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INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP

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LETTER FROM THE EDITOR

Welcome to this Special Issue of the *International Journal of Entrepreneurship.* We are extremely pleased to be able to present this issue to you as a vehicle for those whom we do not ordinarily reach with our communication.

In this Special Issue, the President of Allied Academies asked Dr. Ndubisi to allow us to publish two articles of his, so that we might benefit from his insight. We have also published another paper in this series by the authors, Chandra and Fealey, upon international issues to allow the journal to be published this year.

The theme of this special issue of the International Journal of Entrepreneurship is "Entrepreneurship and Strategy". Entrepreneurial ventures and small and medium businesses in general are gaining more and more prominence in both academic and practitioner literature. This is primarily because of the important contributions of this sector in the world economy and the respective economies of the nations of the world. We also witness the strong impact of these business ventures and their online counterparts on the new global economy. The success of entrepreneurial ventures alone earns them the right of place in the research priorities of academics and the policy makers' development agenda. In this special issue, the authors look at the strategies adopted by entrepreneurial firms in competing in the new global environment. Seven papers are featured in this issue.

The first paper by Perks looks at the factors that influence the choice of international market entry mode by European entrepreneurs. His research addresses the various influences on the internationalization mode of entry strategies of entrepreneurs through in-depth interviews with owner entrepreneurs of medium-sized firms in four European countries. The study found that the most important influences on international market entry mode (IMEM) decisions were the personal preferences and mindset of the entrepreneur, the nature of the product and their priority of being close to and in direct contact with their customers. However, industry globalization, resource limitations and national culture had only a limited influence on the entrepreneur's international market entry mode decision making.

The first paper by Ndubisi and Nair looks at green entrepreneurship and how they add value. They argue that green entrepreneurship is critical for the successful development of green value added because of its flexibility, propensity to take calculated risks, innovative orientation and perseverance while facing challenges. They explain that innovations generally add value, but at the same time they are prone to failure, thus making it risky. It calls for perseverance in seeking acceptance and desired outcomes. It demands an innovative, flexible, risk-taking and persistent entrepreneur to create value adding green innovations. To them, a green value added needs synergic blend of all the above entrepreneurial traits to be effective.

The third paper by Oksanen and Rilla examines how Finish entrepreneurs compete through innovations. Through the use of questionnaire survey and semi-structured interviews Finish

entrepreneurial firms were studied. They found that innovation has been crucial factor for existence of business at the first instance. Moreover identification of market niche and customer needs turns out to be the most important source for innovation among companies. Increase in profitability and competitiveness emerge as the most beneficial impacts of innovation in all companies but also new contacts and co-operation that arise in the process of innovative activity are highly valued, especially in micro firms. They noted that despite the importance of innovation, small entrepreneurial firms also face number of challenges hampering commercialisation of a novel idea. These range from obstacles pioneer company encounters in gaining market credibility and acceptance, to lack of business experience in general.

In the fourth article, Sohail and Alashban analyse the product-market strategy and export performance of Saudi's small and medium enterprises. A field survey of 214 SMEs was conducted. The results suggest that product and export market characteristics have an impact on export marketing strategy of SME's in Saudi Arabia. Moreover product characteristics and export market strategy have significant influence on export performance.

In the fifth article, Chandra and Fealey examine the role of government and its impact on incubator strategy in three countries. This paper describes the incubation landscapes of the United States, China and Brazil noting the similarities and differences in incubation approaches between the three countries, with special focus on incubator funding sources and their financial services to their client firms.

The concluding paper for the issue conceptualises how export promotion programmes of governments influence export performance of entrepreneurship directly and indirectly through organisational and management related factors. In the paper, Shamsuddoha, Ali, and Ndubisi adopt the internationalization process theory and resource-based theory to show how EPPs can influence export performance indirectly through organisational and management factors. They submit that the direct (only) linkage between EPPs and export performance commonly observed in extant literature is incomplete and does not show the whole process or full interactions that take place, hence depriving a comprehensive understanding of this process. The new mediated model is considered an advance over the non-mediated model of EPPs-export performance relationship.
Enjoy.

Nelson Oly Ndubisi (PhD)
Editor/Director, SME and Entrepreneurship Research Unit

INFLUENCES ON INTERNATIONAL MARKET ENTRY METHOD DECISIONS BY EUROPEAN ENTREPRENEURS

Keith J. Perks, University of Brighton

ABSTRACT

The internationalization of small to medium-sized firms has been the subject of scholarly activity for several decades initially focusing on describing the gradual incremental stages starting with exporting evolving to a firm investing in foreign markets. More recently the fields of international new ventures and international entrepreneurship have emerged. International entrepreneurship has shifted the focus of analysis to the entrepreneur and how international decisions are determined by entrepreneurial competencies and capabilities such as developing and exploiting international partner and customer networks and relationships. Much of the extant research examines external market condition influences on internationalization strategies but neglects the role of the international decision making capabilities of entrepreneurs. The research addresses the various influences on the internationalization mode of entry strategies of entrepreneurs through in-depth interviews with owner entrepreneurs of medium-sized firms in four European countries. The study finds that the most important influences on international market entry mode (IMEM) decisions were determined by the personal preferences and mindset of the entrepreneur, the nature of the product and their priority of being close to and in direct contact with their customers. On the other hand industry globalization, resource limitations and national culture have a limited influence on the entrepreneur's international market entry mode decision making.

INTRODUCTION

International business decisions involve making a choice between competing expansion strategies depending on the nature of the market, firm resources and managerial philosophy (Reid, 1983). The choice of international market entry mode (IMEM) is a significant international decision facing top managers and has been the subject of extensive research in the export behaviour, international marketing and international business literature (Malhotra, Agarwal & Ulgado, 2003). Entry mode is part of the early stage of the international evolution of the firm (Johanson & Vahlne 1990) and in the stages model of internationalization or the establishment chain approach has tended to present entry modes as part of a sequence from indirect export, through to foreign direct investment (Johanson & Wiedersheim-Paul, 1975). Mode of entry has also been the subject of research in the literature on strategic alliances and foreign direct investment (Buckley, 2002) and

in the theories of the International Product Life Cycle Theory (IPLC), Market Imperfections Theory, Strategic Behaviour Theory, Resource Advantage Theory, Transaction Cost Analysis Theory, Eclectic Theory, Internationalization Theory and Network Theory (Malhotra et al., 2003). These theories have been used in the study of internationalization of small exporter and large multi-national firms. Others have examined the antecedents of and influences on mode changes (Calof & Beamish, 1995).

Given the diversity and contexts (e.g., sector, firm size) internationalization has been presented as multi-theoretical (Coviello & McAuley 1999) and multi-disciplinary (Shenkar, 2004). Peng (2004) suggests that in order for the field of international business to move forward there should be a return to international business strategic decision-making and the firm as a unit of analysis and more attention paid to theory. The entrepreneurship field offers a rich vein of research and concepts to explain internationalization and more specifically the international strategic decision making behaviour of managers. My paper addresses this issue by using the firm and in particular the entrepreneur as the unit of analysis.

Although extant research on internationalization focuses on new ventures, small and very large firms (Coviello & Jones, 2004) there is a lack of attention to medium-sized firms. My research uses firm size as a measure of medium size (number of employees, 100-500, The Conference Board of Canada, 2004; Corbetta, 2005; Simon, 1996). The selection of number of employees is rather arbitrary and varies according to region (Organisation for Economic Co-operation and Development OECD, 2005). My research also focuses on the entrepreneur(s) own a minimum of 15% of equity, independent not a subsidiary of another company and no industrial shareholder own more than 50% of equity. I have selected country location to evaluate possible cultural differences and contexts (Italy high context culture, France, medium context culture Germany and UK low context cultures; Hall, 1959; Hofstede, 1991; Axtell, 1995) and industry sector (conventional- engineering and metal and high-technology-electronic, telecommunications and software; Boter & Holmquist, 1996) as possible moderating influences on the international market entry mode strategies of entrepreneurs. Finally, to assess the affect of time on the mode of entry decision-making from the inception of exports to several years later I selected firms that had been involved in international business for 10 years or more.

Building on the propositions from the literature my paper reports on the findings of empirical research to answer the research question "*what are the factors influencing* the *choice of mode of entry entrepreneurs in medium-sized firms?"* to develop a framework for international decision-making, and explore the lessons that can be learnt for practice. First of all I develop the propositions from the literature before explaining the methodology adopted for the empirical study. I then present the results, discussion and implications for entrepreneurs, advisors and policy-makers.

LITERATURE REVIEW AND DEVELOPMENT OF THE PROPOSITIONS

Managers may have different biases for focusing their efforts on either domestic or international markets based on their educational background or prior experiences of living in other countries. Some entrepreneurs have a desire or predisposition for concentrating their activities on domestic markets for fear of losing out to locally based competitors (McDougall & Oviatt, 1996; Westhead, Wright & Ucbasaran, 2001). However, small-to-medium sized enterprises (SMEs) can improve their performance through international expansion. Dichtl, Koeglmayr and Mueller (1990) found that internal mental and psychological attitudes were linked to an outward movement of a firm's operations. Further, some managers may have stronger international capabilities due to their prior international experience or ability to leverage their tacit knowledge about international opportunities (Liesch & Knight, 1999; Mitchell, Smith, Seawright & Morse, 2000; Peng & York, 2001). I therefore posit:

Proposition 1: *Personal factors (namely, bias, preferences and prior experience) of the entrepreneur will strongly influence their IMEM choice.*

The decision about market entry mode may vary depending upon the nature of the product or service (Corey, Cespedes & Rangan, 1989; Cloninger, 2004). The level of complexity of a product or service may determine the nature of supplier–buyer relations. With a complex product or service, users may want a direct relationship with the original source of the technology (the producer, or an intermediary service provider). Similarly, if the product requires user education, customization to their needs or is subject to rapid technical change, then the buyer may demand direct links with the knowledge or technical source rather than a commercial intermediary (Rangan, Menezes & Maier, 1992). Further, in the innovation literature (Urban & Von Hippel, 1986; Herstatt & Von Hippel, 1992) in high technology and mature product categories the lead user customer plays a critical role in the development of innovative products in collaboration with the supplier. The buyer, or customer, is a critical influence on a firm's international strategy (Whitelock, 2002). If domestic firms build strong ties with internationally active companies, they may become client followers and start their internationalization process (Perks, 2003; Sharma & Blomstermo, 2003). Buyers may be important for strategic reasons, or because the relationship contributes a significant level of revenues or profits (Campbell & Wilson, 1996). Consequently, the level of international involvement by the seller will rise as the significance of the relationship increases. In the internationalization process of the firm domestic and international customer networks also act as an influence on the internationalization process, particularly mode of entry (Coviello & Munro, 1995). I therefore suggest that:

Proposition 2: *Product or services that require a high involvement from users (technological usage and application; supply arrangements) act as a strong influence on the entrepreneurs IMEM choice.*

Proposition 3: *The importance of the customer acts as a strong influence on the entrepreneurs IMEM choice.*

A firm needs to support market growth and sustain competitive advantage through heterogeneous resources which are valuable, rare, inimitable and non-substitutable (Wenerfelt, 1984; Dierickx & Cool, 1989; Barney, Wright & Ketchen, 2001). Arguably, SMEs encounter more financial and managerial resource constraints than larger firms, when making the decision to enter international markets (Chetty & Campbell-Hunt, 2003; Malhotra et al., 2003; Alvarez, 2004) however, the perception of adequacy should encourage a decision. From this I suggest:

Proposition 4: *The availability of adequate resources acts as a strong constraining influence on the entrepreneurs IMEM choice.*

The industry influence has been acknowledged by Porter (1986) and Grant (2002) in the globalization of businesses. Others in the field of population ecology (Hannan & Freeman, 1977) and entrepreneurship (Covin & Slevin, 1991; Dess, Lumpkin & Covin, 1992, Zahra, 1993; Tan, 1996) recognize that the environmental context shapes entrepreneurial strategies in particular internationalization (Garner, 1982; Rao, 1990). Customer preferences and the demands they make on suppliers affect internationalization decisions (Bell, 1995). For example, a domestic or international customer may require a supplier to sell directly to its subsidiaries in international markets. On the other hand the international customer may prefer to deal with locally based intermediaries. The impact of the industry environment on the IMEM decision provides the basis for the fifth proposition.

Proposition 5: *The industry environment in which the firm operates will act as a strong influence on the entrepreneurs IMEM choice.*

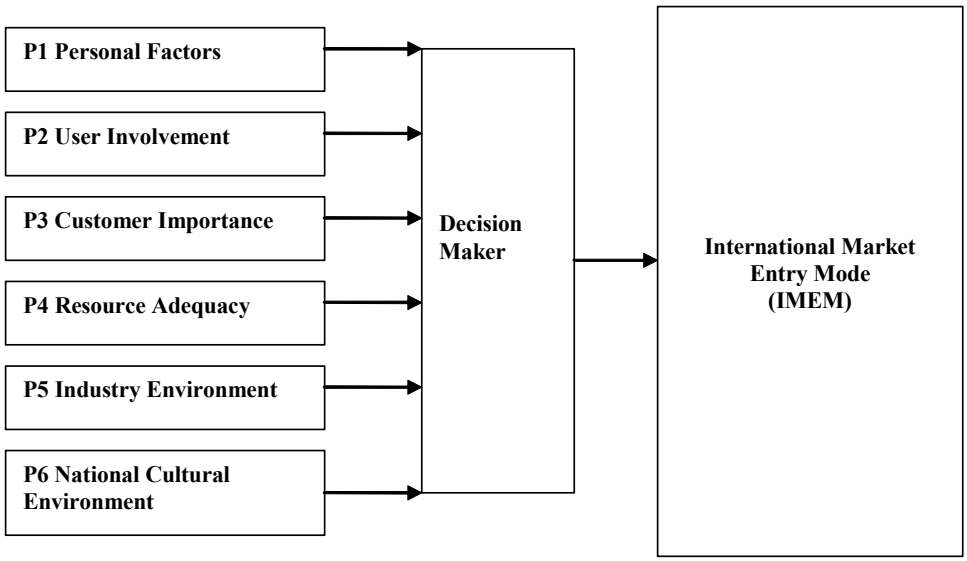
When entrepreneurs consider engaging in foreign markets managers have to cope with psychic distances and barriers in terms of culture and language which may disturb the flow of internationalization of a firm (Moen, Gavlen & Enderesen, 2004). Marcella, Davies and Williams (2002) argue that the language element can cause a certain degree of ambivalence when making decisions about the IMEM. Managers are more likely to select a market entry mode that will overcome language and cultural barriers, such as local agents if they lack confidence or are uncertain

about a particular country. On the other hand if they perceive cultural similarity between the home country and the potential market (Sharma & Blomstermo, 2003; Wei & Christodoulou, 1997; Erramilli & Rao, 1993) they may be more likely to deal directly with customers. This leads to the sixth and final proposition:

Proposition 6: *National culture has a strong influence on the entrepreneurs IMEM choice.*

The six propositions have been theorized and presented in the framework in figure 1. The propositions will be evaluated through the analysis of the responses and documents from the empirical research.

