations and in the interaction with stakeholders”* (Mareewijk 2003, p.102). However, in his attempt to provide an overview of the contemporary debate on the concepts and definitions of CSR and CS Mareewijk (2003) concludes that broad definitions like the one cited are of little relevance for organisations. Instead he proposes to allow a variety of definitions that are more specific taking into account the specific context of a business like its development, awareness or ambition levels. This seems to be particularly important in the context of SME research given the heterogeneity of this sector. As SMEs constitute the vast majority of the business population, it is unlikely to find a definition that embraces the self-employed hairdresser, the small manufacturing exporter and the fast-growing high-tech enterprise employing 80 staff. The broader the definition the more difficult it is especially for small businesses to see how they could possibly contribute to the sustainability agenda.

SMEs and corporate sustainability

A review of the literature on SMEs and CS indicates that much of the research to date has focused on the environmental dimension of sustainability, namely environmental management practices and environmental performance of SMEs (for example Revell and Blackburn 2007, Hillary 2000, Hillary 2004, McKeiver and Gadenn 2005, Rutherford, Blackburn and Spence 2000, Merrit 1998, Petts et al. 1999, Tilley 2000). The focus of the present research is to take a more holistic approach by including environmental and social aspects of corporate sustainability. For this reason plus taking into account Mareewijk’s (2003) considerations on the similarities between corporate social responsibility and corporate sustainability we have extended our review to cover the CSR literature within the SME research field.

Jenkins (2004, p.52) concludes in her critique on conventional CSR theory that *“SMEs are frequently seen as a failure within the CSR debate, because of their failure to become engaged with it. An alternative interpretation is that it is the CSR debate that is the problem, because of its failure to engage SMEs.”* The cited failure results mainly from attempts to scale down CSR/CS approaches that have been developed in and for large firms to suit smaller firms. However, in addition to size there are further internal and external characteristics that need to be taken into account to explain behavioural patterns of SMEs in relation to CSR/CS. The Bolton Report (1971) names three main characteristics differentiating small firm from large firms:

- The firm is owner-managed in a personalised way, not through a formal, specialised management structure.

SMEs are mostly privately held with the owner-manager having multiple responsibilities and roles with a strong involvement in daily operational tasks. While most owner-managers have a good technical knowledge of the business, they are often lacking management capabilities and resources (Fuller-Love 2006, Walker et al. 2007, O’Dwyer and Ryan 2000).

- The firm is independent, in the sense that it is not a subsidiary of a larger enterprise and the owner is free of outside control in making decisions.

While decision making is free of outside control it is strongly driven by the values, personal beliefs and attitudes of owner-managers and their psychological characteristics. Despite the legal independence, many SMEs rely on one large customer making them not only financially vulnerable, but as well exposed to pressure from within the supply chain.

- The firm has a relatively small market share, serving a local or regional rather than a national or international market.

Despite serving a smaller and rather local market, there is no doubt that SMEs have an impact on the environment and on the society, but the impact is likely to be different from the impact of large firms. It is often quoted that collectively SMEs are responsible for up to 70% of the global pollution, but this figure has not been supported by any substantial quantifiable studies (Hillary 2000).

In an effort to motivate SMEs to take up CSR/CS programmes, it is often argued with the ‘business case’ suggesting that implementing CSR/CS practices will benefit the business in a number of ways, from financial gains to increased reputation and high employee motivation. However robust evidence is missing that the business case is applicable to SMEs as it has been developed on research evidence from large firms only (Jenkins 2000, Revell and Blackburn 2007). Jenkins (2000) concludes that “SMEs are likely to be sceptical of CSR programmes that require expenditure with the ‘promise’ of financial gain” (p.48-49).

Research Design and Sample Profile

This research aims to identify the small firm owner-managers individual perspectives on sustainability in their business and how these perspectives translate into practice. Instead of presenting small firm owner managers with a definition of sustainability and exploring the extent to which their definitions and practices match our chosen definition, we are interested to understand sustainability from the perspective of small firm owner-managers in the context of their business.

To this end, a small scale study was designed based on intensive, semi structured interviews with small firm owner-managers. 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, p.169). To this end, interviews covered four areas of discussion.

- A profile of the firms (size, ownership, overall business strategy) and a sociodemographic profiles of the owner-manager.
- The owner-managers understanding of sustainability in the context of their business as well as in their private lives.
- The firms’ current sustainability practices in relation to the environment, their community and their employees.
- The process through which the firms had commenced and developed its sustainability practices, particular learning experiences and their engagement with public and private sector agencies that support sustainability.

The sample for this study was selected purposefully to include enterprises with different levels of understanding of sustainability and a range of practices. 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. They were recorded with the resulting interview transcript shared with the interviewee to give opportunity to amend and augment the initial responses. This approach followed the guidelines provided by Massey University Human Ethics Committee with approved the way in which the team planned to select the interviewees and collect and store the data.

The sample covered manufacturing firms, service providers as well as small agricultural producers based in urban and rural locations throughout New Zealand. All firms were characterised by being small in size (fewer than 50 employees), independent and owner-managed. In New Zealand, as in other countries, 99 percent of businesses are SMEs, making these a significant proportion of the business population. But unlike other countries, the New Zealand SME sector is dominated by very small firms. 68 percent have no employees and 89 percent of New Zealand businesses employ fewer than five staff (Ministry of Economic Development 2008). This is significant when considering the way in which the owner-managers operate their firms.

A total of 50 enterprises were included in the study. 29 were micro in size employing zero to five staff and 21 were small in size employing six to 49 staff. On average the firms employed eight staff with an annual turnover of NZD 1.1 million (USD 620,000). With regard to industry sector, 24 of the firms (48%) were service providers, 19 manufacturers (38%) and seven agricultural producers (14%). The majority of the firms were limited liability companies (41) with a minority being sole traders (six) and partnerships (three). Almost one third (14) of the firms described themselves as family firms.

The present discussion focuses on understanding what sustainability means to small firm owner-managers and explaining how these definitions translate into practice. From this analysis implications are drawn for policy makers who aim to engage more small firms in sustainable business practices. We analysed the data using Spence and Rutherford's (2001) four ethical frames developed in relation to the social and ethical orientation of small firm owner-managers. Spence and Rutherford's (2001) focus is on the social context of business, rather than on sustainability specifically. However, there is clearly a thematic overlap making it a suitable framework for our analysis. For example, Spence and Rutherford (2001, p.131) define the social context of business as "*activities which are not directly related to the commercial success of the business...they include things such as giving time or money from the business to charity, involvement with local schools or community groups, offering work experience opportunities, or contributing to caring for the environment. Each of these things has positive, non-pecuniary effects beyond the boundaries of the commercial operation of the business*". This definition of the social context of business is closely related to the broader definitions of corporate sustainability encompassing social and environmental dimensions of business, in addition to economic considerations.

In Spence and Rutherford's (2001) typology two dimensions are combined to produce four frames (see Figure 1). These dimensions are the owner-managers perspective on profit – profit maximising versus profit satisficing – and the level of social activities – inactive versus active. The combination of these two dimensions results in the following four ethical frames:

- Profit maximisation: owner-managers are driven primarily by money and see financial objectives overcoming social motivations

- Subsistence priority: motivated by ensuring the long-term survival of their business to secure their livelihood and standard of living, short-term financial gain is not a key priority, neither are social objectives
- Enlightened self-interest: owner-managers are pursuing social objectives because they expect a long-term financial gain for their business, owner-managers are not necessarily motivated by good will
- Social priority: social values and actions have priority over maximising profit and are integrated into business practise as a long-term choice of lifestyle.

Perspective		
Practices	<i>Profit maximisation</i>	<i>Profit satisfying</i>
<i>Socially inactive</i>	1. Profit maximisation	2. Subsistence priority
<i>Socially active</i>	3. Enlightened self-interest	4. Social priority

Figure 1: Ethical frames of small firm owner-managers (Spence and Rutherford, 2001, p.131)

SME Owner-managers Definitions of Corporate Sustainability

In line with Spence and Rutherford’s (2001) study we decided not to assign individual owner-managers to one of these framed positions for the following reasons. Owner-managers often presented more than one frame when discussing the issues. It wasn’t necessarily the case that any one owner-manager would consistently adopt the same frame - some owner-managers shifted from one frame to another through the course of the interview. As Spence and Rutherford argue “*frame analysis helps demonstrate the possible perspectives that an owner-manager might possess, not just the categories of owner-managers in a fixed typology*” (2001, p.143). The following section describes the typical perspectives associated with the frame represented in each quadrant and provides transcript evidence to illustrate the various frames.

1. Profit Maximisation Priority or “It’s About Making Money”

Although some economists and policy makers expect businesses to grow and business owners to strive for higher profits, a large portion of small firms is unlikely to meet this expectation. Results showed that only a few of the interviewed small firm owner-managers expressed a profit maximisation priority. With regard to their understanding of corporate sustainability four perspectives emerged from the data:

- **Sustainability as not being on the radar or given very low priority**

Some of the owner-managers have never thought about sustainability in the context of their business, other than in financial terms.

This is an education for me now because I’ve never sat and really thought about sustainability in terms of my business (#36, service provider, 10 employees)

- Sustainability objectives and profit motives as being opposed; sustainability goals and making profit are seen as mutually exclusive.

Sometimes owner-manager decisions to implement sustainability practices were contrasted with what were perceived as trade-offs to making profit. While there is an awareness of at least the environmental dimension of sustainability, in the business context financial priorities outweigh sustainability concerns.

You're constantly making choices about what to do with your time and if I were to spend a morning thinking or finding a way to deal with some sort of sustainability issues, like what we do with our waste, then that's an opportunity cost to the business, time, income, yeah. [...] We find increasing pressure on our time available to earn, so sustainability just becomes one of those things that our conscience and professional ethics tell us we should be doing better at but at the end of the day we also have to make stark choices about what we do on a daily basis. (#21, service provider, 21 employees)

- **Sustainability does not save costs**

Again respondents showed awareness of sustainability issues, particularly in terms of environmental practices, but could not see how it could add benefit to their business. While this example seems to be closely related to the previous one the key distinction is between whether respondents argue from a business growth perspective or from a cost saving perspective. It can be seen as two sides of the same coin. Owner-managers of very small firms raised concerns about the cost saving potential of sustainable business practices. There is clearly a perception that the implementation cost would outweigh the savings.

We had growth every year, profit growth, margins were growing, turnover was growing. [...] I don't think we could actually save an awful lot of cash or operational costs, it would cost us more to shag around to remember to do it you know, more than what it's worth (#28, manufacturer, 14 employees)

- **Sustainability as compliance driven**

Some respondents mentioned sustainable business practices, but they were likely to be within the limits of regulation. The focus was clearly on environmental practices and they were seen more as a duty and obligation.

There's a raft of things coming up in the future and there's also stuff which we address now, and some issues are efficient disposal of tyres is a good example, waste oil, engine coolants and what we call dirty water... And in the future there's going to be more things like washing cars, soaps, detergents going down the stormwater, clean air, we have a ventilation system in the workshop now, but that would be in the future it's going to be monitored. Noise pollution too. (#18, manufacturer, 17 employees)

2. Subsistence Priority or “It’s About Keeping the Business Running”

Within our sample the subsistence priority was a frequently encountered one. Owner-managers are placing importance on the long-term survival of the business to secure the livelihood of themselves, their families and employees. With regard to corporate sustainability three perspectives emerged from the data:

- **Sustainability as economic viability**

Respondents described sustainability in terms of the survival and long-term continuation of their business. Economic viability is a necessity to secure income for themselves and their families and to ensure their standard of living and in many cases their retirement.

In a business sense, being able to generate enough work continuously to make the business operate profitably. That's really it in a nutshell (#18, manufacturer, 7 employees).

Oh I've got to make money. I have to make money while it's in operation, in such a way that it's saleable. And then all your sustainability comes under that (#3, service provider, 1 employee).

- **Sustainability as balancing private and business life**

Some owner-managers explained sustainability in terms of balancing private and business life. They felt that focusing on maximising profit would compromise their lifestyle. Hence, they showed limited ambitions to grow their business beyond the point where it would negatively impact on their lifestyle for which the owner-managers have set up their businesses.

While our goal is to try, we all enjoy what we're doing and still have a life out of it as well, you know, we don't want to be just straight work, work, work, work, work. We have to live) [...] Having enough money left over at the end of the month to pay the bills and live (#9, manufacturer, 2 employees) .

- **Sustainability as perceived responsibility towards employees and services for customers**

The owner-managers' understanding of sustainability was most frequently translated into a responsibility to ensure long-term employment for employees.

Well our first goal is to actually sustain the company which means we need to make a profit to be able to provide ongoing employment for staff (#25, manufacturer, 25 employees).

The responsibility not only extends to employees, but also includes ensuring service for customers, as this respondent explains:

The ability to be able to continue having a sound, profitable and happy client base and also staff. It's a central part of my business in that both my clients and my staff need to be able to see a continuation of the level of business or work that they choose to be involved in (#29, service provider, 6 employees).

3. Enlightened self-interest or "It's a Business Opportunity"

Owner-managers within this frame are profit driven and corporate sustainability is seen as a business practices that positively affects their bottom line in the long-term. Corporate sustainability is mainly pursued because it is perceived as adding value to the business. Within this frame, personal values and beliefs often co-exist with financial drivers. Three perspectives on sustainability emerged from the data:

- **Sustainability as an opportunity for business innovation**

Some respondents see sustainability as a business opportunity in the way that it provides a different view on the business with the possibility to be innovative and create new products.

That's what I like about this sustainable business; it's about looking at things differently and looking for opportunities. [...] It's not rocket science, but hopefully we can get a product out there first and get some traction in the market and some supply chains (#19, manufacturer, 2 employees).

- Sustainability as a marketing tool and to create a good public reputation

Some owner-managers describe sustainability as a mean for better marketing their products or building up a good reputation and thus adding value to the business. In the following example, the owner-manager comments on the marketing potential for the business of demonstrating a concern for environmental issues to customers. However, the respondent makes it clear that it is not just green washing, but actually reflects their business practices.

People in general are becoming aware of the environment and pollution and environmental impact, there's a lot of talk about the carbon footprint. So that's something that we will definitely look at and if there's an advantage in marketing our business, saying that we are looking after these things, looking after the environment, even though it's just part of our normal daily routine, if we make customers aware of it, it may be good (#18, manufacturer, 7 employees).

The following quote comes from an owner-manager of a small winery that recently joined a sustainable business network to explore possibilities of how to use sustainability for marketing purposes.

Again, being a business, everything comes back to financial and so marketing, you don't do anything that's going to destroy markets, so we see it as possibly being beneficial but we haven't placed a lot of weight on it (#11, agricultural producer, 9 employees).

The following quote is an example of an owner-manager who balances personal values and beliefs with business priorities.

It definitely adds value because I think it shows people that you care. I think it shows people that you are really aware of the environment around you and not just a business that is out to make money and not give back and that's probably the biggest part of sustainability to me (#12, service provider, 4 employees).

- Sustainability driven by pressures from supply chain companies

Sometimes owner-managers were influenced by suppliers in relation to general environmental awareness or the adoption of environmental-friendly practices for compliance to be considered as suppliers for other organisations.

We have our Industry Association conference every year, and I think most of it is about sustainability. 50% at least would be devoted to sustainability, learning how our suppliers look at sustainability and what impetus it gives to our market. What's our competition? Are we as clean and green as we think? All that (#23, manufacturer, 12 employees).

4. Social Priority or "It's a Lifestyle"

Within this frame corporate sustainability has priority. This frame is characterised by a number of perspectives ranging from applying a triple bottom line approach and balancing environmental and social concerns with economic concerns to sacrificing business profitability for the pursuit of holistic sustainability principles.

- **Sustainability as ‘triple bottom line approach’**

A number of respondents referred to taking a ‘triple bottom line’ approach to business aiming to achieve financial performance by simultaneously achieving environmental and social performance.

You know triple bottom line and I think that in actual fact that for us does describe it quite well, plus it’s to try and do things better environmentally and also to be a good ethical and moral business to deal with. But overriding all of that we need to still have the ability to make a profit and make money, that’s why you’re in business. You just try to take into account those things and endeavour to make a profitable business (#19, manufacturer, 2 employees).

One respondent used the imagery of a Rubik’s cube to explain the interconnected and complementary nature of environmental, social, and economic dimensions of sustainability:

I think it’s a somewhat overdone term, sustainability, but I think there’s obviously social sustainability and then the environment and underpinning all of that is our financial sustainability. So I mean but we actually see that as interlinked, I sort of think about it almost like a Rubik’s cube aspect to things. (#22, service provider, 10 employees)

- **Sustainability as integrated part of life**

A number of respondents saw sustainability not simply as a business approach but as an integral part of their life.

The only way for the future. I guess it’s a lifestyle and it’s our lifestyle. I’d rather have slow growth and do it sustainably (#4, agricultural producer, no employees).

These owner-managers are driven by personal values, religious beliefs or family upbringing.

Because I’ve always been that way, so regardless of trends it’s always been on the radar. [...] It’s like most small businesses; they evolve out of the beliefs of the person who starts them up, the key driver. [...] I think it’s how you’re brought up. I can probably attribute a lot to my mother, my mother having been a child of the depression, everything was about saving (#8, service provider, 5 employees).

In the following quote the respondent describes his understanding of sustainability in the context of religious beliefs.

Look I’m a Christian and it’s what I believe, it’s what I’m suppose to do and even if I see someone in need I’m supposed to help within reason (#36, service provider, 10 employees).

- **“Beyond sustainability” - Holistic view of the role of business within society**

Sustainability was described in a holistic sense, seeing the business as part of a wider community where businesses support each other. This respondent describes her business as a community space for people to gather:

We came up from the Wakefield market and there is a community that has formed from that market and we are still part of that community. We help each other to do things and so this is a community and we support each other. [...] Also, as a business, we saw our store as a community space and always

opened it up to people, sometimes for art exhibitions or we would have lunches and it was about gathering community, our community together (#35, service provider, 20 employees).

In the next example the owner-manager takes this perspective even further and suggests rejecting the label ‘sustainability’ as it does not reach far enough. Instead of focusing on conserving resources for future generations the respondent expressed a desire for society to focus on what we can create that is beneficial for future generations. These views of sustainability are more about questioning the assumptions underpinning our economic system and challenging common business practices.

I hate the word sustainability and I've banned it from my workplace. I think we should be operating beyond sustainability, actually a much more generative space of not just what do we leave behind but what are we actually creating, how can we actually hand this on to future generations. Sustainability to me has sort of a status quo attached to it and to me that's not good enough. [...] I think that we're operating in a very consumerist market which creates a whole lot of drivers for working that may not be healthy for us. Those sorts of very propositions and those assumptions need to be challenged. Which sounds incredibly socialist or radical but I actually believe that there is a crumbling of the way that we've been in civilisation and that what will emerge from that is something well beyond sustainability, it will be a revolution in the way we think about why we work, what we're producing and how we're living (#17, service provider, 1 employee).

One Size Does Not Fit All

This paper has used Spence and Rutherford's (2001) four ethical frames to examine how small business owner-managers define sustainability in the context of their firm and explore how they put these understandings into practice. As previously emphasised it would be difficult to assign each of the owner-managers to just one of these framed positions. Interviewees often presented more than one frame when discussing the issues relating to sustainability. As Spence and Rutherford (2001) argue “*frame analysis should be seen as a dynamic representation of ways of understanding a particular experience, not a static tool*” (p.134). Frame analysis in this study allowed for the potential of multiple frames being evident in a single owner-manager's understanding and experience of sustainability.

This research focuses on the influence that the owner-manager has on the small firm as a key difference between small and large firms. Owner-managers were not given any predetermined definitions of sustainability as a key aim of this research was to understand how owner-managers themselves explain and describe what they are doing with regards to sustainability.

The research demonstrates a diversity of views and ways that owner-managers define sustainability in the small firm context. As with Spence and Rutherford's study (2001) the least common frames presented in this research were the profit-maximisation priority frame and the enlightened self-interest frame. The most commonly presented frames were the subsistence priority and the social priority frame perspectives.

It is perhaps not surprising in this study that the enlightened self-interest frame did not feature prominently. The enlightened self-interest frame, emphasising perceived links between sustainability performance and long-term business value, particularly around issues such as risk management, reputational capital and consumer pressure, is a

perspective more allied with large firms (Jenkins 2004). For example, Jenkins (2004) argues that as SMEs often don't sell directly to the public they are much less susceptible to consumer pressure and damage to public reputation. In addition, SMEs do not always have a brand or image that needs marketing in a specific way.

The subsistence priority frame was commonly presented in this study. Many small firm owner-managers defined sustainability primarily in terms of long-term financial viability with greater emphasis put on generating a satisfactory standard of living than being entrepreneurial or exceptionally wealthy. The financial survival of the business was prioritised over any broader environmental or social concerns.

The social priority frame perspectives, putting broader social and environmental concerns to the forefront, were common in this study. However, in contrast perhaps to Spence and Rutherford's study (2001) we found that the social priority frame encompassed a broad spectrum of views. Views within this frame centred on the idea that sustainability values and actions, expressed in environmental, social and economic terms, were integrated into the business life and to varying degrees took priority over financial considerations. However, a multiplicity of views was expressed around this central idea. Some owner-managers expressed views on sustainability in terms of what Marrewijk (2003) describes as "*caring corporate sustainability*" view – corporate sustainability consists of balancing economic, social and ecological concerns, all of which are important in themselves. This goes beyond profit considerations and is motivated by "*human potential, social responsibility and care for the plant*" (Marrewijk, 2003, p.102). Other owner-managers in this study went beyond a 'caring corporate sustainability' view to embrace what Marrewijk (2003, p.102) describes as a more "*synergistic corporate sustainability*" view - a search for well-balanced, functional solutions creating value in the economic, social and ecological realms of business performance. The motivation for corporate sustainability is that sustainability is important in itself. Furthermore, a few owner-managers talked more in terms of "*holistic corporate sustainability*" (Marrewijk, 2003, p.103) suggesting that sustainability is the only alternative given the mutual interdependence of all beings and non-human species.

Instead of a "one size fits all" definition of sustainability this research reveals a multiplicity of understandings of sustainability by owner-managers within the SME context.

Concluding remarks

The role of SMEs in corporate sustainability has attracted increasing attention in recent years with much of the evidence pointing to the low number of SMEs that are taking up sustainability programmes and the difficulties to engage SMEs in the sustainable business debate. Attempt have been made to critically review definitions of and approaches to corporate sustainability suggesting that these are not relevant to SMEs and do not fit their needs. However, to date no comprehensive theory on sustainability in SMEs has emerged. In this context, the focus of this paper was to understand how small business owner-managers define sustainability and how they put this understanding into practice. The paper started by presenting definitions on corporate sustainability arguing that current definitions are too broad and general to be of relevance to SMEs. Reviewing the specific characteristics of SMEs it is concluded that it might need a number of separate definitions that take into account the heterogeneity of the SME sector as well as the characteristics of the owner-manager. Spence and Rutherford's (2001) four ethical frames guided the qualitative

study of 50 SME owner-managers allowing to explore the diversity of perspectives on sustainability and move beyond the notion of SME owner-manager being reluctant to engage in sustainable business practices.

The paper has made a number of contributions. The first contribution at the theoretical level is to provide a diversity of perspectives on sustainability within the SME context. Because of the exploratory nature of this research it is not possible to develop a comprehensive SME definition of sustainability, but this research provides considerable contribution to the development of such a definition. We have encountered excellent examples of sustainability, but because these activities are mostly small in scale and not labelled as “sustainability”, they tend to be unrecognised. Allowing to undertake research from the perspective of the SME owner-managers offered valuable insights. A second important contribution of this paper is practical in nature, highlighting the need to focus more on the personal values, beliefs and drivers of small firm owner/managers to leverage corporate sustainability more successfully in the context of SMEs. There is a large body of evidence that small firms are operating differently compared to large firms. While these differences and ‘peculiarities’ are acknowledged, they are not always taken into account when developing SME theories and designing practices and policies. Following from the results it is suggested that taking into account the owner-managers values, beliefs and most importantly their motivations of doing business might help to understand why emphasising the business case for sustainability might be contra productive within the SME sector. The reasons for being in business are far more complex than purely economic reasons.

While this paper has provided useful insights into sustainability in the context of SMEs, this exploratory research admittedly has some limitations. The findings are based on research in a single country with SMEs that are, compared with SMEs internationally, very small in size. Further, the qualitative nature of the research does not provide insights into the frequencies of the different perspectives presented or how they relate to characteristics of the business environment like sector for example. The paper nevertheless raises some important questions that might be worth addressing to assist with the design and implementation of SME programmes and policies in relation to sustainability. These focus around the questions how the psychological characteristics of SME owner-managers can be leveraged to promote sustainable business practices within SMEs. More importantly, from a developmental perspective the dynamics need to be identified, how owner-managers adopt different frames and how they shift between frames.

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Social Entrepreneurship as an Integrating Mechanism for Disadvantaged Persons¹

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Social Entrepreneurship as an Integrating Mechanism for Disadvantaged Persons

ABSTRACT

This article theorizes about a specific facet of social entrepreneurship, namely, the integration of disadvantaged persons into the field of entrepreneurship. Drawing from Bourdieu's theory of practice, the authors conceive of this integration as a power-laden process that reflects normative expectations imposed by field incumbents on entrants to the field that require them to both comply with and challenge existing field arrangements. Propositions outline the desirability and ability of disadvantaged persons to meet these expectations.

INTRODUCTION

Extant research is marked by a myriad of approaches aimed at de-reifying social entrepreneurship as a concept and examining its place within the business world and society in general (Mair & Marti, 2006; Peredo & McLean, 2006; Shaw & Carter, 2007). For example, one approach focuses on the outcomes of social entrepreneurship, particularly its potential to create positive social change, which might be achieved through not only conventional business models but also philanthropy and government expenditures (Bornstein, 2004; Dees, 2001; Tracy & Phillips, 2007). A different yet related approach emphasizes the social nature of the objectives put forward by organizations, including both not-for-profits and for-profit firms. For example, Southshore bank was designed as a community development bank in Chicago, with the objective of supporting and enhancing a minority community through resources obtained from wealthier areas (Taub, 1988). Firms in the private sector also might support social entrepreneurship through specific projects, such as the local community initiatives undertaken by Ben & Jerry's (Peredo & McLean, 2006).

Yet another approach considers the role of entrepreneurship in helping disadvantaged persons in society break away from their unprivileged positions (Alvord, Brown, & Letts, 2004; Brown & Covey, 1987; Korten, 1980), serving as a potential device for poverty alleviation (e.g., Bornstein, 2004; Krishna, Uphoff, & Esman, 1997; Taub, 1988), a solution to unemployment or discrimination in the labor market (Fairlie, 2005; Glazer & Moynihan, 1970), or a tool for the social inclusion of minority groups (Anderson, Honig, & Peredo, 2006a; Anderson, Dana, & Dana, 2006b; Fairlie & Meyer, 1996; Maher, 1999; Mata & Pendakur, 1999; Pavey, 2006). Despite the fact that some attention has been devoted to the role of cooperatives, job subsidy programs, occupational training, and volunteer organizations in achieving social inclusion of

disadvantaged persons (Bode, Evers, & Schulz, 2006), extant theory has not fully addressed the mechanisms by which disadvantaged persons can enter entrepreneurial activities, nor has it considered the role of power in this process (Armstrong, 2005; Chell, 2007; Nicholls & Cho, 2006). We contend that the study of entrepreneurship among people who are disadvantaged represents a specific and important instance of social entrepreneurship that may warrant a distinctive theoretical framework. To this end, we develop a conceptual framework of social entrepreneurship that focuses on the forces of domination that underlie the integration of disadvantaged persons into entrepreneurship. We define disadvantaged persons as those individuals who have difficulty integrating into the marketplace and typically are located outside the mainstream of social and institutional support for entrepreneurship, such as disabled persons (e.g., Pavey, 2006) or visible minorities (Fairlie & Meyer, 1996).

The crux of the arguments we propose is that the integration of disadvantaged persons into entrepreneurship cannot be addressed in isolation from acknowledging the power-laden mechanisms these persons confront in their interactions with incumbent constituencies of society. Despite widespread acknowledgment that social entrepreneurship takes place in a broader societal context (Austin, 2006; Bode et al., 2006; Peredo & McLean, 2006), extant research has yet to provide a complete account of the forces of dominance that characterize the inclusion, or lack thereof, of disadvantaged groups into entrepreneurship (Chell, 2007), though some research has begun to address the role of societal expectations in this process (Laville, Lemaitre, & Nyssens, 2006). For instance, the call to empower people to become entrepreneurs by supplying them with credit or training opportunities resonates with the need to include a broader set of persons in the business sector (Bornstein, 2004; Yunus, 2006). Furthermore, recent work notes the contemporary expectations that wealthy entrepreneurs should create foundations

or otherwise donate substantial sums to causes they deem worthy, typically with the support of tax incentives or publicly sponsored initiatives (Oppedisano, 2004; Osberg, 2006).