Figure 1: Theoretical Framework of Propositions



Before the exploration and evaluation of the propositions and framework I will explain the research design and methodological position adopted to answer the central research aims and question "*what are the factors influencing* the *choice of mode of entry entrepreneurs in medium-sized firms?"*

METHODOLOGY

To meet the research aims and answer the research question the methodology adopted is qualitative and in particular a case study methodology was employed because they are "valuable at all stages of the theory building process" (Eckstein, 1992). The particular strength of qualitative

methodologies and case method is the collection of rich data, *in vivo,* facilitating the evaluation of interrelated definitions and propositions and the exploration of the relations between them. The approach I have adopted is 'theory-first', whereby theory is developed via a deductive strategy with the researcher identifying "some orienting constructs and propositions to test or observe in the field" (Miles & Huberman, 1994, p.155). A case study reveals theoretical relations in situ and can be used to uncover processes that link inputs and outputs within a system (Lacey, 1976). This implies that the researcher may "literally see them (processes) occur" (Glaser & Strauss, 1967, p.40). The multiple-case methodology allows for replication and development of "a rich theoretical framework" (Yin, 1994, p.46). The methodology for the research does not seek to apply sampling logic because it would be 'misplaced' (Yin, 1994). The research is based on sixteen case studies, from a population of 500 firms (Europe 500, 2004) and interviews with the lead entrepreneur of firms in France, UK, Italy and Germany. The 'ideal' number of cases is, in the main, judgmental (Yin, 1994) and it would also be inappropriate in the light of the methodology to imply a calculated sample size. The interview data was compared with data from company documents to improve the validity and accuracy of the analysis and discussion. All of the responding firms provided me with information ranging from internal company documents, catalogues, books, annual reports and press cuttings. This method helps to overcome the problem of 'mistaken' memories on the part of interviewees as it facilitates confirmation of a statement(s) via comparison with documentary evidence. The coding system applied was based on the structure of the questionnaire used in the process of interviewing and was analyzed in two stages allowing for several iterations and interpretations from micro-analysis to the linking of concepts and propositions (Strauss & Corbin, 1998). The first level of analysis coded the documents into 28 free nodes within 'Nvivo' software. The coding structure and content was developed around the questionnaire and adjusted as new codes emerged. This enabled me to identify cross-case patterns, replications and differences. The second level of coding and analysis in this stage broke the data down to develop the influences on the IMEM.

ANALYSIS AND DISCUSSION OF RESEARCH PROPOSITIONS BASED ON THE FINDINGS

The questioning elicited the extent to which the firms were engaged in direct export, exports through subsidiaries, joint venture partners, or indirect exports (agents or distributors). The case study findings are analyzed and presented in table 1 below in terms of direct versus indirect entry modes.

The method of market entry and the subsequent pattern of internationalization for the firms in the study display both common and divergent patterns. What is common to all of the firms is that regardless of the chosen market entry method there is a strong preference to have direct links with the customer. These may be through direct sales to end-users or OEMs, joint ventures, partnerships, or sales subsidiaries. Over an extended period of time (an average of 10 years in exporting) these

firms have not changed their mode of market entry. There were some industry sector differences in the mode of entry. The 6 firms that had chosen IMEM in the form of a subsidiary were in the high-technology sectors. None of the metal or mechanical engineering firms use this form of market entry mode. All 4 firms involved in partnerships were in the high-technology industries none in the metal mechanical sector. However there were no sector differences in the use of agents or distributors.

Table 1: Summary of the international market entry methods of the case firms by location/sector/number of employees

Case/Location Sector/Employees	Direct Export	Foreign Subsidiaries	Partners/JV/ Licensing	Agent-distributor
1 / Germany / Software / 130	Yes	Yes	Yes	No
2 / Germany / Software / 410	Yes	Yes	Yes	No
3 / Germany / Metal / 150	Yes	No	Yes	No
4 / Germany / Electronic / 200	Yes	Yes	No	Yes
5/ Germany / Electronic / 181	Yes	No	Yes	No
6 / Germany / Electronic / 375	Yes	Yes	No	Yes
7 / France / Software / 230	Yes	Yes	No	No
8 / France / Metal / 185	Yes	No	No	Yes
9 / France / Electronic / 245	Yes	No	No	Yes
10 / France / Electronic / 110	Yes	No	No	Yes
11/ Italy / Electronic / 105	No	Yes	No	Yes
12 / Italy / Metal / 333	Yes	No	No	Yes
13 / Italy Metal / 101	Yes	No	No	No
14 / Italy / Metal / 129	No	No	Yes	No
15 / UK / Software / 139	Yes	No	Yes	No
16 / UK Metal / 150	Yes	No	No	Yes

.

Proposition 1: *Personal factors (namely, bias, preferences and prior experience) of the entrepreneur will strongly influence their IMEM choice.*

The evidence from the empirical research is that the entrepreneur has a very strong influence on the IMEM of the firm. The strength of this influence is evident in many of the respondents' discussion of the importance of the entrepreneur's role and involvement in international market entry mode decisions.

"I travelled to a bank, we went to their office in London, a big American bank. We then set up a subsidiary" (respondent firm 1).

"In the consumer market we do address the end-user, but we sell into distribution retail system integration and PC OEMs so we classically mix two modes of market entry" (respondent firm 6).

"I prefer to enter a country through direct sales first to get started, to support the start up of subsidiaries" (respondent firm 7).

"I am in direct and close contact with clients. When you transfer an industrial unit it is necessary to work with trust. It is not necessary to use an intermediary, because marketing close to the potential client, we do not want the foreign agent" (respondent firm 8).

"I prefer to sell directly to the radio operators. In each country there is only one operator" (respondent firm 9).

"As the president I prefer to sell directly 92/93% of sales are from supplying components (pumps, motors etc) directly to manufacturers of white goods" (respondent firm 12).

"I work directly with OEM car makers in Germany, France and in the UK. As they are suppliers of key components to the car industry for special cars, and products need to be designed into the client's products, then we have direct links with customers" (respondent firm 13).

"My approach is direct and simple go into any store, look at the back of the boxes and make contact with the companies who make the machines and then sell directly to them (respondent firm 15).

"I prefer to work with OEM customers in Germany, Japan and the USA. Exactly, then at that point we picked three companies, phoned them cold and asked to go and see them directly" (respondent firm 16).

The entrepreneur was mainly responsible for deciding on the international market entry mode. Even when the firm's international business developed and other specialist export managers took on the responsibility for international sales, the simple organizational structure for exports left

the entrepreneur still actively involved in domestic and international mode of entry decision making and direct selling.

Proposition 2: *Product or services that require a high involvement from users (technological usage and application; supply arrangements) act as a strong influence on the entrepreneurs IMEM choice.*

The interplay between the nature of the product, service and the preferences of the customer influences the mode of international market entry for these firms. For example, there is evidence to suggest that firms with complex products or systems serving customers where the buyer requires direct support select direct market entry modes. Where firms use sales subsidiaries a critical factor in making the decision is the customer demand for local support. Conversely where the customer does not demand a local presence and the product is relatively standardized agents are used as a mode of market entry. The literature suggests that a firm's international market entry mode is in part influenced by the nature of the product and service offering (Cloninger, 2004). Complex products and co-design with major customers are a strong characteristic of the software and electronics firms and the need for integrated supply systems is a feature of firms in the metal mechanic sectors working with Original Equipment Manufacturers (OEMs):

"We have a product-a product that needs direct near contact with the customer because the product is complex" (respondent firm 5).

"*We adapt the products to the buyer" (respondent firm 6).*

"I think our product is quite special and requires a technical background we need to train and have control persons specific to servicing the product, good positioning, well documented, we want control over deals" (respondent firm 7).

"Yes it is determined by the product, the distribution system is determined by the product. We have many different products, we do not have rules, each product is different we take a different approach. We are now focusing on producing only global products we do not want to produce products for the French market only" (respondent firm 9).

Proposition 3: *The importance of the customer acts as a strong influence on the entrepreneurs IMEM choice.*

The discourse from the interviewees provides very strong evidence that the internationalization process was started by 'following the customer' and responding to a customer need or demand. The firms clearly view themselves to be customer oriented and there is evidence that the firms' internal staff and processes are set up to disseminate and respond to customer information, following Kohli and Jaworski (1990). The association between customer demands and IMEM is evident in comments from most of the firms and is one of the strongest influences from the respondents' perspective. Several of the responses support Homburg's (2000) 'closeness to customer' construct and the strong connection between the firm and the market (Srivastava, Fahey & Christensen, 2001). There was also evidence that whatever the market entry mode the firm uses, the preference was for some direct interaction with the customer:

"We need subsidiaries to keep our customers happy, they need a local person they can talk to" (respondent firm 2).

"Yes-we follow our customers. If they request this then we must work with them wherever they want us to" (respondent firm 5).

"Have to check that the needs of the client are being met. We want to satisfy our customers. Most important thing we developed products with the clients, they decided on the product (respondent firm 7).

"The company is close to clients? Sure, very close yes. When you transfer an industrial unit it is necessary to work with trust because in such a project you are responsible for many things, and it is important that the client can trust you" (respondent firm 8).

"We need to be trusted by the customer because we develop their products. We do not give them products, we give them our know-how. We have some niche products specialized around a customer. We change products to customer demands. We have to be close to our customer, our technical department, our engineering department they work very closely with the customer" (respondent firm 10).

"When we moved into the market in 1993 it was on the back of developing products to a customer in the USA. We followed the customer to other locations in international markets. We are close to our customers"(respondent firm 15).

Proposition 4: The availability of adequate resources acts as a strong constraining influence on the entrepreneurs IMEM choice.

None of the entrepreneurs expressed the opinion that resources constrained or influenced their decision about the IMEM. One respondent discussed some financial difficulties caused by the lack of capital and the underperformance of management in a foreign subsidiary however this was not perceived as a resource problem as the firm quickly resolved the issue and recovered the situation.

> *"With the first subsidiary (in the USA) totally undercapitalised the entire group is basically living from hand to mouth as we say in Germany. The biggest hurdle for such an expansion is two fold. The one is definitely while you are so busy in your domestic market then a faraway subsidiary requiring attention is hard to support. The second aspect certainly is local management quality however we were strongly committed to this mode of market entry and we were willing and able to allocate resources to resolving the problem" (respondent case 6).*

This is at variance with the literature on small firms and resource constraints (Kedia & Chokar, 1986) but is consistent with Crick and Spence (2005) that the resource-based view of the firm does not fully explain internationalization decisions by entrepreneurs. A possible reason might be found in the nature of the entrepreneurial mindset. The theory of entrepreneurial orientation is defined as how firms act and take entrepreneurial decisions. Entrepreneurial firms tend to be predisposed to take risk (such as internationalization and IMEM) in the face of resource uncertainty (amongst other types of uncertainties) because they believe in the rewards available to them (Lumpkin & Dess, 1996). For example, their knowledge of and strong ties to the customer base might ease the decision on IMEM. This allows the firm to ignore resource concerns because the nature of the investment is more clearly known. Resource limitations are problematic only when the requirements are unclear but if the firm has greater knowledge of what the international investment decision requires, then limited resources may not necessarily hinder decision-making. This is not to say that resource limitations will not hinder performance. The prevailing logic would be that some moderation effect is likely. This implies that further research is needed to understand how resources influence the internationalization process and what role they play in determining IMEM.

Proposition 5: *The industry environment in which the firm operates will act as a strong influence on the entrepreneurs IMEM choice.*

Most of the industries served by the firms studied are international in nature and so push entrepreneurs to engage in international activities. The software firms are linked to international banking, large projects, global software houses, telecommunications, retailing, information technology, and pharmaceuticals. The electronic firms serve international clients in the automobile, medical, retail, telecommunications, information technology, and computer games industries. The

metal-mechanic firms supply the global automobile industry, mobile communications, international projects, domestic appliances, medical, and military markets. For many of the firms the industry environment can be classed as global or international in nature. The combination of both an internationally focused supplier industry and customer industry may be thought to exert a strong influence on the IMEM of the case study firms. Only one firm, however, explicitly acknowledged the influence of the industry environment on internationalization but not IMEM.

> "*The internet is the driving force of our industry yes definitely. The PC periphery business and client access business is a global industry and either you play in a global dimension or you don't play*" (respondent case 6).

One possible explanation is that the firms follow multinational customers into international markets serving them through a direct market entry mode. Consequently these entrepreneurs are more focused on the immediate micro-customer environment rather than the distant macro-industry environment. A more likely explanation might be that the nature of the industry is but one consideration. Although one school of thought suggests that firms behave in accordance to its industry, other schools such as the resource-based view argue that firms behave in accordance with their unique resource endowments, and are not governed by industry structure (Ekeledo & Sivakumar, 2004; Farjoun, 2002). The degree of sensitivity of a firm's internationalization decision-making it could be suggested relies on balancing resources with the nature of the industry. This observation explains the growing interest in the resource based view in international research (for example, Erramilli, Agarwal & Dev, 2002). On balance, despite the intuitive appeal of drawing on industry environment as an explanatory variable of international market entry mode decision-making, it should be viewed as one cog in a holistic decision-making process (see for example, Jones, 1999).

Proposition 6: *National culture has a strong influence on the entrepreneurs IMEM choice.*

In terms of the influence of national culture on internationalization overall the case study results suggest that, contrary to some of the literature on cross-cultural and entrepreneurial management (Busenitz, Gomez & Spencer, 2000) few respondents considered national culture as a significant issue in IMEM decision-making. This finding supports Mitchell et al., (2002) and Mitchell, Smith, Morse, Seawright, Peredo, and McKenzie (2000) who found a common cultural perception of entrepreneurship. A specific component of the home country environment which may impact on internationalization is the ability to deal with different languages and cultures. Language and cultural issues have not prevented the firms in the study from exporting and they are not seen as significant barriers to IMEM decisions. However, the organizations that are more domestically

oriented in their sales appear to lack the linguistic confidence of some of the more internationally oriented firms in the study:

> "*It really becomes difficult with these external organizations where there is also the culture and the language system that is different*"(respondent case 2).

> "*The mentality of Italian entrepreneurs is we are good on technological processes good technical developers but we are no good for example at languages and exporting*" (respondent case 10).

These quotes suggest that the educational context within the home country may be influential on a firm's openness to exploiting international market opportunities. If the education system emphasizes the development of foreign language skills then this may ultimately serve to encourage the internationalization of firms within that country. As such this suggests there can be varieties in the national environmental conditions for stimulating IMEM decisions (see for example, Wong, Ho & Autio, 2005). This finding however appears somewhat at odds with Dwyer, Mesak & Hsu (2005) who found that broad national culture types (based on the work of Hofstede [1991, 2001]) influenced the cross-national diffusion of innovations. Since my research relates to IMEM as opposed to the cross-national diffusion rates, it would seem that research is needed to reconcile the influence of culture on post internationalization performance in addition to pre-internationalization expectancies. Whilst culture may not have hindered IMEM in the firms we studied in terms of forming a decision, it would be valuable to discover if this triggered naivety in entry mode strategy. Finally, cultural factors may be a stronger influence on IMEM decision-making of entrepreneurs located outside of the European region.

CONCLUSIONS AND IMPLICATIONS

The findings are that the entrepreneurs in these firms who have been exporting for at least 10 years are they use a mix of 2 or 3 market entry modes simultaneously rather than change market entry mode over time in a singular linear progression. This is at variance with the stage or mode change theory (Johanson & Wiedersheim-Paul, 1975; Calof & Beamish, 1995). Rather these entrepreneurs in medium-sized firms have common and some divergent patterns of IMEM influenced by personal characteristics and biases of the entrepreneur, the nature of the product or service, and the preferences of the customer. There is evidence of differing mode of entry decisions depending on the sector. Electronic and software firms were more likely to use partnerships and subsidiaries as an IMEM. However, there were no sector differences in the use of agents or distributors. On the other hand there is less influence of resource adequacy, industry and cultural environment on the IMEM. These findings follow Crick and Spence (2005) and the argument that

resource limitations can be overcome through leveraging market knowledge and the exceptional capabilities of entrepreneurs with strong international market linkages and networks. These entrepreneurs do not perceive they have resource limitations, as they are more likely to have adequate resources in comparison with micro or small firms. Even so the entrepreneurs in the firms in my study have tended to overcome resource barriers at all stages of their growth including when they were small. The industry did not appear to be as important as the product as an influence on IMEM. Finally, these entrepreneurs appear to overcome cultural barriers and select the IMEM which is appropriate to them and the nature of their products and customers. The research and debate surrounding the influence of culture on entrepreneurs and managers is however inconclusive and while my work finds little or no influence on entry mode decisions this could reflect the Euro-centric empirical research and research in other regions produce contradictory alternative findings.

The implications for theory are that international market entry mode decisions are not static but dynamic contingent on the influences of the factors outlined in the research propositions. My paper addresses the shortage of theoretical development in international entrepreneurship by developing a relatively parsimonious framework. The implications for international managers are the importance of IMEM decisions which are driven by a mix of personal bias, product factors and the requirements of their customers. The implications for policy makers are that any intervention and advice should be specific and contingent to the individual business, the biases and preferences of the entrepreneurs' the products and services and the customers rather than a generic programme of one size fits all. More specifically policy makers should identify and profile entrepreneurs with an international mindset. Other initiatives could take the form of national and regional forums to debate the issues of management skills and the strategic needs of these firms. Policy makers should not focus on resources as the central thrust for supporting the internationalization of medium-sized firms. Instead, the need is to create an economic and fiscal environment to stimulate the internationalization of firms.

For future research it would be interesting to further test the propositions in other regions of the world and extend the work to a larger scale empirical study. The paper contributes to future empirical studies by offering a set of propositions grounded in the experiences of the entrepreneurs in the study. Future research can build hypotheses based on the propositions developed.

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GREEN ENTREPRENEURSHIP (GE) AND GREEN VALUE ADDED (GVA): A CONCEPTUAL FRAMEWORK

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ABSTRACT

This conceptual paper discusses the concepts of green entrepreneurship and green value added. In this paper GVA is projected as an ideal green platform for small and medium sized organisations that is founded by green entrepreneurs. Green entrepreneurship is considered critical for the successful development of GVA because of its flexibility, propensity to take calculated risks, innovative orientation and perseverance while facing challenges.

INTRODUCTION

Natural environmental issues are increasingly becoming integral part of business in every passing day without being recognized as such. It has been argued by many scholars that holistic green business solutions that add value to organizations and their stakeholders should be made part of the basic system of business (e.g. Banerjee et. al. 2003; Coddington, 1993; Charter, 1992; Menon & Menon, 1997; Ottman, 1993; Polonsky, 1995; Porter & van der Linde, 1995; Peattie, 1995), so much so that addressing the natural environmental problems has become a matter of 'survival and prosperity' of every business (Baker & Sinkula, 2005). Many organizations view environmental activities as fragmented functions like waste minimization, pollution control, recycling, etc. However, in many instances green business practices do not exist in isolation; rather they thrive as a comprehensive business philosophy and culture leading to superior firm performance (Nair, 2004; Baker & Sinkula, 2005; Nair & Menon, forthcoming) and value addition. This paper is an attempt to develop conceptual models on basic green business culture leading to firm performance and stakeholder value addition. The authors of the article propose to call this concept as Green Value Added (GVA). Porter's (1985) Value Chain framework is used in this article as a basic premise in developing GVA process model. Entrepreneurs are capable of bringing in innovative and revolutionary changes to business (Ndubisi, 2004), hence entrepreneurship is taken as a conduit for introducing Green Value Added (GVA). Those entrepreneurs voluntarily adopting GVA is referred as Green Entrepreneurs (GE) in the article. The article proposes that careful development of GVA by green entrepreneurs will add value to all key stakeholders of the organization and at the same

time protect the natural environment. The article discusses two models; GVA system model and GVA process model. GVA systems model is a simple framework that depicts the details of how a GVA is developed and adds value to stakeholders and natural environment. The GVA process model is a detail version of the GVA process.

RELEVANCE OF GREEN ENTREPRENEURSHIP (GE)

Many studies have established a strong relationship between environmental friendly business practices (e.g. environmental marketing) and firm performance (e.g. Miles & Covin, 2000; Backer & Sinkula, 2005). However, not many studies have developed a comprehensive environmental orientation that impacts the entire organizational system and adds value to the organisation and its stakeholders. Porter & van der Linde (1995) have suggested that managers should think 'environmental improvements' in terms of 'economic and competitive opportunity' that adds organizational and customer value. For achieving this end a comprehensive green value chain should be developed that effectively connects the organizations with its stakeholders in a sustainable fashion. Development of such a system calls for incremental and breakthrough innovations (Zheng *et al*, 2005), risk-taking propensity, persistence and flexibility (Ndubisi, 2004; Ndubisi et al. 2005) that characterize entrepreneurs. The entrepreneurs are capable of creating small and medium sized organizations that will have the necessary flexibility and endurance to embrace such innovative practices. Osukoya (2007) argued that small firms have several advantages over big firm in adopting environmental practices. Consumers tend to see small firms more environment friendly than their bigger counterparts, and small firms are in a position to react actively to the increasing demands of green products and services in almost all segments of markets (Osukoya (2007). Certain studies have also suggested that an entrepreneurial spirit is more important in making green business innovations than regulations (e.g. Martinsons *et. al.*, 1996). Hence, a green entrepreneurial orientation is vital for developing GVA. In this article, the propensity to innovate or create a green organization is referred to as green entrepreneurship. Thus green entrepreneurship is an essential element of a comprehensive green system like Green Value Added.

GREEN VALUE ADDED (GVA)

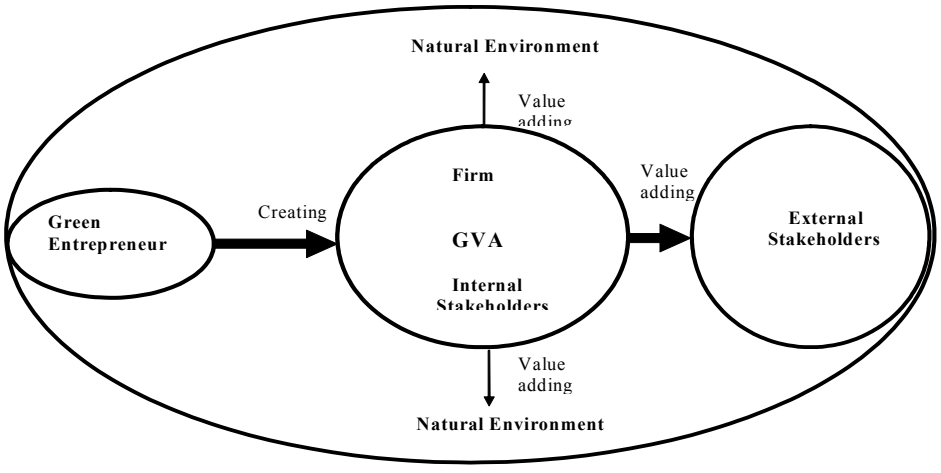
Many comprehensive management initiatives have been proposed by business scholars and practitioners for combating the environmental issues. Some of such practices are: Total Quality Environmental Management (TQEM) (Banerjee, 1998), Environmentally Responsible Manufacturing (ERM) (Handson *et. al,* 2004), Corporate Environmentalism (CM) (Banerjee, 1998, Banerjee et. al., 2003), Environmental Marketing (EM) (Charter, 1993; Ottman, 1993; Peattie, 1995), to name a few. Green Value Added (GVA) is a concept in the same genre proposed in the article based on Porter's value chain analysis. If an entrepreneur wish to build a 'Sustainable

Corporation' then he/she needs to integrate 'environmental and social issues' to achieve long term shareholder value (Banerjee, 2002). Although environmental issues are caused primarily by economic and technological factors, a solution to it cannot be made through these perspectives alone; because environmental problems also have cultural, behavioural and institutional impacts (see Hoffman & Sandelands, 2005). Therefore a comprehensive green business solution based on GVA should take cultural, behavioural and institutional factors into consideration along with economic and technological factors. Thus, GVA is developed in a green entrepreneurship (GE) culture, which in turn breeds green desires and behaviours, with the support of well-developed pro-green institutions and pro-green stakeholders.

Another perspective that the article emphasize is the importance of developing GVA as a basic business system. Claver-Cortes *et. al.* (2007) argue that environmental friendly business practices are source of great value addition to organizations hence should be treated as a capital. Environmental capital according to Claver-Cortes *et. al.* (2007) is part of firm's intellectual capital and "…the creation, transfer and application of knowledge allows them (firms) to offer the market products and services that are more environmentally friendly and therefore have a higher added-value component." (Claver-Cortes *et. al.*, 2007). For GVA to be developed as a source of core competence of a firm, it should be essentially developed as an intellectual capital. Green entrepreneur can spearhead the development of such a knowledge organization that actively learns for environmental efficiency and perpetually develops green products and services. The green knowledge hence acquired will form part of the priceless environmental capital of the firm.

Figure 1 is a diagrammatic representation of a simple GVA system and a discussion follows.

FIGURE 1. THE GVA SYSTEM MODEL.



THE GVA SYSTEM

The GVA systems framework is a comprehensive model that shows how a green entrepreneur builds the organization using GVA. GVA is not an environmental friendly function of the firm, rather it is developed as an organization wide culture and guiding philosophy that adds value to the key stakeholders, to the entrepreneurial firm itself and ultimately to the environment (the physical and socio-economic environments). GVA essentially adds green value to all parties concerned, which is the ultimate aim of the system. However, one should not mistake it as a mechanism for achieving only green objectives that may not be in compliance with other economic and social objectives of organizations. GVA is basically designed to deliver as well, all economic and social goals of the entrepreneurial firms at both micro and macro levels, however, the achievement of these goals are made in the most sustainable and environmental friendly manner as possible. That means GVA retains the usual objectives like profit maximization and shareholder value maximization of a business organization. The major difference in GVA is its inherent green structure, designed to achieve the economic objectives of business without compromising its environmental commitments. How GVA achieves these dual objectives is discussed in the following section of GVA process.

THE GVA PROCESS

The GVA process draws from the value chain model proposed by Porter (1985) as depicted in the Figure 2. Green Value is added in both the primary and support activities of value creation process. A detailed discussion on the GVA process follows.

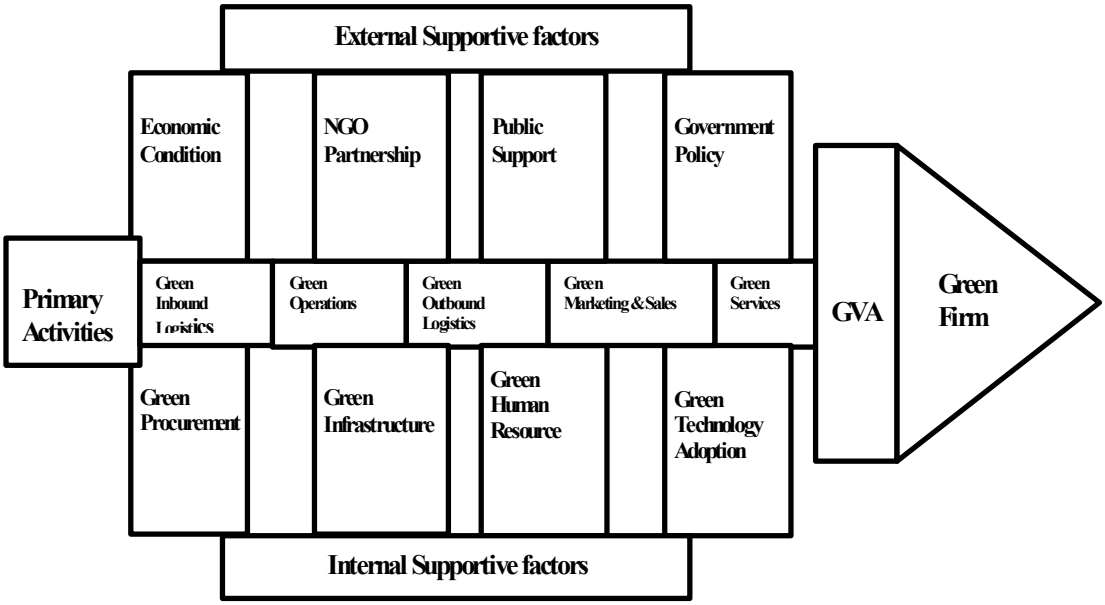
Primary activities

Green inbound logistics

Inbound logistics is responsible for receiving the materials from the suppliers and storing it until it is ready for use. Eco-efficiency can be achieved in all those related activities like transportation, martial handling, storage and warehousing. Good relationship and better connectivity with the suppliers will help the firm go for pro-green practices like Just in Time (JIT) inventory system and similar environmental friendly practices. Introduction of e-logistics systems will help manage logistical issues considerably well and help reduce cost in material handling and storage thereby increasing market competitiveness (Sarkis et. al., 2004) and sustainability. The transportation methods can be made more energy efficient and pollution free. The selection of mode of transportation plays an important role here. Selecting transport service providers who can understand and emulate the firm's green initiatives will fetch long-term results in developing eco-

efficient transport services. For example, haulers that use alternative fuel vehicles (AFVs) will better serve the green logistics goals of the firm and ultimately green value addition. Material handling and storage can be made effective for better eco-performance. Changes in the mode and method of packing (e.g. bulk packing, use of recyclable packing materials etc.) can save money in material handling (Wu & Dunn, 1995). Storage efficiency can be achieved by proactive warehouse designing and use of reusable containers (Wu & Dunn, 1995). Solar powered warehousing facilities are compatible with firms' green storage and warehousing objectives, and can form an important criterion for choosing service providers. Other innovative ways of greening and sustainably developing the warehousing system are through 'green roofing' of the facility and cross docking. Innovative methods like cross-docking are used by many companies like Wal-Mart in their attempt to attain efficiency in warehousing operations (Wu & Dunn, 1995).