Against this backdrop of increased recognition of social entrepreneurship as a phenomenon that is intrinsically intertwined with the very fabric of contemporary society, we draw from Bourdieu's (1977, 1990, 1998) theory of practice to examine the integration of disadvantaged persons into entrepreneurship as a socially embedded process that is essentially power laden. Bourdieu's extensive body of work provides a conceptual framework that is uniquely suited to examine issues related to domination in the relationships between individuals and social structures (Ozbigilin & Tatli, 2005). We use this perspective to examine the role of power as reflected in the expectations that incumbent actors hold about disadvantaged entrepreneurs (Aldrich & Fiol, 1994; Zimmerman & Zeitz 2002). To be precise, we conceptualize the integration of disadvantaged persons into the "field of entrepreneurship" as intrinsically linked with the need to both *comply with* and *challenge* existing expectations about entrepreneurship. For existing constituencies to comprehend and trust the disadvantaged in their entrepreneurial endeavors, the latter group needs to address two main issues.

First, the need to *comply with* existing arrangements implies that disadvantaged persons should follow the rules imposed by institutions, norms, and structures, thus convincing field incumbents that their practices conform to how entrepreneurs typically appear or behave in appearing legitimate (Aldrich & Fiol, 1994; Suchman, 1995). For instance, norms indicate that entrepreneurs should adhere to existing laws and be "good citizens" (Aldrich & Fiol, 1994) by following preset standards when they apply for incorporation or register with the Securities and Exchange Commission to launch an initial public offering. Similarly, they should adhere to "specialized, explicit and codified knowledge and belief systems promulgated by various

professional and scientific bodies” (Scott, 1994, p. 81), such that their ventures’ characteristics conform to established evaluation criteria used by external investors and creditors (Chaganti, DeCarolis, & Deeds 1995; Chandler and Jansen 1992). For the context of this study, aspiring entrepreneurs with specific disadvantages (e.g., they may be disabled or belong to a visible minority) will need to convince investors, customers, and other stakeholders that their unprivileged position in society does not prevent their entrepreneurial undertakings from aligning with existing expectations of what is perceived as acceptable in the marketplace (Aldrich, 1999; Barley, 1996).

Second, the very fact of being disadvantaged may invoke an expectation among field incumbents that entrepreneurs should somehow *challenge* existing institutions, norms, and structures to accommodate a new set of hitherto unfulfilled needs in the field (Bornstein, 2004; Dees, Emerson, & Economy, 2002; Shane & Venkaraman, 2000). Thus, disadvantaged persons need not only attract a recognized “seal of approval” for their activities and products but also enrich their undertakings with an appeal that relates to their specific situation. For instance, while the normative attitudes that broader society holds toward persons with disabilities must change, as may occur through role playing, lectures, videos, or direct contact (Daruwalla & Darcy, 2004), to stimulate social inclusion, disabled entrepreneurs may also benefit if they exploit opportunities that relate to their specific situation (Pavey, 2006). For example, one disabled entrepreneur successfully established a tour agency that caters specifically to the needs of the disabled (Accessible Travel, 2008).

In short, disadvantaged persons’ ability to meet dual demands—to comply with and/or challenge existing field arrangements with respect to entrepreneurship—may rest at the very core of the expectations bestowed on them, as well as the expectations they create for themselves. On

the one hand, a disadvantaged entrepreneur must look credible to incumbents by concentrating on “framing the unknown in such a way that it becomes believable” (Aldrich & Fiol, 1994, p. 651). On the other hand, he or she also should demonstrate that belonging to a disadvantaged group can facilitate the exploitation of opportunities that previously had been unexploited in the field, which could upset existing field arrangements (Shane & Venkataraman, 2000). In this sense, disadvantaged persons’ entrepreneurial activity may be conceived as a “balancing act between deviation and belonging” (Lindgren & Packendorff, 2006, p. 230).

Our conceptual framework addresses two questions. First, we examine what makes disadvantaged persons *desire* to comply with and challenge field incumbent expectations about entrepreneurship, focusing particularly on how the forces of domination that disadvantaged persons experience, stemming from their disadvantage, may fuel their motivation to become entrepreneurs. That is, drawing on Bourdieu’s notion of “field,” we discuss the desirability of entrepreneurship in light of the interplay between disadvantaged persons’ *focal* field (e.g., disability, ethnic minority) and the field of entrepreneurship. We argue that the level of dominance experienced by the disadvantaged may increase their desire to comply with the existing arrangements of the entrepreneurship field, while the impermeability of their focal field increases their desire to challenge those arrangements.

Second, we examine the factors that may make disadvantaged persons better *able* to comply with and challenge field incumbents’ expectations about entrepreneurship. To this end, we consider the role of disadvantaged persons’ access to entrepreneurship-specific cultural and symbolic capital, which helps them meet these expectations. Although field entrants must compete for several forms of capital, including economic, human, and social capital (Bourdieu, 1986), their access to cultural and symbolic capital arguably provides the best indicator of the

hidden processes that underlie their ability, or lack thereof, to meet field incumbents' expectations (Bourdieu, 1990; Everett, 2002). We argue that disadvantaged persons' access to cultural capital increases their ability to comply with field-specific arrangements, and their access to symbolic capital facilitates their ability to challenge those arrangements.

The rest of this article is structured as follows: First, we outline our conceptualization of social entrepreneurship through the lens of the theory of practice; that is, we conceive of the integration of disadvantaged persons into the field of entrepreneurship as an enactment of field-specific habitus, or habitual expectations about compliance and challenge. Second, we develop propositions pertaining to the desirability and ability of disadvantaged persons to enact field incumbents' expectations. We also consider how their success as entrepreneurs may depend on their ability to juggle the dual demands of compliance and challenge, particularly through their engagement in impression management. Third, we summarize our main arguments and point to some future research and practical implications. The study's conceptual framework appears in Figure 1.

Insert Figure 1 about here

ENTREPRENEURSHIP AS AN ENACTMENT OF HABITUS

To better understand the power-laden nature of the integration of disadvantaged persons into entrepreneurship, we acknowledge the important notion of “field.” A field represents a network of social relations in which actors struggle for power (Wallace & Wolfe, 1999). Fields are occupied by “dominant” and “dominated” actors, who attempt to usurp, exclude, and establish monopolies over the mechanisms of the field's reproduction through their accumulation of various forms of capital, such as economic, social, cultural, and symbolic capital (Bourdieu &

Wacquant, 1992). Thus, capital provides an essential source of power (Everett, 2002; Wacquant, 1993) and cannot be treated as separate from the relevant field (Bourdieu, 1998; Bourdieu & Wacquant, 1992; Entwistle & Rockamora, 2006). For instance, that which constitutes relevant capital in the field of entrepreneurship (Lyon, 2004) is not necessarily the same as capital in the public sector (Du Gay, 2004). Furthermore, though each field contains a set of rules of the game, which actors may contest (Jenkins, 1992; Martin, 2003; Sallaz & Zavisca, 2007), these rules are “flexibly structured and minimally formalized” (Bourdieu, 2000, p. 130). Thus, fields are not fixed but rather are malleable and subject to change, according to the conceptions or dispositions of the fields’ members (Martin, 2003).

For the purpose of this study—namely, examining the integration of disadvantaged persons into entrepreneurship—we consider the power-laden process by which disadvantaged persons navigate from their “focal field” (i.e., associated with their specific disadvantage) to the “field of entrepreneurship.” In this regard, we conceive of their integration into entrepreneurship as an enactment of the habitus of the field of entrepreneurship (Bourdieu & Wacquant, 1992; Calhoun, 2003). *Habitus* entails the cognitive and somatic structures people use to make sense of and enact their positions in a field, akin to the notion of “common sense.” As defined by Bourdieu (1990, p. 54), “Habitus [is] a product of history that produces individual and collective practices.... It ensures the active presence of past experiences, which, deposited in each organism in the form of schemes of perception, thought and action, tend to guarantee the ‘correctness’ of practices and their constancy over time, more reliably than all formal rules and explicit norms.” Habitus thus reflects a practical sense of the game that is historically constructed through the variety of experiences of its constituents (Calhoun, 2003). According to Entwistle and Rocamora (2006, p. 747), “fields are reproduced precisely through the specific forms of

embodiment demanded by them.” Habitus is field specific, and no field exists without actors who embody it by adopting field-prescribed habitus (Bourdieu & Wacquant, 1992).

Although their belonging to the focal field associated with their disadvantage endows disadvantaged persons with a habitus that relates to their specific situation (Bourdieu, 2005), the focus of our proposed framework is on the power-laden mechanisms through which the situation of being disadvantaged influences the desire and ability to meet incumbents’ expectations when a person enters the field of entrepreneurship. Because the habitus of the field of entrepreneurship—hereafter, referred to simply as “habitus”—captures a historical view of what constitutes entrepreneurship (Calhoun, 2003), disadvantaged persons must comply with existing field arrangements to enact this habitus. Habitus stimulates disadvantaged persons to comply with existing field arrangements because it tends to produce sets of actions and cognitions that accord with the interests of the field’s dominant agents, who constitute that very field (Bourdieu, 2000; Bourdieu & Wacquant, 1992). Thus, an essential facet of disadvantaged persons’ enactment of field-prescribed habitus is complying with the existing arrangements with respect to entrepreneurship.

Yet, perhaps paradoxically, the enactment of field-prescribed habitus does not preclude disadvantaged persons who enter the field of entrepreneurship from acting artfully and challenging existing arrangements (Calhoun, 2003). Field incumbents do not expect new field entrants to exhibit the exact embodiment of the field’s existing arrangements but rather anticipate an embodiment that is *compatible* with these rules (Bourdieu, 2000). Thus, though field-prescribed habitus may constrain the scope of acceptable practices upon entry into the field, it is not overly deterministic and allows actors to adjust cognitively to their perceptions (Ozbigilin & Tatli, 2005) or even attempt to bend the field to their perceptions (Bourdieu, 2000). Furthermore,

a field's habitus does not guarantee perpetual stability, in that it does not necessarily adapt to every single situation, nor is it necessarily coherent. Therefore, field incumbents may be torn by contradiction and internal division, which can fuel changes to the field's existing power relations (Bourdieu, 2000).

Having discussed the integration of disadvantaged persons as an enactment of field-prescribed habitus—which includes both compliance and contestation—we now turn to the mechanisms that underlie this integration. We develop propositions with respect to both its drivers and its enablers.

Desirability of Integration into Entrepreneurship

Level of domination. Extant literature attests to the challenges encountered by disadvantaged persons when they attempt to integrate into society and the labor force. For instance, they face significant hurdles with respect to limited access to resources (Fairlie, 2005; Pavey, 2006) and unattractive stereotypes about their interests and capabilities (Glazer & Moynihan, 1970; Lindgren & Packendorff, 2006). Because they often have relatively little opportunity to improve their position in society through regular employment, entrepreneurship represents an option for overcoming these hurdles (Anderson et al., 2006a; Ipsen, Arnold, & Colling, 2003; Mata & Pendakur, 1999). Entrepreneurship may help disadvantaged persons accomplish several goals, such as increased self-worth (Van Gelderen, 2006), satisfaction through overcoming obstacles in the labor market (Ghormley, 2001), or reduced dependence on social assistance support (Ipsen et al., 2003).

We argue that disadvantaged persons' motivation to *comply* with the existing arrangements of the field of entrepreneurship will be highest when they experience higher levels of domination in their current situation. Therefore, we investigate the domination they might

experience both within their focal field (i.e., being disadvantaged) and in the relation between their focal field and the field of entrepreneurship.

First, to the extent that disadvantaged persons hold a less dominant position in their focal field, they may experience a stronger desire to break away from their current situation through entrepreneurship and do “whatever it takes” to comply with the existing arrangements associated with being an entrepreneur (Bourdieu, 2000; Fairlie, 2005). As noted previously, fields are occupied by “dominant” and “dominated” actors, who aim to acquire power over the field’s reproduction and the type of power effective in it (Bourdieu & Wacquant, 1992). The level of domination that disadvantaged persons experience in their focal field may depend on the capacity of dominant *peers* within the field to limit or maintain preferential access to key resources (Bourdieu, 2000). For instance, some disadvantaged persons may not have equal access to information about how to receive government support or where to go to participate in training programs, though these resources might help emancipate them from their precarious situation (Ipsen et al., 2003). Therefore, to the extent that disadvantaged persons are dominated by their peers, their motivation to become an entrepreneur and do whatever it takes to comply with the existing arrangements of the field of entrepreneurship should be greater.

Second, Bourdieu emphasizes that fields relate hierarchically, such that some are dominated by others. Fields that can impose their arrangements on other fields are more dominant than are the fields that are more easily subjected to the whims of other fields (Bourdieu, 1998). For example, business fields often dominate non-business fields, such as those governed by educational or artistic logics (e.g., Oakes et al., 1998), though the reverse also might occur, as in the case of high art, whereby the business field gets repressed and stigmatized (e.g., Bourdieu, 1983, 1998). Extant research also reveals that certain sectors of the economy (e.g.,

public) tend to model themselves after the business or entrepreneurial sector (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). Accordingly, to the extent that disadvantaged persons' focal field is dominated by the field of entrepreneurship, they should be more motivated to comply with existing entrepreneurial norms, because they are more familiar with them. Narratives about how to do business (e.g., compose and present a business plan) typically get imposed and maintained by dominant fields and their actors (DiMaggio & Powell, 1983). To the extent that disadvantaged persons belong to a more dominated (focal) field, they should have been exposed more to the rules governing the field of entrepreneurship (Oakes et al., 1998). Because the existing arrangements of the field of entrepreneurship should appear less foreign or intimidating to a disadvantaged person in a dominated focal field, he or she may be more prone to comply with these arrangements.

Proposition 1: The level of domination experienced by disadvantaged persons relates positively to the desire to comply with field-prescribed arrangements when they enter the field of entrepreneurship.

Impermeability of the focal field. In addition to the desire to comply with existing arrangements when entering the entrepreneurship field, we also consider disadvantaged persons' motivation to *challenge* such arrangements. We argue that this motivation increases when disadvantaged persons' focal field has less permeable boundaries. Fields vary in terms of the permeability of their boundaries and generally strive for maximum autonomy to obtain sufficient discretion to dole out rewards and punishments (Bourdieu, 1998). To the extent that a field is insulated, its dominant players can better emphasize its distinctiveness, relative to other fields (Bourdieu & Wacquant, 1992). Literature on cultural industries argues that high art fields typically are able to insulate themselves better from other fields, such as popular art, which

enables them to impose on participants an identity that stimulates adherence to aesthetic concerns and disavows business concerns (Bourdieu, 1983, 1998). Similarly, we argue that a less permeable focal field can create a stronger identity as a “disadvantaged person” for its participants; this enhanced identity as “someone different” may in turn make it more likely that disadvantaged persons challenge existing arrangements of the field of entrepreneurship when they decide to become entrepreneurs.

This argument also aligns with group literature that suggests that human behavior results from the need to be part of a particular group of similar others (i.e., the in-group) and distinctive from other groups (i.e., out-groups) (Brewer, 1991). To the extent that disadvantaged persons strongly identify with a particular group (e.g., disabled, a visible minority), their associated desire to be distinct from other groups should be higher (Brewer, Manzi, & Shaw, 2003; Smurda, Wittig, & Gokalp, 2006). In this regard, extant research indicates that the need for distinctiveness may be particularly salient among *minority* groups, because the very fact of being part of a smaller group accentuates their distinctiveness (Brewer & Weber, 1994). Yet members of minority groups vary in the extent to which they identify with the specific group, as well as in the associated reflex to juxtapose their group’s characteristics against those of other groups (Taylor, Moghaddam, & Bellerose, 1989). Similarly, disadvantaged persons may vary in their ideological goals, such that some are more profit oriented and others more socially focused (Lindgren & Packendorff, 2006).

Ultimately, to the extent that disadvantaged persons’ focal field has less permeable borders and creates a stronger identification among its occupants, disadvantaged persons who aspire to become entrepreneurs should perceive of themselves as a “particular type” of

entrepreneur, which should increase their desire to challenge field-prescribed arrangements typically associated with entrepreneurs.

Proposition 2: The impermeability of disadvantaged persons' focal field relates positively to the desire to challenge field-prescribed arrangements when they enter the field of entrepreneurship.

Ability to Integrate into Entrepreneurship

Prior research acknowledges the role of financial, human, and social capital as critical for success in entrepreneurial endeavors (Caputo & Dolinsky, 1998; Cooke & Wills, 1999; Davidsson & Honig, 2003), yet these capital types tend to be more overt and codified and thus less able to capture the hidden power-laden mechanisms that underlie their acquisition and conversion (Bourdieu, 1990; Everett, 2002). In contrast, actors' access to field-specific cultural and symbolic capital (i.e., for the field of entrepreneurship) acknowledges the inherent role of power and contestation in disadvantaged persons' integration into entrepreneurship (Bourdieu, 1990; Everett, 2002). We therefore consider these two forms of capital to theorize about the forces of domination inherent in disadvantaged persons' ability to meet field incumbents' expectations about complying with and challenging field arrangements.

Cultural capital. The perception that disadvantaged persons comply with existing field-prescribed arrangements about entrepreneurship may be enhanced if their access to capital aligns with the volume and structure of the capital of the field's most dominant players (Bourdieu, 1986). Further, their access to field-specific cultural capital arguably is most potent in this process (Bourdieu, 2000). Cultural capital refers to the ability to access and mobilize the institutions and cultural products of the field (Allan, 2006; Bourdieu, 1986), and it can appear in three forms: objectified, institutionalized, and embodied. First, objectified cultural capital refers to material goods with value in a particular field. In the context of this study, objectified cultural

capital in the field of entrepreneurship might include maintaining a dress code that expresses field-level norms. Second, institutionalized cultural capital involves certifications and credentials (e.g., educational degrees) that signal trustworthiness within a particular field. It might, for example, refer to disadvantaged persons' previous work experience with an organization known for its "entrepreneurial" character. Third, embodied cultural capital entails the automatic "knowledge" of how people should present themselves, according to the field's current arrangements (Allan, 2006). It could be reflected in disadvantaged persons' ability to relate the founding of their venture to commonly held conceptions among field incumbents about the hardships and challenges associated with launching a new business.

Thus, disadvantaged persons' access to field-specific cultural capital is instrumental in terms of their ability to meet field incumbents' expectations that they comply with customary norms of what an entrepreneur should do and look like, and it facilitates their adaptation to the working consensus of the field of entrepreneurship (Bourdieu, 1985, 2000). The synergy between disadvantaged persons' access to field-specific cultural capital and their compliance with field-prescribed arrangements also becomes apparent in the acclaimed power-laden connection between aspiring entrepreneurs' previous careers and the social systems in which they become embedded when launching a venture (e.g., Baum & Dutton, 1996; Dacin, Ventresca, & Beal, 1999). Specifically, disadvantaged persons' previous access to cultural capital that is relevant to entrepreneurship may serve as a powerful conduit through which they depict their day-to-day practices, when they start a new venture, as legitimate and useful (Boeker, 1988). Dominant narratives about how to launch and run a business typically get imposed and maintained by high-status field participants (Bourdieu, 1990; DiMaggio & Powell, 1983), who benefit from reinforcing these existing arrangements and are unlikely to disturb them

(Leblebici, Salancik, Copay, & King, 1991). For instance, Anderson and Tushman (1990) assert that field incumbents typically embrace activities by field entrants that enhance their own competencies, because these activities can be instrumental for their own success. Therefore, disadvantaged persons who hold high levels of field-specific cultural capital, and thus are “programmed” to comply with existing norms about what entrepreneurs should do, will be looked upon favorably by dominant field incumbents in terms of their ability to follow the field’s rules when they enter the field of entrepreneurship.

Proposition 3: The level of field-specific cultural capital held by disadvantaged persons relates positively to their ability to comply with field-prescribed arrangements when they become entrepreneurs.

Symbolic capital. The perception that disadvantaged persons can challenge existing arrangements in the field of entrepreneurship may be enhanced if they have the ability to change the volume and mix of capital types in that field (Bourdieu, 1986). Yet their access to field-specific symbolic capital arguably provides the most important criterion for accomplishing this goal (Bourdieu, 2000). Symbolic capital pertains to actors’ ability to impose interpretations on other field participants and control the perceptions they provoke (Bourdieu, 1986; Calhoun, 2003; Mahar, Harker, & Wilkes 1990). This form of capital resides in the mastery of symbolic resources, based on knowledge and recognition, such as goodwill investments and brand loyalty (Bourdieu, 2005). Although the term “symbolic capital” can align with aspiring entrepreneurs’ reputation, and thus their ability to engender beliefs that their venture will deliver excellent performance (Birch, 1987; Rindova & Fombrun, 1999), the concept goes beyond the mere notions of quality, visibility, or prestige. Specifically, symbolic capital represents the ultimate basis of power through which actors can impose their vision of the way the field should be organized and the hierarchy of power that should be effective in it (Meisenhelder, 1997).

Furthermore, other field participants typically misrecognize the “true nature” of the power associated with symbolic capital (Everett, 2002).

Disadvantaged persons’ access to symbolic capital enhances their ability to pursue strategic actions that challenge incumbent field players (Calhoun, 2003). To be precise, their access to symbolic capital contributes to their ability to meet the expectations of uniqueness associated with being disadvantaged (e.g., to have a disability or belong to a particular visible minority), because it provides them with field-reconfiguring capabilities (Bourdieu, 2000). That is, the “symbolic power” attached to this type of capital helps disadvantaged persons leverage their specific characteristics (Bourdieu 1990; Wacquant, 1993)—such as their personal situation of being disadvantaged—and to turn these characteristics into an advantage for them in the field as a whole (Bourdieu, 2000).

We further note that the ability of disadvantaged persons to challenge existing field arrangements as an entrepreneur does not contradict the power-laden mechanisms that field incumbents exercise over field entrants (Bourdieu, 2000). Rather, as we mentioned previously, the concept of habitus recognizes the possibility that a field’s existing power structure may be changed and transformed (Ozbilgin & Tatli, 2005). Thus, the confrontation between field incumbents’ dispositions and disadvantaged persons’ unique experiences may lead to an ongoing actualization of the premises on which the current field rules are based (Bourdieu, 2000). Dominant incumbents may even welcome changes invoked by field entrants (i.e., disadvantaged persons), because those changes could benefit the field’s operations as a whole (Calhoun, 2003). For example, disabled persons’ access to symbolic capital may be associated with their “symbolic power” (Sallaz & Zavisca, 2007) to include other disabled persons (or their supporters) on boards or other governance bodies, which in turn may serve as powerful tools for

developing new, useful field arrangements for all field incumbents. This symbolic power thus may establish new rules, standards, and regulations that provide, for example, disabled persons with equal access to various tourist venues, programs, packages, cruises, and tours, which ultimately can increase the scope of activities among *all* tour agents (Accessible Travel, 2008).

In short, disadvantaged persons' access to field-specific symbolic capital may be instrumental in leveraging their unique situation to challenge the field's current arrangements (Bourdieu, 1990; Greenwood & Suddaby, 2006; Meisenhelder, 1997; Wacquant, 1993).

Following the argument that symbolic capital enables holders to control others' behavior, thoughts, and beliefs (Bourdieu, 1990), we posit that to the extent that disadvantaged persons have more field-specific symbolic capital, incumbents should be more likely to recognize that disadvantaged persons' practices can change and improve the field's current arrangements for their own benefit (Bourdieu, 1990; Maguire, Hardy, & Lawrence, 2004).

Proposition 4: The level of field-specific symbolic capital held by disadvantaged persons relates positively to their ability to challenge field-prescribed arrangements when they become entrepreneurs.

Navigating the Boundaries Between Compliance and Challenge

Although disadvantaged persons' access to field-specific cultural and symbolic capital enables them to enact both facets of habitus of the field of entrepreneurship—comply with and challenge existing field arrangements—the success of this effort is not automatic, because the underlying demands of these drives may be contradictory (Aldrich, 1999; Bourdieu, 1993). For example, an aspiring disabled entrepreneur who wishes to cater to the specific needs of the disabled and thus *stand out* compared with other field participants may require an office in an incubation center. Because the incubation center may be unfamiliar with the needs of the disabled, it may fail to view the entrepreneur as an authentic, bona fide, or viable prospective

tenant, even if the business activities this entrepreneur proposes are mainstream and well accepted in the market (Ipsen et al., 2003). Furthermore, the disabled entrepreneur may have supplementary requirements with respect to accessibility, which might not align with the incubation center's existing templates about how office space should be used to support entrepreneurial undertakings (Greenwood & Hinings, 1996).

Thus, disadvantaged persons must cope with the simultaneous demands to provide value to the field that could not be generated through existing field arrangements, yet also use methods and procedures that are somewhat consistent with those arrangements (Aldrich & Fiol, 1994; Bourdieu, 2005). We argue that disadvantaged persons might accomplish this task by engaging in impression management and artfully navigating the boundaries between demands for compliance and challenge (Arndt & Bigelow, 2000; Baumann, 2007; Rao & Giorgi, 2006). By considering the potential role of such impression management, we shift attention away from what disadvantaged persons ought to do to become integrated into the field of entrepreneurship and onto the mechanisms that might enable them to rely on discursive practices to advance their objectives of becoming entrepreneurs. Impression management might be manifest in, for instance, the practice of decoupling (Oliver, 1991), whereby disadvantaged persons dissociate certain internal activities (e.g., ethnic businesses' unique internal working hours, which stem from culture-specific expectations about work ethic that may conflict with Western norms about human resource management) from the perceptions created by external constituents. Ultimately, disadvantaged persons' successful integration into the field of entrepreneurship depends on the extent to which they can artfully navigate the tensions between dominant field arrangements about entrepreneurship on the one hand and potentially contradictory facets of their activities stemming from their very membership in a disadvantaged group on the other.

CONCLUSIONS

In this article, we draw on Bourdieu's theory of practice to examine disadvantaged persons' integration into the field of entrepreneurship as a power-laden, socially embedded process. Our objective is to provide a theoretical framework and develop propositions that advance the conceptualization of entrepreneurship as an integrative tool for disadvantaged persons. We have conceived of this integration as an enactment of field-prescribed habitus, which captures field incumbents' expectations about what entrepreneurs should look and act like (Bourdieu & Wacquant, 1992; Wallace & Wolfe, 1999). Disadvantaged persons thus confront two simultaneous expectations when they attempt to become entrepreneurs: to comply with *and* challenge existing arrangements about entrepreneurship. We maintain that disadvantaged persons' *motivations* to meet these two expectations depend on their level of domination and the impermeability of their focal field of disadvantage. We also contend that their *ability* to become entrepreneurs results from their access to field-specific cultural and symbolic capital.

The enactment of field-specific habitus, as argued herein, reflects the practical sense of how disadvantaged persons launch and run their businesses, based on existing templates and images of how such activities should be done (Calhoun, 2003). Yet we also emphasize that though such historical conditions may limit the definition of "acceptable" entrepreneurial activities undertaken by disadvantaged persons, they do not necessarily prevent disadvantaged persons from modifying existing arrangements; there may even be an expectation that they do so (Bourdieu, 2000). The diversity of conditions to which disadvantaged persons gain exposure, prior to entering the field of entrepreneurship (Anderson et al., 2006a; Fairlie & Meyer, 1996), can lead field incumbents to be "confronted with conditions of actualization different from the conditions in which the field's rules were produced" (Bourdieu, 2000, p. 161). Thus, the field's

habitus can be subjected to a permanent revision when it confronts the special characteristics of disadvantaged persons. Furthermore, field incumbents who do not match the existing order of the game, or are not favored by it, may champion the newly established order invoked by disadvantaged persons to increase their own standing in the field (Bourdieu, 2000).

The simultaneous demands to comply with and challenge existing field arrangements also highlight the need for disadvantaged persons to be both reflexive about their own situation and act upon it to “make a difference” (Zanoni & Janssens, 2007). We would argue that they can do so by adopting scripts, which are behavioral regularities that serve as guiding strategies for action (Barley & Tolbert, 1997). As Chaisson and Saundres (2005, p. 765) note, “entrepreneurial opportunities are considered to be both formed and recognized by the entrepreneur. Viewed in this way, entrepreneurial action involves both the acceptance and modification of scripts, guided by feedback on the legitimacy, meaningfulness/competence, and power of scripts among the various stakeholders.” Similarly, for disadvantaged persons, impression management involves not just blindly applying existing scripts but also adapting those scripts to meet their own and field incumbents’ needs (Arndt & Bigelow, 2000; Suddaby & Greenwood, 2005).

Therefore, disadvantaged persons’ enactment of field-prescribed habitus encompasses both the constraints imposed by existing field arrangements and the agency through which their unique characteristics enable them to bring about change in these arrangements (Bourdieu, 1985; 1990). This dialectic interplay between the need to comply and the need to challenge can lead disadvantaged persons to “micro-emancipate” themselves in the form of ongoing interactions with field incumbents and artful navigations through the latter’s expectations (Alvesson & Willmott, 1992). Normative expectations about entrepreneurship are not simply constraints on disadvantaged persons but also enable reflexive action and may provide a potential means for

inducing change. Ultimately, disadvantaged persons' successful integration into entrepreneurship may result from their ability to relate elements of both existing and new field arrangements to broader cultural comprehension, in an effort to increase acceptance of their endeavors (Suddaby & Greenwood, 2005). This process may be marked by shifts in the field's dominant view of the nature and constituents of entrepreneurial undertakings, although a minimum level of familiarity with existing standards always must be present.

Extensions and Implications for Practice

We suggest some extensions to the proposed framework with respect to the drivers and enablers that underlie disadvantaged persons' integration into entrepreneurship, as well as empirical tests of the proposed framework. We also point to the framework's practical implications.