FIGURE 2. THE GREEN VALUE ADDED (GVA) PROCESS



Green operations

Implementation of an environmental management system (EMS) standard like ISO 14001 will help streamline green operations. An EMS standard is capable of incorporating environmental management into a company's daily operations as well as long term oriented strategic planning

(Chavan, 2005). Implementation of an EMS also helps in standardizing the firms operations that ultimately result in cost reduction in many ways (Zutshi & Sohal, 2004). Several studies have supported the evidence of improved environmental performance due to the implementation of EMS (e.g. Theyel, 2000). Innovative use of appropriate environmental technology in production and operations will essentially help improve the performance of EMS. A detailed discussion of the environmental technology adoption follows in a later part of the article. From the green manufacturing literature Pun (2004) has identified six major tools that can be used for environmental responsible operations (ERO) : i) life cycle assessment; ii) green quality function deployment; iii) design for recycling and remanufacturing; iv) green purchasing; v) green material requirements planning; and vi) green supply chain. Most of these tools are essentially part of an EMS standard like ISO 14001 and has overlapping effect on other green value chain activities.

Green outbound logistics

Outbound logistics facilitates distribution of finished products and services using technologies of transportation, material handling, packaging, etc. Use of imaginative distribution system and appropriate information ad communication technologies will help to make outbound logistics more energy efficient and pollution free. The earlier discussion on efficiency in transportation, material handling and storage under inbound logistics is relevant here as well. The only difference between inbound and outbound logistics is the nature of products it handles; finished products in case of outbound logistics and raw materials for inbound logistics (Wu & Dunn, 1995). Making distribution partners to adopt and emulate the environmental friendly activities of the firm can help the outbound logistics to be more eco-friendly (Nair, 2004) and more sustainable (Ndubisi & Chukwunonso, 2008). Development of a vertical green marketing system (VGMS) will also help to build a green network of the firm and its distribution partners for improved eco-performance.

Green Marketing & Sales

Green marketing and sales has a more responsible role to play in GVA because of its impact and influence on other activities. According to Charter (1992), "greener marketing is a holistic and responsible strategic management process that identifies, anticipates, satisfies and fulfils stakeholder needs, for a reasonable reward, that does not adversely affect human or natural environmental well-being." It is therefore the role of green marketing to ensure the support of the firms stakeholders for GVA and at the same time make sure that the stakeholder needs are fulfilled at the most sustainable fashion. Customers being the most important stakeholder for a company, green marketing should give more emphasis on communicating with them and if necessary educating them on the green initiatives of the firm. Ideally green marketing should develop an internal and external orientation (Banerjee *et. al*., 2003), to take care of the needs of internal and external customers separately. The

internal green marketing directed at employees and management of the firm can be a collaborative act with Green Human Resources Management (GHRM) that will be discussed in a later part of this article. External green marketing initiatives should be part of a carefully developed strategy to develop effective communication channels to connect with the major external stakeholders to help identify, develop and deliver their needs in the most environmentally benign way. Green firms often share the onus for how customers acquire, use and dispose off products supplied to them. By assuming shared responsibility with customers, they are motivated to use bio-degradable materials and to implement recycling projects and other waste management initiatives in the subsequent discussion.

Green services

Green customers might need the firm's support in using and disposing the innovative green products. This is more so in the initial stages of firm's GVA commitments where use of new green technology necessitates a lot of supportive services to the customers who are using the green products of the firm for the first time. Disposing off the product waste during and after use is a major issue that needs extended green services of the firm committed to GVA. It is likely that firm's key stakeholders will have several concerns and doubts about the GVA. Green services can take the lead role in organising educational and training programmes for better understanding and practice of GVA. In short, green services should offer excellent customer and stakeholder support services for the best use of green products and a better understanding of the green commitments of green entrepreneurs.

Internal Support Activities

Green infrastructure development

Green infrastructure development involves the activities in developing a conducive operating environment suitable for GVA. The organizational structure, control mechanisms and organizational culture usually impacts the infrastructure environment of a firm. To create such an environment, a green entrepreneur should develop a culture where everyone recognizes "environmental improvements as an economic and competitive opportunity, not as an annoying cost or an inevitable threat" (Porter & van der, 1995). The green infrastructure should be flexible enough to adopt the changing environmental needs. Green entrepreneur consistently tries to find ways to improve green infrastructure for excellence and improved performance. Such infrastructure proactively developed to support green primary activities and accommodate other green internal supportive initiatives, are deemed as green infrastructure for a green entrepreneur. ISO 14001 EMS standard will give necessary guidelines to develop a pro-environmental infrastructure in the firm. The whole affair can

be made effective with appropriate professional advice on these matters. Environmental management consulting firms and environmental auditing firms can be used for this propose.

Green Human Resource Management

A green human resource management (GHRM) is directly responsible for developing a green workforce that understands, appreciates and practices GVA. GHRM should uphold its green objectives intact all throughout the HRM process of recruiting, hiring, training, compensating, developing and advancing the firm's human capital. If the employees are exposed to the green culture of the firm right from the very beginning, it is easy to develop a green workforce that will form the backbone of GVA. This way GVA can be made as an intellectual property of the firm that can translate to sustainable competitive advantage. During the selection process, GHRM system could use appropriate measures to identify potentially green employees, such as generic knowledge of the environment and specific incidences of environmental hazards, involvement with environmental advocacy, and past experience and involvement with green projects. Training and development programmes should aim at creating awareness, interest, motivation, and skill to contribute to the firm's GVA initiatives. Of course, there is no gain saying that employees that have demonstrated exceptional commitment to these initiatives should be recognized and rewarded with career advancement. Moreover, an excellent green entrepreneurial leadership will fetch excellent results too. The founder of the business can help develop a green culture in the organization. Anita Roddick of Bodyshop, the UK based cosmetics manufacturer and retailer, is a good example here.

Green technology adoption

Green technology adoption is both a matter of natural choice to a green entrepreneur and a key support for green primary activities. Studies have indicated that environmental or green technology that is adopted as a preventive measure may increase the cost initially but ultimately reduces it in the long-term (Porter & van der, 1995). Innovative environmental technology adoption is a healthy sign of combating environmental issues in the most competitive fashion. Environmental (or green) technologies are defined by Srivastava (1995) as "production equipment, methods and equipments, product designs, and product delivery mechanisms that conserve energy and natural resources, minimize environmental load of human activities, and protect the natural environment." Environmental technology would be viewed both as part of technologies and management orientation. Technologies are in the form of *hardware* like pollution control equipment, ecological measurement instrumentation, etc. and management orientation is formed as *operating methods* like waste management practices, and conservation oriented work arrangements (Srivastava, 1995). Both the *hardware* and the *software* part of environmental technologies should be looked at as integral part of the green management practice of the firm so that better cost effective results can be achieved

in the most competitive fashion. Tools like Total Quality Environmental Marketing (TQEM) can be used to implement environmental technologies effectively (Banerjee, 1998, Hartman & Stafford, 1998)

Green Procurement

Green procurement plays a key role in preventing some of the possible environmental issues a firm might face in the future. Pollution and wastage can be reduced to a large extent if raw materials are sourced carefully. Green procurement will become a vital element in GVA for effective source reduction and excellent relationship with suppliers. Both source reduction and supplier relationships are equally important for GVA. Source reduction will result in better resource productivity by substituting expensive materials and effectively utilizing the existing ones (Porter & van der Linde, 1995). This can also help the organization to avoid or minimize the utilization of depleting resources and can encourage the use of recyclable, biodegradable, photodegradable, and compostable resources. Establishing long term, quality relationship with the suppliers is of paramount importance for achieving these ends. No green initiatives are complete if a firm's supply chain partners are neither green nor willing to go green (Nair & Menon, forthcoming). If necessary the firm can arrange environmental education and training for their supply chain partners. The green entrepreneur can take a deliberate decision to do business with green suppliers or those suppliers who are willing to go green. Many studies have revealed the positive outcomes of a green supply chain relationship between the manufacturer and their supply chain partners (e.g. Simpson, 2007). It is imperative to take green procurement very seriously by a green entrepreneur considering its primacy among business activities and its organisation wide impact on green performance.

External Support Activities

External factors also play key roles for the successful implementation of GVA, rather indirectly. The major external factors identified are economic conditions, NGO partnership, public support and government policy. There are indeed other factors that might impact GVA, but the factors mentioned above are assumed to have a major influence.

Economic Condition

Favourable economic conditions generally inspire and facilitate innovative entrepreneurial initiates like GVA. There have been numerous studies indicating the correlation between favourable economic conditions and adoption of environmental initiatives (Ndubisi & Chukwunonso, 2005; 2008), and performance of business ventures (Baker & Sinkula, 2005; Nair & Menon, forthcoming). It is more likely that green entrepreneurs will venture into building green firms in a more conducive

economic environment than otherwise. And when the economic conditions are favourable, consumer affinity towards green products will be greater as they have enough disposable income to experiment with innovative green products. Hence, favourable economic conditions can be counted as a major external economic factor that supports GVA.

NGO Partnership

A *green alliance* (Stafford, *et al*. 2000) with environmental NGOs will help green entrepreneurs to achieve their green goals more effectively. A *green alliance* can be helpful in many ways. It can help the green entrepreneur establish relationship with other major stakeholders (Polonsky, 1995; Stafford & Hartman, 1996; Stafford, *et al*. 2000) while providing environmental expertise (Stafford & Hartman, 1996; Stafford, *et al*. 2000) to perform the functions of the green organization. It is of vital importance to a green entrepreneur to be connected to the environmental NGOs groups for their support and expertise in the area. The Green NGOs by virtue of their relentless crusade against environmental damage and contamination has the necessary environmental market knowledge and have networking with major environmental stakeholders. This knowledge base might prove to be very vital for the success of green entrepreneurial start-ups. *Green alliance*, hence, would pose as a valuable external support factor for GVA.

Public Support

Regulations and public scrutiny will impact the green initiatives positively (Epstein & Roy, 2000). Green entrepreneurship needs the necessary community and public support to make its GVA venture a success. A strong relation with the community is major prerequisite and success factor for green entrepreneurs. The public supports green initiatives that create jobs and safeguards the natural environment. An initial public relation campaign to educate the public would ensure their support as they later can become partners and customers of the green entrepreneurial venture. Green ventures will be successful if they gain public support as the public forms the market for and the major stakeholder of green initiatives. Therefore, public support can be rated as an important factor supporting green entrepreneurship and hence GVA.

Government Policy

Most of the Governments in the world have been committed to environmental protection as a priority issue. There have been carefully developed environmental policies and regulations to protect the natural environment in many parts of the world. An environmental policy will create an ideal climate to breed environmental friendly business practices like green entrepreneurship if it has a way to reward firms which excel in that regard. Business and industry policies and regulations

developed by the Governments should be designed in such a way that it will encourage new business start-ups with environmental initiatives. Such initiatives will foster economic growth through innovation, job creation, and globalization (Barringer & Ireland, 2006) while protecting the environment. On the flip side, government policies that penalize environmentally unfriendly firms would assist in improving the compliance rate to environmental quality standards and motivation to implement green initiatives. Government policy, no doubt, is very powerful in supporting the growth of green entrepreneurship and GVA.

CONCLUSIONS

GVA is projected in the article as an ideal green platform for small and medium sized organisations that is founded by green entrepreneurs. Green entrepreneurship is considered critical for the successful development of GVA because of its flexibility, propensity to take calculated risks, innovative orientation and perseverance while facing challenges. Innovations generally add value, but at the same time they are prone to failure, thus making it risky. It calls for perseverance, in seeking acceptance and desired outcomes. It demands an innovative, flexible, risk-taking and persistent entrepreneur to create value adding green innovations. A GVA needs synergic blend of all the above entrepreneurial traits to be effective. GVA is proposed as a basic value adding business process blended with eco-efficient green initiatives that does not compromise on the economic and social objectives of a business. No business activity, both internal and external, is spared from GVA. That is to say in a firm green value addition occurs at all points and stages of the business process, and most importantly everyone is responsible ad can be involved. Green entrepreneurial leadership plays a vital role in creating a green culture in the organization. Such a culture can breed significant environmental knowledge and expertise that could translate into an intellectual capital for the firm leading in turn to sustainable competitive advantage. By adapting and blending the primary business activities with green initiatives, entrepreneurial ventures can create green value added to important stakeholders with the support of internal factors such as green procurement, green infrastructure, green human resources, green technology, and external factors namely, conducive economic condition, NGO participation and advocacy, public support and favourable government policy.

Lastly, this article creates opportunities for future research in the area. GVA is developed as a conceptual framework in the article and needs empirical validation. The possibilities and properties of developing a GVA in real life business setting needs to be researched further and the conceptual framework developed in the article can be used as a basis for the empirical validation.

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INNOVATION AND ENTREPRENEURSHIP: NEW INNOVATIONS AS SOURCE FOR COMPETITIVENESS IN FINNISH SMES

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ABSTRACT

This paper analyses the role of innovation in small Finnish entrepreneurial firms. The study is based on a questionnaire survey and semi-structured interviews carried out recently. In light of company cases innovation has been crucial factor for existence of business at the first instance. According to the survey results, identification of market niche and customer needs turns out to be the most important source for innovation among companies. Increase in profitability and competitiveness emerge as the most beneficial impacts of innovation in all companies but also new contacts and co-operation that arise in the process of innovative activity are highly valued, especially in micro firms. Despite of the importance of innovation, small entrepreneurial firms also face number of challenges hampering commercialisation of a novel idea. These range from obstacles pioneer company encounters in gaining market credibility and acceptance to lack of business experience in general. The results are expected to give new information about the role innovations play in building competitiveness in small entrepreneurial firms in Finland.

Keywords: Innovative SMEs, entrepreneurship, competitiveness

INTRODUCTION

The point of departure of this study is that innovations in a form of a new product, process or service are an important factor in providing competitive advantage for SMEs. Continuous creation and recognition of new ideas and opportunities are common characteristics for innovation activity and entrepreneurship. At the best, innovation facilitates small companies to overcome resource restrictions needed for growth.

This paper analyses the role of innovation in small Finnish companies. More specifically our focus is on specific characteristics related to origin of innovation in small entrepreneurial firms and contribution of innovation to firm success. Study is based on a survey targeting 220 Finnish companies having introduced an innovation to market in 1999-2004. Besides to survey also semi-structured interviews were carried out among 70 Finnish innovative SMEs. Both survey and

interviews were implemented in the late 2005. The interviewed companies had developed and launched a new product or process to market similar to firms in survey sample. A clear majority of companies has been established originally on a basis of a novel idea developed by innovator to whom own firm has been a way to turn idea into a revenue bringing commodity.

In the following, a short definition for the key concepts of innovation, entrepreneurship and their inter-relationship is provided. Thereafter data and methodology used are presented. Rest of the paper focuses to report results of analysis starting from origin of innovations in small entrepreneurial firms and proceeding then to benefits and impacts of innovation to firm. Also challenges of innovativeness faced across innovation process are discussed before the concluding chapter.

THEORETICAL BACKGROUND

This paper is based on an assumption that innovation and entrepreneurship are closely related to each other. As phenomena both are characterised by a group of common attributes — uncertainty, risk-taking but also recognition of new market opportunities, endurance to face challenges and strive for success.