First, we argue that disadvantaged persons' desire to enter the field of entrepreneurship relates to the level of domination they experience, as well as the relation between their focal field and the field of entrepreneurship. This argument parallels strain theory, which posits that disconnections between cultural prescriptions about what constitutes success and persons' access to the means to conform with those prescriptions may create a sense of frustration or strain (Merton, 1968). In particular, it focuses on the negative relationships that occur when a person is not treated as well as he or she expects to be treated (Agnew, 1992). For instance, most people in Western society recognize the cultural goals of economic gains and material well-being, but not all groups have equal access to the means for attaining those goals, which leads to strain (Agnew, 1992; Merton, 1968). Strain theory might complement Bourdieu's theory of practice and help explain how the strain experienced by disadvantaged persons fuels their desire for entrepreneurship. For example, a person who feels that she has been treated poorly in the context

of her focal field (e.g., receives fewer government resources than immediate peers) or belongs to a highly marginalized field (e.g., suffers a disability with a strong negative stigma) may experience very high levels of strain. To reduce this disturbing gap between her personal expectations and current achievements, she may be highly motivated to become an entrepreneur.

Second, our discussion of disadvantaged persons' ability to enact field-prescribed habitus focuses on access to cultural and symbolic capital pertaining to the field of entrepreneurship. However, capital related to the situation of being disadvantaged (i.e., capital specific to the "focal" field) also warrants attention. Disadvantaged persons may possess a unique set of cultural and symbolic images that influence their ability to identify and exploit entrepreneurial opportunities (Shane & Venkataraman, 2000). For instance, cultural repertoires of entrepreneurial actions can be manifested in certain actions that accord with entrepreneurs' knowledge, skills, and habits (Sewell, 1999). Therefore, to the extent that disadvantaged persons have unique characteristics, they may engage in unique entrepreneurial actions, as illustrated in the aforementioned example of Accessible Travel, a company that caters to the specific needs of disabled holiday travelers and their mobility difficulties and that originated from the founder's personal experiences as a wheelchair user trying to travel with his family (Accessible Travel, 2008).

Third, an empirical investigation of our proposed framework might help bridge multiple levels of analysis. Bourdieu resists treating different levels of analysis as separate (Bourdieu & Wacquant, 1992) and considers such separations artificial and problematic (Swartz, 1997). Similarly, our proposed framework is essentially a meso-level one (Cooke, Clifton, & Oleaga, 2005), in that it operates at the interface of the macro level (e.g., the "field") and the micro level (e.g., disadvantaged persons' practices) and uses the concept of field-specific habitus to connect

them. Consequently, empirical research exploring our propositions should attend to the personal characteristics of disadvantaged persons as well as the macro-context in which they are embedded, and careful attention should be placed hereby on the mechanisms that describe the dialectical relationship between these two levels. 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. For example, research might use qualitative methods to examine, in situ, how disadvantaged persons navigate the potentially conflicting demands to comply with and challenge expectations about entrepreneurship. Researchers also might use survey data and other quantitative methods to examine, for instance, how disadvantaged persons' network centrality contributes to their compliance with or challenge of field-prescribed, entrepreneurial arrangements.

From a practical perspective, the arguments developed herein suggest that aspiring entrepreneurs who are disadvantaged must artfully navigate the requirements of conveying an image of compliance and contestation. In doing so, they can proactively offer and add meaning to the concept of "entrepreneurship" and even expand its image or perception. Therefore, the integration of disadvantaged persons into the field of entrepreneurship should not be regarded as a static but rather an ongoing process, during which the understanding of what constitutes "appropriate" forms of entrepreneurship gets negotiated between disadvantaged persons and field incumbents (Bourdieu, 1990).

Furthermore, our discussion of the role of field-specific cultural and symbolic capital speaks to the inextricably political nature of the integration of disadvantaged persons into entrepreneurship (Everett, 2002). As disadvantaged persons enter the field of entrepreneurship, the competition they confront might not be confined to the economic sphere; instead, they may

need to fight a “symbolic” battle to contest the standards set by field incumbents regarding what constitutes “typical” entrepreneurship (Calhoun, 2003). Thus, the broader environment in which disadvantaged entrepreneurs operate lacks an objective and stable existence and may instead be actively reproduced and reinforced by the actions of these entrepreneurs and incumbent field participants alike (Bourdieu, 2000).

To conclude, our theoretical framework explains how broader societal expectations provide normative definitions and directions for disadvantaged entrepreneurs’ actions and success. We therefore hope this work functions as a stepping stone for further research into the power-laden mechanisms that underlie the inclusion of disadvantaged persons into entrepreneurial endeavors and the labor force in general.

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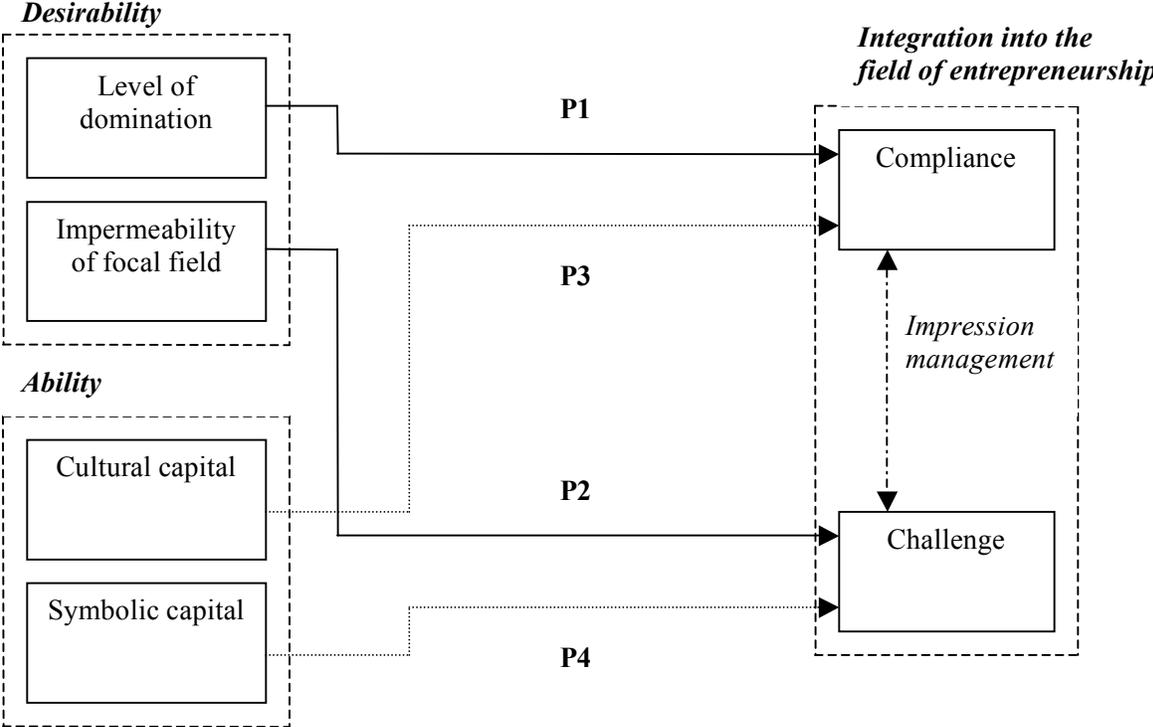
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Figure 1: Conceptual framework



A Strategic Pathway to the Rapid-Growth of New Startups:
Niche Marketing and Strategic Investment

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A Strategic Pathway to the Rapid-Growth of New Startups: Niche Marketing and Strategic Investment

Abstract

This paper presents 16 startups that ultimately grew to become Fortune 500 corporations through niche marketing in 30 years or less. A discrete-choice single-prize innovation race model is used to simulate their investment behavior under four possible business scenarios that are constructed by the combinations of quality shock and market shock: {high quality, high market}, {high quality, low market}, {low quality, high market}, {low quality, low market}. By the order from the left, they are scenarios 1, 2, 3, and 4. The model predicts that pioneer startups are able to protect their market leadership as they experience greater scale of the quality and market shocks. Among four scenarios, the startups are more likely to grow rapidly under the scenarios 1 and 2. In particular, the scenario 2 rather than the scenario 3 contributes more to the investment of the pioneer startups, which suggests that, of the two types of shocks, their survival and investment depend more on quality shocks than on market shocks. Some panel estimation results strongly support the predictions of the numerical example; the size expansion and profitability of pioneer startups indeed benefit from quality shocks compared with their early competitors and, between the two types of shocks, quality shocks have larger impacts on the performance of pioneer startups, differently from the early competitors.

Keywords: pioneer, niche marketing, innovation, strategic investment, simulation

1. Introduction

1.1. Pioneer startups

This paper presents recently established startups that have grown to become some of the largest firms in the United States within 30 years or less through niche marketing. For this purpose, the Fortune 500 indexes for the years 1993 and 2003 are compared. To prevent double counting, new entrants are excluded if they had been listed ex ante in the 1993 Fortune index. In 2003, there were 358 new Fortune 500 entrants, and among them, 240 firms were incorporated as startups. The initial entry types of 358 new Fortune 500 entrants are tracked through *Standard & Poor's Corporate Descriptions plus News*.

The paper focuses on 16 niche market creators among 44 new entrant startups, particularly those founded after 1975. The year of 1975 is chosen in particular because business environments such as the IT boom and soaring health and distribution industries have provided good foundations for incubating new startups. For this purpose, the following historic analysis is used.

Each startup's entry market is tracked through *Hoover's Company Profiles*, *Business News in Lexis-Nexis*, and major business periodicals. For concrete niche market identification, it is indispensable to identify conventional markets, which are referred to as "incumbent" markets in the paper. In practice, newly created niche markets are not thoroughly evaluated by SIC segments because both incumbent and niche markets are frequently located in identical SIC segments. Nevertheless, one can identify the early competitors in the initial primary SIC of niche marketers. In other words, it is possible to discover the set of early incumbents from which the pioneer startups had to differentiate themselves during their incubating stage. The next step is to name incumbent markets, and this paper again uses *Hoovers Company Profiles* and business periodicals to identify the major markets of the early incumbents. Finally, a startup is considered a first mover if its entry service or product segment is substantially different from incumbent markets. In many cases, the above-mentioned tracking sources evaluate whether the entry markets of the new Fortune startups are niche markets or not. In fact, 16 among the 44 new Fortune 500 startups founded after 1975 are defined as "pioneer rapid-growth" startups that have explored niche markets either from manufacturing or from service industries. They are good examples overcoming first-mover disadvantages such as free riding, market uncertainty, and technological discontinuity. <Table A> in the Appendix summarizes pioneer startups along with their early competitors for easy comparison.

The early competitors of pioneer rapid-growth startups are also collected using *Lexis-Nexis*. Five separate years are set to identify the competitors by periods, i.e. 1985, 1990, 1995, 2000, and 2003 because their foundation years are different from each other. In the paper, the competitors in 1985 are the competitors for the pioneer startups that were founded earlier than 1985, and those in 1990 are the competitors for the pioneer startups founded between 1986 and 1990, and so on. If a pioneer startup is a diversified one, competitors in different segments are also collected but they are classified as the competitors by periods if their primary segment is identical to the diversified segment of the pioneer. For single-focused pioneer startups, incumbents in primary segment are collected. Due to Fortune's industry classification standard, there are inevitably a number of overlapping competitors between industries. To circumvent this problem, similar industries are grouped: distribution (seven Fortune industries), energy (six Fortune industries), financial (four Fortune industries), insurance (four Fortune industries), health (three Fortune industries), computer (five Fortune industries), and transportation industry groups (two Fortune industries). Then, intra-group overlapping competitors in each competitor by period groups are eliminated. From the competitors by period, a group of early competitors is constructed after removing overlapping competitors once again to construct a panel data. There are 349 early competitors with their average foundation year being 1960.

1.2. Literature Review

Many previous studies concluded that the performance of first movers is superior to late movers' (Michael, 2003; Thomas, 1996; Golder & Tellis, 1993; Mascardenhas, 1992; Parry & Bass, 1990; Carpenter & Nakamoto 1989; Liberman & Montgomery, 1988; Urban, et. al. 1986). McDougall and Robinson (1990) argue that first mover advantage can fasten the growth of new startups. Even under hostile business environments, niche marketing leads to better performance, which implies that new startups with market initiatives are invulnerable to exogenous market shocks (Covin, et. al. 1999). Niche marketing accompanies first mover advantage and thus can provide a shortcut for startups to achieve rapid growth in a short time period through market leadership (Gilbert & Newsberry, 1982), strong brand image¹

¹ In a highly competitive market, this may not be true. According to Gandalm (2001), first mover advantage is significant in internet search engines but the brand effect declines over time.

(Vanderwerf & Mahon, 1997), learning by doing (Robinson & Fornell, 1985), and foreign penetration (Li, et. al. 2003). Nevertheless, the longevity and survival rate of first and second movers are not significantly different (Lilien & Yoon, 1990).

The definition of pioneer rapid-growth startups in this paper is entirely different from previous studies, in that, most of previous works have focused on first mover advantages within product category such as facsimiles, PCs, telephones, etc using the *PIMS (Profit Impact of Market Strategy)* database. However, this paper adopts a market-based performance approach because pioneer rapid-growth startups have diverse industry backgrounds. More specifically, this paper tackles several critical questions regarding their exploration of niche markets. At the same time, the threat of hostile M&As must be carefully considered once niche markets are proven to be profitable markets. In other words, large enterprises have strong incentives to pursue M&As because they are able to circumvent sunk costs while acquiring know-hows and marketing channels. Therefore, protecting themselves from hostile M&A attempts becomes a sufficient condition for the survival of rapidly growing pioneer startups.

This paper focuses, in particular, on testing which shock between quality shock and market shock contributes more to the remarkable performance of pioneer rapid-growth startups highlighting with their early competitors; adjusted total market capitalization, sales, gross profits, and net income are used as performance measures. Adjusted total market capitalization and sales represent stock market evaluation and firm growth, which are proxies for measuring size expansion. Gross profits and net income represent profitability. The quality and market shocks in the paper are different from the firm and industry effects, frequently controlled by the firm and industry dummies in related literatures. Quality shocks, estimated by total factor productivity (TFP), can capture such information as quality improvements in both manufacturing startups and service startups while market shocks capture exogenous business fluctuations. In contrast, the firm and industry effects derived by simple dummy method are not precise enough to explore the main theme of this paper.

At the meanwhile, this paper does not aim to scrutinize how each pioneer rapid-growth startup has explored its niche market because each pioneer has its own unique success story. Therefore, this paper adapts the discrete-choice racing models introduced by Yim (2008) and Filson & Gretz (2004). This is an effective way to understand how pioneer startups have achieved remarkable rapid growths through strategic

investments in niche markets. For simplicity, four growth scenarios, named as scenarios 1, 2, 3, and 4 are prepared, using the combinations of the quality and market shocks: {high quality, high market}, {high quality, low market}, {low quality, high market}, and {low quality, low market}. They represent four possible business scenarios. Simulation results predict that pioneer startups are more likely to maintain market leadership as larger shocks occur and, among the two types of shocks, quality shocks enhance the startups' likelihood of winning innovation races more than market shocks do. Alternatively speaking, the startups under interests are more likely to enjoy first mover advantages when they experience higher quality shocks.

The predictions of the racing model are verified through empirical frameworks. For this purpose, some panel firm, industry, and time fixed effect models are constructed. According to empirical results, the contributions of quality shocks on pioneer startups' performances are significantly greater to those of their early competitors. However, no evidences are found if pioneer rapid-growth startups benefit more from market shocks compared to their early competitors. Among four business scenarios, scenarios 1 and 2 have positive and significant effects on the performance of pioneer rapid-growth startups, and thus it is evident that firm specific innovation capability is the key success factor for pioneer rapid-growth startups. They can grow more rapidly if favorable market lucks occur. Schmalensee (1985), Rumelt (1991), and McGahan (1999) conclude that firm effects can explain a larger part of the variations in firm values of the U.S. manufacturers, but the main result of this paper using the censored data from Fortune 500 archives can suggest a slightly different interpretation. In that, the impact of market lucks cannot be simply neglected as trivial because market shocks are still significant to the performance of early competitor group that is composed of the nation's largest enterprises. However, firm-level innovation capability is obviously crucial for successful startups with the strategic shortcut of niche marketing.

The paper is organized as follows. In section 2, pioneer rapid-growth startups and their early competitors are highlighted. Section 3 presents a discrete-choice innovation race model along with experiment results on four business scenarios. Section 4 discusses empirical frameworks and summarizes main findings. In section 5, several key implications are discussed.

2. Niche Market and Pioneer Startup's Performance

In the field of business and industrial organization, the term “first mover” denotes product pioneer. For example, Schmalensee (1982, p. 350) defined a first mover as “the first appearance of a brand in a distinctly new product category.” A majority of previous studies used *PIMS* to identify a first mover. However, *PIMS* is not adequate for this study. First, it identifies only early entrants in some product categories. Second, the pioneers in *PIMS* are self-reported; accordingly, 52% of firms in the database classify themselves as pioneers (Golder & Tellis, 1993). Third, it can provide only the order of entry into particular product categories, not information about a firm's entry market.

Therefore, a broader definition is necessary to study pioneer startups; Robinson and Fornell (1985, p. 305) defined a market pioneer as “the first entrant in a new market.” Interestingly, niche marketing is highly associated with brand image; 13 pioneer rapid-growth startups were registered in the 2004 *Fortune's Most Admired Firms Index* (81.3%). A distinct feature of pioneer rapid-growth startups in this paper is that their entry markets are distinctively different from previously established incumbent markets, and thus they are “the first entrant in a new market,” as Robinson & Fornell (1985) defined them. In other words, pioneer startups are first movers in their niche markets.

There are two types of niche markets. First, several pioneers created entirely new business trends. Good examples are Microsoft, Qualcomm, EMC, and Oracle in PC operating systems, CDMA technology, an array of independent disk (RAID) storage devices for large IBM computers, and database management. The impact of niche marketing is enormous. For example, CDMA license revenues constituted 34% of Qualcomm's total revenue in 2006. UnitedHealth Group is another good example in service industry. It is the first HMO that was established with the innovative private HMO model approved by Congress and the Administration in 1977. Later, Pacificare Health, Caremark Rx, Oxford Health Plans, Health South, Coventry Health Care, and Universal Health Services were founded and they were listed on the *Fortune 500* in 2003.

Second, most pioneer startups created niche segments that were differentiated from incumbent markets. Before Starbucks was founded, Procter & Gamble, General Foods, and Nestle accounted for more than 90% of the U.S. coffee market during the 1980s. However, their marketing strategy was simply to sell coffee as a commodity through retailers and convenience stores, while fast food outlets served the dormant

espresso coffee market. Starbucks virtually created the “take-out-espresso-gourmet” coffee franchise market in 1984. With its barista chain service, Starbucks preempted an innovative business model in the “mass customization age.” Likewise, both Staples and Office Depot, founded in 1985, created the specialty retailing market for office products. Before their debut, department stores and general retailers overlooked this potential niche market. The leader in the networking appliance market, Cisco achieved its leadership position by developing routers, currently the industry standard network distributor, in 1984, pushing costly switches out of the market. In these cases, canned coffee, general retailing, and switches markets are incumbent markets, and gourmet coffee, specialty retailing of office products, and router markets are niche markets.²

Figure 1 depicts the evolution path of the market capitalization of two groups of firms. It is interesting to note that pioneer startups have been highly valued by the stock market since the 1990s. In addition, the market capitalization of pioneer Fortune startups dominates that of their early competitors and non-pioneer Fortune startups’ as well. This highlights the reason why the success of pioneer startups is so interesting. Simply speaking, their growth was too explosive to conclude simply that they were extremely lucky.

Another important implication is that these businesses have achieved sharp sales growth with smaller labor forces compared with non-pioneer startups (see Figures 2 and 3). This implies that the productivity of pioneer startups is higher than that of non-pioneer startups. Figure 4 provides more insights into the differences in performance. The ROA and ROI of the pioneers are positive throughout the entire period, whereas those of the early competitors recorded negative values. In particular, the high ROI of first movers until the mid-1990s demonstrates that their initial investment was timely and effective.

² Many rapid-growth startups regionally differentiate themselves while their entry market segments overlap with incumbent markets. For example, many startups in distribution, homebuilding, healthcare, financial, automotive retailing, insurance, and energy industries are region-based. Region-based startups are not considered as first movers. However, this paper considers a niche market creator as a first mover if a startup’s initial entry market was designed to develop a nationwide chain. United Auto Group, attempted to build a nationwide automotive dealership within the automotive retailing industry, is a unique example in this category. Following the success of United Auto Group, Sonic Automotive, Asbury Automotive, and Group 1 Automotive entered the niche market and were eventually listed on the Fortune 500 in 2003.

3. The Model

An important finding is that the evolution of pioneer startups' capital expenditure described in Figure 5 perfectly coincides with its firm value evolution, which implies that firm-level investment is highly associated with the performance of niche marketers. In Figure 5, the average capital expenditure of the pioneers was infinitesimal during the 1980s, but it has sharply increased and eventually exceeded their early competitors' expenditure since 1998. The investment reached a peak in 2000, and the startups' market capitalization shows an identical path. In contrast, the average market capitalization of non-pioneer Fortune startups has not increased; nonetheless, their capital expenditure has soared since the mid-1990s.

Theoretical background on this issue can be found in the work of Kerin, et. al. (1992) who argued that technological leadership is not enough to secure first mover advantage. First movers need to invest in capital goods as well as complementary assets for securing market position. Because capital expenditures include all investments in tangible and intangible assets, they can effectively capture the investment behavior of pioneer startups. In other words, strategic investment is imperative to the sustainable growth of new startups with niche marketing. In practice, the R&D investments of the pioneer startups from service industries are seldom observed, and thus capital expenditure is a useful proxy to measure the scale of investment.

In this sense, the single-prize racing model introduced by Yim (2007) and Filson & Gretz (2004) is an effective way to derive some useful implications of pioneer startups. The virtue of the model can be summarized as follows. First, it is adequate for cross-industry analysis. Because both manufacturers and service firms are included, a structural model, which requires strong assumptions about profit and investment structures, may be too restrictive. Because the racing model adopts a value function, it does not require any functional form. Second, the model determines the order of race participants' equilibrium investments once quality and market shocks are given. Third, the model is a partial equilibrium model, and thus a market clearing condition is not required. Fourth, market prices and demands are simultaneously determined, which can eliminate any lagged effect.

Initially, there are two incumbents, i.e., firms 1 and 2 in market A. The quality of firm 1 is assumed to be superior to that of firm 2: $\theta_{0,A1} > \theta_{0,A2}$ where the subscript 0 indicates the initial value, and subscripts 1 and 2 represent firm 1 and firm 2, respectively. A pioneer rapid-growth startup, firm 3, creates niche market

B rather than penetrating the incumbent market A once it wins an original race acquiring $\theta_{1,B3}$ where the subscripts 1, B , and 3 represent the original race value, the niche market, and the startup, respectively. Market A is assumed to have matured, and so no innovation race is considered in this market.

Two incumbents enter the next race for obtaining a single prize, $\theta_{2,B}$ in market B where subscript 2 represents the next race value, and the pioneer startup also participates in the race in order to protect its niche market. Firms 1 and 2 can enter market B with $\theta_{2,B}$ after the next race if they win, which results in the expansion of their product lines into market B . In other words, winning the next race provides a chance to diversify into the niche market. The quality of the startup improves from $\theta_{1,B3}$ to $\theta_{2,B}$ when it innovates ahead of firms 1 and 2 during the next race.

There are three stages. A licensing stage follows the next innovation race, and then firms market during a marketing stage according to their level of quality. If the startup sells its innovation, the firm gives up leadership in its niche market; as a result, it cannot grow to be a large firm in the end.

3.1. Profit Structure

There are two groups of consumers. No consumer can purchase more than one good. A consumer h in market m purchases firm i 's good in market n maximizing:

$$U_{hi} = \alpha_{mn}\theta_{ni} - p_{ni} + \varepsilon_{hi} \quad (3.1)$$

U_{hi} is the utility of the consumer choosing i 's good. θ_{ni} and p_{ni} are the quality and price of i in market n , respectively, and ε_{hi} is an individual-specific shock. α_{mn} is a preference parameter that measures the willingness of consumers changing their consumption from market m to market n . It is assumed that consumers in A purchase from both markets but consumers in B purchase only from B , and thus $\alpha_{BA} = -\infty$. Individual shocks are assumed to be independently and identically distributed according to distribution $e^{-e^{-\varepsilon_{hi}}}$. The probability that consumers in A choose incumbent i in A (λ_{AAi}) when there are

incumbent i and pioneer startup in B is given as (3.2). λ_{AAj} , λ_{ABi} , and λ_{AB3} are similarly defined. The probability that consumers in B choose pioneer startup is derived in (3.3).

$$\lambda_{AAi} = \frac{e^{\alpha_{AA}\theta_{Ai} - p_{Ai}}}{1 + e^{\alpha_{AA}\theta_{Ai} - p_{Ai}} + e^{\alpha_{AA}\theta_{Aj} - p_{Aj}} + e^{\alpha_{AB}\theta_{Bi} - p_{Bi}} + e^{\alpha_{AB}\theta_{B3} - p_{B3}}} \quad (3.2)^3$$

$$\lambda_{BB3} = \frac{e^{\alpha_{BB}\theta_{B3} - p_{B3}}}{1 + e^{\alpha_{BB}\theta_{Bi} - p_{Bi}} + e^{\alpha_{BB}\theta_{B3} - p_{B3}}} \quad (3.3)^4$$

Firm i 's profit in market B is $\pi_{Bi} = \max_{p_{Bi}}(p_{Bi} - c)(n_A\lambda_{ABi} + n_B\lambda_{BBi})$ and the F.O.C. is given as follows.

$$(n_A\lambda_{ABi} + n_B\lambda_{BBi}) - (p_{Bi} - c)[n_A\lambda_{ABi}(1 - \lambda_{ABi}) + n_B\lambda_{BBi}(1 - \lambda_{BBi})] = 0 \quad (3.4)$$

3.2. The Innovation Race

Race entrants invest to maximize their value by regarding each race as a continuous-infinite time innovation race. Innovation incentives arise from higher markups along with higher demands. Once a race winner is determined, the race is over. The innovation production function is memoryless. Non-winners remain at their initial qualities.

The value function of i is

$$V_i = \int_0^\infty e^{-rt} e^{-\sum_j h_j(x_j)t} \left[\pi_i^0 - x_i + h_i(x_i)V_i^i + \sum_{j \neq i} h_j(x_j)V_i^j \right] dt \quad (3.5)$$

³ If there is only a startup in B , then $\lambda_{AAi} = \frac{e^{\alpha_{AA}\theta_{Ai} - p_{Ai}}}{1 + e^{\alpha_{AA}\theta_{Ai} - p_{Ai}} + e^{\alpha_{AA}\theta_{Aj} - p_{Aj}} + e^{\alpha_{AB}\theta_{B3} - p_{B3}}}$.

⁴ If there is only a startup in B , then $\lambda_{BB3} = \frac{e^{\alpha_{BB}\theta_{B3} - p_{B3}}}{1 + e^{\alpha_{BB}\theta_{B3} - p_{B3}}}$.

where V_i^i is the post-race value of i received if i wins and V_i^j is that of i if j wins. r is the discount rate and π_i^0 is the initial *ex ante* race marketing profit. $h_i(x_i)$ is the hazard rate, which is assumed to be a twice differentiable concave function. Simplifying,

$$\hat{V}_i = \frac{\pi_i^0 - x_i + h_i(x_i)V_i^i + \sum_{j \neq i} h_j(x_j)V_i^j}{r + \sum_j h_j(x_j)} \quad (3.6)$$

Firm i 's first-order condition is

$$-r - \sum_j h_j(x_j) + h_i'(x_i) \left[rV_i^i - \pi_i^0 + x_i + \sum_{j \neq i} h_j(x_j)(V_i^i - V_i^j) \right] = 0 \quad (3.7)$$

The quality and market demand parameters determine equilibrium investments in different ways. The fundamental difference is that any change in n_m is exogenous to all race entrants while θ_{mi} is firm-specific. n_m magnifies profits exogenously because $\partial \pi_{mi} / \partial n_m = (p_{mi} - c)\lambda_{mmi} > 0$. On the contrary, θ_{mi} has a two-step impact. First, θ_{mi} simultaneously influences the prices and demands of all race entrants through the non-linear equations system composed of (3.2), (3.3), and (3.4), and then they affect equilibrium investments through equation (3.7). The replacement and efficiency effects are $rV_i^i - \pi_i^0$ and $\sum_{j \neq i} h_j(x_j)(V_i^i - V_i^j)$, respectively, and their coordinated effects eventually determine the order of investments. For instance, in market B , the replacement effect of the most technologically backward firm 2 becomes the largest one and that of firm 1 is the second largest. In contrast, the market leader, firm 3, has the largest efficiency effect.

3.3. Licensing

The licensing stage follows the next race. If firm 3 wins, it has two options. The pioneer startup can market its innovation, then it can maintain its monopoly. If the firm sells its innovation to firms 1 or 2, the niche market turns into duopoly and the startup begins to lose its market leadership. In other words, when

incumbent i markets an innovation in the next race, i obtains $\pi_{2,Ai}(p_{2,Ai}(\theta_{0,Ai}, \theta_{0,Aj}))/r$ + $\pi_{2,Bi}(p_{2,Bi}(\theta_{2,B}, \theta_{1,B3}))/r$ and incumbent j earns $\pi_{2,Aj}(p_{2,Aj}(\theta_{0,Ai}, \theta_{0,Aj}))/r$ only where the subscript 2 indicates the next race value. If a pioneer startup markets the innovation, its profit becomes $\pi_{2,B3}(p_{2,B3}(\theta_{2,B}))/r$ and incumbent i and j obtain $\pi_{2,Ai}(p_{2,Ai}(\theta_{0,Ai}, \theta_{0,Aj}))/r$ and $\pi_{2,Aj}(p_{2,Aj}(\theta_{0,Ai}, \theta_{0,Aj}))/r$ because incumbents cannot enter market B . When licensing occurs, a fixed transaction cost is involved. Let the profit of firm j be $\pi_{2,Bj}^i(p_{2,Bj}^i)$ when i markets $\theta_{2,B}$ in market B . Gains from mergers must be positive in order for j to acquire i 's innovation. Therefore, the following condition must be satisfied in order to enable licensing from i to j where f_l is the transaction cost:

$$\frac{\pi_{2,Bj}^j(p_{2,Bj}^j) + \pi_{2,Bi}^j(p_{2,Bi}^j)}{r} - f_l \geq \frac{\pi_{2,Bi}^i(p_{2,Bi}^i)}{r} + \frac{\pi_{2,Bj}^i(p_{2,Bj}^i)}{r}$$

3.4. Simulation

3.4.1. Four business Scenarios

The initial quality of pioneer rapid-growth startup is assumed to be inferior to that of firm 2 because niche market B is premature: $\theta_{0,A1} > \theta_{0,A2} > \theta_{1,B3}$. Now, suppose that quality shocks and market shocks occur in market B before the next race starts. The quality shock is specific to the pioneer, whereas the market shock is exogenous to all race participants.

According to the combination of the two shocks, there can be four business scenarios: {high quality, high market}, {high quality, low market}, {low quality, high market}, and {low quality, low market} shocks, which are denoted by scenarios 1, 2, 3, and 4, respectively. They represent four possible business environments in the niche market. One can presume easily that firms 1 and 2 will have greater incentives to enter market B in scenarios 1 and 3 owing to favorable market shocks in B , while the startup is more likely to protect its market leadership in scenarios 1 and 2. By testing the four scenarios, one can tell which shock has greater impacts on investment decisions. One can also compare the order of investments across four possible scenarios. This enables us to forecast in which scenario the startup is more likely to innovate ahead

of its competitors. Licensing analysis can determine in which business environment the startup is more or less likely to maintain its market leadership.

Considering the fact that market B is rapidly growing, the preference matrix is given to $\begin{pmatrix} \alpha_{AA} & \alpha_{AB} \\ \alpha_{BA} & \alpha_{BB} \end{pmatrix} = \begin{pmatrix} 1 & .5 \\ -\infty & 1 \end{pmatrix}$. Let $\hat{\theta}_{1,B3}$ be the post-shock quality of the startup and $\hat{n}_{1,B}$ be the post-shock number of consumers in market B . $\theta_{0,A2}$ is assumed to be 1. The other qualities are a function of $\theta_{0,A2}$: $\theta_{0,A1} = \omega * \theta_{0,A2}$ where $\omega > 1$. For a high quality shock, $\hat{\theta}_{1,B3}^H = \omega^{1.5} * \theta_{0,A2}$ and $\hat{\theta}_{1,B3}^L = (\omega/1.5) * \theta_{0,A2}$ for a low quality shock, and thus $\hat{\theta}_{1,B3}^L$ can be even lower than $\theta_{0,A2}$. To compare the effects of both quality and market shocks, $n_{0,A}$ is set to one ($n_{0,A} = 1$). The post-shock demand is a function of $n_{0,A}$: $\hat{n}_{1,B}^H = \omega^{1.5} * n_{0,A}$ and $\hat{n}_{1,B}^L = (\omega/1.5) * n_{0,A}$. Therefore, the combination of the quality and market shocks under four scenarios in market B are given as

		Market Shock	
		High	Low
Quality Shock	High	$\{ \hat{\theta}_{1,B3}^H = \omega^{1.5} * \theta_{0,A2},$ $\hat{n}_{1,B}^H = \omega^{1.5} * n_{0,A} \}$	$\{ \hat{\theta}_{1,B3}^H = \omega^{1.5} * \theta_{0,A2},$ $\hat{n}_{1,B}^L = (\omega/1.5) * n_{0,A} \}$
	Low	$\{ \hat{\theta}_{1,B3}^L = (\omega/1.5) * \theta_{0,A2},$ $\hat{n}_{1,B}^H = \omega^{1.5} * n_{0,A} \}$	$\{ \hat{\theta}_{1,B3}^L = (\omega/1.5) * \theta_{0,A2},$ $\hat{n}_{1,B}^L = (\omega/1.5) * n_{0,A} \}$

All three firms enter the next race to obtain $\theta_{2,B} = \omega^2 * \theta_{0,A2}$. Because market A is assumed to be a mature market, $n_{2,A} = n_{0,A}$, but the total number of consumers in market B is $n_{2,B} = \omega^2 * n_{0,A}$. The transaction cost is $f_l = .16$. The marginal cost is 5, and the discount rate is .05. The hazard rate is given as $h_i = (x_i)^{1/2}$.

3.4.2. Results

Tables 1 and 2 summarize the experimental results of investment and licensing behaviors. If $\omega = 2.5$, pioneer startup invests the least amount in scenarios 1 and 2 because the replacement effects of firms 1 and 2, having no original products in market B , dominate the efficiency effect of the startup when the niche market experiences a high quality shock. The startup invests less than firm 1 but more than firm 2 in scenarios 3 and 4 because the replacement effect of firm 2 becomes smaller than the efficiency effect of the pioneer startup as it undergoes a low quality shock. If $\omega = 2.6$, the pioneer is more likely to innovate for the same reason. If $\omega \geq 3.4$, the startup is most likely to innovate in all scenarios.

These results demonstrate that the pioneer startup is more likely to maintain market leadership as both shocks become larger. Now, consider in which scenario the startup invests the most. For $\omega \leq 2.5$, the order of the startup's investment scenarios is 4, 3, 2, and 1. However, when $\omega \geq 3.4$, the startup invests in the order of 2, 1, 4 and 3. This demonstrates that the startup is more likely to innovate under high quality shocks than under low quality shocks as the scale of both shocks becomes large. Of the two shocks, quality shocks play a more important role in the investment of pioneer startups as ω increases. That is, the startup invests more in scenario 2 than in scenario 3 if $\omega \geq 3.4$, while it shows the exact opposite if $\omega \leq 2.5$.

Licensing behavior is also affected by the scale of both shocks. In Table 2, when $\omega = 2.0$, no licensing occurs. If $\omega = 2.5$, firms 1 and 2 do not sell their innovations to the startup, but the startup licenses to firm 2 in scenarios 1 and 2. Therefore, it will not grow quickly after giving up its leadership. However, both firms 1 and 2 license to the startup in scenarios 1 and 2 if $\omega = 3.4$, but the startup never sells its innovation to the incumbents. If $\omega = 3.5$, firms 1 and 2 always sell their innovations to the startup in all scenarios, and the startup does not license. Therefore, the rapid-growth startup is able to maintain its first mover advantage as it experiences larger quality shocks. These results contain two very important implications. First, the startup can grow to become a large firm through licensing even if it fails to win the next race. Second, the startup sells its innovation when the scale of quality and market shocks is relatively small and it is less likely to win. In other words, the startup is more likely exit the market if its niche market is not profitable or quality improvement is not satisfactory.

4. Empirical Test

4.1. Quality Shock and Market Shock

As a proxy for market size, annual constant dollar industry GDP (1996 basis) is collected from the “Gross Output by Detailed Industry” published by the *Bureau of Economic Analysis*, which includes information from 1987 to 2001. Since the industry classification of Fortune is different from that of the *Bureau of Economic Analysis*, the GDP data is modified along with Fortune’s industry classification. <Table B> in the Appendix reports the regrouped industries with GDP shares and GDP growth rates. Industry GDP is used to construct exogenous market shocks. For robustness, DOW index is used too. In that, the residuals of industry GDP AR(1) and those of industry DOW AR(1) are considered to be exogenous market shocks: $\ln GDP_{j,t} = c + \ln GDP_{j,t-1} + e_t$ and $\ln DOW_{j,t} = c + \ln DOW_{j,t-1} + e_t$. The residual of GDP AR(1) is named as $ms_{i,t}^{GDP}$ and that of DOW AR(1) is named as $ms_{i,t}^{DOW}$.

To derive this quality shock, inter-firm total factor productivity (TFP) is used. There are two techniques for estimating TFP. The intrafirm production function can capture the marginal effect of input j of firm i on total production at time t . However, firm effects are not derivable unless there are more than two observations for i in a particular period. For example, Maksimovic and Phillips (2002) estimated the firm effects of individual plants working in different business segments. Alternatively, one can regress two consecutive years for firm i to estimate the firm effects of intrafirm production functions, but it is not precise enough due to the lack of degree of freedom (Mundlak, 1961). In contrast, all firms in industry j share the same slope in the interfirm translog production function in period t but intercepts vary between firms, which determine the production functions in all time periods. The interfirm total factor productivity model including cross products and square terms is as follows:

$$\ln Q = A + f_i + \sum_{k=1}^m \alpha_k \ln L_k + \sum_{h=1}^l \sum_{k=1}^m \beta_{hk} \ln L_k \ln L_h \quad (4.1)$$

Q is the vector of total sales of all participants in industry j at time t . A is an industry quality shift parameter. L_k represents production inputs: capital expenditure deflated by the CPI (1984=100) from the

Department of Labor and total number of employees. f_i is a firm dummy, which denotes the contribution of innovation that is not explained by the productivity of the inputs, and thus the firm dummy is a proxy for quality shock.

4.2. Panel Analysis

4.2.1. Empirical Framework

Some panel “startup, industry, and time” fixed effect models are constructed to examine the predictions of simulation. Among them, Equation (4.2) can test two groups of firms individually. $y_{i,t}$ represents the size and profitability of two groups of firms. Two size measures are used: adjusted market capitalization per labor and sales per labor. They are realized by CPI (1984=100) and are divided by total employees in order to eliminate scale discrepancies. Net income and gross profits measure profitability. All performance measures are collected from *Compustat*. f , j , and t are firm, industry, and time dummies for controlling firm, industry, and time effects, respectively. $qs_{i,t}$ represents the quality shock measured by the firm dummy in (4.1) and $ms_{i,t}$ does market shock: $ms_{i,t}^{GDP}$ and $ms_{i,t}^{DOW}$. The natural log of total working year ($\ln yr_{i,t}$) measures firm know-how or learning by doing. As Yim (2008) pointed out, strategic behaviors can interact with quality shocks, and so two types of strategic behaviors are included as control variables. The number of SIC segments ($div_{i,t}$) represents the degree of focus, and firm-level aggressiveness is measured by total M&A ($ma_{i,t}$).⁵ When profitability measures are used as dependent variables, the natural log of total employees is included in order to control size discrepancy.

$$y_{i,t} = f + j + t + qs_{i,t} + ms_{i,t} + \ln yr_{i,t} + div_{i,t} + ma_{i,t} (+ \ln emp_{i,t}) + \varepsilon_{i,t} \quad (4.2)$$

⁵ The information on the degree of diversification is tracked through the *Industrial Annual Reports* in *Compustat*. M&A information is tracked through *Business News* in *Lexis-Nexis*, which contains more than 600 data sources including *Business Wire*, *PR News Wire*, *Business Week*, *Newsweek*, *Mergers and Acquisitions Reports*, *Mergers and Acquisitions Journal*, etc (see Figure 6). Only completed M&As are counted.

Equation (4.3.) tests if pioneer startups benefit from the two types of shocks more than their early competitors do indeed where pn is a pioneer dummy. Annual panel data covers the period from 1989 to 2001, with 365 firms and 5,510 observations.

$$Y_{i,t} = f + j + t + \{qs_{i,t} + ms_{i,t} + \ln yr_{i,t} + div_{i,t} + ma_{i,t} + (\ln emp_{i,t})\} + pn * \{qs_{i,t} + ms_{i,t} + \ln yr_{i,t} + div_{i,t} + ma_{i,t} + (\ln emp_{i,t})\} + v_{i,t} \quad (4.3)$$

In order to test if the main outcomes from the numerical example in the previous section can be supported, equations (4.4) and (4.5) are examined as well. In the equations, four scenarios based on the dummy variable combinations of the quality shock measured by TFP and two types of markets shocks are created. For instance, HH_{GDP}^{TFP} is constructed by multiplying the positive TFP quality shock dummy that gives one if TFP quality shock is positive and the positive industry GDP AR(1) market shock dummy that gives one if the market shock is positive. In contrast, LL_{GDP}^{TFP} is constructed by multiplying both dummies that give ones if their values are negative. HL_{GDP}^{TFP} , LH_{GDP}^{TFP} , HH_{DOW}^{TFP} , HL_{DOW}^{TFP} , LH_{DOW}^{TFP} , and LL_{DOW}^{TFP} are similarly defined and they are all dummy variables accordingly. In that, HH , HL , LH , and LL represent scenarios 1, 2, 3, and 4, respectively. According to the predictions in Tables 1 and 2, HH_{GDP}^{TFP} , HL_{GDP}^{TFP} , HH_{DOW}^{TFP} , and HL_{DOW}^{TFP} are expected to show positive and significant coefficients. In practice, LL_{GDP}^{TFP} and LL_{DOW}^{TFP} are dropped in order to avoid perfect multicollinearity.

$$y_{i,t} = f + j + t + HH_{GDP}^{TFP} + HL_{GDP}^{TFP} + LH_{GDP}^{TFP} + LL_{GDP}^{TFP} + \ln yr_{i,t} + div_{i,t} + ma_{i,t} + (\ln emp_{i,t}) + \xi_{i,t} \quad (4.4)$$

$$y_{i,t} = f + j + t + HH_{DOW}^{TFP} + HL_{DOW}^{TFP} + LH_{DOW}^{TFP} + LL_{DOW}^{TFP} + \ln yr_{i,t} + div_{i,t} + ma_{i,t} + (\ln emp_{i,t}) + \xi_{i,t} \quad (4.5)$$

4.2.2. Results

Table 4 shows how quality and market shocks contribute to the performance of pioneer rapid-growth startups along with their early competitors' (see Table 3 for descriptive statistics). The empirical results clearly support the predictions of simulation. The contributions of quality shocks on the size measures of

pioneers are positive and significant and they are much greater to those of their early competitors that are also positive and significant. The results on profitability show different aspects. Pioneer startups earn significantly from quality shocks but their early competitors do not at all. For instance, the coefficients of quality shocks on startups' market capitalization, sales, gross profits, and net income are .1089, .0908, .2008, and .3613 and those of early competitors' are .0109, .0765, -.0183, and -.0626, respectively. In contrast, the coefficients of market shocks on the startups' two types of performance measures are all insignificant while their early competitors show positive and significant coefficients. Therefore, it is evident that the performance of pioneer startups owes to firm-specific quality shocks rather than exogenous market shocks, which supports simulation results exactly. As frequently quoted as the most aggressive firm strategic behavior in business literature, M&As are found to have positive and significant effects on all independent variables and diversifications have positive and significant effects as well in both groups.

According to Table 5, without any doubt, pioneer startups obviously benefit more from quality shocks compared with their early competitors. It is interesting to note that quality shocks enhance the stock market performance the most, which indicates that niche marketing has been highly evaluated by stock market, quoted as the most efficient market. On the contrary, there is no evidence that market shocks enhanced the performance of pioneers against early competitors. With regard to two strategic behaviors, it turns out that the degree of focus does not add additional firm values to pioneer rapid-growth startups. On the contrary, the contributions of total M&As are significantly higher in all independent variables. It is because almost two thirds of the M&As completed by pioneer startups was aimed to remove competitors while their early competitors attempted a variety of M&As with different reasons such as acquiring technologies, distribution channel, diversifications, etc.

Tables 6-1 and 6-2 reports four scenairo panel analysis results. In both tables, niche marketers show superior performance in scenarios 1 and 2, which perfectly coincides to simulation outputs. Their early competitors show same pattern. This demonstrates that quality shocks play positive roles in both group of firms; however, the impacts are larger to pioneer rapid-growth startups. In other words, the pioneers respond more to quality shocks compared with their early competitors. Between scenarios 2 and scenairo 3, the former has larger effects on performance meausres, which suggests that the success of pioneer rapid-

growth startups relies more on quality shocks. This result is consistent to simulation outputs exactly. Alternatively speaking, the performance of startups with the ability to pioneer niche markets depends on own innovations mostly, not simply on lucks. Regardless of performance measure, both groups show the highest performances in scenario 1. In that, quality shocks combined with market lucks provide the most favorable business environment to all market participants.

5. Conclusions

This paper did not intend to scrutinize firm level strategic behaviors such as alliance, organizational restructuring, diversification, and merger and acquisition, but rather attempted to model strategic innovations, which are formulated into quality shocks in the paper. The counterpart of quality shocks is market shocks that are exogenous to race participants. Alternatively speaking, quality shocks represent firm-level innovations and market shocks do business fluctuations. As the strategic behaviors circumventing initial endowments, the degree of focus and the level of aggressiveness, measured by total SIC and total M&A, were included in empirical works.

Experiments under four business scenarios with the combinations of the quality and market shocks were carried out: {high quality, high market}, {high quality, low market}, {low quality, high market}, and {low quality, low market}. The major predictions are to the followings. First, quality shocks increase the chance of pioneer startups' obtaining innovations more than market shocks do. Second, pioneer startups are more likely to maintain their leadership under high quality shocks than under high market shocks. Third, pioneer startups become more resistant to hostile M&As and they even can acquire competitors under high quality shocks.

To verify the model predictions, various panel fixed effect models were prepared. They are composed of three major parts. First, the contributions of the quality and market shocks on two groups of firms were estimated separately, second, whether pioneer startups gain more from the two types of shocks against the early competitors was tested, and third, the performance of both groups were scrutinized under the above mentioned four scenarios. Performances are scrutinized with stock market evaluation, size expansion, and profitability. The empirical results of this paper are broadly consistent to the previous works done by McGahan (1999), Rumelt (1991), and Schmalensee (1985), but still slightly different. For instance,

McGahan(1999) concluded that firm effects account for almost two thirds of the performance the U.S. manufacturers from 1981 to 1994. The group of early competitors collected in the paper can project previous studies as they include major public enterprises.

According to empirical results, market shocks are found to be deeply associated with the performance of the early competitors. This suggests that market shocks are likely to be as important as quality shocks in general. In contrast, market shocks have only infinitesimal effects on pioneer Fortune rapid-growth startups, which suggest that firm specific capability rather than exogenously given lucks must be more importantly treated when it comes to successful startups. The licensing simulation results demonstrated that pioneer rapid-growth startups were able to protect market leadership even when they failed to innovate because they were able to purchase innovations. Active M&As completed by pioneer startups are good evidences for this. In the U.S., M&A market is well developed indeed (see Figure 6 for more detailed information). For instance, more than 57 percent of total sales of American securities companies originated from M&A services in 2005

According to the architecture of research framework in the paper, it is obvious that firm-specific quality improvements enabled pioneer rapid-growth startups to overcome exogenous environmental effects. Considering that quality shocks are entirely firm-specific inner shocks, one can infer that the pioneers themselves are responsible for their own survival and growth. Henceforth, local governments can consider direct subsidies to pioneer startups for quality enhancement once they desire to incubate rapidly growing startups in their territories. If so, new startups with strong firm-level competitiveness are able to grow more quickly when favorable market opportunities visit. Although it is not widely discussed in this paper, the role of business infrastructure cannot be overlooked. For example, patent protection, venture capitals, and social norms that value pioneering spirit can be as important as the entrepreneurial ability of pioneer rapid-growth startups. Because the U.S. business infrastructure is well organized, combined with active entrepreneurship, it would be able to incubate numerous startups from diverse industries. This is probably the fundamental reason why the U.S. economy is called as the most dynamic one.

As a concluding remark, the conventional wisdom such that the entry through startup is less likely to evolve to large enterprises due to the lack in initial endowments does not hold because new startups are able to circumvent the initial endowment problem through strategic investments. This paper did not intend

to study how each pioneer startup has behaved in its niche market. Because pioneer startups have diverse industry backgrounds, it may be distracting to scrutinize their growth story individually. Rather, I attempted to present a blue sketch unveiling the secret of how pioneer rapid-growth startups have achieved superior performances. Their strategic behaviors would be carefully analyzed in future research works.

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Table 1. Investments under Alternative Values of ω

	Scenario	Ranking, from left to right, in order of who invests most		
$\omega = 2.5$	1	Firm 1	Firm 2	Startup
	2	Firm 1	Firm 2	Startup
	3	Firm 1	Startup	Firm 2
	4	Firm 1	Startup	Firm 2
$\omega = 2.6$	1	Firm 1	Startup	Firm 2
	2	Firm 1	Startup	Firm 2
	3	Startup	Firm 1	Firm 2
	4	Startup	Firm 1	Firm 2
$\omega = 3.4$ & 3.5	For all scenarios	Startup	Firm 1	Firm 2
Under which scenario the startup invests the most				
$\omega = 2.5$ & 2.6	Scenario 4	Scenario 3	Scenario 2	Scenario 1
$\omega = 3.4$ & 3.5	Scenario 2	Scenario 1	Scenario 4	Scenario 3

Table 2. Licensing under Alternative Values of ω

	Licensing		Scenario 1	Scenario 2	Scenario 3	Scenario 4
	Licensor	Licensee	High Quality /High Market Shock	High Quality /Low Market Shock	Low Quality /High Market Shock	Low Quality /Low Market Shock
$\omega = 2.0$			No licensing occurs			
$\omega = 2.5$	Firm 1	Startup	-	-	-	-
	Firm 1	Firm 2	-	-	-	-
	Firm 2	Startup	-	-	-	-
	Firm 2	Firm 1	-	-	-	-
	Startup	Firm 1	-	-	-	-
	Startup	Firm 2	Yes	Yes	-	-
$\omega = 3.4$	Firm 1	Startup	Yes	Yes	-	-
	Firm 1	Firm 2	-	-	-	-
	Firm 2	Startup	Yes	Yes	-	-
	Firm 2	Firm 1	-	-	-	-
	Startup	Firm 1	-	-	-	-
	Startup	Firm 2	-	-	-	-
$\omega = 3.5$	Firm 1	Startup	Yes	Yes	Yes	Yes
	Firm 1	Firm 2	-	-	-	-
	Firm 2	Startup	Yes	Yes	Yes	Yes
	Firm 2	Firm 1	-	-	-	-
	Startup	Firm 1	-	-	-	-
	Startup	Firm 2	-	-	-	-

Table 3. Summary Statistics

	Definition	Obs.	Mean	Standard Deviation	Min.	Max.	
Pioneer Startups							
Dependent Variable	Log Market Capitalization per Labor	184	.7488	.1716	.2470	1.0705	
	Log of Sales per Labor	188	.6688	.1292	.2555	.9031	
	Net Income	194	.6969	2.1215	-2.4302	16.2229	
	Gross Profits	194	.2943	.5726	-.0005	4.1401	
Independent Variables	Quality Shock	160	.2460	.5148	-.8444	1.9390	
	Industry Shock	Industry GDP OLS Residual	224	-.0001	.0339	-.1079	.0934
		Industry DOW OLS Residual	224	.0024	.1195	-.2005	.1758
	Log of Total Year	210	1.0710	.2486	0	1.4313	
	Total SIC Segment	188	2.2340	.9693	1	7	
	Total M&A	174	2.4425	4.3095	0	31	
	Log of Employees	188	4.8522	.6074	3.2304	5.8147	
	Early Competitors						
Dependent Variable	Log Market Capitalization per Labor	3,417	.5920	.1869	-.8675	1.7925	
	Log of Sales per Labor	3,597	.5927	.1917	-2.2027	1.0886	
	Net Income	3797	.2849	1.5526	-11.7059	3.5138	
	Gross Profits	3797	.1890	.6805	-.2392	8.7960	
Independent Variables	Quality Shock	3004	.2653	.5844	-3.6810	2.8073	
	Industry Shock	Industry GDP OLS Residuals	4,886	.0001	.0345	-.1079	.0934
		Industry DOW OLS Residuals	4,886	.0024	.1193	-.2005	.1758
	Log of Total Year	4701	1.3986	.4159	0	2.2175	
	Total SIC Segment	3831	2.5741	1.6117	1	10	
	Total M&A	6423	.6274	2.4333	0	100	
	Log of Employees	3628	4.2602	1.0232	1	7.1408	

Table 4. Panel FE: The Effects of Quality and Market Shocks on the Performances of the Pioneer Rapid-Growth Startups and Their Early Competitors

	Pioneer Rapid-Growth Startups			
	Market Cap.	Sales	Gross Profit	Net Income
Constant	.2739*** (.0770)	.4979*** (.0535)	-.8291** (.4124)	-.6952 (1.9640)
$qs_{i,t}$	.1089*** (.0294)	.0908*** (.0223)	.2008** (.0765)	.3613 (.3199)
$ms_{i,t}$	.2813 (.2098)	.0306 (.1256)	-1.0632 (1.5117)	-2174 (5.3580)
$\ln yr_{i,t}$	.3198*** (.0999)	.4099*** (.0648)	.6949** (.2731)	2.7698** (1.2100)
$div_{i,t}$	.0183* (.0098)	.0088 (.0057)	.1687* (.0939)	.6483* (.3870)
$ma_{i,t}$	.0114*** (.0029)	.0044*** (.0013)	.0703*** (.0122)	.2484*** (.0778)
$\ln emp_{i,t}$	-	-	-.0032 (.1168)	-.5382 (.6146)
Adj. R ²	.6043	.6653	.6206	.4964
Obs.	139	140	140	140
	Early Competitors			
	Market Cap.	Sales	Gross Profit	Net Income
Constant	.3603*** (.0205)	.5284*** (.0132)	-.8714*** (.0469)	-1.2605*** (.1375)
$qs_{i,t}$	.0109* (.0057)	.0765*** (.0095)	-.0183* (.0096)	-.0626** (.0295)
$ms_{i,t}$	.3956*** (.0920)	.0190 (.0601)	.1737 (.1317)	1.2215*** (.3326)
$\ln yr_{i,t}$	.0728*** (.0080)	.0871*** (.0055)	-.0106 (.0131)	.0132 (.0389)
$div_{i,t}$	.0102*** (.0020)	.0109*** (.0014)	.0590*** (.0110)	.1594*** (.0378)
$ma_{i,t}$	.0031*** (.0011)	.0020*** (.0007)	.0030** (.0015)	.0032 (.0026)
$\ln emp_{i,t}$	-	-	.1871*** (.0099)	.2196*** (.0237)
Adj. R ²	.1942	.3768	.4279	.2113
Obs.	2,744	2,816	2,816	2,816

1. *, **, and *** indicate significance at 10%, 5%, and 1% levels.

2. The numbers in the parentheses are robust consistent standard errors correcting heteroscedasticity and autocorrelation.

3. Firm, time, and industry dummies are not reported.

Table 5. Panel FE: The Contribution of Quality and Market Shocks on the Performance of Pioneer Rapid-Growth Startups Compared with Their Early Competitors

		Market Cap.	Sales	Gross Profit	Net Income
Constant		.3531*** (.0194)	.5318*** (.0125)	-.1515*** (.0077)	-1.3108*** (.1420)
$qs_{i,t}$		.0108* (.0057)	.0767*** (.0094)	-.0026* (.0015)	-.0660** (.0296)
$ms_{i,t}$		.3969*** (.0921)	.0185 (.0601)	.0336 (.0220)	1.2516*** (.3405)
$\ln yr_{i,t}$		.0763*** (.0080)	.0897*** (.0054)	-.0002 (.0021)	.0258 (.0395)
$div_{i,t}$		.0107*** (.0020)	.0112*** (.0013)	.0096*** (.0017)	.1662*** (.0373)
$ma_{i,t}$		.0031*** (.0011)	.0020*** (.0007)	.0004* (.0002)	.0016 (.0025)
$\ln emp_{i,t}$		-	-	.0329*** (.0016)	.2385*** (.0243)
Pioneer Startups	$qs_{i,t}$	.1171*** (.0277)	.0560** (.0218)	.0729*** (.0140)	.8003*** (.2703)
	$ms_{i,t}$	-.1758 (.2917)	-.0360 (.1649)	-.2696 (.2930)	-1.6719 (5.9792)
	$\ln yr_{i,t}$	.1510*** (.0272)	.0829*** (.0168)	.0806*** (.0221)	1.8772*** (.5087)
	$div_{i,t}$	-.0098 (.0120)	-.0050 (.0067)	.0131 (.0155)	.2631 (.3764)
	$ma_{i,t}$	.0111*** (.0034)	.0042*** (.0016)	.0141*** (.0025)	.2571** (.0833)
	$\ln emp_{i,t}$	-	-	-.0321*** (.0095)	-.5982*** (.2282)
Adj. R ²		.2329	.3857	.4446	.2515
Obs.		2883	2956	2956	2956

1. *, **, and *** indicate significance at 10%, 5%, and 1% levels.