Innovation, as we understand it here, is a novel product, process or service developed and commercialised by a company. Principally, continuum of innovation spans from incremental improvements new to firm to radical invention new to global market. Often innovation activities are translated or seen more or less as synonymous with R&D. This view is, however, too narrow particularly if we look at smaller companies or companies operating in fields not known to be particularly R&D intensive. In addition, often product development carried out in small and medium sized firms is tightly intertwined with the business as a whole, and thus consequently less formalized in organizational terms (i.e. having neither separate nor official R&D departments). We would rather like to follow here the definition given by Harrison and Sullivan (2000, 40) to innovation process: "all firms have their own approach and method for developing new or innovative ideas that create value. For many technology companies the innovation process is an R&D activity; service companies, on the other hand, often have a creativity department; still others rely on their employees in the field to produce innovative ideas".

According to Acs and Audretsch (1990, 39-40), two distinct views concerning "the relative advantages of large- and small-firm innovative activity" has emerged in theoretical and empirical literature. Evolvement of Schumpeter's thinking succinctly describes the two positions. Early Schumpeter emphasised the role of small firms and entrepreneurs in renewal of industries through creative destruction – small firms motivated by competition are seen as the most conducive to economic dynamics. However, late Schumpeter stressed the unique attributes of large enterprises (in form of resources and market presence) to utilise innovative opportunities.

A close relationship between innovation and entrepreneurship becomes clear if we take a look on definition given for the latter by Shane (2003, 10). According to Shane, "entrepreneurship

is an activity that involves discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organising, markets, processes, and raw materials through organizing efforts that previously had not existed". This definition fits particularly to research focusing on a specific instance of entrepreneurship that is the founding of a new business and self employment. However, there is not a clear consistent view on the existence of entrepreneurial opportunities. Kirzner (1973) emphasised the access to existing information to play crucial role. He further argued that people use and form beliefs about the efficient use of resources according to the information they possess. Therefore decision-making process is not always accurate and is likely to contain errors, which in turn creates shortages and surpluses. An individual may respond to these unbalances by obtaining resources, recombining them and selling the output. On the other hand, Schumpeter (1934) explained the introduction of new information to create the entrepreneurial opportunities. He argued that changes in technology, political forces, regulation, macro-economic factors and social trends create new information that entrepreneurs can use to figure out how to recombine resources into more valuable forms. (Shane & Venkataraman 2000.)

Entrepreneurship as a research area is quite recent and therefore a conceptual framework is still a bit blurry (see e.g. Casson 2005; Shane & Venkataraman 2000; Bruyat & Julien 2000). Some researchers argue entrepreneurship to involve establishment and running of own company, i.e. entrepreneurial firm, while others see entrepreneurship to exist in any company or organisation, large or small. For example Casson (2005) highlights the importance of judgemental decision-making in defining entrepreneurs. He further adds that risk and uncertainty relate closely to this type of decision-making. The same characteristics can be easily associated to innovation activities. Casson (2005, 335-336) speaks about market-maker entrepreneurs who exploit emerging opportunities to create new markets e.g. by designing novel products, for which there exist no market.

In order to accept that innovation has today increasingly important role in firm's growth and survival, it becomes crucial to identify the sources from which innovative ideas origins. This is well in line with Shane's (2003) view that the entrepreneurial process originates from the perception of the existence of opportunities, or situations in which resources are converted into profitable business. Traditionally it has been acknowledged in the innovation literature that customer need or technological advancement are the primary factors behind new combinations of resources, i.e. innovations (c.f. Dodgson & Rothwell 1994, 33-50; Dosi 1982; Kline & Rosenberg 1986, 275-305). More nuanced models, such as the chain-linked model, account for wider diversity in the sources of an innovation (see Kline & Rosenberg 1986).

New combinations can be seen as a response to changes and/or emerging opportunities. Following Schumpeter (1934, 66), novel combinations may take form as new products or services, new geographical markets, new raw materials, new methods of production and new ways of organising. Drucker (1985), on the other hand, describes number of sources from which innovation opportunities spring. He has identified these as unexpected, discrepancies, process need, structures

of industry and market, demographics, changes in perceptions and novel knowledge. According to Drucker (ibid.), systematic exploration of these sources for emerging opportunities is necessary and leads to innovative ideas. Although, the systematic screening of emerging opportunities is important for innovations to be realised it is not the only sufficient condition. The key role that the alert entrepreneur plays in discovery, and, in particular, in the development of ideas for how to pursue and launch them to market, should be underlined (Shane 2003).

Predominantly the impacts and success of innovation are difficult to pinpoint and measure exactly. In research the success of an innovation is commonly approached at the firm level, i.e. increase in market share, profitability, productivity or technical novelty (Niininen & Saarinen 2000; Palmberg 2006). The above mentioned measures cannot though alone explain the value of innovation to the innovative firm. Innovation activity is such a multidimensional phenomenon that economic or technical attributes reveal only partially its effects.

In this paper our aim is to find out where innovative ideas come from and how they evolve in small Finnish companies. Another question raised here touches upon impacts of innovation on firm performance and survival.

DATA AND METHODOLOGY

The data we use in this study originates from the Finnish innovation data, Sfinno®, which at the moment contains information of nearly 4000 innovations. The data on innovations is gathered using literature based innovation output method, which means that innovations are identified from trade and technical journals (Palmberg et al. 2000). All innovations in a database are developed and commercialised by Finnish companies, i.e. companies that are registered and have their headquarters located in Finland. The data used in this study is based on the preliminary results of fourth updating of innovations from period 1999-2004. Data was collected by electronic questionnaire called Zef Tool® during autumn 2005. The respondents were able to rate significance of claim in a segment of line from 0 till 100. An invitation to participate into Sfinno® study was sent overall to 220 respondents of whom 37.7% completed the extensive questionnaire. The fourth updating is currently in process, and data used in this study will be complemented in the near future.

In the Sfinno® database an innovation has been defined as "invention that has been commercialised on the market by a business firm or the equivalent" (see, OECD Oslo Manual 2005). Each innovation contains information of the commercialising firm. This information includes entry, exit, geographical location, turnover, number of employees, patents, and industrial classification (SIC) according to the main industrial sector of the firm. An innovative firm has been defined "as a firm, which has developed and commercialised a new product – an innovation" (OECD Oslo Manual 2005).

Companies in sample were divided into groups according to number of employees. The significances of answers were simply summarised and divided by number of responses. The

respondents were able to leave questions unanswered if the claim had not materialised, or was not valid for an innovation in question. In addition, the Sfinno® survey asked the respondents to indicate the years of major phases in the innovation's development cycle, including the year of basic idea, first prototype, commercialisation, break-even point and first exports. The year of basic idea is considered to indicate the year when the first initiative for development of an innovation was voiced. The year of commercialisation marks the year when innovation entered market on a larger scale rather than a time when a mere prototype was introduced. In this context, the development time of an innovation is defined as a time it takes from basic idea to commercialisation.

In addition, we have selected company cases that describe companies' innovation processes to support our Sfinno® data analysis. These 29 cases were selected from the total amount of 70 in order to get representative sample, and in which either one of the authors or both had attended. Cases were selected using the same criterion as in survey sample – companies had developed and commercialised an innovation. Suitable companies were contacted in advance by telephone in order to set time and place for an interview. Semi-structured interviews were conducted in pairs to ensure reliability.

RESULTS AND ANALYSIS

Descriptive statistics

The sample constituted of Finnish companies that have developed and commercialised an innovation. The studied companies were divided into three distinct groups according to their size measured by number of employees. The sample splits into two relatively same sized groups, the companies having 1-9 employees and companies having 50 and above workers, as can be observed from table 1.

The average company age at the time of commercialisation of innovation was significantly smaller in companies employing less than 50 employees than in larger firms with over 50 workers, naturally the smallest firms being the youngest. Companies are often established in order to take forward the development and commercialisation of an innovator's idea - to make an idea into an innovation. It might too be that an innovation is brought to the market at the same year that company is established. The number zero indicating the company age at commercialisation refers either to fast innovation process, or commercialisation of an innovation developed prior to establishment of firm.

Another indicator for the duration of innovation process is the development time that is taken from the first thought of an innovative idea to be developed into process or product to be commercialised on market. The average development time in micro firms is 2.8 years whereas larger companies spent slightly more time for development. The interviews carried out imply that the restricted available resources lengthen innovation process in several companies in which innovation

is developed mainly by cash-flow. As can be seen from table 1, development time of an innovation in studied companies ranged from 1 to 17 years.

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Table 1: Descriptive statistics of sample			
	1-9	10-49	50+
n=	32	17	33
Age at commercialisation	54	7,2	473
Min	*0*	*0*	*2*
Max	*16*	*29*	*121*
Development time in years	28	4,1	36
Min	*0*	*0*	*1*
Max	*9*	*17*	*10*
R&D project number of internal participants	31	6,2	67
R&D project number of external participants	30	2,5	101
Minimum R&D project size	*2*	*2*	*1*
Maximum R&D project size	*30*	*35*	*100*
Patent applied	37,5 %	47,1 %	24,2 %

As could be assumed, the R&D project size measured by participants in the development of innovation is smaller in micro firms than in larger firms. On average an innovation development process in micro firms requires 6.1 participants of which half comes outside the innovative firm. Co-operation with external partners in innovation development is relatively important for companies in all size classes. However, companies with personnel 10-49 employees seem to rely more on internal knowledge and know-how than smaller and larger companies.

Patenting has often been pointed out to be extremely expensive and resource demanding. It could be assumed that this relates more to small than large firms. Interestingly, our study shows small micro companies to be active in patenting taking their scarce resources into account. Besides being expensive, patenting also provides positive effects to company, such as protects from copying and increases esteem of a company. Patenting also opens new routes to commercialise idea or innovation, e.g. licensing, not just through establishing a new firm.

Existing literature shows that size of firm in itself does not explain which enterprises engage in innovation activities. Similarly, the size of innovating firm does not explain outcome of such an activity. For instance industry specific factors have an affect on large and small companies propensity to contribute to innovation - industry matters, technology matters, history matters as Freeman and Soete (1999, 229) remark. Instead of these restraints literature provides a number of explanations for small companies' engagement in innovation.

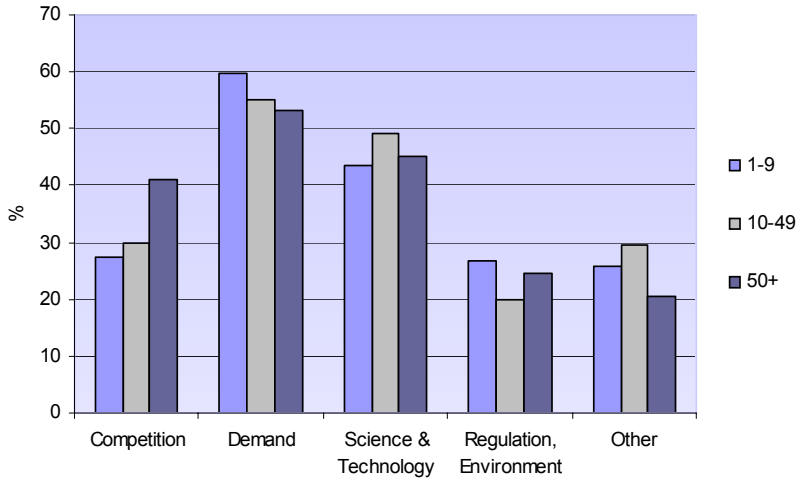
Following Acs and Audretsch (1990, 39-40), a tentative list about pros and cons for innovation in small firms can be compiled: 1) innovative activity requires often high costs which in small firms are restrained by available resources; 2) innovation/product development is risky investment and small firms engaging in innovation activities make themselves vulnerable by investing a large proportion of their resources in a single project; 3) small firms with low levels of bureaucratic constrains and flat management structures can provide a fertile ground for innovative activity and intra-company knowledge flows (opportunities, market needs etc.) when compared to larger firms; 4) many innovations relate to rather focused niche market which attract interest of an individual entrepreneur rather than large corporations.

Origin of innovation

Innovative ideas are identified to be driven by two main factors – market demand or technology push (cf. Freeman and Soete 1999, 200). Either one of these two main streams is often identified as initiating factor for innovative ideas. As Fig 1 clarifies, our results support this common view. Factors rising from demand are clearly the most significant initiator in innovation process in each company size class. Especially micro companies that are in the focus of our study seem to utilise market opportunities. Ideas originating from scientific sources are also important in all size classes, however, more significant in larger companies than in small.

The initiating factors presented in Fig 1 were classified into five categories. Under competition has been grouped sources relating to firms competitors, i.e. intensification of price competition and thread posed by rival innovation. Issues related to market demand are realisation of market niche, customer demand as well as public procurement. New scientific breakthrough, new technologies, and public research or technology programme are classified under science & technology class. The fourth group constitutes of regulative factors such as environmental factors; official regulations, legislation and standards; and availability of licence. Furthermore, the respondents were able to indicate another source in the other category. The respondents were given a possibility to denote the importance of a certain source for the start of development of an innovation in the scale of no significance to great significance. Therefore an innovation may have several significant sources. The same applies to benefits and impacts of an innovation that will be introduced in section 4.3 later on.

Figure 1. Sources for innovation typified into five categories



In large companies innovative ideas originates more often from competition compared to small firms. One possible explanation might be their preparedness to face competition which derives from their market position. Especially recently established small firms may lack market knowledge and position compared to older counterparts. The realisation of market niche created the most significant source for innovation in each firm category. Customer needs are also an important source for innovative ideas in micro and large firms employing more than 50 employees. Moreover, the micro firms have been able to utilise the opportunities emerging from public procurement more vastly than larger firms in the sample.

Another commonly stated origin for innovative ideas is the scientific progress either in own firm, or in external sources. The several case studies presenting research institution spin-offs emphasise the science and technology as an elementary source for innovation. The most significant source for micro firms in science and technology class has been the participation to public research and technology programmes - these programmes are in most cases organised on national basis. Programmes are designed so that participants represent several instances, i.e. universities, research organisations and various sized companies enabling knowledge and know-how diffusion and networking. The official legislation, regulations and standards have also been quite significant origin for innovations in each company group. Availability of licences has been important particularly to micro firms.