2. The numbers in the parentheses are robust consistent standard errors correcting heteroscedasticity and autocorrelation.

3. Firm, time, and industry dummies are not reported.

Table 6-1. Panel Time, Firm, and Industry FE for Testing Four Scenarios: HH_{GDP}^{TFP} , HL_{GDP}^{TFP} , LH_{GDP}^{TFP} , and LL_{GDP}^{TFP} represent Scenarios 1, 2, 3, and 4 with the Combinations of Quality shock and Market Shock Measured by Firm TFP and Industry GDP OLS Residuals Respectively.

	Pioneers			Early Competitors		
	Market Cap.	Sales	Gross Profit	Market Cap.	Sales	Gross Profit
Constant	.3093*** (.1017)	.4731*** (.0496)	-1.4037** (.5394)	0.4037*** (0.0187)	.4554*** (.0161)	-1.1737*** (.0776)
HH_{GDP}^{TFP}	.1348*** (.0382)	.0911*** (.0280)	.0314 (.0748)	0.0439*** (0.0090)	.0462*** (.0086)	.0059 (.0262)
HL_{GDP}^{TFP}	.1225*** (.0401)	.0754** (.0305)	.1423* (.0752)	0.0259*** (0.0094)	.0484*** (.0086)	-.0362 (.0239)
LH_{GDP}^{TFP}	-.0323 (.0356)	-.0340 (.0290)	-.1059 (.0970)	0.0257** (0.0109)	.0016 (.0100)	-.0155 (.0240)
LL_{GDP}^{TFP}	-	-	-	-	-	-
$\ln yr_{i,t}$	.2863*** (.0892)	.4266*** (.0629)	.8368** (.3447)	.0781*** (.0080)	.1018*** (.0078)	.0322** (.0155)
$div_{i,t}$	.0144* (.0084)	.0128** (.0054)	.1199 (.0754)	.0137*** (.0017)	.0143*** (.0015)	.0702*** (.0118)
$ma_{i,t}$	.0108*** (.0026)	.0042*** (.0012)	.0562*** (.0131)	.0042*** (.0015)	.0026*** (.0010)	.0073* (.0039)
$\ln emp_{i,t}$	-	-	.0559 (.1628)	-	-	.2480*** (.0177)
Adj. R ²	.6410	.6512	.5681	.1672	.2248	
Obs.	166	168	168	3,274	3,339	3,355

1. *, **, and *** indicate significance at 10%, 5%, and 1% levels.

2. The numbers in the parentheses are robust consistent standard errors correcting heteroscedasticity and autocorrelation.

3. Firm, time, and industry dummies are not reported.

Table 6-2. Panel Time, Firm, and Industry FE for Testing Four Scenarios: HH_{DOW}^{TFP} , HL_{DOW}^{TFP} , LH_{DOW}^{TFP} , and LL_{DOW}^{TFP} represent Scenarios 1, 2, 3, and 4 with the Combinations of Quality shock and Market shocks Measured by Firm TFP and Industry GDP OLS Residuals Respectively.

	Pioneers			Early Competitors		
	Market Cap.	Sales	Gross Profit	Market Cap.	Sales	Gross Profit
Constant	.2823*** (.0953)	.4452*** (.0508)	-1.5881*** (.5267)	.4170*** (.0179)	.4562*** (.0154)	-1.2143 (.0838)
HH_{DOW}^{TFP}	.1519*** (.0450)	.1114*** (.0279)	.1554 (.0970)	.0524** (.0266)	.0237 (.0226)	-.0182 (.0819)
HL_{DOW}^{TFP}	.1387*** (.0454)	.0960*** (.0292)	.3263** (.1243)	.0244*** (.0068)	.0467*** (.0065)	.0336* (.0190)
LH_{DOW}^{TFP}	.0098 (.0391)	.0181 (.0313)	.1749* (.0902)	.0000 (.0415)	-.0044 (.0414)	-.1534 (.1126)
LL_{DOW}^{TFP}	-	-	-	-	-	-
$\ln yr_{i,t}$	.2893*** (.0894)	.4320*** (.0619)	.9439*** (.3579)	.0784*** (.0080)	.1016*** (.0078)	.0309** (.0156)
$div_{i,t}$	.0150* (.0086)	.0138** (.0058)	.1079 (.0705)	.0137*** (.0017)	.0143*** (.0015)	.0701*** (.0118)
$ma_{i,t}$	.0109*** (.0026)	.0043*** (.0012)	.0546*** (.0127)	.0042*** (.0015)	.0027*** (.0010)	.0074* (.0040)
$\ln emp_{i,t}$	-	-	.0400 (.1611)	-	-	.2486*** (.0177)
Adj. R ²	.6394	.6482	.5783	.1647	.2250	.3481
Obs.	166	168	168	3,274	3,339	3,355

1. *, **, and *** indicate significance at 10%, 5%, and 1% levels.

2. The numbers in the parentheses are robust consistent standard errors correcting heteroscedasticity and autocorrelation.

3. Firm, time, and industry dummies are not reported.

Figure 1. Market Capitalization

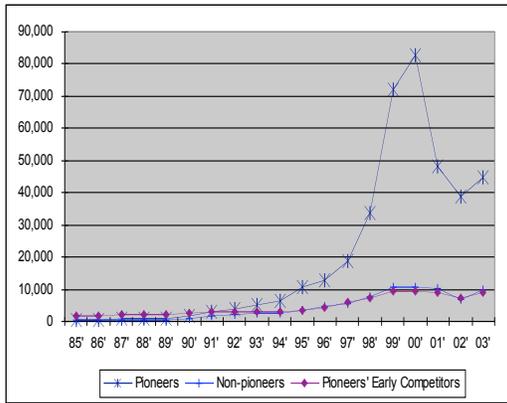


Figure 2. Sales

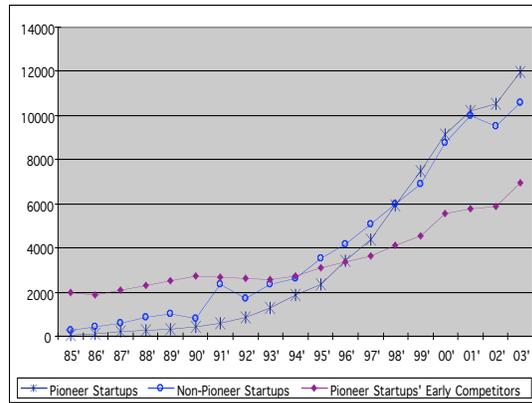


Figure 3. Employee

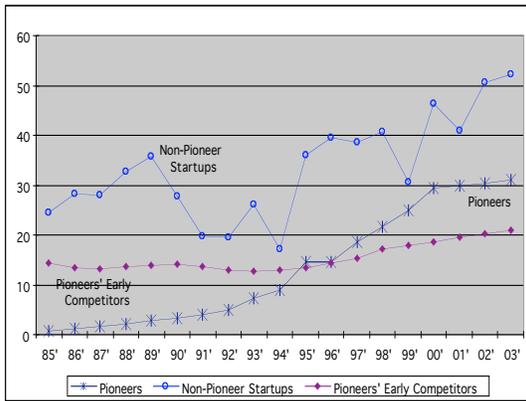


Figure 4. ROA & ROI

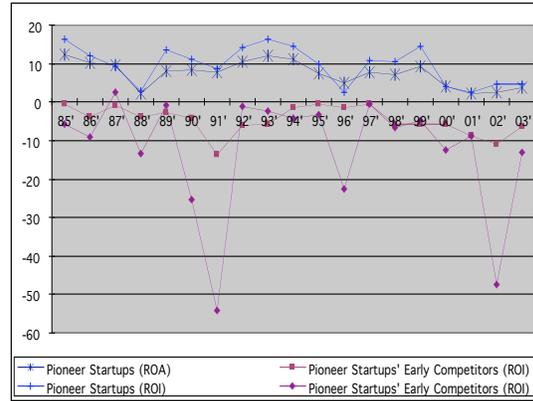


Figure 5. Capital Expenditure

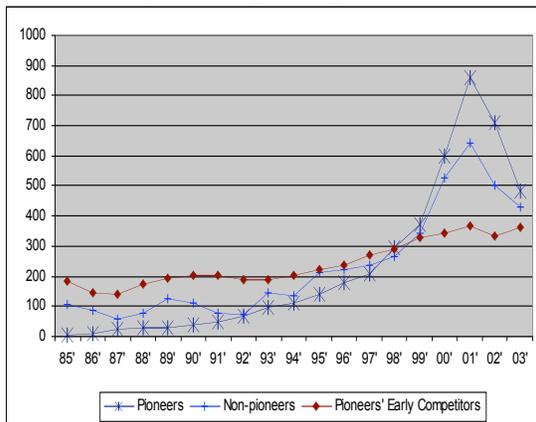
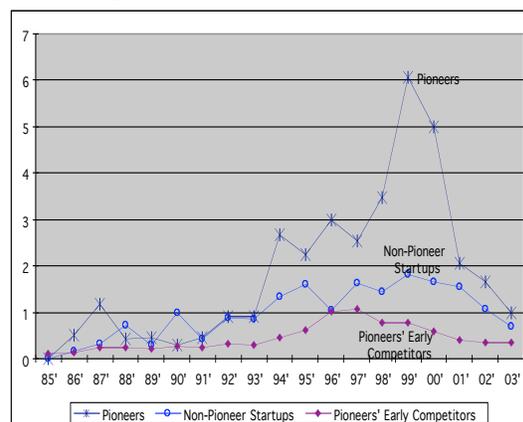


Figure 6. Total M&A



Appendix

Table A. The Niche Markets of Pioneer Rapid-Growth Startups

Niche Marketer	Niche Market	Incumbent Market	Competitors Established Earlier than Niche Markets	
			Firm	Business Area
United Auto Group (1990)	Pioneering nationwide auto dealer chain in highly fragmented and localized automobile sales industry: For implementing nationwide service, it expanded size through M&As. This strategy enabled the firm to save costs by sharing inventories and cross-selling to customers. After its success, Asbury Automotive Group (1995), Group 1 Automotive (1995), AutoNation (1997), and Sonic Automotive (1997) mimicked the business model of United Auto Group; Eventually all the firms became new Fortune 500ers in 2003	Local Auto Dealers	-	-
EMC (1979)	Pioneering redundant array of independent disks (RAID) storage for large IBM computers; it pioneered new-type small sized hard disks with large cache memories for IBM mainframes: EMS introduced innovative hard disks that were quicker in data access and cheaper than other contemporary products: its small sized hard disk dramatically decreased the size of computer mainframes	Storage Market for IBM Mainframes	IBM (1911)	-
			Hewlett-Packard (1939)	-
Microsoft (1975)	Pioneering personal computer operating system (DOS) for IBM compatible PCs	Network System Market	IBM (1911)	-
Oracle (1977)	Pioneering database management systems and network servers workable with IBM-compatible mainframes	Database Management Market	IBM (1911)	-
			Microsoft (1975)	-
Calpine (1982)	Pioneering geothermal power generation in the U.S.: Calpine owns 19 of the 21 power plants among the largest geothermal facilities	Power Generation; Electricity Retail & Wholesale Market	Reliant Energy (1976)	Retail power supplier using fossil-fueled capacity
			American Electric Power (1906)	AEP trades electricity, natural gas. Other operations include natural gas transportation, storage, and telecommunications infrastructure services.
			Duke Energy (1904)	The top midstream gas company
			TXU (1945)	Gas and electricity retailing market

Starbucks (1984)	Pioneering specialty coffee chain targeting premium gourmet coffee market	Canned and Instant Coffee Market	The Procter & Gamble (1873)	The number one US maker of household products
			Nestle (1866)	The largest food company in the U.S.; Nestle is the world leader in coffee (Nescafe) and bottled water (Perrier); Its largest global brands include Buitoni, Friskies, Maggi, Nescafe, Nestea, and Nestle
			7-Eleven (1927)	Convenience store market
United Health Group (1977)	Pioneering private HMO: Congress and the Nixon administration approved HMO model of D.R. Ellwood who is called the father of HMO; United Health Group became the first private HMO in 1977	Non Private Health Care	Aetna (1853)	Managed care benefits, dental, pharmacy, vision, and group insurance coverage
			Health Net (1960)	Managed health care and other medical coverage
			Humana (1961)	Humana provides health plans and related services primarily through HMO's and PPO's; Humana provides health care coverage to military personnel and their families through its TRICARE unit
Oxford Health Plans (1984)	Pioneering new service concept in health care market: It is the first firm introduced freedom plan where members could use doctors outside the system with higher deductibles and co-payments.	General Health Care	Aetna (1853)	-
			Cigna (1982)	Group accident, life and disability insurance as well as behavioral health, vision, and dental insurance
			United Health Group (1977)	-
Health South (1984)	Pioneering outpatient rehabilitative health care service: Health South aimed "half hospital and half upscale sports club" niche market specializing back problems and sports injuries	General Health Care	Rehab Cab (1982)	Rehabilitation program management: clients include hospitals, long-term-care units, and outpatient facilities throughout the U.S.
			Tenet Healthcare (1969)	Acute care hospitals chain
			Res-Care (1962)	Physical and mental disabilities care
Cisco Systems (1984)	Pioneering networking router: Before Cisco developed networking router, costly switches were widely used for networking: Cisco's innovative routers successfully created easier, cheaper,	Ethernet Switch Market	Nortel Network (1914)	The provider for switching, wireless, and optical systems for telephone carriers and data service

	and compact networking distributor market		ECI Telecom (1961)	Optical transport and switching equipment, broadband network access systems, and computer telephony products
			3Com (1979)	LAN-level infrastructure gear (hubs, switches, and servers), Internet telephony systems, and wireless networking equipment
			Novell (1983)	Network, system integration, and storage system
Qualcomm (1985)	Pioneering CDMA technology for wireless communications equipment and satellite ground station: royalties from CDMA technology licenses make up nearly a quarter of the company's sales in 2003; The major IT companies such as Samsung, Kyocera, Motorola, and LG Electronics are adopting CDMA technology	Satellite Communications	Nokia (1865)	Mobile phones, multimedia, networks, and enterprise solutions; Nokia is using GPRS (General Packet Radio Service) which is European standard
			Texas Instruments (1930)	The market leader in digital signal processors
			Motorola (1924)	The second largest wireless handsets manufacturer; Personal communications products like cell phones and two-way radios
Amgen (1980)	Pioneering new anti-anemia drugs using molecular biology; The FDA approved the safety of Epogen, its major product, in 1989; The major drug distributors like ARANESP, AmerisourceBergen, Cardinal Health, and McKesson purchases from Amgen	Pharmaceuticals: Anti-anemia	Bayer (1910)	Pharmaceuticals and over-the-counter medicines, medical diagnostic equipment, and chemicals
			Baxter (1918)	Medicine manufacturer for cancer, kidney disease, immune deficiencies, and other diseases
			Wyeth (1926)	Pharmaceuticals business, anti-infective vaccines
Solectron (1977)	Pioneering outsourcing market for electronic systems and subsystems for computers; For cost saving, high-tech giants including Hewlett-Packard, Nortel, Cisco, Apple, Ericsson, and IBM have outsourced from Solectron; Its innovative technologies create entirely new outsourcing niche market; Solectron was awarded the prestigious Malcolm Baldrige Award twice in 91' and 97'	Electronics Components Market	Raptron Electronics (1973)	Assembling and testing printed circuit boards and providing display engineering and integration services

Staples (1985) Office Depot (1985)	Both Staples and Office Depot are the pioneers of office goods specialty retailing market; before they created the niche market, large firms bought in bulk from dealers.	General Retailers & Small Office Supply Stores	Kinko's (1978)	Copy service, groceries, and office supplies
			BJ's Wholesale Club (1984)	Membership warehouse club
			Wal-Mart (1945)	General retailer
			K-Mart (1916)	General retailer
Amazon. Com (1994)	Pioneering online book store; Amazon introduced one-click shopping, customer reviews, e-mail order verification, quick delivery; Its on-line niche market could discriminate from Barnes and Nobles by 'easy to search' and price advantage through tax exemption	Off-line bookstores	Barnes and Nobles (1983)	The biggest off-line book seller and video game retailer; Gamestop is its subsidiary
			Borders (1994)	The 2 nd largest bookstores behind Barnes and Nobles

Table B. GDP Shares by Industry

Fortune's Industry Classification	SCI	Industry Classification By the Bureau Of Economic Analysis	New Entrant	GDP Share		Growth Rate
				1987	2001	1987-2001
Advertising	731	Advertising	2	.32% (18,488)	.43% (42,065)	181.6%
Aerospace & Defense	120	Military Facility	2	.02% (1,026)	.001% (184)	-82.1%
Airlines	451	Domestic & International Air Passenger Service	7	1.39% (81,580)	1.33% (131,021)	6.6%
	452	Domestic & International Air Mail, Freight And Express Other Air Transportation Services				
Apparel	513	Apparel, Piece Goods, And Notions	3	.38% (22,089)	.33% (32,012)	44.9%
Automotive Retailing	551	New And Used Car Dealers	5	1.32% (77,660)	1.52% (149,297)	92.2%
	552	Used Car Dealers				
	5559	Other Vehicle Dealers				
Beverages	518	Beer, Wine And Distilled Beverages	6	.22% (12,925)	.16% (16,050)	24.2%
Chemicals	516	Chemical & Allied Products	8	.23% (13,307)	.20% (20,126)	51.2%
	1479	Chemical And Fertilizer Mineral Mining				
Commercial Banks	60	Mortgage Bankers And Brokers	23	5.48% (321,562)	4.38% (430,536)	33.9%
Diversified Financials	611	Personal Credit Institutions				
	614	Business Credit Institutions				
	615	Federally-Sponsored Credit Agencies				
Savings Institutions	616	Unpriced Depository Services (Imputation) Priced Depository Services (Receipts)	2			
Computer and Data Services	737	Computer Programming, Data Processing, And Related Services	5	.95% (55,611)	3.45% (339,682)	51.8%
Computer Software			3			
Computer Peripherals	504	Professional And Commercial Equipment (Including Computers)	2	.38% (22,535)	1.71% (167,731)	644.3%
Computers and Office Equipment	508	Machinery, Equipment, And Supplies (Including Computers)	1	.92% (53,725)	.87% (85,347)	58.9%
Diversified Outsourcing Services	738 834	Miscellaneous Business Services Job Training And Vocational Rehab. Services	3	1.08% (63,511)	1.56% (153,432)	141.6%
Energy	1311	Natural Gas Extraction	8	1.12% (65,438)	.86% (84,908)	29.75%
	1321	Natural Gas Liquids				
	138	Oil And Gas Field Services				
Engineering And Construction	503 871	Engineering, Architectural, And Surveying Services Construction	5	1.44% (84,386)	1.40% (138,157)	63.7%
Entertainment	781-4	Motion Picture Production, Distribution, & Allied Services	4	2.33% (136,862)	2.42% (238,415)	74.2%
	792	Motion Picture Theaters				
	799	Video Tape Rental				
	483	Theatrical Producers, Bands, Orchestras, And Entertainers				
	484	Miscellaneous Amusement And Recreation Services Ex Membership Sports And Recreation Clubs Radio And Tv Broadcasting, Except Cable Tv Cable Tv				
Food Consumer Products	01	Food Grains	1	2.18% (127,967)	1.58% (154,929)	21.1%
	134	Vegetables				
	016	Fruits And Tree Nuts				
	17	Other Crops				
	21	Meat Animals				
	24 25	Dairy Products Poultry Products				
Food Services	5812	Eating Places	4	3.78%	3.05%	35.2%

	5813	Drinking Places		(221,639)	(299,543)	
Wholesales : Food & Grocery	541 542-9	Grocery Stores Other Food Stores	8	1.99% (116,985)	1.27% (124,754)	6.6%
Food and Drug Stores	591	Drug Stores And Proprietary Stores	10	.36% (20,936)	.34% (33,598)	6.5%
Forest and Paper Products	511	Paper And Paper Products	1	.24% (13,900)	.25% (24,160)	73.8%
Furniture	502	Furniture And Home Furnishings	1	.20% (11,502)	.18% (17,410)	51.4%
General Merchandisers	531 541 5942	Department Stores Grocery Stores Miscellaneous General Merchandise Stores	13	2.72% (159,300)	2.21% (217,275)	36.4%
Specialty Retailers	5942 553 5712 5713 5714-9 5722	Book Stores Auto And Home Supply Stores Furniture Stores Floor Covering Stores Other Home-Furnishings Stores Household Appliance Stores	25			
Wholesalers: Diversified	566 561 562-5 566 5722	Shoe Stores Men's & Boys' Clothing Stores Women's And Children's Clothing And Accessories Shoe Stores	5	2.22% (130,310)	2.66% (261,949)	78%
Wholesalers : Health Care	5733 5944 5941 5931 533 5943,9 5992-4	Household Appliance Stores Music Stores Jewelry Stores Sporting Goods And Bicycle Shops Remainder Durables And Optical Variety Stores Liquor Stores Remainder Non-durables	4			
Wholesalers : Electronics & Office Equipment	5732 504	Radio And TV Stores Professional & Commercial Equipment (Including Computers)	8	.40% (28,871)	1.90% (186,500)	546%
Health Care	110232 801-3 802 804 805 806 807-9	New Residential Health Institutions And Other Health Related Facilities Offices Of Physicians, Dentists, Osteopathic Physicians, And Other Health Practitioners Offices And Clinics Of Dentists Offices And Clinics Of Health Practitioners, Nec Nursing And Personal Care Facilities Hospitals Medical And Dental Laboratories, Outpatient Care Facilities, And Health And Allied Services, N.E.C.	21	8.99% (527,172)	8.21% (807,647)	53.2%
Home Equipment, Furnishings	120100 502	Residential Structures Furniture And Home Furnishings	1	.33% (19,447)	.17% (16,881)	-13.2%
Home Builders	110101 110102 110103 110104 110105 110107 110501 120202	New Residential 1 Unit Structures (Non-farm) New Residential 2-4 Unit Structures (Non-farm) New Residential Garden Apartments New Residential High-Rise Apartments New Residential Additions And Alterations (Non-farm) New Dormitories And Other Group Housing New Farm Housing Units, Additions, And Alterations Farm Residential Buildings	6	3.08% (180,872)	2.04% (200,604)	1.9%
Hotels, Casinos, And Resorts	701,4 702 703	Hotels, Motels, And Tourist Courts Rooming And Boarding Houses Camps And Recreational Vehicle Parks	6	1.36% (79,950)	1.05% (103,705)	29.7%

Household and Personal Products	509 514 5722	Miscellaneous Durable Goods (Including Sporting Goods And Toys) Groceries & Related Products Household Appliance Stores	1	1.54% (90,060)	1.49% (146,889)	63.1%
Industrial and Farm Equipment	110502 120203 508	New Farm Service Facilities Farm Service Facilities, Repair And Maintenance Machinery, Equipment, And Supplies (Including Computers)	2	.98% (57,213)	.91% (89,859)	57.1%
Insurance: Life and Health (Mutual)	631	Life Insurance Sold By Life Insurance Companies Accident & Health Insurance And Medical Service- Plans Sold By Life Insurance Companies	7	.75% (44,036)	1.36% (133,405)	202.9%
Insurance : Life and Health (Stock)			10			
Insurance: Property and Casualty (Mutual)	632	Automobile Insurance Workers' Compensation Insurance Fire, Marine And Other Casualty & Property Insurance Accident & Health Insurance And Medical Service Plans	2	1.36% (79,936)	1.65% (161,981)	102.6%
Insurance : Property and Casualty (Stock)	633		17			
Mail, Package & Freight Delivery	451,2 596 733 4215	Domestic & International Air Mail, Freight And Express Non-store Retailers And Mail Order Mailing Reproduction, Commercial Art, Photography, Etc. Courier Services, Except By Air	4	1.37% (80,438)	2.04% (200,817)	149.7%
Medical Products and Equipment	110232 807-9	New Residential Health Institutions And Other Health Related Facilities Medical And Dental Laboratories, Outpatient Care Facilities, And Health and Allied Services, N.E.C.	2	.7% (40,904)	1.03% (101,018)	146.9%
Metals	1081 1241	Metal Mining Services Metals And Minerals, Except Petroleum	3	.28% (16,639)	.20% (19,967)	5.1%
Mining, Crude Oil Production	1311 1321 1241	Crude Petroleum Extraction Natural Gas Extraction Natural Gas Liquids Mining Services	2	1.88% (110,204)	1.06% (104,178)	-5.5%
Motor Vehicles And Parts	501	Motor Vehicles, Parts, And Supplies	6	.72% (42,060)	.58% (56,564)	34.5%
Network and Other Communications Equipment	4812 4813 4822& 4899	Radiotelephone Communications Telegraph And Other Message Communications And Communication Services N.E.C. Cable TV	4	.46% (27,028)	2.27% (223,758)	727.9%
Oil and Gas Equipment, Services	110304 507 120207	New Gas Utility Facilities Hardware, Plumbing And Heating Equipment And Supplies Gas Utility Facilities, Repair And Maintenance	2	.34% (19,873)	.29% (28,780)	44.8%
Packaging, Containers	441-9 4491 473 474,8	Water Transportation, Exc. Marine Cargo Handling And Marinas Marine Cargo Handling Freight Transportation Arrangement Other Transportation Services	3	.65% (38,341)	.69% (67,561)	76.2%
Payroll Services	738	Miscellaneous Business Services	1	1.08% (63,511)	1.45% (142,179)	123.9%
Petroleum Refining	517	Petroleum And Petroleum Products	4	.46% (26,823)	.28% (27,173)	1.3%
Pharmaceuticals	512	Drugs, Proprietary And Sundries	3	.21% (12,606)	.45% (43,933)	248.5%
Pipelines	120208 46 110305	Petroleum Pipeline Facilities, Repair And Maintenance Pipelines, Except Natural Gas New Petroleum Pipelines	2	.30% (17,731)	.16% (15,601)	-12%
Railroads	110302	New Railroad Structures And Facilities Railroad Freight Transportation	4	.03% (1,896)	.03% (2,555)	34.8%

	40	Railroad Passenger Transportation Railroad Facilities				
Real Estate	N/A	Real Estates ²	2	11.69% (685,578)	1.39% (1,021,996)	49.1%
Scientific, Photographic And Control Equipment	733 722	Mailing Reproduction, Commercial Art, Photography, Etc. Photographic Studios, Portrait	1	.08% (4,555)	.07% (6,987)	53.4%
Securities	6211 6231	Security Brokers And Dealers Security Exchanges	6	1.13% (66,567)	3.15% (309,545)	365%
Semiconductors and Other Electronic Components	N/A	Electronic And Other Electric Equipment ²	3	.92% (53,952)	3.41% (335,150)	512.2%
Tele- Communications	4813 110301 120204	Telephone Communications, Exc. Radiotelephone New Telecommunication Facilities Telephone And Telegraph Facilities	16	2.53% (148,439)	3.33% (327,964)	12.9%
Temporary Help	738	Miscellaneous Business Services	2	.66% (38,556)	1.36% (133,765)	246.9%
Textiles	N/A	Textile Mill Products ²	1	.38% (22,077)	.21% (20,708)	-6.2%
Tobacco	132	Tobacco Products ²	2	.38% (22,545)	.05% (4,980)	-77.9%
Trucking, Truck Leasing	4212-4	Trucking And Warehousing Vehicle Leasing (Operating Lease Receipts)	5	2.20% (129,208)	3.10% (304,634)	135.8%
Utilities: Gas & Electric	120206 120207	Electric Utility Facilities, Repair And Maintenance Gas Utility Facilities, Repair And Maintenance	32	3.89% (228,115)	3.00% (295,053)	29.3%
Waste Management	120210 494-7	Sewer Facilities, Repair And Maintenance Water, Sanitary, Steam And Irrigation Services	2	.34% (19,719)	.36% (35,429)	79.7%
Miscellaneous	514 751 7291	Groceries And Related Products Automotive rental and leasing, without drivers Tax return preparation services	3	1.42% (83,401)	1.31% (128,729)	53.3%
Maximum			35	11.69% (685,578)	1.39% (1,021,996)	727.9%
Minimum			1	.02% (1,026)	.001% (184)	-82.1%
Mean			6.37	1.48% (86,694.2)	1.60% (157,352.2)	114.5%
Sum of GDP Share				41.20%	47.23%	
Total GDP (Million \$)				5,867,039	9,836,201	

1. The numbers in the parentheses are GDP (million \$).

2. GDP is 1996 constant dollar based from 'Gross Output by Detailed Industry', *Bureau of Economic Analysis*.

From Entrepreneurial Intention to Action Initiation

Marco van Gelderen

This paper offers a conceptual investigation of why people sometimes unintentionally do not act on their entrepreneurial intentions. We propose that risk, aversion, and uncertainty on the action level can affect emotion and action regulation in such a way that no action is taken, even when risk, aversion, and uncertainty were accounted for when forming an intention on the business or the opportunity level. In addition, intention instability, lack of intention elaboration, a lack of excitement, and competing goals can all have inaction as a result. Strategies are derived for actors to overcome the intention – action gap.

Keywords: Entrepreneurial-intentions; entrepreneurial-action; intention-action-gap.

Introduction

We all know people, perhaps even including ourselves, who talk about starting a business but never get around to doing it. Typically a situational constraint is cited to explain the lack of action: now is not the right time in the market place, I want to gain work experience first, I need to save money first, I first want to pay the mortgage, I am too busy now, and so forth. A gap between entrepreneurial intentions and actions is to be expected by definition, as intentions precede actions. In many cases people have good reasons to delay action (Brenner, Pringle, and Greenhaus, 1991; Dimov, 2007). If the entrepreneurial ambitions would indeed be realized at a later stage, or, alternatively, if newly emerged constraints or changed preferences would lead to abandonment of the intention, there would be no conflict between aims and the lack of action. However, if no action is taken, in spite of persisting intentions, goals and actions appear to be at odds. A lack of action in these cases means that many potentially fruitful entrepreneurial initiatives will never see the light of day.

This paper offers a conceptual investigation of why people unintentionally do not act on their entrepreneurial intentions. The ultimate aim is to derive strategies for actors to overcome the intention – action gap. We propose that risk, aversion, and uncertainty *on the action level* can affect emotion and action regulation in such a way that no action is taken, even when risk, aversion, and uncertainty were accounted for when forming an intention on the business or the opportunity level. In addition, intention instability, lack of intention elaboration, a lack of excitement, and competing goals can all have inaction as a result. We will argue that all these factors are related to how intentions are currently operationalised in research. If actions would be predicted by intention assessments that occur at multiple points in time, on the action level (rather than on the goal or opportunity level), and that include the degree of elaboration, accompanying affect (notably the levels of excitement, eagerness and enthusiasm), and the strength of competing intentions, the intention-action gap would be smaller as well as better predicted.

We will refer to the person having entrepreneurial intentions as the EI (entrepreneurial intender), and to the intention – action gap that unwillingly occurs as the UIG (unintended intention – action gap). We will refer to entrepreneurship in the sense of starting an independent business. We are well aware that multiple definitions of entrepreneurship exist. Our choice is explained by the consideration that starting an independent business is the operationalisation of entrepreneurial intentions in the research so far. To a large extent, our exposition also applies to entrepreneurship defined otherwise. This paper will proceed as

follows. First we discuss the UIG in general and in the field of entrepreneurship in particular. Because we will explain inaction as an outcome of action regulation and emotion regulation, we will describe these self-regulatory processes in the next two paragraphs. Then, we will turn to factors that cause action and emotion regulation to have inaction as a result. Finally, we provide remedies for each of these factors, that help in overcoming the intention – action gap.

The unintentional intention – action gap (UIG)

It's not just anecdotic evidence that points to the UIG. Research on entrepreneurial intentions has typically focussed on the prediction and explanation of intentions, rather than subsequent behavior, so little insight can be gained here. But research on nascent entrepreneurship in the U.S. shows sizeable amounts of people lingering for many years in the “still trying” phase, some even more than 30 (Reynolds, 2000; Gartner and Cartner, 2003). Already in 1996 it was shown by Cartner, Gartner and Reynolds that even people who abandoned the start-up process performed more gestation activities than those perennially “still trying”. In order to get into the research sample, these people must have performed at least a few gestation activities, but apparently they did little else.

The intention – action gap is researched in many academic fields, notably health psychology. Good intentions abound in this life domain. People intend to exercise, take their medication, eat healthier, or perform other health promoting or illness preventing behaviors, but never get around to doing it. For exercise behavior, meta-analyses show about a quarter of the variance of actual exercise behaviour can be predicted by intentions to exercise (Mohiyeddini et al, 2009). In other life domains a similar picture can be drawn. In a meta-analysis of meta-analyses, Sheeran (2002) found that across a variety of domains, intentions predict on average 28% of variance in subsequent behavior. Comparable figures were obtained in meta-analyses by Armitage and Connor (2001) and Sutton (1998). While in terms of effect sizes this is a strong effect (Sheeran, 2002), it also shows that a sizeable variation in behavior is left unpredicted. Sheeran (2002) also provides evidence that the intention – action gap is mostly caused by inclined abstainers, rather than by disinclined actors.

It is speculative whether these findings apply to the intention to start a business, as there is an absence of data regarding the entrepreneurial intention – action relationship. Health goals and enterprising goals share that they are medium term goals that are effortful to enact, they differ in that the former are for most people an avoidance goal (one exercises in order to prevent poor health), whereas the latter are usually, at least in developed countries, approach goals (Reynolds, 2000). Moreover, relative to other domains where the relation between intention

and behavior has been studied, entrepreneurship is characterized by uncertainty, risk, novelty, change, complexity, resource constraints, and financial as well as psychological ownership (Baron, 1998; Gibb, 1993). Enterprising behavior is self-starting and requires initiative (Fay and Frese, 2001) and pro-activeness (Parker et al., 2000) to conduct the multiple gestation activities needed to start a business.

Even though the relationship with subsequent behavior has been under-researched, the entrepreneurial intentions literature is still instructive and relevant for the study of the UIG. Two models dominate the literature. The first is Ajzen's (1988, 1991) Theory of Planned Behaviour (TPB), which explains intentions by means of attitudes, perceived behavioral control (PBC), and subjective norms. The second model is proposed by Shapero and Sokol (1982), and explains EI on the basis of perceived desirability, perceived feasibility and the propensity to act. Thus, the models share that intentions are predicted by willingness and capability. Both models have consistently received empirical support. In a direct comparison of the two models, Krueger, Reilly and Carsrud (2000) conclude that both models provide satisfactory predictions (Shapero and Sokol model adj. r sq. 0.41 ($p < 0.00$) and TPB model adj. r sq. 0.35 ($p < 0.00$)). In the remainder of this article, we will refer to the TPB, as this model has been applied extensively and widely across settings and domains, but our arguments equally apply to the model proposed by Shapero and Sokol.

When analysing the gap between intention and action, we will disregard the factors that explain intention. People are not inactive because they think that starting and having one's own business is not desirable or not feasible – if so, they would not have formed the intention in the first place. Perceived behavioral control in the TPB is conceptualised to affect intention as well as behavior. In the explanation of behavior, PBC is thought to be a proxy for actual control. Lack of PBC on the action level is indeed a contributor to the (goal, opportunity) intention – action gap. But this is a different variable. In those cases where it is clear beforehand that constraints make entrepreneurial actions impossible, one would expect no intentions to emerge (as intentions are also explained by PBC). Here, we are interested in the phenomenon that the intention persists, yet no action is taken. Assuming that people have good reasons for their goals and intentions, looking at these reasons will not explain the intention – action gap.

Not just empirical work in the field of entrepreneurship has ignored the intention-action gap, conceptual work has done just the same. In a influential recent article titled "Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur", McMullen and Shepherd (2006) provide a synthesis of the risk perception and risk propensity literature. Unfortunately,

when proposing that entrepreneurial action is the outcome of the willingness to bear perceived uncertainty, they collapse the decision and the action stages. They claim that when a desire (“A wants to achieve X”) and a belief (“A believes that if B is performed X will occur”) are present, “the conclusion is not another belief but the action itself” (p.141). Similarly, they state that if someone believes that the payoff of an opportunity justifies bearing the perceived uncertainty necessary to attain it, entrepreneurial action will take place. The collapse of decision and action stages becomes most clear in their model, which discerns an attention stage, in which an opportunity is perceived, and an evaluative stage, where it is decided whether one is willing to bear risk. The attention stage is said to be unrelated to action, and the two determinants considered in the evaluative stage are called feasibility and desirability assessment. On page 148 the authors state that “this conceptualization is identical to an intention as described in the context of action theory”. Thus, they have returned to exactly the core elements of Shapero and Sokol’s (1982) theory of entrepreneurial intentions proposed 24 years earlier.

McMullen and Shepherd theory is a theory of entrepreneurial decision making or intentions, not of action. Willingness to bear perceived uncertainty is assumed to be automatically followed by action. Unfortunately, willingness can not be equated to action. We are all willing to eat better and to exercise more, but we do not do it. We may be willing to confront a group of burglars who entered our house during the night, but perhaps we don’t dare to. One reason why McMullen and Shepherd’s theory can not explain action nor inaction is because it refers to opportunities, whereas actions need to be analysed on the level of actions. The intention to pursue an opportunity is different from the intention to pursue an entrepreneurial action (e.g., to phone an acquaintance to convince her to become part of the team). McMullen and Shepherd refer to expected outcomes (whether they payoff of an opportunity justifies bearing the perceived uncertainty necessary to attain it). On the action level, the means to attain those outcomes, one may be uncertain of how, when and where this outcome is to be achieved.

The meta-analyses cited above all show the existence of a sizeable intention action gap. Our primary focus will be on what EIs can do to overcome this gap. Therefore, we are not interested in stable personality factors such as regulatory focus (Brockner, Higgins and Low, 2004), need for achievement (McClelland, 1961), proactive personality (Bateman and Crant, 1999), or action control (Kuhl and Beckman, 1994) that signify a propensity to take action. Instead, we focus on those explanatory factors for which strategies can be derived to overcome their effects. In doing so, this research helps to bridge the “thinking-doing” link in entrepreneurship research (Mitchell et al., 2007). It also helps to answer one of the

fundamental questions in entrepreneurship research as formulated by Baron (2004). Why are some so much more successful in entrepreneurship than others? One answer is: because they take action. Our analyses requires an understanding of action regulation and emotion regulation, to which we turn in the next two paragraphs.

Action Regulation

Not all actions are under conscious, rational control. Psychologists distinguish between two processing systems (Chaiken and Trope, 1999). Griffin and Kahneman (2003) call them system 1 and system 2. In system 1 processing of information and the control of actions is automatic. Processes occur spontaneously and do not require conscious attention or intervention. System 2 processes on the other hand are slow, controlled, and require effort. Here people use their capacity for rational analysis. Evidence suggests that the vast majority of behavior is effortless and automatic and relies on system 1 processing (Bargh and Chartrand, 1999). For example, while daydreaming we can walk through a busy city we're familiar with without any difficulty. Automatic control programs such as if-then rules and scripts guide routine behaviour which frees the actor from cognitive burdens. Just as mechanical devices free people from having to exert physical effort, so does system 1 processing prevents people from having to use their limited capacity for conscious attention. Therefore, humans strive to automatize behavior whenever possible, and even the process of automatization is automatic (Bargh and Chartrand, 1999).

System 2 processing occurs at best some of the time. The reason is that system 2 processing requires effort, and consumes resources in terms of attention and processing capacity. Our capacity to process information is severely limited and can readily be exceeded. We therefore seek to minimize cognitive effort, and often use various short-cuts in our thinking (Baron, 1998). Cognitive scientists have drawn a distinction between two modes of processing: systematic, careful, analytic processing; and heuristic processing, an effortless and quick form of processing using various heuristics (Baron, 2004). These short-cuts, heuristics, rules of thumb, can be used and applied consciously or unconsciously. Conscious analytic processes come into play when the automatic use of if-then rules, scripts and heuristics are disrupted. This can happen for example because of novelty and uncertainty (we're now walking through a busy city in totally different culture), or because issues of importance are at stake. The two systems work together and it makes little sense to pit them against each other in theories (e.g. intuition versus reason). Both system 1 and 2 are needed and they complement each other, and neither level can be called more effective or efficient (Frese, 2007).

Entrepreneurs are in situations of high novelty, change, uncertainty and complexity, and need to make many important decisions. They will therefore often need to regulate actions on the conscious level. But as executive control processes are effortful and make use of restricted processing capacity, there is a limit to system 2 processing capacity. Moreover, novelty, change, uncertainty and complexity can easily lead to cognitive overload, especially in combination with time pressure and when there is too little, too much, or unreliable information. When conscious processing capacity is exhausted, habits, routines, and the use of heuristics takes over. Successful entrepreneurs must therefore have the right habits, routines, and heuristics, as well as the capability to make the right choices in when to use systematic processing.

In action regulation, the ability to use conscious, systematic processing can be depleted, as has been shown by studies of self-regulatory strength (Baumeister and Heatherton, 1996; Baumeister, Gaijlot, DeWall, and Oaten, 2006). This research stream is concerned with self-control, for example resisting impulses to consume fatty food, shop impulsively, or to use violence (Vohs and Baumeister, 2004). Starting from impulse control, the argument is that if an impulse has a certain pulling strength, for instance an enticing piece of chocolate for a dieter, than what resists that impulse must have greater strength (Baumeister and Heatherton, 1996). This self-regulatory strength is a resource that becomes depleted when being used. Hence, it's often in the evening that dieters will take that chocolate, after having resisted it all day (Muraven and Baumeister, 2000). Laboratory research shows that when people have exerted self-control on an initial task, they are subsequently less successful at other tasks requiring self-control (Schmeichel and Baumeister, 2004). A person can become exhausted from many simultaneous demands. Self-regulatory strength can be replenished, for example, by sleeping or distractions.

Action theory (Frese and Zapf, 1994; Frese, 2007) is another dual process theory that explains how people regulate their actions to achieve goals in both routine and novel situations. It not only recognizes different levels of consciousness and automaticity in action regulation, but also several phases within the action process: goal setting, mapping of the environment, planning, executing, monitoring, and feedback. Action theory is intended to apply to broad level goals such starting a business, down to sensomotorical goals such as picking up the phone to make a call. Hence, in explaining how actions can about, its closer to the action than McMullen and Shepherd who only analyse on the level of the opportunity. Frese (2007) states that from an action regulation perspective there can be uncertainty for each phase in the action sequence.

From an action regulation perspective, we would argue that there are uncertainties for every step of the action sequences and that in each case, uncertainty means something different – uncertainty with regard to an action goal implies that there is uncertainty between a goal and further long-term goals of the entrepreneur. Uncertainty with regard to mapping the environment may be related to the complexity of the situation; uncertainty with regard to the plans related to how uncertain it is that the plan will work out; and uncertainty with regard to feedback may be uncertainty on whether one gets the feedback, when one gets it, or which kind of feedback one is likely to get (Frese, 2007, p. 162).

Uncertainty in each of the different action phases can have inaction as a result, as we will discuss in a later paragraph.

Emotion Regulation

Just as with the regulation of actions, so the regulation of emotions is thought to be subject to dual processes, differing in the degree to which conscious, deliberate, or non-conscious, automatic processes are involved. Brain research shows that emotions can take a quick and dirty pathway, and a conscious pathway. The former emotional responses occur automatically and involuntarily. They take place before the conscious brain has the chance to deliberate what to do (Zhu and Thagard, 2002). These automatic emotional reactions are evaluative in nature, indicating ‘good’ and ‘bad’, or ‘liking’ and ‘disliking’, and that activate approach or avoidance tendencies (Baumeister, Vohs, DeWall, and Zhang, 2007; Elliott, 2006; Gable, Reis and Elliott, 2000). Their main advantages are that they save time and signal importance (Zhu and Thagard, 2002). If conscious deliberation should have taken place, it may have been too late (e.g., when crossing the road and having to jump away for a car that does not stop). If the event or object was of no importance, no emotional response would have occurred (Frijda, 1988).

Conscious emotions are posited not to be direct causes of action, but are rather thought to serve as feedback in action control (Baumeister et al., 2007). As seen above when discussing action control, much behavior is driven by automatic programs, rules and scripts. This includes automatic, quick-pathway affective responses. Conscious, fully experienced emotions can serve to update these, thus influencing future behavior rather than current behavior. One example is guilt: after not giving a quarter to someone who asked for money to make a phone call, one may feel guilty, and decide to give a quarter the next time this situation comes up. The new rule relieves one from the unpleasant feeling of guilt, and one’s mood may go back to a neutral or positive state. Similarly, fear, which is often thought to trigger fleeing, may trigger future plans to prevent the fear-evoking situation from happening again. What would otherwise be the point fear if one is running already? Fleeing may have

been caused by the automatic response. For example, when seeing a ferocious snake, one runs away, and the experience of fear results in a rule to avoid that spot in the future (Baumeister et al., 2007). Generally, people are reluctant to stay in emotionally unpleasant state, and will employ mood repair strategies to feel good again, a self-regulation principle that has been called hedonistic emotion regulation (Mohiyeddini et al., 2009) or ubiquitous emotion regulation (Baumeister et al., 2007).

That conscious emotion may primarily function as feedback in action control helps to explain why the experience of emotions is so strong and often can not be controlled, whereas the actions in response to emotions can be controlled. According to Baumeister et al. (2007), if emotions could be changed or removed at will, no lessons would be learned. They state that “you can not control your emotions because the purpose of emotions is to control you” (p. 175). In contrast, the behavioral response to emotions can be regulated. People sit in cinemas experiencing a wide range of emotions and never move from their chair, and soldiers in the battlefield can stay in position in spite of being frightened to death. The conscious regulation of emotion consumes considerable cognitive capacity and resources, just like the conscious regulation of actions. For example, it may be difficult to concentrate on a work task, after an argument with the boss or with one’s partner.

Negative feelings, in particular anxiety, can have inaction as a result. Insofar as these influence attitude, perceived behavioral control, and subjective norms (in the TPB), no entrepreneurial intention should emerge. For example, anticipated regret, in the context of forming entrepreneurial intentions, should be factored in the attitude (or desirability) component. However, are several conditions under which feelings can cause inaction even if the original intention was strong. These are considered in the next paragraph.

Factors leading action and emotion regulation to result in inaction

A variety of factors can be inputs to action and emotion regulation that have inaction as a result.

Intention strength instability. Enthusiasm about an ambitious, risky aim such as starting a business may vary during the day, weeks, months or years. Although the intention is continuously present, its strength may vary, which may cause difficulties for action control when strength is down. Starting a business requires effortful behaviour in often novel, uncertain contexts, and in order for intentions to pull the action, they require a certain strength. The intention – action gap may be even larger among samples of business students that are commonly used in studies of entrepreneurial intentions. Intentions are invariably

measured only once, and students, given their phase in life, may be still exploring their options (Nabi, Holden and Warmesley, 2006). Some have goals that often change, in other words, they suffer from goal instability (Multon, Heppner, and Lapan, 1995).

Lack of intention elaboration. Intention instability can also be caused by a lack of intention elaboration (Sheeran, 2002). Some have thought about business ownership longer and harder than others. Those who have formed their entrepreneurial intentions on the basis of an superficial analysis may never get started. They may experience anxiety and/or task aversion when actually attempting to take action. Having underdeveloped ideas of when, where and how to take actions, they run into action control problems.

Lack of excitement, enthusiasm, eagerness. Emotion has a motivating function and a lack of excitement may make it difficult to get started, in spite of having formed entrepreneurial intentions. Here, the idea of having one's own business seems attractive and feasible, but somehow this does not translate into a state of excitement, enthusiasm and eagerness. This means that in order to achieve the goal, one has to exert conscious effort to generate action, which consumes self-regulatory strength. One possible reason can be that the entrepreneurial intention is at odds with implicit motives such as affiliation, achievement and power (Kehr, 2004). Intentions need to pull the action, but without excitement, it is likely to remain a wish. It is possible that the intention is competing with other goals and intentions that create more excitement, as will be discussed next.

Competing goals. The TPB measures intentions as a function of attitudes, perceived behavioral control and subjective norms with regard to one goal. In practice, people have multiple goals organised in a goal hierarchy (Austin and Vancouver, 1996). Business ownership may serve multiple goals in the hierarchy (such as wealth, autonomy, challenge, identity), and these superordinate goal can be achieved by various means. For example wealth can be attained through business ownership but also by means of a lucrative job, speculating, buying lottery tickets, stealing, or marrying a rich partner. The position and strength in the goal hierarchy of entrepreneurial intentions as a means to achieve superordinate goals can contribute to inaction. Not only competing means to the same superordinate goals, but also intentions that compete for time, attention and other resources need to be considered. For example, leisure, hobbies, family demands, and social activities can all have greater pull. The EI may have to choose between spending the evening watching television, or doing preparatory steps for setting up the business, and in some cases the television may have greater pull.

Goal selection difficulty can give rise to negative feelings. Research shows that when people have to choose between multiple attractive options that vary in non-comparable attributes (for example, whether to spend one's time and energy on starting a business, learning a second language, or travelling around the world for six months), they show an increased tendency to postpone action (Anderson, 2003). Goals also compete in terms of time frame and urgency. Starting an independent business is itself often a medium range goal, but may serve to achieve higher level, long-range life goals such as self-actualisation, or becoming a millionaire. This puts the EI at risk of being caught up by goals that are more important in the short or medium term, such as keeping the job that brings a monthly income in the bank account. Higher level goals, although considered of utmost importance, are often not in the foreground of attention. Short term goals may have more regulatory power, having procrastination as a result (Steel, 2007).

Aversive aspects. The different level of analysis of a goal and action intentions can mean that, in spite of a willingness to bear perceived uncertainty on the level of the opportunity, starting a business can still involve aspects that arouse apprehension. Starting a business requires conducting numerous diverse activities and chances are that one or more are aversive to the EI. Possible candidates, amongst others, are bookkeeping, finding out about and dealing with governmental regulations and agencies, raising finance, and doing acquisition. In order to avoid the aversive feelings that these tasks bring about, the activities can be procrastinated (Van Eerde, 2003; Steel, 2007).

Fear. The time frame between intention formation and its realisation gives rise to another phenomenon that can cause stalling. As the prospect of an uncertain, risky event approaches in time, fear tends to increase (Loewenstein, Weber, Hsee, and Welch, 2001). The urge to chicken out is augmented by the tendency to consider practical considerations and loss implications as the moment of action draws near (Loewenstein et al., 2001). The original intention may have been guided by more vague desirability and feasibility considerations. As an automatic process, fear may trigger the automatic avoidance response system, leading to inaction (Gable, Reis and Elliott, 2000). As a conscious emotion having an effect on cognition, fear may lead to reflection (Baumeister et al., 2007). Does the EI really want to give up her job? Does the EI really want to invest a sizeable amount of hard-saved money? Fear also increases a focus on magnitude outcomes as opposed to probabilities (Loewenstein et al., 2002). For some, fear can propel EIs into action, for example, when afraid to miss out on an opportunity (Baron, 2004). Others, however, will increasingly experience fear of loss or failure when the time comes to implement one's intentions, and become more cautious.

The moment of action drawing close may also give rise to anticipatory feelings of regret. With increased attention for the immediate loss implications of risky and uncertain courses of action, inaction may be preferred over action. In the short run people associate regret with actions taken, and its only when looking back over long periods that inaction rather than action are regretted most (Baron, 1998). Perhaps those who do take action are motivated by anticipated regret of foregone opportunities (Baron, 2004).

Action uncertainty. Even if the EI is certain and excited about the intention, no competing goals are present, aversive aspects are absent, and fear is conquered, inaction and procrastination can still occur as a consequence of action uncertainty. That the EI perceived enough control to form the intention at the business or opportunity level, does not necessarily mean knowing what to do at the action level. The EI may not know where to start and how to go about. Coming back to the action sequence (Frese and Zapf, 1994; Frese, 2007), uncertainty in each phase can have regulation overload and regulation uncertainty as a result. Entrepreneurial goals may not be specified very well (not complying with the SMART formula (Doran, 1981): specific, measurable, attainable, realistic, and time-bound). The mental maps of the EI may be inaccurate, which can be conducive to getting started initially if they are overoptimistic, but will be problematic if actions quickly turn out to be ineffectiveness. Plans can be poorly devised, showing no detailed description of where and when which action needs to be taken. The EI may not know what feedback to look for, or where to find it.

Uncertainty about courses of action can be a function of entrepreneurial experience. Experienced entrepreneurs may possess entrepreneurial action scripts such as arrangement and ability scripts (Mitchell, Smith, Morse, Seawright, Peredo, and McKenzie, 2002; Mitchell, Smith, Seawright, and Morse, 2000). Arrangement scripts concern the resources, relationships and assets needed to engage in entrepreneurial activity. Ability scripts are thoughts and mental frameworks concerning the skills, knowledge and capacities needed to create a new venture. Those with developed entrepreneurial action scripts can get into action quickly, perhaps even without much cognitive processing, whereas the inexperienced entrepreneurs need to consider each step along the way. The tendency to associate wrong actions with regret can cause the inexperienced EI to avoid experimentation and to procrastinate, rather than act. Conscious action control as a consequence of a lack of skills and knowledge will also mean expenditure of time, energy, and cognitive capacity. When this proves to be too much of a burden, other goals or distractions may take over, or past habits and routines kick in.

In the case of inaction, there is obviously no feedback on one's actions, but procrastination is feedback by itself. It tells the EI that she has not come closer to the goal. A lack of progress towards goal attainment can result in negative affect (Carver and Scheier, 1981). Negative feelings about a lack of progression towards to goal may lead to an increase in effort. Insofar as the approach system is activated, this is correct. For approach goals, progress in goal achievement is conceptualized to cause elation, whereas a lack of progress causes dejection (Carver, Sutton, and Scheier, 2000). If, however, the avoidance system is activated, because of risk, uncertainty, aversive aspects, or any other cause of inaction, inaction will result in relief, whereas a lack of success in avoiding the avoidance goal will result in distress (Carver et al., 2000). Over time, not working on the new venture may provide feelings of relief rather than dejection.

Figure 1: Model of the entrepreneurship UIG.

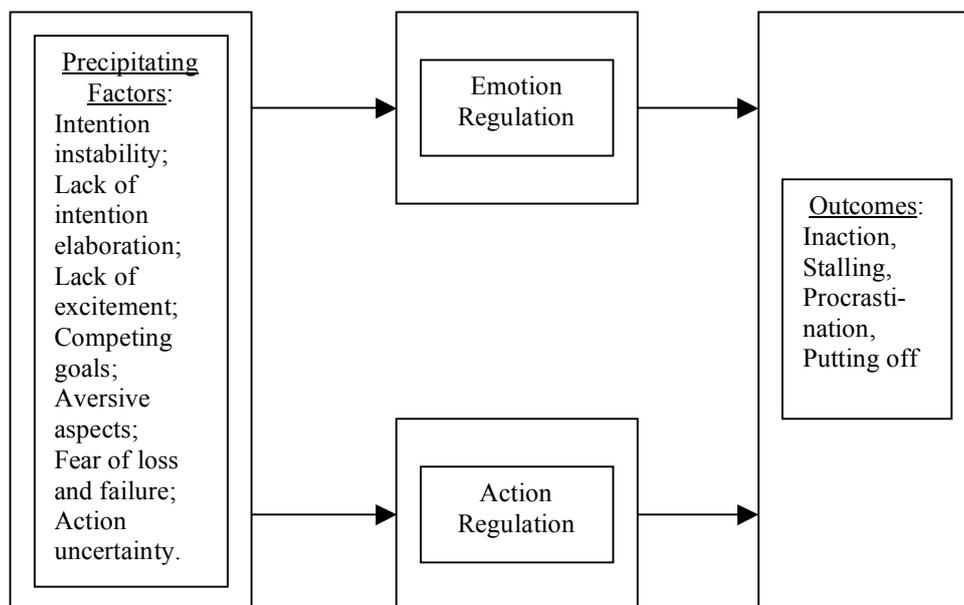


Figure 1 depicts the constructs that have been described. Dual processes in emotion and action regulation can result in action. Direct, non-conscious activation of avoidance system will lead to withdrawal. Hedonistic emotion and mood regulation can cause inaction when stalling helps to escape or neutralize a negative affective state. Action uncertainty and poorly developed action scripts prevent automatic action from taking place. Conscious action control processes can result in inaction when novelty, uncertainty, risk and complexity contribute to regulation overload, regulation uncertainty, and depletion of regulatory strength. In the next section, we will analyse remedies to overcome the factors causing the unintentional intention – action gap.

Remedies

As stated in the introduction, there can be many good reasons for EIs to delay action. The intention – action gap is in many cases intentional, for example, when the EI wants to gain experience or resources first, or when the EI plans to take action 5 years later. More problematic are those instances where the EI truly wants to start a business, but keeps postponing to take action. Here we are concerned with the EI who wants to overcome these barriers. As our focus is on strategies and behaviors that can be employed to prevent procrastination, we do not consider personality factors.

In the cases of intention instability, lack of intention elaboration, and lack of excitement refraining from action may perhaps not be such a bad choice. Starting a business takes commitment and resources: if desired only sometimes, if superficially decided upon, or if not generating excitement, the EI may want to reconsider the validity of the intention. Further, having inactive goals or intentions can be adaptive in later situations where they will be activated (for example, after being fired). Even the other causes of entrepreneurial inaction can be sound reasons to discard the entrepreneurial intention: perhaps other goals are more important, or reached better by other avenues than business ownership; aversive aspects can be a serious threat to work satisfaction; fear of loss and failure may be well-founded; and action uncertainty can signal a very unpredictable market and/or a lack of enterprising skills and knowledge.

Dealing with competing goals. Effortful, ambitious and challenging goals like setting up a business needs to be protected from competing goals and distractions in order to be successful. Prioritization is a first step as the EI needs to reach clarity about whether the entrepreneurial intention is really on the top of the list. If so, time management techniques need to be employed to allocate time, energy and other resources to entrepreneurial goal pursuit. Entrepreneurship can be a long range goal and is at risk at being overridden by short term, urgent goals (Frese, 2007). Time management techniques aim to facilitate the achievement of long run, important goals (Covey, 1989).