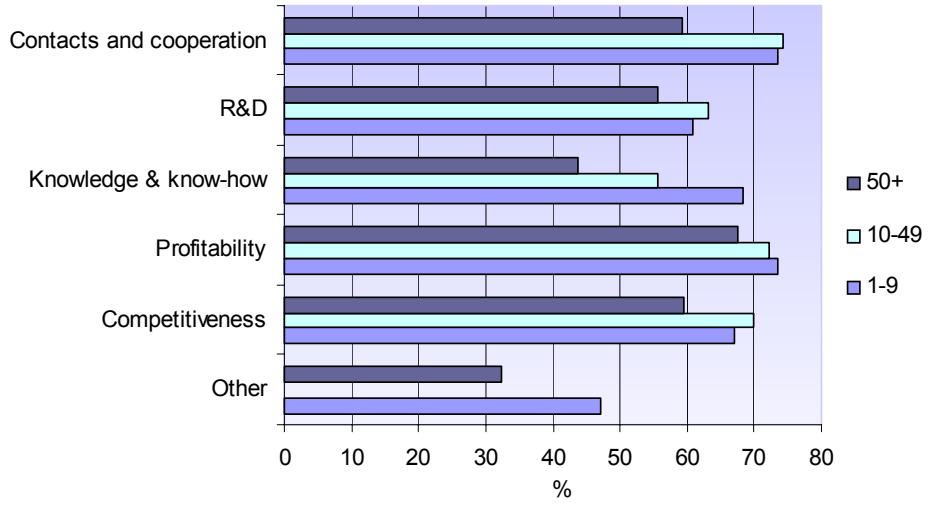
Further, several cases indicate innovative ideas to origin from innovator's own experience and know-how. Improvement in an existing product, process or service might turn out to be a successful innovation. Innovator's knowledge of industry in general and experience accumulated during the years in particular support entrepreneur to realise market opportunities. This is well in

line with Shane's (2003, 45-46) findings from literature from which emerge three factors, prior life experience, social networks and information search that have an influence on gaining early access to information valuable for recognizing entrepreneurial opportunities. Further, two different factors have been proposed to have influence on the ability to recognize opportunities; firstly, absorptive capacity (knowledge about markets and knowledge of how to serve markets), and secondly, cognitive processes (intelligence, perceptive ability, creativity, inclination to see opportunities) (ibid. 50).

Benefits and impacts to innovative company

This section reveals impacts and benefits innovativeness brings to company. Innovation may be argued to have several kinds of impacts not only commonly thought commercial benefits. The results of our study reveal that micro firms value new contacts and cooperation with other companies as the most significant benefit to company (Fig 2). Also improved profitability and enhanced knowledge and competitiveness through innovation are seen important in micro firms. In general larger companies value the same impacts than micro firms – only on a lesser extent. Differences in perceptions concerning impacts of innovation probably reflect distinct bases of companies; micro firms tend to have only one innovation whereas larger companies may possess an extensive pool of innovations.

Figure 2. Benefits and impacts of innovation to company.



The benefits and impacts were classified into wider categories similar to origin of innovation introduced in previous section (see more detailed division in Appendix 1). The larger companies with more than 50 employees perceive the significance of an innovation to impact commercial value

of company. Micro firms, on the other hand, appreciate both commercial benefits and intangible benefits, i.e. improvement in ways of doing and strengthening of knowledge and know-how. Even though the strengthening of knowledge and know-how proved as one of the most important impacts to micro firms, the increase in the number of R&D workers has not though seen so important in micro firms as in larger firms. A likely explanation is that in micro firms the division of labour rarely is determined to the extent than in larger companies.

Moreover the cases imply innovator/entrepreneur's reluctance to hand over product development projects to co-workers but wants to keep strings in own hands that on its behalf affects the recruitment of new employees. On the other hand, there are also cases in which the original innovator and founder of company has decided to focus on R&D and left the running of everyday business to professionals, e.g. to externally recruited CEO. This indicates how important role discovering and developing new ideas actually has in companies.

The protection that patenting and other IPR measures bring to innovation was surprisingly seen more important in small than large firms. Filling in patent applications has commonly argued to be time-consuming and expensive, and first of all not always seen to create real protection to an innovation that might discourage smaller companies to patent their invention. In light of case interviews of small firm CEOs, the actual protection provided by patents was considered vague in the case another company wants to violate the IPRs – small companies do not often have resources to defend their position by filing a lawsuit. In spite of this, many case companies still had extensive patent portfolios. On the other hand, right to sell a licence might act as an only means to commercialise innovations in smaller firms - especially in the case of science based innovations.

There are of course variations between industries' tendency to patent while also other factors might explain individual companies' patenting propensities as well. For example a strong market position or acknowledged brand name might protect larger companies' innovation that are not attainable for a start-up company. Moreover companies tend to use other protection methods, like simply staying ahead of competitors in terms of technology that defends their market position. The case studies showed that instead of patents other type protection methods are also widely used, especially in certain industries such as ICT.

As mentioned, new contacts and cooperation related to innovation turned out to be highly valued by company respondents particularly among smaller companies. The enhanced visibility and esteem was judged the highest by micro firms. The successful commercialisation of an innovation does not solely enhance commercial values but most of all brings satisfaction to innovator/entrepreneur and improves company's esteem among stakeholders, i.e. competitors, co-operation partners and not least among financiers. Merely an image of innovativeness affects company's esteem and visibility. However, often good image is not sufficient in gaining the first customer. According to a data of our case studies, difficulties in gaining the first deal were stressed. Having an extensive list of references is important for companies commercialising their innovation,

and therefore lack of reference list was repeatedly mentioned as one of the main hindrances in successful commercialisation.

Challenges of innovativeness

This section based on 29 company cases reveals the challenges most often faced in the innovation processes. The cases reveal that duration of innovation development creates challenges to entrepreneurs in several ways. Firstly, process ties human resources and, secondly, it demands often relatively large financial inputs. Particularly in small firms, new innovation processes are often carried out beside the regular operations which ties innovator/entrepreneur's time but shows commitment required to go through new product development processes as well. Besides to acquire specific knowledge and know-how, identifying a right actor or person is not effortless either. For instance to build a viable network of subcontractors, co-operators, sales agents etc, is demanding and time-consuming process. Financial restrictions in innovation process are common for micro companies having not yet references, or either credibility in the eyes of financiers. An indication of shortage of external sources of funding is that at the early stage of innovation development several companies rely exclusively on income financing. Overall, uncertainty about outcome and risk are integral part of innovation and entrepreneurship - in fact, they are the very factors making entrepreneurial profit possible.

The current trends of subcontracting and outsourcing in different stages of business activities and the increasing technological complexity create both challenges and new opportunities for innovative small companies. Networking is becoming critical not only in manufacturing but also in product development. When complexity of R&D project increases the small and micro firms need to tap complementing external sources of expertise and know-how. This type of trend creates simultaneously new opportunities for entrepreneurs and small firms to enter opening niche markets which may also be highly R&D intensive. Instead of growth taking place in single company it might ever more become concrete in company networks.

The challenges faced in the commercialisation and internationalisation are crystallised in the lack of first references as mentioned above. Small start-up companies struggle with selling the idea without convincing references to potential customers. Particularly in technologically oriented companies the problems linked with commercialisation are multiplied because of inexperience in sales and marketing – some firms tend to proceed in stepwise manner focusing heavily on product development and neglecting market contacts. Paradoxically some interviewees felt that pioneering position (in a meaning of novel product) further raises threshold to enter market. The market might also be non-existing that impedes commercialisation particularly in the case of breakthrough products. In addition, small companies often lack resources to create a new market, which is needed in truly innovative cases (i.e. when product or service does not exist before).

The small size of domestic markets in Finland pushes even small firms to look for foreign opportunities in the early phase of company life cycle. Naturally this creates new type of challenges concerning internationalisation; finding right distribution channels, concern about international IPRs and level of own know-how about foreign operations just to mention few.

CONCLUDING REMARKS

The rather small sample size restricts us to make too far-reaching generalisation of results, however it gives implications of phenomena. Challenges that companies encounter are dependent on industries or sectors they arise at but also dependent on markets, i.e. consumer versus business markets, they operate at.

Economic success and profitability are necessary but not alone sufficient explanations for innovation in entrepreneurial firms. Besides of economic rewards, innovative entrepreneurs seem to value self-fulfilment which shows in the preparedness and commitment to use considerable amount of own time and energy in advancing idea into successful innovation.

Despite of various challenges and obstacles that entrepreneurs face during the innovation process, their commitment to learning and advancement of business seems to provide solutions to carry on - sometimes through trial and error. Besides of commitment and preparedness also dose of good fortune and timing is needed in order to succeed in innovation.

In light of case studies, it seems that small entrepreneurial companies face challenges in commercialising their innovations. This is quite apparent especially in the case of novel innovations to which markets are largely unknown and non-existing. Creating a market - assuring customers, financiers, competitors, and other interest groups - is definitely a challenge for any company, large or small, but challenges might turn out to be tremendous for entrepreneurial companies who have less market, or marketing, knowledge compared to larger firms. Keeping these challenges in mind entrepreneurial companies should assess their commercialising strategy carefully. The market and technology-led strategies should be in balance in a chosen commercialisation strategy. Either one should not be left unconsidered but neither one should be weighted in the expense of another.

From policy perspective the paper raises a question whether there exists opportunities to lower threshold which innovative entrepreneurs encounter in launching breakthrough innovations. This relates especially to the situation in which innovation, even potentially very promising one, does not fit into dominant mainstream understanding, e.g. technologically or commercially. On the one hand, this type of situation creates challenges to pioneering innovators but also reflects to requirements that policies aiming to promote entrepreneurship should be aware of. A one well-known example that innovative companies and entrepreneurs have often to overcome in order to start, or continue, development or commercialisation of innovation is to gain credibility and acceptance in the eyes of private and/or public financiers.

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Appendix 1					
Benefits and impacts to innovative company. Categorisation used in demonstrating the survey results.					
Contacts and Cooperation	**Research and Development**	**Knowledge & know-how**	**Profitability**	**Competitiveness**	**Other**
New contacts / improvement in co-operation	New and improved methods / services	Strengthening of knowledge and know-how	Improved competitiveness	Increase in market share in existing market	Other factors
Increase in visibility and esteem	Patents and licences	Additional R&D recruitments	Improved profitability	Access to new markets	

AN ANALYSIS OF PRODUCT-MARKET STRATEGY AND EXPORT PERFORMANCE: EVIDENCE FROM SME'S IN SAUDI ARABIA

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ABSTRACT

This paper examines the relationship between product and export market characteristics with export marketing strategies and performance of SME's in Saudi Arabia. Based on an extensive review of literature, a model was developed for the study and hypotheses were formulated. Empirical research was used to test the hypotheses. Primary data were collected through a survey from a sample of 214 exporting SME's in Saudi Arabia. Results based on the use of multiple regression procedures suggest that while product and export market characteristics have an impact on export marketing strategy of SME's in Saudi Arabia. Limited sample size and the generalization of results for the entire Kingdom although the sample are quite limited are the limitations of this study. The findings of this study provides useful insights to SME's involved in exporting activities in marketing strategy deployment. This study makes a valuable contribution given the fact that there is a dearth of empirical studies c of this nature focusing on Saudi Arabia.

Keywords: export, marketing strategy, performance, SME, Saudi Arabia

INTRODUCTION

Exporting is one of the most common entry modes to international markets. Consequently, exporting and export behaviour have been a primary area of interest in the international marketing field and the focus of extensive marketing literature (for example, Lado *et al*, 2004; Leonidou *et al,* 1998). Although past research has established the relationship between marketing strategy and performance in the domestic marketing context, empirical work in the context of export marketing has been scanty and fragmented (Zou and Cavusgil 2002). Leonidou *et al* (2002) observe that while this stream of research has identified marketing strategy elements that influence export performance, the findings reported in the literature are characterised by fragmentation and diversity, limiting theory development, as well as making improvements in management practice.

Nevertheless, most of the studies on marketing strategy determinants of export performance have focused on developed or western country settings. For example, Katsikeas, *et al* (1996) use empirical research to find the determinants of export performance of exporters from Greece. Other

studies in other western countries are numerous (for example, Chetty & Hamilton, 1993; Slater & Narver, 1993; Bodur, 1994; Couto, *et al*, 2006) with little empirical evidence obtained from Middle East. Within the Middle Eastern region, Saudi Arabia is a key member of the Gulf Cooperation Council (GCC), which is the most powerful trade group in the Middle East. In the trade arena, GCC's objective is to achieve free trade arrangements with the European and Asian nations besides unification of trade policies and importation systems.

That Saudi Arabia is world's largest exporter of crude oil is well known. However, the Kingdom has been making concerted efforts at diversifying its export base. The non-oil exports amounted to $20 billion in 2007, up from $16 billion in 2006 and $12.8 billion the previous year. In the non-oil exports, sectors such as metal products, electrical goods, machinery and industrial equipment, construction materials, wood products, textiles and garments as well as food and beverages have been growing in importance. Accession to the World Trade Organization (WTO) has given the Kingdom's export efforts a huge boost to strengthen its position in the fast growing markets in the Middle East as well as in Asia. Membership of WTO has given a competitive advantage to exporting SMEs operating within the petrochemical industry, which enjoys several comparative advantages. Further, because of membership of WTO, removal of trade barriers in the EU, US and Japanese markets is allowing SMEs in the Kingdom to offer substantially lower prices to previously tariff-protected markets.

The present study builds on previous work and focuses on the relationships between export performance and marketing strategies of SME's in Saudi Arabia. The key role of SME's in exporting has led to a large number of investigations into the factors associated with export success for over almost half a century (Tookey, 1964; Cunningham and Spigel, 1971; Wolff and Pett, 2000; Williams, 2006). In particular, studies have explored the relationships between successful export performance and export marketing activities (Lee and Yang, 1990).

This study consists of five sections, inclusive of this introduction. In the second section, literature is reviewed, a conceptual framework is presented and hypotheses are developed, and the third section explains the research methodology used and data collection process. The fourth section reports the findings and the implications of study. The final section concludes by outlining the limitations of the study.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

SME Characteristics

Exporting is the preferred mode of internationalisation of SME's. Although, SMEs face challenges in competing on price with larger firms, they have their own strengths. A key strength is their lighter structure, which allows them rapid adaptation of their export strategies to the special needs of the foreign market (Lages and Montgomery, 2004). Recent studies have attempted to

identify the factors that stimulate SMEs in their exports (example, Leonidou, *et al,* 2007). In general, size of firm, categorised as large on one hand and small to medium on another have been widely examined as a potential predictor of export performance (Babakus, *et al,* 2006). Many researchers assumed that larger firms tend to be better international performers. Much previous research found a positive impact of firm groups on export performance and supported the conventional wisdom that a larger firm with greater resources compared to their smaller counterparts tended to perform better in foreign markets (Babakus, *et al,* 2006). This theory finds support in instances where sales volume is used as a measure of firm size, and export performance is measured by export volume. This suggests that larger firms with large dollars sales are likely to have high export volume but that does not mean that they have higher export to total sales ratio and higher export growth than smaller firms do. Firm size as a variable has no impact on performance measures (example, Baldauf *et al,* 2000; Francis and Collin-Dodd, 2000) suggesting that SME's may have the ability to perform as well as their larger counterparts in foreign markets.

Previous research on export performance has examined the effect of a broad range of variables on the export performance, among which are market characteristics (Stewart and McAuley, 2000). The internal SME specific factors include firm and management characteristics such as size, management commitment to exporting, managers' attitudes and perceptions towards exporting, competition, market potential, risk and profitability. The relationship between market characteristics and export behaviour has been extensively studied in the export management literature (for example, Shamsuddoha and Ali 2006; Francis and Collin-Dodd, 2000; Lu and Beamish, 2001; Aaby and Slater, 1989), but its impact on export performance is far from clear. Whilst a positive impact has been found by many researchers (Babakus, *et al*, 2006; O'Cass and Julian, 2003a; Javalgi *et al*, 2000) researchers have also reported a non-significant impact (Ali, 2004) or mixed results (Baldauf *et al*, 2000). Based on empirical evidence, Cavusgil (1984) argued that the true relationship is not between size and export behaviour, but between various advantages, which accrue from large size, product and market characteristics.

Export Marketing Strategy

One of the roles of export companies is to develop and implement export-marketing strategies (Timmor and Zif, 2005). As world markets globalise, the effect of global marketing strategy on a firm's performance has been frequently discussed in the literature. Export marketing strategy is the means by which a firm responds to market forces to meet its objectives .The key aspects of export marketing strategy include product, price, promotion, distribution, and the decision to standardise or adapt to the conditions of foreign markets (Cavusgil and Zou, 1994; Douglas and Craig, 1989).

Many researchers (Birkinshaw, *et al,* 1998; Lages, 2000) argue that global marketing strategy plays a critical role in determining a firm's performance in the global market. The relationship

between export marketing strategy and performance has received considerable attention in the literature (Lee, 2004). Systematic examinations have been made of the relationships between marketing strategy and performance (example, Tang, *et al*, 2007). Yet there is little agreement as to what constitutes global marketing strategy.

Export Performance

Exporting is one of the significant preliminary steps of an enterprising organization towards expanding its international business activities. There is a lack of uniformity in conceptualisation, definition and measurement of export performance; and difference among countries' export performance in export literature (Eusebio, *et al,* 2007). This has contributed to the challenge of identifying and understanding the antecedents of export performance (Madsen, 1989; Zou, Taylor and Osland, 1998). A comprehensive survey of the literature by Katsikeas, *et al* (2000) revealed that export intensity, export sales, export growth, and export profitability are the four most used measures of economic export performance. Export intensity is the ratio of export sales to a company's total sales and it is the most widely used economic measure of export performance in the literature (Katsikeas *et al,* 2000). This is followed by export sales, which indicates the size of export earnings in dollar value for a company (Madsen, 1989). The two other measures of economic export performance are export growth, which is an increase of exports over a certain time period (Aaby and Slater, 1989) and export profitability - either an objective financial measure of profitability of the export venture or a subjective assessment of the profitability of exporting compared to domestic marketing (Baldauf *et al* , 2000).

It is argued in the literature that firms set goals to achieve strategic objectives such as international market entry, market share and strategic position in international marketing rather than just financial goals (Cavusgil and Zou, 1994; Johnson and Arunthanes, 1995). Thus, alternatively, export performance measures a firm's outcomes in its international operations, which encompass both financial goals over a certain time horizon (Baldauf *et al,* 2000). An alternative to an objective measure of export performance would be to measure managers' subjective assessment of satisfaction with export success (Evangelista, 1994). The use of a composite measure of export performance that incorporates financial performance, and managers' subjective assessment of performance of the export market venture has also gained support in recent years (Cavusgil and Zou, 1994; Julian and Ali, 2004; Zou, *et al,* 1998).

HYPOTHESES

Export Marketing Strategy and performance

The relationship between marketing strategy and performance has been well documented in the domestic marketing context (Cavusgil and Zou, 1994).Similarly, the linking of marketing strategy to export performance has been one of the most widely investigated topics in international marketing research (Namiki, 1994; Zou and Stan, 1998). In the international marketing context, a number of studies (Lee, 2004) have suggested that export performance is influenced by export marketing strategy. Thus, it is hypothesised that export-marketing strategy will enhance export performance of Saudi exporters. More formally stated:

H1: The higher the commitment to exporting strategy of Saudi SME's, the greater the contribution to export performance

Effects of product and market characteristics on export marketing strategy

A review of the strategy literature reveals that strategy formulation is also influenced by product characteristics (Lado, *et al*, 2004). Product characteristics influence the marketing strategy in an export venture (La, *et al,* 2005). Relevant product characteristics that influence export-marketing strategy include culture-specificity, strength of patent, unit value, uniqueness, age, and service/maintenance requirements of product. In formulating a marketing strategy for export markets, a major consideration is product related (Greenley, 1993; Sudharasam, 1995; Hooley *et al,* 1998). Hence the following hypothesis

H2a: Marketing strategy of Saudi SME exporters are positively influenced by product characteristics

Further, conditions in foreign markets pose both opportunities and threats for exporters. Consequently, export-marketing strategy tends to be conditioned by export market selection (Lado *et al,* 2004). The key characteristics of the export market that affects the choice of export marketing strategy include demand potential, cultural similarity to home market, familiarity with the product, brand familiarity of export customers, and similarity of legal and regulatory frameworks. Thus, the following hypothesis:

H2b: Marketing strategy of Saudi SME exporters are positively influenced by export market characteristics.

Effects of product, market and strategy characteristics on export performance

Product characteristics have been identified as having a significant influence on the marketing performance of a specific venture in an international market (O'Cass and Julian, 2003). Product characteristics that have been argued to influence marketing performance include culture-specificity, strength of patent, age, unit value, uniqueness and service/maintenance requirements (Cavusgil and Zou, 1994).

Firms engaging in product adaptation can meet cross-border differences of the needs and wants of the firm's target customers, thus increasing customer satisfaction and overall performance (Cavusgil and Zou, 1994). Thus, it is hypothesised that export products characteristics will enhance export performance of Saudi exporters. More formally stated:

H3a: Product characteristics of Saudi SME exporters have a significant effect on their export performance

Findings of research on determinants of export performance support the contention that market characteristics, among others, are also a significant determinant of export marketing performance (Katsikeas, *et al*, 2000; Brouthers and Nakos, 2005). A study of Greek exporting firms by Brouthers and Nakos (2005) found that systematic international market selection is a significant determinant of export performance. The study concentrated on the criteria SMEs use in selecting export target markets. Similar findings were also reported in another study (Ali, 2004).

Thus, the following hypothesis is proposed:

H3b: Market characteristics have a positive influence on the export performance of Saudi exporters.

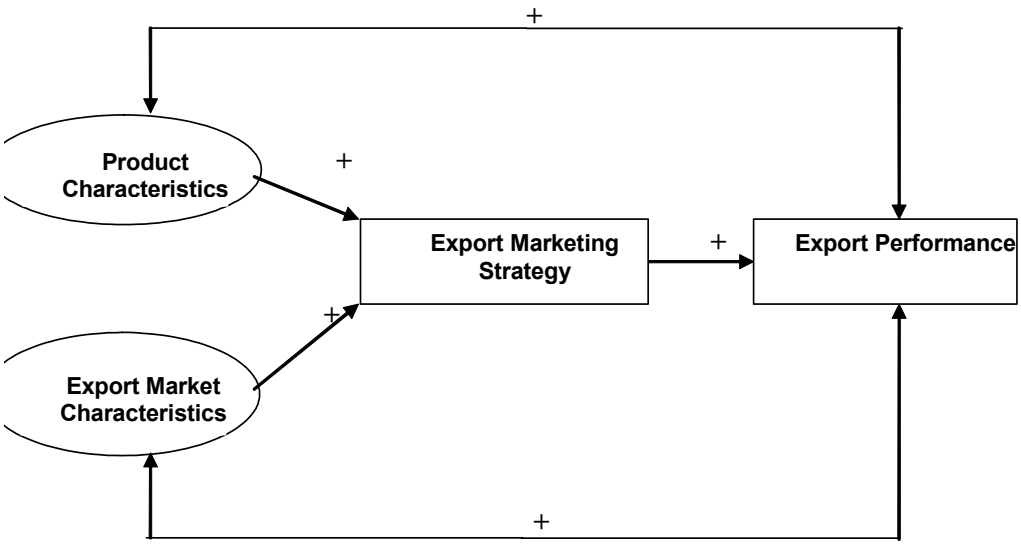
CONCEPTUAL FRAMEWORK

Based on the study's objectives, which were substantiated by the reviewed literature, the theoretical model for the study was conceptualised and depicted in figure 1. The model shows the constructs and hypothesized relationships investigated in the study.

Methodology

The study adopted survey method to determine the impact of Saudi SME's product and market characteristics on marketing strategies and export performance. The survey instrument utilized for the study reflected the framework depicted in Figure 1. Based on the developed model, a survey instrument was developed specifically for this study.

Figure 1: Conceptual Model and Hypothesize Relationships



METHODOLOGY AND DATA COLLECTION

Measurement

The design of the questionnaire was based on issues raised in the literature. The questions to the key constructs as outlined in the conceptual model in Figure 1, were derived from past survey instruments with modifications to suit the model requirements.

Items used in the measurement of export marketing strategy, product and export market characteristics were adapted from Cavusgil and Zou (1994) and Lee 2004). To measure export performance, items were drawn from Cavusgil and Zou (1994); Akyol and Akehurst (2003) and Cadogan et al (2002). A pre-test of the instrument was conducted on export managers of three SMEs, in order to ensure clarity and validity of the survey instrument. Some minor changes were made to produce a final version. The final version of the instrument had four major sections. The first section comprised of general questions to elicit information on the individual and the profile of SME. The following two sections comprised of questions to measure product characteristics and export market characteristics. Likert-scale five-point category response format with category labels ranging from ``strongly disagree '' to ``strongly agree '' were employed. The fourth and fifth section sought to capture information relating to export marketing strategy and export performance. For

both these sections, five-point category response formats were used with category labels varying from ``strongly disagree'' to ``strongly agree''.

All the scales and their psychometric properties are shown in Table II.

Data Collection

The target respondents were managers involved in exporting activities of SME's. Respondents chosen were thus those who were generally competent to evaluate their companies' export performances. The target population included all SME's in Saudi Arabia. In the absence of uniform conceptualization, we consider small business as those having less than 100 employees, while medium-sized business are considered as having between 100 to 500 employees.

Primary data collection poses numerous challenges to researchers in Saudi Arabia (Sohail and Abdali, 2005). Due to the closed nature of the Saudi society and its SME's, and a general apathy to unsolicited surveys, repeated waves of reminders and callbacks were undertaken. Further, due to a preference for formality, research assistants were engaged to make personal visits and to distribute/administer the survey questionnaire in SME's, which had consented to participate.

Due to the lack of the lack of complete and reliable sampling frames from which to draw probability samples, most empirical studies have relied on convenience samples in the Saudi environment. Convenience sampling was also used for the present study. Research assistants under the direct supervision of the researchers visited the targeted industrial cities, soliciting the participation of exporting managers. Managers who voluntarily agreed to participate were provided with the questionnaire. One thousand questionnaires were distributed in this manner. All these efforts yielded 214 completed questionnaires, for a response rate of 21 per cent, which compares very well with response rates from other studies in Saudi Arabia., for example Sohail and Abdali (2005).

STUDY FINDINGS AND IMPLICATIONS

Survey responses and profile of respondent SME's

Of the 214 respondent SME's, 52 companies (24 per cent) were categorised as dealing in exports of consumer goods; 55 per cent of them were engaged in manufacture of industrial goods, while the remaining 21 per cent were exporting other goods (see Table 1). Just about half of all companies have been exporting their products for over 12 years. The next highest category of the respondents is those companies whose products have been exported between 4 to 7 years, which constitutes 21 percent of the responses. About 14 per cent of the SME's have been exporting between 8 to 12 years and the remaining 14 per cent of the SME's have exporting their products for less than 3 years.

Table I: Demographic profile of respondent SMEs		
	No. of SMEs	Percentage
Type of products exported		
Consumer	52	24.29
Industrial	118	55.14
Other	44	20.56
No. of years SMEs in exporting		
Less than 1 year	10	4.67
1 to 3 years	20	9.35
4 to 7 years	44	20.56
8 to 12 years	30	14.02
More than 12 years	110	50.47
No of markets for regular export		
1 to 3	64	29.91
4 to 8	78	36.45
4 to 7	36	16.82
15 to 20	12	5.61
21 to 30	14	6.54
More than 30	10	467
Average %revenue from annual export sales		
Less than 10 %	56	26.17
10 to 20 %	52	24.3
21 to 30 %	50	23.36
31 to 40 %	14	6.54
41 to 50 %	22	10.28
More than 50 %	20	9.34

The demographic profile of the companies surveyed for the study also indicates that over 80 per cent of the SME's export to different export markets between 1 to 7 markets. Most of the SME's (36.45 per cent) export to 4 to 8 markets, while the least number of companies (3.74 per cent) export to over 30 markets. From this table, it can also be seen that 26.17 per cent, 24.30 per cent and 23.36 per cent of the companies have proportions of their export sales equals to less than 10 per cent, 10 per cent - 20 per cent and 21 per cent - 30 per cent of their annual sales respectively. The percentage

of companies with export sales between 31 per cent - 40 per cent is 6.54 percent; 41 per cent - 50 per cent is 10.28 percent; and more than 50 per cent is 8.41 percent.

Table II Measurement and scale properties of constructs			
	Mean	Std. Deviation	Cronbach's Alpha
Scale items			
Product characteristics			
Well established product	4.523	0.718	0.679
Design and feature unique	3.726	1.159	
Product can be used in different culture	4.104	1.171	
Product carefully planned for entry in foreign market	3.886	1.022	
Management committed to export	4.364	0.770	
Commit non managerial resource for export	3.275	1.136	
Export Market Characteristics			
Export Market very competitive	4.308	0.905	0.601
Product extensively exposed in export market	3.705	0.980	
Product familiar to customers in export market	3.981	0.931	
Export Marketing Strategy			
Target markets are clearly specified	3.781	0.930	0.798
Adaptation before entry is substantial	3.385	0.998	
Adaptation after entry is substantial	3.295	1.168	
Use local languages in product label	2.971	1.312	
Adapt product positioning strategy	3.500	0.931	
Adapt packaging	3.535	1.064	
Adapt promotional approaches	3.563	0.997	
Provide overall support to foreign distributors/subsidiary	3.971	0.912	
Provide training to the samples force of foreign distributor/subsidiary	3.176	1.155	
Provide Promotional support to the samples force of foreign distributor/subsidiary	3.451	1.114	
Price is very competitive	3.856	0.841	

Table II Measurement and scale properties of constructs			
	Mean	Std. Deviation	Cronbach's Alpha
Export performance			
Sales of exported products have increased	3.921	0.966	0.869
Profitability of export products has improved	3.535	0.867	
Market share of export products have improved	3.802	0.895	
Overall financial performance of our product have improved	3.717	0.770	
Export objectives of products generally met	3.436	1.014	
Notes: statements measured 1= Strongly Disagree, 5= Strongly Agree			

HYPOTHESES RESULTS

A two-stage multiple regression procedure was used to test the hypotheses. In the first stage, export marketing strategy was entered as a dependent variable with Product characteristics and export market characteristics as independent variables. In the second stage, export marketing strategy, product characteristics and export market characteristics were entered as independent variables with ``export performance '' as dependent variable. The two equations are of the form:

$$\textit{Export Marketing Strategy} = a_1 + \beta_{11}\,\textit{Product characteristics} + \beta_{12}\,\textit{Export Market Characteristics} + e$$

$$\textit{Export Performance} = a_2 + \beta_{21}\,\textit{Product characteristics} + \beta_{22}\,\textit{Export Market Characteristics} + \beta_{23}\,\textit{Export Marketing Strategy} + e$$

Estimates for Equation (1) were used to test *H2a and H2b*, while those for Equation (2) were used to test *H1, H3a and H3c*. Table III shows results of these analyses. Estimates for the first regression equation are presented in the top half of the Table (Model I) while those for the second equation are shown in the bottom half (Model II). The results for Model I indicate that both these relationships are not only in the predicted positive direction, but the estimates for product characteristics ($B = 0.200$; $p < 0.005$) and export market characteristics ($B = 0.218$; $p < 0.0001$) are statistically significant. Thus, both *H2a* and *H2b* are supported by the data. For export marketing firms in Saudi Arabia, the determinants of export marketing strategy are product characteristics and export market characteristics. Together, these two variables explain a little over 17 percent of the variance in export marketing strategy.