Implementation intentions (Gollwitzer, 1999) help to initiate action as well as to shield actions from distractions Implementation intentions supplement goal intentions by specifying the where, when and how of behavior. For example when the goal is to approach a possible financier at a networking function, the implementation intention might be formulated as “as soon as the financier stands alone, I will approach this person and start a conversation”. By specifying the situational cues that trigger action, behavior is automatized. The control of the

action is passed on from the person to the environment and cognitive processing capacity is freed up which can now be used to deal with other aspects of the situation. There is by now a solid body of evidence showing the effectiveness of implementation intentions (Sheeran, 2002).

Dealing with aversive aspects. Its holistic nature is one of the essences of businesses that are new and small (Gibb, 1993). All aspects of the business, from strategy to the coffee machine, need to be attended to or delegated. One way to deal with aversive aspects is to make them more attractive, for example, if the EI offers herself a reward if the aversive task has been accomplished. The other way is to find other people willing to do the aversive job, either because they don't find it aversive or because they are paid for it.

Overcoming fear: courage. Research summarised in Rachman (2004) investigated the factors that made it possible for people in risky professions such as bomb-removal experts, fire brigades, combatants, and astronauts, to do their task. He defined courage as acting in spite of being afraid, distinguishing it from taking unconsidered risks (recklessness) or not feeling fear (fearlessness). Courage turned out to be determined by three factors: exposure, skills and knowledge, and situational demands. Exposure, in other words just doing it, helps parachutists (on average after five successful jumps), public speakers, bomb-removal experts to get rid of their fear, as long as no disasters occurred. Trial-and-error behaviors and experimentation are crucially important for entrepreneurship, especially when one is uncertain or when much learning needs to take place.

The second determinant, skills and knowledge, is a primary source of confidence and will be further discussed under action uncertainty. Situational demands, finally, refer to features in the environment that induce actors to behave in a courageous way. For example, in a group of 4 combatants, where each member of the team has been assigned specific tasks whereupon the others are dependent, there is a strong pressure to perform. Role models also help to perform courageously. In the context of setting up a business, situational demands can be created in a team by assigning actions in such a way that others depend on it.

Lowering action uncertainty. Skills and knowledge, both theoretical and practical, will help to reduce action uncertainty. When turned into scripts, they can be processed automatically, leaving conscious capacity for other tasks. Again, implementation intentions can help. Here, plans are made as precise as possible from an action regulation perspective, with environmental cues specified that trigger the action that needs to be taken. Again, it is the shift from conscious to unconscious processing that is aimed for. Action uncertainty can also

be gradually reduced by experimentation. The experience gained can lead to learning-by-doing, reducing uncertainty in the process.

Practice of self-regulatory strength. The capacity for conscious processing can be increased. (Baumeister et al., 2006). Reporting on their research program, Baumeister et al. (2006) show that the exercise of self-regulatory strength leads to improvements in self-control that extend to domains unrelated to the practice. If self-regulatory strength is practised in one area, it generalizes to other, unrelated areas. In comparison to a control group, those who adhered to a two month physical exercise program did not only get fitter, they also did better on a visual tracking task, decreased impulsive spending, and washed their dishes more often. Those who signed up and adhered to a money management program not only spent less, also did better on a subsequent visual tracking task, showed better maintenance of household chores, and ate healthier food in spite of the increase costs. The implication of this research is profound, because it suggests that one can become better at enterprising behavior, including taking action, by means of the practice of completely unrelated exercises.

Conclusion

A recent article by Haynie, Shepherd, Mosakowski, and Eagly (2009) proclaimed meta-cognitive abilities as the core feature of what they labeled the entrepreneurial mindset. Meta-cognition are cognitions about cognitions. While it is certainly true that meta-cognition has many benefits, it is also a scarce resource. For entrepreneurial action the continuous use of meta-cognition may not only exhaust self-regulatory strength and cognitive capacity, it may also stifle the ability to take action if hyperflexibility means an ever-increasing array of options to choose from. Cognitive, meta-cognitive, and subconscious processes are all needed in order to bridge the intention – action gap.

Future research on the realization of entrepreneurial intentions will be able to make more precise predictions if the factors that contribute to the UIG are taken into account. Measuring intentions repeatedly, assessing intention elaboration, taking into account the affective attributes of goal intentions such as excitement and enthusiasm, considering competing goals and intentions, and measuring aversion, fear and uncertainty on the action level will all help to gain a better understanding of intention – behavior relationships. The relative strength of the determinants of the UIG, their interrelationships, and the relative effectiveness of the remedies proposed are all matters that need better understanding.

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Entrepreneurship, Firm Dynamics and Triple Helix

by Younghwan Kim, Wonjoon Kim, and Taeyong Yang

Triple helix of university-industry-government relationship is accepted as an important driver of technology innovation and entrepreneurship. In this paper, we investigate the role of the triple helix in the entrepreneurial activity of the U.S. We use firm dynamics factors such as firm birth, death, and turbulence rate as the measures of entrepreneurial activity, and conduct the regression analysis between the firm dynamics factors and the triple helix and habitat factors. There is a regional difference of the level of entrepreneurial activity, and the role of the industry and habitat is very important for entrepreneurial activity. Especially, in the habitat, racial variety, low housing cost, and high quality of health care can be crucial factor for entrepreneurial activity. Policy makers in the region with low firm birth rate should first make regional supportive habitat, and then invite the industrial R&D and VC investment to raise the level of firm birth rate.

Introduction

The importance of entrepreneurship in economic development and job creation has been highlighted by many previous literatures. As a result, various researches and educational programs of entrepreneurship have been emerged and rapidly disseminated in many developed and developing countries in recent decades. Among these studies, researches on the determinant of entrepreneurial activity - new firm formation and firm dynamics - have been highly valued in the perspective of public policy. These studies suggested various factors that determine entrepreneurial activity, such as population, income, R&D employees, educational degrees, university R&D, creativity, foreign population, political structure, land costs, taxes, natural amenities, etc (Spilling 1996; Armington and Acs 2002; Lay 2003; Lee, Florida, and Acs 2004; Audretsch and Lehmann 2005; Wang 2006; Woodward, Figueiredo, and Guimaraes 2006; Brixey and Grotz 2007; Kirchoff et al. 2007).

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However, structural approaches based on theoretical backgrounds such as *triple helix* has not been carefully attempted in finding the determinant of entrepreneurial activity. Most of entrepreneurship researchers have been just selected major economic indicators and demographic factors without consideration of university-industry-government relationship. On the other hand, the triple-helix model has been introduced in the study of innovation system in recent years (Etzkowitz and Leydesdorff 2000; Etzkowitz 2003). They suggested triple helix model and explained the innovation system through the supportive relationships among university-industry-government. However, the role of triple helix and the relationship among its three spheres in the entrepreneurial activities has not been carefully dealt with.

Therefore, in this paper, we examine the determinants of entrepreneurial activity through the structural framework of triple helix in order to discover the relative role of three spheres and the importance of collaboration among them in entrepreneurial activity. We examine the case of U.S. as an empirical verification considering the number of triple helix and its diverse distribution in the perspective of its characteristics and relationship. Considering regional variations in the entrepreneurial context in the U.S., we distinguish fifty states into four major regions and separate regional effect on entrepreneurial activity from the effects of triple helix during the periods between 2000 and 2004. We also include habitat factor which has not been carefully considered in the entrepreneurship research together with triple helix. Habitat has been generally accepted as an important factor in entrepreneurship activity (Lee, Florida, and Acs 2004) without any profound analysis in previous studies. In our study, we consider quality of life such as healthcare, housing and crime rate and demographic factors such as population, income and ethnic groups as habitat factors.

Consequently, by revealing the different role and relative importance of each sphere of triple helix as well as habitat on the entrepreneurial activity, our study contributes to entrepreneurship policy literature suggesting to establish *structural entrepreneurship policy* regarding the enhancement of entrepreneurial activity by carefully managing the collaborative relationship among university, industry, and government and clearly differentiate the policy for each sphere of triple helix. In addition, our research suggests policy-makers to consider the policy of *habitat management* in order to promote entrepreneurial activity in the regional policy perspective. Our study also illuminates the role of university as an important supplier of key entrepreneurial human resources as well as innovated research outcomes together with the role of industry its important role in triple helix is to build concrete value chain of product or service commercialization.

Entrepreneurship, firm dynamics and triple helix

Many researchers have examined the determinant of entrepreneurial activity in the perspective of regional variation of new firm formation. However, the selection of factors which explain entrepreneurial activity has been *situational* rather than *structural*. In other words, previous studies more likely attempted to analyze entrepreneurial activity by selecting those potential factors in some situational context such as population, income, R&D employees, educational degrees, university R&D, creativity, foreign population, political structure, land costs, taxes, natural amenities, etc (Spilling 1996; Armington and Acs 2002; Lay 2003; Lee, Florida, and Acs 2004; Audretsch and Lehmann 2005; Wang 2006; Woodward, Figueiredo, and Guimaraes 2006; Brixey and Grotz 2007; Kirchoff et al. 2007). They focused on the factors related with demographics, employment, industry structure, investment on

research and development (R&D), and individual entrepreneurial characteristics. In the case of the measure of entrepreneurial activity, firm dynamics factor, especially, firm birth rate has been generally accepted as the most relevant measure. However, structural approaches in the perspective of a regional entrepreneurial context such as a triple helix system of university, industry, and government relationship together with habitat have not been explored, although it is important to find the structural factors that influence entrepreneurial activity for policy making.

Recently, the concept of 'triple helix' has been introduced in the study of innovation system as one of promising structuralized regional approach. Etzkowitz and Leydesdorff (2000) and Etzkowitz (2003) introduced the triple helix model of university-industry-government relationship in their studies of innovation system in a knowledge-based economy and explained that innovation is increasingly based upon the interaction among each component of a 'triple helix'. Before the advent of knowledge-based society, one of major explanation of this triple helix relation was 'etatistic' model. In this model, innovation is achieved by the government's control and plan, and industry and university played their roles on their own function under the government's direction. On the other hand, 'laissez-faire' model also significantly contributed to innovation study explaining that the roles of university, industry and government are separated while the market coordinates the whole system. Later, the knowledge-based society has made three spheres close to each other in the innovation system (Etzkowitz and Klofsten 2005). One sphere "takes the role of the other" in new triple helix model (Etzkowitz 2003). These relations enhance the transfer of new knowledge from one sphere to the others, and let the other spheres commercialize it.

These studies on the triple helix mostly used theoretical approaches in order to explain the importance of the triple helix and their interactions. However, no empirical study has been attempted regarding its role in entrepreneurial activity at regional level, although entrepreneurial activity is one of critical factors in innovation system. Here, in this study, we examine what factors in triple helix affect entrepreneurial activity in the region and how different they are, in addition to illuminating the importance of collaborative and systematic interaction among the spheres of triple helix.

Regarding the measure of entrepreneurial activity, a variety of approaches has been made, although entrepreneurship cannot be precisely measured. Some researchers suggested the concept of firm dynamics; Fritsch (1996) used four types of indicators for market dynamics in his analysis: entry rate, exit rate, turbulence rate, and net entry rate in order to investigate the relationship between several aspects of market dynamics and economic development in West Germany in 1986-1989. He divided the number of new firms and exits by the number of incumbent establishments, which can be labeled as 'ecological' approach. On the other hand, Reynolds, Miller, and Maki (1995) suggested a 'labor market' approach by using workforce data as a denominator in order to standardize the number of firm's entries and exits.

These two approaches have been commonly applied in the literature related with firm formation. In the ecological approach, incubator firms provide breeding grounds for new entrepreneurs and role models for other potential founders (Smith 1991). This approach focuses on the phenomenon of new firm spinouts by incumbent firms. On the other hand, the labor market approach has a more rational appeal in terms of the theory of entrepreneurial choice (Audretsch and Fritsch 1994). This approach assumes that new entrepreneurs are recruited from within the labor market of a region (Spilling 1996). Spilling (1996) pointed that the ecological approach will result in a measurement bias that overestimates firm dynamic rates in areas where firm sizes are above average, and underestimates firm dynamic rates in areas with many small firms. He mentioned that the labor market approach generally provides a better explanation compared to the ecological approach. Nevertheless, the ecological approach is widely used in the literature on account of its simplicity of calculation and its convenience in terms of data collection.

Therefore, in this paper, we examine the role of those factors that comprise triple helix and surrounding habitat in the enhancement of entrepreneurial activity in the regional context. We consider three factors of firm dynamics: firm birth rate, firm death rate, and firm turbulence rate derived from both the ecological and the labor market approach. In addition, we investigate how important the collaboration and interaction among those factors are in explaining the role of triple helix. Fifty states in the U.S. are divided into two groups according to the level of entrepreneurial activity and these two groups are compared in terms of the conditions that promote entrepreneurship.

Data & Descriptive Statistics

The factors in triple helix and habitat are derived at the state level in the United States; six triple helix factors and six habitat factors are selected to test whether these variables affects entrepreneurial activities. In addition, six factors of firm dynamics are selected as the measure of entrepreneurial activity. Regarding the population of our study, we consider all 50 states except the District of Columbia. The period of data covers from 2000 to 2004 and total observations are 250 ($n = 250$). In order to examine reduce heterogeneous effect in our empirical analysis we divide the states into four major geographical regions according to the statistics of the U.S. Census Bureau. The four major regions are the West (13 states), the Midwest (12 states), the South (16 states), and the Northeast (9 states). The geographical division used in this analysis is presented in Figure 1.

Figure 1
Four major geographical regions in the U.S



Factors of firm dynamics

According to the terms of the Statistics of U.S. Businesses by the U.S. Census Bureau, a firm is ‘a business organization consisting of one or more domestic establishments in the same state and industry that were specified under common ownership or control’. The firm and the establishment are same for single-establishment firms. For each multi-establishment firm, establishments in the same industry within a state are counted as one firm.

Six firm dynamics factors that we consider as the measure of entrepreneurial activity and as dependent variables are presented in Table 1. The data on the number of firm births and deaths are from the Small Business Economy, an annual report to the President made by the Small Business Administration (SBA). Turbulence rate are calculated as the sum between the firm birth and the firm death. These three factors are divided by the number of incumbent firms and by the labor force in each state. The data of the number of existing firms has been also collected from the the Small Business Economy of the SBA. Labor force data has been measured from Local Area Unemployment Statistics (LAUS). This data is constructed by the Bureau of Labor Statistics (BLS). As a result of these calculations, six entrepreneurship variables are obtained.

Table 1
Types of firm dynamics factor

Dynamic indicators	Ecological Approach	Labor Market Approach
Birth rate	BIRTHRATE_F	BIRTHRATE_L
Death rate	DEATHRATE_F	DEATHRATE_L
Turbulence rate	TURBULRATE_F	TURBULRATE_L

Triple helix variables

As mentioned above, the triple helix factors of the university-industry-government relationship are considered. Two variables from each sector are selected and a total of six variables are considered, as represented in Table 2. In each sphere, we consider one R&D related variable and one other critical variable that has been generally used in previous studies on the determinants of entrepreneurial activity. Two variables in the case of university sphere are ‘Degree’ which represents educational attainment and UNIVRD_R which denotes university and college R&D expenditures per capita.

In the case of government, we use government R&D (GOVRD_R) and tax rate (TAXRATE). ‘Government R&D’ is a measure of the federal obligations for R&D and for R&D plants per capita. ‘Tax rate’ has been used in various types in previous studies that examined the determinants of entrepreneurial activity. In our study, we select *total tax burden per capita* because other taxes such as corporate tax as well as the property tax can affect firm formation and termination process. In the case of the private sector, INDUSTRYRD_R represents the industrial R&D expenditures per capita. Venture capital investment per capita can be obtained by MoneyTreeTM Report (VCINVEST_R). The MoneyTreeTM Report is a popular quarterly study of venture capital investment activity in the United States. All triple helix variables with absolute values such as R&D and VC investment are divided by state population in order to escape the bias originated from state size.

Habitat variables

Habitat variables are important in the point that they can explain the changes of entrepreneurial activity which cannot be explained by the factors of triple helix. In our study we consider housing price, crime and health care index which are generally accepted as the measure of quality of human life (Goldstein and Drucker 2006). Therefore, our habitat

variables consist of demographic variables, crime index, and health care index. The description and the sources of habitat variables are also represented in Table 2. HOUSEPRICE represents the median housing value of owner-occupied housing units and CRIME is the total crime rate, which is the sum of the violent and property crime rate per 1,000 people. Due to diverse characteristics of expenditures regarding health care, we simply select a factor that explains how many people owe to public health insurance. Health insurance coverage (HINSUCOV) means the level of coverage of basic health care enable us to evaluate how well basic welfare policy is operated in a region. We also use the natural log of state population estimates (ln_POP) and the natural log of state average annual pay (ln_INCOME) as demographic factors in the analysis.

Table 2
Variable descriptive statistics (observed $n=250$)

Variable	Description	Source	Mean				
			Overall	West	Midwest	South	Northeast
BIRTHRATE_F	Number of new firm created per 100 existing firms	SBA	14.42	18.17	10.86	14.54	13.49
DEATHRATE_F	Number of firm terminated per 100 existing firms	SBA	15.26	18.24	12.50	14.96	15.15
TURBULRATE_F	Sum of firm birth and death per 100 existing firms	SBA	29.67	36.42	23.36	29.50	28.65
NETRATE_F	(firm birth - firm death) per 100 existing firms	SBA	-0.84	-0.07	-1.64	-0.41	-1.66
BIRTHRATE_L	Number of new firm created per 1000 work force	SBA, BLS	6.20	8.28	4.46	5.78	6.24
DEATHRATE_L	Number of firm terminated per 1000 work force	SBA, BLS	6.56	8.30	5.16	5.92	7.03
TURBULRATE_L	Sum of firm birth and death per 1000 work force	SBA, BLS	12.75	16.57	9.63	11.70	13.27
NETRATE_L	(firm birth - firm death) per 1000 work force	SBA, BLS	-0.36	-0.02	-0.70	-0.14	-0.79
DEGREE	% of 25+ population with bachelor's degree	Census	25.88	26.03	25.62	23.73	29.86
UNIVRD_R	University and college R&D expenditures per capita (dollars)	NSF	124.79	127.19	122.23	111.74	147.95
GOVRD_R	Federal obligations for research and development and for R&D plant per capita (dollars)	NSF	289.37	362.78	136.54	314.65	342.17
TAXRATE	Ratio of total tax burden per capita to average annual pay	Census, BLS	5.74	5.99	5.81	5.49	5.73
INDUSTRYRD_R	Industrial R&D expenditures per capita (dollars)	NSF	539.81	509.60	536.27	337.76	947.36
VCINVEST_R	Venture capital investment per capita (dollars)	MoneyTree™	85.73	108.23	31.84	55.40	178.98
MELTINGPOT	% of foreign-born population	Census	7.53	10.32	4.62	5.95	10.16
ln_POP	Log of Population estimates	Census	15.08	14.69	15.15	15.38	15.01
ln_INCOME	Log of Average Annual Pay	BLS	10.42	10.41	10.39	10.38	10.57
HOUSEPRICE	Median housing value of all(03-04) or specified(00-02) owner occupied housing units (thousand dollars)	Census	136.01	167.89	109.80	108.27	174.22
CRIME	Total crime rate (violent and property crime rate) per 1000 people	FBI	39.38	44.67	35.89	43.74	28.62
HINSUCOV	% of private or government health insurance coverage	Census	86.23	83.79	89.14	84.50	88.93

NOTE: SBA = Small Business Administration; BLS = Bureau of Labor Statistics; Census = U.S. Bureau of the Census; NSF = National Science Foundation; FBI = Federal Bureau of Investigation

Here is another interesting index as a habitat variable in our analysis. MELTINGPOT is the percentage of the foreign-born population. Melting pot index was used in the paper of regional analysis of new firm formation by Lee, Florida, and Acs (2004). In addition, Saxenian (2002) found that the most successful entrepreneurs of Silicon Valley rely heavily on ethnic resources. Kirchoff et al. (2007) also concluded that a foreign population has a positive effect on new business formation. In this analysis, the same relationship between entrepreneurship and ethnic variety is expected.

Descriptive statistics

Descriptive statistics of 50 states in U.S. for the six variables for firm dynamics and twelve triple helix and habitat variables are presented in Table 2. The averages of firm birth and death rate are highest in the *West region* which includes California, Washington, and Colorado. *Midwest region* which includes Illinois, Ohio, and Iowa has the lowest birth rate and death rate. In the *Northeast region* which includes New York, Massachusetts, and Pennsylvania, firm birth and death rate with the ecological approach are lower than average, while those with the labor market approach are higher than average.

Northeast region has the highest level in educational condition. The percentage of 25-over population with bachelor's degree is 3.83% higher than *West region*. *Northeast region* was overwhelming in university R&D. On the other hand, regarding the government R&D, *West region* surpassed *Northeast region*. The government R&D of *Midwest region* records below half of other regions, while *Midwest region* surpasses other regions except for *Northeast region* in industrial R&D. *Northeast region* shows the best habitat, the environment of business and industry.

Interestingly, *West region* with relatively low condition of triple helix has high firm dynamics compared to *Northeast region*, which we examine the reason later through our statistical analysis considering their habitat. However, the melting pot index which explains the racial diversity shows highest number and population has grown rapidly which seems to explain some of the reason of high firm dynamics. In addition, housing price in *West region* is cheaper than those of *Northeast region*.

Empirical Results

This section examines the results of the multivariate regression of the triple helix and habitat factors associated with state variations on the six firm dynamics factors which represent entrepreneurial activity of each state.¹

For our convenience, the three variables from the ecological approach, BIRTHRATE_F, DEATHRATE_F, and TURBULRATE_F are termed 'ECOL', and the three variables from the labor market approach, BIRTHRATE_L, DEATHRATE_L, TURBULRATE_L, and NETRATE_L, are termed 'LABOR'. The results of the correlation analysis are presented in Table 3. The six firm dynamics factors had similar characteristics in common in the correlation analysis. They have positive correlation coefficients in terms of degree, government R&D, industrial R&D, VC investment, melting pot index and house price. These six factors were negatively and significantly associated with health insurance coverage.

¹ As noted above, all triple helix variables regarding R&D and VC investment are divided by state population. Without this treatment, we have strong correlations among these variables giving us size dependent bias in the estimation.

Full model regression

In our analysis, consider six triple helix factors and six habitat factors in all 50 states in the U.S. except the District of Columbia. Six firm dynamics models are examined: BIRTHRATE_F, TURBUL RATE_F, DEATHRATE_F in the 'ECOL' and BIRTHRATE_L, TURBULRATE_L, DEATHRATE_L in the 'LABOR'.

The OLS regression results by STATATM 10.0 S.E. are reported in Table 4 to Table 6. First, the regression result of firm birth rate in the ECOL and the LABOR is represented Table 4. Trend and regional variables are significantly related with birth rate in both approaches. The number of new firm has been increasing by 0.54% and the number of new firm per a thousand of work force has been rising by 0.23 firms for each year. *West region* has 7% higher in the number of firm birth and have 3.22 firms more in the number of new firm per a thousand of work force than *Northeast region*. *South region* with lower firm birth than *West region* has high firm birth rate compared to *Northeast region*, and *Midwest region* shows the lowest level of firm birth rate. We can find that firm birth rate is increasing by year and the order of firm creation in a region is *West, South, Northeast* and *Midwest region*.

Table 3
Correlation analysis

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1 BIRTHRATE_F	1.00																		
2 DEATHRATE_F	0.63**	1.00																	
3 TURBULRATE_F	0.91**	0.90**	1.00																
4 BIRTHRATE_L	0.89**	0.55**	0.79**	1.00															
5 DEATHRATE_L	0.55**	0.87**	0.78**	0.70**	1.00														
6 TURBULRATE_L	0.78**	0.77**	0.86**	0.92**	0.92**	1.00													
7 DEGREE	0.21**	0.05	0.15*	0.24**	0.09	0.18**	1.00												
8 UNIVRD_R	0.08	0.09	0.10	0.06	0.07	0.07	0.58**	1.00											
9 GOVRD_R	0.28**	0.20**	0.27**	0.16*	0.09	0.14*	0.40**	0.61**	1.00										
10 TAXRATE	-0.19**	-0.03	-0.12	-0.01	0.17**	0.09	-0.23**	-0.08	-0.10	1.00									
11 INDUSTRYRD_R	0.17**	0.23**	0.22**	0.17**	0.21**	0.21**	0.57**	0.30**	0.15*	-0.12	1.00								
12 VCINVEST_R	0.21**	0.11	0.18**	0.18**	0.08	0.14*	0.40**	0.23**	0.20**	-0.14*	0.42**	1.00							
13 MELTINGPOT	0.44**	0.32**	0.42**	0.32**	0.20**	0.28**	0.45**	0.16**	0.23**	-0.22**	0.39**	0.37**	1.00						
14 ln_POP	0.15*	0.04	0.11	-0.14*	-0.27**	-0.22**	0.16*	0.01	0.06	-0.55**	0.25**	0.26**	0.49**	1.00					
15 ln_INCOME	0.24**	0.14*	0.21**	0.15*	0.04	0.10	0.68**	0.42**	0.28**	-0.38**	0.71**	0.39**	0.66**	0.51**	1.00				
16 HOUSEPRICE	0.34**	0.28**	0.34**	0.33**	0.26**	0.32*	0.64**	0.43**	0.28**	-0.02	0.54**	0.36**	0.72**	0.17**	0.69**	1.00			
17 CRIME	0.39**	0.25**	0.36**	0.17**	0.03	0.11	-0.13*	-0.04	0.12	-0.20**	-0.16*	-0.07	0.22**	0.29**	-0.04	0.01	1.00		
18 HINSUCOV	-0.37**	-0.19**	-0.31**	-0.30**	-0.13*	-0.23**	0.26**	0.14*	-0.14*	0.26**	0.28**	0.09	-0.27**	-0.22**	0.06	0.09	-0.44**	1.00	

Correlation is significant at *5%, **1%

Table 4
Regression results – Birth rate by ‘ECOL’ and ‘LABOR’ approach

Variables	(1) BIRTHRATE_F				(2) BIRTHRATE_L			
	Coefficient	Standard Error	t	p-value	Coefficient	Standard Error	t	p-value
Trend	0.5413***	0.1501	3.61	.000	0.2304***	0.0751	3.07	.002
West	7.0000***	0.7623	9.18	.000	3.2243***	0.3816	8.45	.000
Midwest	-2.2915***	0.6030	-3.80	.000	-1.4427***	0.3019	-4.78	.000
South	2.4972***	0.6915	3.61	.000	0.6568*	0.3462	1.90	.059
DEGREE	0.1598***	0.0590	2.71	.007	0.1503***	0.0295	5.09	.000
UNIVRD_R	-0.0060	0.0044	-1.35	.180	-0.0023	0.0022	-1.02	.309
GOVRD_R	0.0011*	0.0006	1.74	.083	-0.0005	0.0003	-1.40	.164
TAXRATE	-0.3386*	0.1837	-1.84	.067	-0.0222	0.0920	-0.24	.810
INDUSTRYRD_R	0.0016***	0.0005	3.12	.002	0.0008***	0.0003	3.25	.001
VCINVEST_R	0.0005	0.0012	0.41	.680	0.0004	0.0006	0.60	.550
MELTINGPOT	0.2306***	0.0591	3.90	.000	0.0821***	0.0296	2.78	.006
ln_POP	0.4626*	0.2643	1.75	.081	-0.1480	0.1323	-1.12	.264
ln_INCOME	-1.4720	2.3657	-0.62	.534	-0.7440	1.1844	-0.63	.530
HOUSEPRICE	-0.0298***	0.0068	-4.40	.000	-0.0151***	0.0034	-4.46	.000
CRIME	0.0175	0.0234	0.75	.455	-0.0134	0.0117	-1.14	.255
HINSUCOV	0.3160***	0.0763	4.14	.000	0.0609	0.0382	1.59	.112
Constant	-9.2090	24.2042	-0.38	.704	7.6749	12.1178	0.63	.527
R-square(Adj.)	.619				.610			

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

In the factors of triple helix, both of firm birth rate in the ECOL and the LABOR are positively related with degree and industrial R&D expenditure. In the ECOL model, firm birth rate is positively associated with government R&D and is negatively related with tax rate unlike in the LABOR model. These results satisfy general forecast that the government R&D expenditure helps people to create ventures and low tax rate stimulate to do a business. On the other hand, two firm birth rate factors are not related with university R&D expenditure. We can explain this result; university R&D does not have direct effect on the firm birth unlike government R&D and industrial R&D.

Among habitat factors, the states with relatively high melting pot rate have high firm birth rate. This outcome corresponds with the studies of Saxenian (2002) and Kirchoff et al. (2007) which perorated that the racial variety can provide the vitality and the flexibility in the environment of firm creation. We can find through our result that 1% increase of melting pot index can give a rise of 0.23 firms per 100 incumbent firms or a rise of 0.08 firms per a thousand of work force. In the case of house price, as we predicted, higher price leads lower firm birth rate. If the average of house price increases by 10 thousand dollars in the U.S., the number of firm birth per 100 existing firms is reduced by 0.3 firms and the number of firm created per a thousand of work force shrinks by 0.15 firms. Health insurance coverage is

positively and significantly related with firm birth rate in the ECOL only, and 1% increase of the coverage can have a positive effect of 0.32 firms increase on the firm birth.

Both of the ECOL and the LABOR model have no variable that represents a contrary sign to our predictions. Through the full regression of firm birth rate models, we can find that government and industrial R&D expenditure are more important than university R&D on the firm creation, that tax reduction and deduction can make a favorable condition to conduct a business, and that racial variety, house price and health care coverage are directly associated with a decision of making a firm.

In the case of firm turbulence rate, we also conducted full model regressions in the ECOL and the LABOR approach (Table 5). It is important that turbulence rate is the sum of firm birth rate and firm death rate. The combined effect between the death rate model and the birth rate model can strengthen the effects of explanatory variables on the turbulence rate or dilute those, or even melt those. For instance, trend effect disappears in the ECOL and the LABOR model. Degree and government R&D leave out of a group of significant factors in the ECOL model. In the LABOR, government R&D, crime index, health insurance coverage newly enter the group of significant factors at 10% of the significant level, so that they do not have much power to explain the relationships. The result of the turbulence rate model is similar to the one of the birth rate model, and we can find same signs of the coefficients of the significant variables in both regressions, between the model (1), (2) and the model (3), (4).

The fact that turbulence rate is the sum of the firm birth rate and the firm death rate can accompany a difficulty in analyzing the effects of the explanatory variables on the result from two contradictory cir

Table 5
Regression results – Turbulence rate by ‘ECOL’ and ‘LABOR’ approach

Variables	(3) TURBULRATE_F				(4) TURBULRATE_L			
	Coefficient	Standard Error	t	p-value	Coefficient	Standard Error	t	p-value
Trend	0.3386	0.2807	1.21	.229	0.1467	0.1400	1.05	.296
West	11.8905***	1.4256	8.34	.000	5.4238***	0.7110	7.63	.000
Midwest	-4.9828***	1.1277	-4.42	.000	-3.1343***	0.5624	-5.57	.000
South	3.6285***	1.2933	2.81	.005	0.6271	0.6450	0.97	.332
DEGREE	-0.0279	0.1103	-0.25	.800	0.1454***	0.0550	2.64	.009
UNIVRD_R	0.0067	0.0083	0.81	.420	0.0038	0.0041	0.91	.365
GOVRD_R	0.0019	0.0012	1.56	.119	-0.0010*	0.0006	-1.73	.085
TAXRATE	-0.6991**	0.3436	-2.03	.043	-0.0278	0.1713	-0.16	.871
INDUSTRYRD_R	0.0050***	0.0010	5.21	.000	0.0024***	0.0005	5.11	.000
VCINVEST_R	-0.0036	0.0022	-1.60	.110	-0.0014	0.0011	-1.26	.209
MELTINGPOT	0.4616***	0.1105	4.18	.000	0.1749***	0.0551	3.17	.002
ln_POP	0.8673*	0.4943	1.75	.081	-0.4009	0.2465	-1.63	.105
ln_INCOME	-6.2213	4.4244	-1.41	.161	-2.7410	2.2065	-1.24	.215
HOUSEPRICE	-0.0440***	0.0126	-3.48	.001	-0.0244***	0.0063	-3.87	.000

CRIME	0.0081	0.0438	0.18	.854	-0.0389*	0.0219	-1.78	.076
HINSUCOV	0.6234***	0.1427	4.37	.000	0.1195*	0.0712	1.68	.095
Constant	26.7763	45.2666	0.59	.555	34.3400	22.5748	1.52	.130
R-square(Adj.)		.586				.599		

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

-cumstances in some cases. Though the turbulence rate can be represented the level of entrepreneurial activity through a high correlation between birth rate and turbulence rate. In this analysis, we can find that the activeness of entrepreneurial activity is high in order of *West, South, Northeast* and *Midwest region*. We can also know that high industrial R&D, high melting pot index, high health insurance coverage, and low house price can cause high level of entrepreneurial activity.

The only one strange fact is that government R&D has a negative effect on the turbulence rate in the LABOR model. This result explains that government R&D can be an obstacle for entrepreneurial activity because of the side effect such as a moral hazard.

The regression result of firm death rate in the ECOL and the LABOR is represented Table 6. As the case of birth rate and turbulence rate, *West region* has the highest level in the death rate and *Midwest region* is lowest. On the other hand, Trend and South are not significant variables in both regression models, model (5) and (6).

In the case of triple helix factors, we found several interesting facts. The death rate is negatively and significantly related with the venture capital investment, and positively and significantly associated with industrial R&D and university R&D. This result explains that among the sources of investment on entrepreneurial activity, venture capital with high pressure of retrieving the investment can reduce a failure rate than industrial R&D and university R&D with relatively low retrieving pressure. In the case

Table 6
Regression results – Death rate by ‘ECOL’ and ‘LABOR’ approach

Variables	(5) DEATHRATE_F				(6) DEATHRATE_L			
	Coefficient	Standard Error	t	p-value	Coefficient	Standard Error	t	p-value
Trend	-0.2027	0.1833	-1.11	.270	-0.0837	0.0867	-0.97	.335
West	4.8906***	0.9309	5.25	.000	2.1995***	0.4404	4.99	.000
Midwest	-2.6913***	0.7364	-3.65	.000	-1.6916***	0.3484	-4.86	.000
South	1.1313	0.8445	1.34	.182	-0.0297	0.3995	-0.07	.941
DEGREE	-0.1877***	0.0720	-2.61	.010	-0.0049	0.0341	-0.14	.886
UNIVRD_R	0.0127**	0.0054	2.34	.020	0.0060**	0.0026	2.35	.020
GOVRD_R	0.0008	0.0008	0.97	.334	-0.0006	0.0004	-1.58	.114
TAXRATE	-0.3604	0.2244	-1.61	.110	-0.0056	0.1061	-0.05	.958
INDUSTRYRD_R	0.0034***	0.0006	5.43	.000	0.0016***	0.0003	5.42	.000
VCINVEST_R	-0.0041***	0.0015	-2.79	.006	-0.0018**	0.0007	-2.55	.011
MELTINGPOT	0.2311***	0.0721	3.20	.002	0.0928***	0.0341	2.72	.007
ln_POP	0.4047	0.3228	1.25	.211	-0.2529*	0.1527	-1.66	.099

ln_INCOME	-4.7493	2.8891	-1.64	.102	-1.9969	1.3669	-1.46	.145
HOUSEPRICE	-0.0142*	0.0083	-1.72	.086	-0.0093**	0.0039	-2.38	.018
CRIME	-0.0095	0.0286	-0.33	.741	-0.0255*	0.0135	1.88	.061
HINSUCOV	0.3074***	0.0932	3.30	.001	0.0586	0.0441	1.33	.185
Constant	35.9852	29.5594	1.22	.225	26.6651*	13.9846	1.91	.058
R-square(Adj.)		.414				.475		

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

of habitat factors, house price has negative effect on the firm death rate and health insurance coverage is positively associated with the death rate. We can interpret that expensive house price can make the entrepreneur tensioned in the management of the firm and high health insurance coverage can relatively defuse the managerial tension and enhance the failure rate.

Especially, the degree becomes one of the factors that affect the death rate in the ECOL model. In other words, the states with low percentage 25+ population with bachelor's degree have high firm death rates. One percent increase in DEGREE reduces 0.19 firms in the number of firm terminated per 100 incumbent firms. This shows that the educational attainment is related with sustainability of the firm as well as the firm creation.

Factor regression analysis

We selected six triple helix factors of university, industry and government and six habitat factors to explain whether entrepreneurial activity in the full model regression. Three spheres of the triple helix model have two factors for each. In the factor regression analysis, we examine a structure of triple helix and habitat and relative importance in the explanation of three firm dynamics factors; birth rate, turbulence rate and death rate. The ECOL and the LABOR model are analyzed in this analysis. First, the variables of three spheres and habitat are unified. Each sphere and habitat part has one representative factor. We calculated factor scores of each sphere and habitat through the factor analysis in the SPSSTM 15.0, the statistics software package. For our convenience, the four representative factors from the factor analysis are termed 'F_Academy', 'F_Gov', 'F_Industry', 'F_Habitat'. Then we conduct regressions to examine the relationship between six firm dynamics factors and four representative factors. Trend and three regional dummies are also included in the analysis.

The OLS regression results by STATATM 10.0 S.E. are reported in Table 7 to Table 9. First, the regression result of firm birth rate in the ECOL and the LABOR is represented Table 7. The relative importance and explanatory power of the components, three spheres and habitat part, are very essential for the interpretation of this analysis, so that we add the beta coefficient in the result table. Table 7 shows that the results of the ECOL model and the LABOR model are different. First, in the ECOL, all regional dummies are significant and have great explanatory power. This fact accords with the result of the full model regression. The academy factor (F_Academy) does not have significance in the regression while the government factor (F_Gov), the industry factor (F_Industry) and the habitat factor (F_Habitat) are significantly associated with birth rate in the ecological approach. We also found that government, industry and habitat factors have similar explanatory power. Strictly, the coefficient of the government factor is slightly higher than the one of industry and habitat factor. This fact means that the role of government is very important for growth of firm birth rate.

On the other hand, the birth rates in *South region* and *Northeast region* are not different in the LABOR model. We can find the reason in the fact that the population growth rate in South region is higher than the other regions. The government factor and habitat factor are not

significantly related with the birth rate in the labor market approach. This fact is possible to explain after thinking about the concept of birth rate in the labor market approach. Supportive policy and regulation of government, such as government R&D and low tax rate, bring the population growth, and then the birth rate in the labor market approach becomes lower, so that government factor and habitat factor simultaneously leave out from the regression model. Nevertheless, the industry factor is significantly related with two firm birth rates. This fact emphasizes the crucial role of the industry part for firm creation.

The regression result of firm turbulence rate in the ECOL and the LABOR is represented Table 8. As the full model regression, the combined effect between the death rate model and the birth rate model can strengthen the effects of explanatory variables on the turbulence rate. The signs of all significant variables are similar with the firm birth rate model and the significant variables are same between the

Table 7
Factor Regression results – Birth rate by ‘ECOL’ and ‘LABOR’ approach

Factors	(1) BIRTHRATE_F					(2) BIRTHRATE_L				
	Coefficient	S.E.	t	p-value	Beta	Coefficient	S.E.	t	p-value	Beta
Trend	0.1482	0.1335	1.11	.268	.054	0.1451**	0.0669	2.17	.031	.108
West	5.4513***	0.5284	10.32	.000	.620	2.3408***	0.2649	8.84	.000	.538
Midwest	-1.2186**	0.5538	-2.20	.029	-.135	-1.4693***	0.2777	-5.29	.000	-.329
South	2.0754***	0.5669	3.66	.000	.251	0.0044	0.2843	0.02	.988	.001
F_Academy	-0.1952	0.2418	-0.81	.420	-.051	0.1490	0.1213	1.23	.220	.078
F_Gov.	0.6566***	0.2090	3.14	.002	.170	-0.0375	0.1048	-0.36	.720	-.020
F_Industry	0.6158**	0.2469	2.49	.013	.159	0.3814***	0.1238	3.08	.002	.199
F_Habitat	0.5754**	0.2510	2.29	.023	.149	-0.1632	0.1259	-1.30	.196	-.085
Constant	12.1810***	0.5753	21.17	.000		5.5033***	0.2885	19.08	.000	
R-square(Adj.)			.556					.544		

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

Table 8
Factor Regression results – Turbulence rate by ‘ECOL’ and ‘LABOR’ approach

Factors	(3) TURBULRATE_F					(4) TURBULRATE_L				
	Coefficient	S.E.	t	p-value	Beta	Coefficient	S.E.	t	p-value	Beta
Trend	-0.1148	0.2504	-0.46	.647	-.023	0.1216	0.1231	0.99	.324	.049
West	9.0097***	0.9910	9.09	.000	.571	3.7421***	0.4873	7.68	.000	.468
Midwest	-3.0264***	1.0387	-2.91	.004	-.187	-3.3444***	0.5107	-6.55	.000	-.407
South	2.5284**	1.0633	2.38	.018	.170	-0.8522	0.5228	-1.63	.104	-.113

F_Academy	-0.3786	0.4536	-0.83	.405	-.055	0.3261	0.2230	1.46	.145	.093
F_Gov.	0.9406**	0.3920	2.40	.017	.136	-0.2712	0.1928	-1.41	.161	-.077
F_Industry	1.0290**	0.4631	2.22	.027	.148	0.6424***	0.2277	2.82	.005	.183
F_Habitat	0.9708**	0.4708	2.06	.040	.140	-0.4399*	0.2315	-1.90	.059	-.125
Constant	27.5910***	1.0790	25.57	.000		12.4895***	0.5306	23.54	.000	
R-square(Adj.)			.514					.543		

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

model (1), (2) and model (3), (4) except for the habitat factor of the LABOR model. We also found that government, industry and habitat factors have similar explanatory power in the ECOL model. In the ECOL and the LABOR, among the four representative factors, the industry factor has largest effect on the firm turbulence rate. This fact supports that the momentum of the entrepreneurial activity is the revitalization of the industry part.

The result of the factor regression of the death rate in the ECOL and the LABOR model is different from the birth rate model and the turbulence rate model (Table 9). There is no significant representative factor to explain the death rate in the ecological approach except for two regional dummies, West and Midwest. The death rate from the ecological approach only responds to regional variables. Therefore, there is no principle explanatory factor in the determinants of the death rate except for regional factors.

On the other hand, in the LABOR model, we can find that all regional dummies and the government factor, the industry factor and the habitat factor are significantly related with the death rate. The order of relative explanatory power except for the regional factors is; habitat, industry, and government. We can find that favorable habitat can reduce the failure rate of the firm through this analysis.

Partitioned model regression

Through the full model regression analysis and the factor regression analysis, we examined the relationships between the firm dynamics factors such as firm birth rate, firm death rate and firm turbulence rate and triple helix of university-industry-government relationship and habitat factors. In addition, the relative importance of the three spheres' factors of university, industry and government and the habitat factor in entrepreneurial activity was detected. In our partitioned model regression analysis, all 50 states in the U.S. are divided into two groups according to the firm birth rate by the eco-

Table 9
Factor Regression results – Death rate by ‘ECOL’ and ‘LABOR’ approach

Factors	(5) DEATHRATE_F					(6) DEATHRATE_L				
	Coefficient	S.E.	t	p-value	Beta	Coefficient	S.E.	t	p-value	Beta
Trend	-0.2631	0.1639	-1.61	.110	-.098	-0.0235	0.0760	-0.31	.758	-.018

West	3.5584***	0.6484	5.49	.000	.411	1.4013***	0.3009	4.66	.000	.324
Midwest	-1.8078***	0.6796	-2.66	.008	-.203	-1.8751***	0.3154	-5.95	.000	-.422
South	0.4530	0.6957	0.65	.516	.056	-0.8566***	0.3229	-2.65	.009	-.210
F_Academy	-0.1833	0.2968	-0.62	.537	-.048	0.1770	0.1377	1.29	.200	.093
F_Gov.	0.2840	0.2565	1.11	.269	.075	-0.2336*	0.1190	-1.96	.051	-.123
F_Industry	0.4131	0.3030	1.36	.174	.108	0.2609*	0.1406	1.86	.065	.137
F_Habitat	0.3954	0.3081	1.28	.201	.104	-0.2767*	0.1430	-1.94	.054	-.145
Constant	15.4100***	0.7060	21.83	.000		6.9861***	0.3276	21.32	.000	
R-square(Adj.)			.311					.406		

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

logical approach (BIRTHRATE_F), and these two groups are used in the regression analysis to explain how the triple helix and habitat factors differently affect entrepreneurial activity in the two groups; the group of the states with high firm birth rate (HIGH) and the group of the states with low firm birth rate (LOW). We compare the results from the partitioned regression model with the results from original regression model. Finally, we find what factor among university, industry, government and habitat representative factors contributes to the firm birth rate in the two groups through the factor regression analysis. The group 'HIGH' includes top 26 states such as Washington, Nevada, Utah, Colorado and California, and has totally 130 samples. The group 'LOW' consists of bottom 24 states such as Illinois, Nebraska, Wisconsin, Ohio and Iowa, and has totally 120 samples.

First, we examine the regression results used triple helix variables and habitat variables (Table 10). In the case of the group HIGH, the coefficients of the significant explanatory variables are larger than those of the in the full model regression in the Section 4.1. On the other hand, degree and income variable leaves out of the regression equation. Therefore, the effects of important explanatory factors are stronger in the region with high firm birth rate than in the full model regression analysis. In detail, trend and regional variables are significantly related with the birth rate. The number of new firm has been rising by 0.77 firms per 100 incumbent firms for each year. In *West region*, 7.6 firms are more created than in *Northeast region* per 100 existing firms. *South region* with lower firm birth than *West*

Table 10
Partitioned regression results – Birth rate by ‘ECOL’ approach

Variables	(1) HIGH (n=130)				(2) LOW (n=120)			
	Coefficient	Standard Error	t	p-value	Coefficient	Standard Error	t	p-value
Trend	0.7737***	0.2773	2.79	.006	0.1666	0.1571	1.06	.291
West	7.6336***	1.3138	5.81	.000	1.2688	1.6171	0.78	.434
Midwest					-1.7017**	0.7224	-2.36	.020
South	3.7370***	1.1439	3.27	.001	-1.4091*	0.7563	-1.86	.065
DEGREE	0.0141	0.1210	0.12	.907	-0.0233	0.0616	-0.38	.707

UNIVRD_R	-0.0048	0.0075	-0.64	.525	-0.0022	0.0039	-0.57	.568
GOVRD_R	0.0018*	0.0010	1.90	.061	0.0010	0.0012	0.88	.383
TAXRATE	-0.6172*	0.3589	-1.72	.088	0.4769**	0.2000	2.39	.019
INDUSTRYRD_R	0.0015**	0.0008	1.99	.049	0.0001	0.0007	0.15	.882
VCINVEST_R	0.0024	0.0020	1.19	.238	0.0011	0.0010	1.12	.265
MELTINGPOT	0.2580**	0.1046	2.47	.015	-0.0869	0.0965	-0.90	.370
ln_POP	-0.1450	0.4245	-0.34	.733	0.6967	0.4359	1.60	.113
ln_INCOME	1.8927	4.3406	0.44	.664	0.7607	3.6492	0.21	.835
HOUSEPRICE	-0.0318***	0.0106	-3.01	.003	-0.0001	0.0091	-0.01	.989
CRIME	-0.0280	0.0406	-0.69	.493	0.0709**	0.0274	2.59	.011
HINSUCOV	0.3812***	0.1219	3.13	.002	-0.0874	0.0934	-0.94	.352
Constant	-34.8806	43.4778	-0.80	.424	-2.8613	30.9624	-0.09	.927
R-square(Adj.)		.348				.423		

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

region has high firm birth rate compared to *Northeast region*, and there is no *Midwest region* state in the group HIGH. On the other hand, there is no factor that affects the firm birth rate except for the regional factor in the regression model of the group LOW. In the regional view, the birth rate in *West* and *South region* is higher than in *Northwest region* in the group LOW, while the birth rate in *Northeast region* is higher than in *South region*. This strange result is caused by the great difference in the birth rate among the states in *South region*.

Consequently, the government and industrial R&D are more effective than the university R&D to enhance the firm birth rate, and tax deduction and reduction stimulate the firm creation. In addition, in the view of habitat, racial variety and high level of health care lead to high level of the firm birth rate, while high housing cost dispirits the latent entrepreneurs.

We also conducted the factor regression analysis on the group of the states with high firm birth rate (HIGH) and the group of the states with low firm birth rate (LOW), as in the Section 4.2. Beta coefficients are also included in the result table (Table 11) for the examination of relative importance and explanatory power of the three spheres and habitat part. A common feature of two groups is the significance of regional dummies. However, a dramatically different point is that the industrial factor is the best and the only effective factor in the group HIGH, while the habitat factor is the best and the only effective factor in the group LOW in the explanation of the firm birth rate. There is a tendency that industry-related factors promote the entrepreneurial activity in the region with high firm birth rate, while the relatively supportive habitat leads the relatively high firm birth at that in the region with low firm birth rate.

Therefore, in the region with low firm birth rate, policy makers should first make regional supportive habitat to grow the firm birth rate, and then invite the industrial R&D and VC investment to raise the level of firm birth rate up after setting up fundamental habitat.

Table 11
Partitioned Factor Regression results – Death rate by ‘ECOL’ approach

Factors	(5) DEATHRATE_F	(6) DEATHRATE_L
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	Coefficient	S.E.	t	p-value	Beta	Coefficient	S.E.	t	p-value	Beta
Trend	0.3876*	0.2224	1.74	.084	.158	0.0854	0.1046	0.82	.416	.075
West	4.8316***	0.7883	6.13	.000	.694	2.2622***	0.8257	2.74	.007	.279
Midwest						-0.7333*	0.4227	-1.73	.086	-.226
South	2.6354***	0.7782	3.39	.001	.361	1.0013*	0.5749	1.74	.084	.281
F_Academy	0.2055	0.3497	0.59	.558	.059	-0.1826	0.2386	-0.77	.446	-.112
F_Gov.	-0.1456	0.3109	-0.47	.640	-.042	-0.0591	0.1616	-0.37	.715	-.036
F_Industry	0.9387***	0.3478	2.70	.008	.270	0.1256	0.2585	0.49	.628	.077
F_Habitat	0.1720	0.3222	0.53	.594	.049	0.5845**	0.2623	2.23	.028	.359
Constant	12.7162***	0.8938	14.23	.000	-	11.3151***	0.4907	23.06	.000	
R-square(Adj.)			.266					.272		

Beta means a standardized coefficient. Significant at *10%, **5%, ***1% (n=250).

Conclusions

Conclusions

This paper analyzes the effect of triple helix factors of university, industry and government sphere and habitat factors on the entrepreneurial activity at the state level in the U.S. It uses the firm dynamics factors as new measures of entrepreneurial activity; firm birth rate, firm death rate, and firm turbulence rate. Totally, six dependent variables are utilized in the ecological approach (ECOL) and in the labor market approach (LABOR).

We use two factors from each sphere are selected and a total of six factors are considered as triple helix variables; degree and university R&D for the university sector, government R&D and tax rate for the government sector and industrial R&D and venture capital investment for the industry sector. Six habitat variables are also selected in our analysis; melting pot index, the natural log of population, the natural log of average annual pay, house price, crime rate, and health insurance coverage. We consider all 50 states in the U.S. as sample population except the District of Colombia. The period of data covers from 2000 to 2004 and total observations are 250 ($n = 250$).

We conduct the full model regression for firm birth rate, firm death rate and firm turbulence rate using six triple helix factors and six habitat factors by the ecological approach and the labor market approach. In the factor regression analysis, we also make each sphere of triple helix and habitat part has one representative factor. Conducting regressions to examine the relationship between six firm dynamics factors and four representative factors, trend and regional dummies, we examine structures of triple helix and habitat and relative importance in the explanation of the firm dynamics factors in the ECOL and the LABOR model. In the partitioned model regression analysis, all 50 states in the U.S. are divided into two groups according to the firm birth rate by the ecological approach, and these two groups are used in the regression analysis to explain how the triple helix and habitat factors differently affect entrepreneurial activity in the two groups; the group of the states with high firm birth rate (HIGH) and the group of the states with low firm birth rate (LOW). We also conduct the partitioned factor regression analysis of the two groups to explain the relative role of university, industry, government sphere and habitat.

First, according to the descriptive statistics, the averages of firm birth and death rate are highest in the *West region* while *Midwest region* has the lowest birth rate and death rate. In the *Northeast region*, firm birth and death rate with the ecological approach are lower than average, while those with the labor market approach are higher than average. *West region* with relatively low condition of triple helix has high firm dynamics compared to *Northeast region*, however, habitat factors in the *West region* are more supportive than in the *Northeast region*.

In the full model regression analysis, the firm birth rate is positively and significantly associated with degree, industrial R&D expenditure, and melting pot rate and negatively and significantly related with house price. The firm birth rate in the ECOL is also positively related with government R&D and health insurance coverage. We can find that government and industrial R&D expenditure are more important than university R&D on the firm creation, that tax reduction and deduction can make a favorable condition to do a business, and that racial variety, house price and health care coverage are directly associated with a decision of making a firm. Turbulence rate, the sum of firm birth rate and firm death rate, causes the combined effect between the death rate model and the birth rate model. The effect of explanatory variables can be strengthened or diluted. In our analysis, industrial R&D, melting pot index and health insurance coverage have positive and significant effect on the level of entrepreneurial activity, while house price is negatively and significantly related with the turbulence rate in the ECOL and the LABOR model. The negative effect of government R&D on the turbulence rate in the LABOR model also explains government R&D can be an obstacle for entrepreneurial activity because of the side effect such as a moral hazard. The death rate is negatively and significantly associated with the venture capital investment, and positively and significantly associated with industrial R&D and university R&D. This result is caused by the difference of pressure on retrieving investment among various sources of investment on entrepreneurial activity. Venture capital with high pressure of retrieving the investment can reduce a failure rate than industrial R&D and university R&D with relatively low retrieving pressure. On the other hand, expensive house price can make the entrepreneur tensioned in the management of the firm and high health insurance coverage can relatively defuse the managerial tension and enhance the failure rate. In addition, high degree of education helps the existing firm to survive (ECOL model).

In the factor regression analysis, the government factor, the industry factor and the habitat factor are significantly associated with birth rate in the ecological approach while the government factor and habitat factor are not significantly related with the birth rate in the labor market approach. Supportive policy and regulation of government, such as government R&D and low tax rate, bring the population growth, and then the birth rate in the labor market approach becomes lower, so that government factor and habitat factor simultaneously are not significant more. In the case of the turbulence rate, we also found that government, industry and habitat factors have similar explanatory power in the ECOL model and the industry factor has largest effect on the firm turbulence rate in common like the case of the firm birth. In the case of the death rate, the government factor, the industry factor and the habitat factor have significant effect in the LABOR model only. We can find that favorable habitat can reduce the failure rate of the firm through this analysis.

In the partitioned model regression analysis, we divide all 50 states in the U.S. into two groups according to the firm birth rate by the ecological approach. The group 'HIGH' includes top 26 states such as Washington, Nevada, Utah, Colorado and California, and has totally 130 samples. The group 'LOW' consists of bottom 24 states such as Illinois, Nebraska, Wisconsin, Ohio and Iowa. In the case of the group HIGH, the effects of the significant factors on the

firm birth rate are larger than those of the in the full model regression. In the region with high firm birth rate, the government and industrial R&D are more effective than the university R&D to enhance the firm birth rate, and tax deduction and reduction stimulate the firm creation. In addition, in the view of habitat, racial variety and high level of health care lead to high level of the firm birth rate, while high housing cost dispirits the latent entrepreneurs. In the partitioned factor regression analysis, there is a tendency that the industry factor promotes the entrepreneurial activity in the region with high firm birth rate, while the relatively supportive habitat leads the relatively high firm birth in the region with low firm birth rate.

Through the various regression analysis and factor regression analysis, we find that there is a regional difference of the firm birth rate at the state level in the U.S. and the role of government, industry and habitat are important than the role of university for entrepreneurial activity. In detail, the government can promote the firm creation through the R&D expenditure and the reduction or deduction of taxes. In the industry sector, the most important sphere, the enlargement of R&D investment and venture capital investment can contribute to the growth of firm birth rate as well as the reduction of firm failure rate. In addition, the racial variety can be crucial factor for entrepreneurial activity. Low housing cost and high quality of health care can also lubricate the firm creation. Finally, in the region with low firm birth rate, policy makers should first make regional supportive habitat to grow the firm birth rate, and then invite the industrial R&D and VC investment to raise the level of firm birth rate up after setting up fundamental habitat. Using a similar approach, future research might seek to collect regional triple helix and habitat data sets at the MSA or county level. In addition, we try to examine the interactions among the firm dynamics factors using the simultaneous equation method.

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Free E-commerce Catalogs for SME Networks Using Google Tools & Servers

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OpenEntry is an e-commerce platform enabling SMEs to generate full function catalogs able to accept credit card payments. It also makes it easy for such as chambers of commerce, industry associations, and trade promotion organizations to aggregate their members catalogs (even those not built with OpenEntry) into powerful "network markets" capable of generating the visibility and credibility necessary for e-commerce.

OpenEntry was recently relaunched using Google tools and servers and is now offering free e-commerce catalogs (software, hosting, user support) for SMEs worldwide. The United Nations Development Program documented OpenEntry's role in generating 4000 jobs in Nepal for artisan women and young IT professionals (see <http://sdnhq.undp.org/e-comm>).

OpenEntry Founder and CEO, Dan Salcedo, will present cases from implementations in 44 countries and conduct a live demonstration of creating free e-commerce catalogs.

Track: 2. Small Business in Developing & Transition Economies

The Osaka Model: New Methods of Promotion for Joint Development in Japan

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In this paper, new methods of locating business partners for joint development in Japan are examined. These methods, called the Osaka model, enable a company with outstanding technology to find a need for the technology in a new company partnership. On this model, a company that locates a business partner, establishes a mutual trust and is then able to solve higher level technological issues. Consequently, this model shares the strong points of both bid and conventional co-development. In other words, this model takes advantage of both Western and Japanese styles of inter-business relationships and is especially effective in small and medium-sized companies.

Track: 6. Innovation in SMEs