Table III: Unstandardized regression coefficients for determinants of export marketing strategy and performance			
	B	Std. Error	T
Model 1 - Dependent variable= export marketing strategy			
(Constant)	1.831	0.448	4.087
Product Characteristics	0.200	0.096	2.080**
Export Market Characteristics	0.218	0.081	2.684***
$R^2 = 0.175$; F = 7.379**			
Model 2-Dependent variable= export marketing performance			
(Constant)	0.576	0.548	1.051
Product Characteristics	0.260	0.111	2.352*
Export Market Characteristics	0.131	0.094	1.393
Export marketing strategy	0.439	0.111	3.951***
$R^2 = 0.272$, F = 12.053***			
Notes: *** p <0.0001, ** p < 0.005, *p <0.05			

In model II the statistically significant estimates are those for product characteristics (B = 0.260; $p < 0.05$) and export marketing strategy ($B = 0.439$; $p < 0.0001$). Thus, hypotheses *H3a* and *H1* are supported, while *H3b* does not find support. Export marketing strategy and product characteristics are the significant determinants of export performance. The two factors account for nearly 27 percent of the variance in export performance evaluation.

STUDY IMPLICATIONS

This study examined the effects of product and export market components on the marketing strategy and export performance of SME's in Saudi Arabia. The results show that SME's export marketing strategy is positively related to product and export market characteristics. On export performance, results of the present study show that this is positively related to the export marketing strategy and product characteristics. Export market characteristics do not have a significant effect on SME's export performance.

The significant effects of export marketing strategy with product and export market characteristics are quite consistent with findings of recent studies having similar constructs (Ali, 2004).However, the findings of the present study is also consistent with findings of previous studies when comparing the effect of market characteristics on export performance (For example, Aaby and Slater, 1989; Katsikeas, *et al* ,2000; Lim, *et al,* 1996, and Brouthers and Nakos, 2005.

The study findings have broad and specific managerial implications for Exporting SME's in Saudi Arabia. At the broader level, the finding that product and export market characteristics are important determinants of SME's marketing strategy implies that SME's must focus on these factors when developing an export marketing strategy.

From a practical point of view, the study provides an avenue to explore the directions in marketing strategy and determinant of export performance of SME's in Saudi Arabia. This study is more exploratory in nature as few studies in this direction have been made in the past in Saudi Arabia.

Limitation of the study

A few limitations are identified and recognized while conducting this research. Firstly, the size of the sample was limited and hence care should be taken when generalizing the findings of this study. Secondly, the present study includes SMEs from a wide variety of industries. For the present study, this has ensured a larger sample than would otherwise have been obtained if it had been restricted to a particular industry. Future studies may consider limiting the investigation to a particular industry, because exporters from different industries are likely to place different emphasis on different aspects of export marketing strategy and performance evaluation.

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BUSINESS INCUBATION IN THE UNITED STATES, CHINA AND BRAZIL: A COMPARISON OF ROLE OF GOVERNMENT, INCUBATOR FUNDING AND FINANCIAL SERVICES

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ABSTRACT

This paper describes the incubation landscapes of the United States, China and Brazil noting the similarities and differences in incubation approaches between the three countries, with special focus on incubator funding sources and their financial services to their client firms. Incubators in all three countries are described and compared along key dimensions derived from interview data which include: incubator sponsorship/financial model and its impact on strategy, service mix with an emphasis on financial services along with key environmental / contextual influences. The role of government and its impact on incubator strategy in the three country contexts is discussed along with policy implications.

Key Words: Business incubators, Business incubator funding, Business incubator financial services, Business incubator services, Role of government in incubator support, Environment for new venture creation, Business incubation in the United States, Business incubation in China, Business incubation in Brazil

INTRODUCTION

Business incubators are viewed by many country governments as dynamic tools for fostering new ventures with the macro objective of economic development and job creation. Small businesses are engines of growth in many dynamic economies. The research in areas related to business incubators is still in its nascent stages, primarily due to the fact that business incubation as a form of support did not gain currency until the late 1980's and 1990's in many parts of the world. Incubation is a vital component of an entrepreneurial infrastructure and this concept is moving mainstream with increased interest and awareness of the power of this support mechanism.

As business incubators gain ubiquity in various parts of the developed and developing world, incubator models have evolved in sophistication, variety and complexity. The services that are offered and the configurations they take vary widely, since they are highly sensitive to local

environmental conditions and to the unique entrepreneurial ecosystem in that country (Lalkaka, 2002). While incubators have been in existence in the United States since the 1960's, business incubators in developing countries have really only been in evidence in any significant way in the last decade (Scaramuzzi, 2002). Incubator growth in China and Brazil started in the late 1980s to early 1990s.

The purpose of this paper is to describe and compare key elements of the incubation landscape in the United States, China and Brazil to provide an understanding of the similarities and differences in incubation systems across the three countries, as well as the opportunities and challenges inherent in the macro-environmental and institutional environments for new business creation with special emphasis on incubator funding approaches and financial services provided by incubators to client firms in each country context. For instance, compared to the United States and Brazil, Chinese incubators tended to be relatively more monolithic in terms of business models, due to their high level of dependence on the government for direction and support. At the macro-level incubation systems in the three countries were compared to discuss institutional / environmental / contextual influences on incubator models. Incubation approaches were then described and compared along key dimensions which include strategic objectives, incubator financing / incubator sponsorship, the incubator's service mix with an emphasis on financial services provided by incubators to client firms. The role of government and its impact on incubator strategy as well as its role in supporting the environment for new business creation is discussed.

BACKGROUND

Incubators in the United States, China and Brazil were selected for this study (N = 30) and interview and archival data were collected by the author from the incubators through semi-structured interviews over a two year period from 2004-2006. The United States has the oldest and largest incubation system with approximately 1000 incubators, which has evolved into an incubation ecosystem with a plethora of incubator models ranging from public to private incubators. Interestingly, a majority of U.S. incubators operate as non-profit entities and many are university-affiliated. China and Brazil were chosen for this comparative study because these are fast growing emerging markets with the third and fourth ranking business incubation markets in the world.

Both China and Brazil have experienced extensive changes in their economic, institutional and financial infrastructures, especially in terms of market development by opening up to global competition, and deregulating their markets to reduce the predominant role of the State. Although China has only promoted the creation of small business through the incubation model since the late 1980's, it is the world's largest emerging market and has had an average growth rate annually of over 10 percent for the last decade (Konana, Doggett & Balasubramanian, 2005); it is second only to the U. S. in terms of number of incubators. There are now more than 500 incubators in China with over 600,000 employed by those incubators (Ma, 2004). China has a well-developed

incubation market space with the government playing a predominant role in the business of incubation by channeling resources to accord with the government mandate of high technology led economic growth. In China, incubators and incubatees alike depend to a large extent on government funds in an environment marked by a paucity of risk capital.

Currently, with over 400 incubators, the Brazilian incubation market is counted as the 4th largest in the world after the United States, Germany and China. Regional and national incubator networks in Brazil are highly evolved and play a significant role in influencing government policy directed at the growth of business incubators. A multitude of government organizations at the federal, state and local levels are involved in assisting incubation efforts. The business incubation landscape in Brazil is vast, varied and complex with a plethora of incubation models, some of which have evolved in response to unique local needs, such as the need for poverty alleviation.

LITERATURE REVIEW

Business Incubators and Economic Development

The National Business Incubation Association of the United States defines business incubators as entities that "accelerate the successful development of entrepreneurial companies through an array of business support resources and services, developed or orchestrated by incubator management and offered both in the incubator and through its network of contacts" (NBIA 2005) Business incubation is especially important in fostering young firms through their most vulnerable phase (Aernoudt, 2002; Kuratko & LaFollette, 1986) when early demise is attributed to a lack of funding in a majority of cases.

Business incubators are used as economic development tools by almost all countries. Typically, an incubator provides a safe haven for a firm in its early stages of growth through a mix of tangible and intangible services. At a macro level, incubators seek to promote job creation and economic development by linking talent, technology, capital, and know-how in an effective framework to foster the growth of new businesses (Smilor, Gibson, & Dietrich 1990). At the firm level, the incubator provides a value-adding support system for leveraging entrepreneurial agency, which typically includes a raft of tangible and intangible services to help the new venture get off the ground. Tangible services include shared, subsidized rental space, and office infrastructure, such as secretarial services and business/office equipment. Value added services in the form of in-house consulting and access to a network of support businesses specializing in marketing, business planning, legal, accounting, and other services are typically provided as intangible services. Financial services to incubatees in many cases include introductions or connections to sources of risk capital for the new venture and in some rare cases, direct investment by the incubator in its more promising incubatees (Chandra, He and Fealey 2007).

Business Incubator Development / Sponsorship

Business incubators in the United States were funded primarily by government grants and university / corporate support along with rental and consulting income. Support from the State economic development agencies as well as capital funds from the State's legislative allocation, and competitive and matching grants from the State were additional sources of incubator support in the United States (Knopp 2007). By contrast, in China given the structural barriers in the environment to the creation of private enterprise, coupled with the need to transition effectively to a market system, the Chinese government uses business incubators as policy tools of market creation by offering financial support for both for business incubator construction and operations.

The Torch Program, a part of the Ministry of Science and Technology (MoST) which was set up by the Chinese government to support the creation and growth of incubators in China in 1990s has invested heavily in incubators through its line of "construction funds". The government has several lines of dedicated funds to support incubation in the form of "construction" funds for incubators, "seed capital" funds for start-ups and "innovation" funds for small and mid-sized ventures that are in the growth phase of their life cycle. The Ministry of Science and Technology made incubator construction a core part of its 10th Five Year Plan (2001-2005), setting aside 50 million yuan (U. S. $6 million) in annual funding for incubator construction. As a result, incubators in China tend to be larger in terms of size and incubating capacity (Scaramuzzi 2002). The government viewed business incubators as a strategic tool for China's transition to a high technology-driven market economy and hence was willing to invest large amounts of resources into these crucibles of entrepreneurship (Harwitt, 2002).

Brazilian incubators were generally linked to universities and funded by plural government and non-government sources. Financial support for incubators came from federal government programs such as the PNI (National Incubation Support Program) which was designed to support new incubator creation and the expansion of existing ones. The PNI program is supported by a coalition of government, industry and incubator associations, such as the Brazilian Ministry of Science and Technology, the CNPq (National Council for Scientific and Technological Development) and FINEP (Financing of Projects and Studies), SEBRAE (Brazilian Support Services for micro and small enterprises) and ANPROTEC (National Association of Incubators and Science Parks) (Scaramuzzi 2002). A major feature of incubation in Brazil was the degree of private / public coalition of partners that support incubation efforts. For instance, the Federation of Industries for the State of Sao Paulo (FIESP) operated a dozen incubators.

METHODOLOGY

In this study of United States, Chinese and Brazilian business incubators, a total of 30 incubators were studied. The United States sample included 6 incubators in 6 cities located in

Indiana, Maryland, Georgia, Florida and Ohio. The Chinese sample included 12 incubators in 8 cities. A random sample was selected from the key cities in China from Guangzhou and Shenzhen in the South to Shenyang and Dalian in the North, and Xian in the West to Shanghai and Tianjin in the East. During June-August, 2004, interviews were conducted with one incubator in each of the seven cities and five in Beijing, the capital of China. Beijing is home to a greater number and variety of incubators than any other city in the country, due to its leading role in China's economic development and industrial innovation. The Brazilian sample consisted of 12 interviews in 4 cities. A sample from Brasilia, the capital of Brazil, Rio de Janeiro, Belo Horizonte in the State of Minas Gerais and Sao Paulo in the south were selected. Interviews were conducted with incubator managers, incubator clients, government officials, trade association representatives and academics in July – August 2006. Sao Paulo has a higher density of incubators and Rio de Janeiro has the broadest scope in incubation models, both cities were well represented in the selected sample.

The interview instrument for the semi-structured, in-depth interviews was developed after a thorough literature review and revised after pilot interviews with incubators in the United States. The pilot interviews served as a pre-test for instrument validation and changes were made to the interview instrument based on the findings and comments. Six incubators in the United States were interviewed to serve as a baseline for the comparison. The instrument was pre-tested and adapted to the Chinese environment by scholars and consultants with extensive experience in China and other Asian markets. The instrument was first translated and back translated from English into Chinese and vice versa by a Chinese-speaking research assistant and then proofread and modified by another Chinese speaker from an academic environment to ensure the accuracy of translation. The semi-structured interview format was selected, since this modality provides for focused and systematic information collection, while allowing the interviewee to provide relevant contextual information appropriate to each case.

For each incubator visited, the president, vice president, or director/manager in charge of corporate affairs was interviewed. In addition, the sample included visits with incubator association directors, academics and entrepreneurs located in the incubators. They were selected as key informants, since they were in the best position to provide an overview of the incubator's strategic direction, as well as its history and background. In China, the interviewees were native Chinese speakers who did not speak English. They were provided a copy of the instrument in Chinese either prior to the interview by e-mail, or handed a copy of the interview instrument at the beginning of the interview in Chinese. The same interview protocol was followed in Brazil, where most of the interviewees spoke English with one exception where a translator was used. All interviews were recorded with the interviewee's permission and transcribed for analysis. On average each interview lasted for 1:35 minutes.

Research Questions

The following research questions served to guide the interview questions and qualitative data collection:

1. What is the nature of the institutional environment for new venture creation in the three countries and how does that impact the incubator model and its service mix, including financial services in that particular context?

2. What is the role of government / universities in supporting the incubator mechanism financially and its attendant policy implications in the different country contexts?

RESULTS

From the literature review and content analysis of the interview data, four key environmental and incubator-level dimensions were identified using Eisenhardt's (1989) and Yin's (1994) method for case study data collection and analysis – institutional environment for new venture creation, role of government in incubator development, incubator financial model, and the incubator service mix, including financial services provided to client firms. The incubation approaches were then compared and contrasted along the key dimensions identified from the interview data to provide an overview and critical assessment of the state of business incubation in the three countries. Conclusions and policy implications are addressed in the last section.

Institutional Environment for New Venture Creation

The institutional structure and maturity of its institutions in a country shapes the environment for incubation, and this holds true in the United States, China and Brazil. Availability of capital as well as the structure of financial markets is a key determinant of growth of fledgling ventures (Bhide, 2000). Banking reform in China has been slow and halting as witnessed by the fact that the government-owned Big Four banks still control about 55% of the country's banking assets. Banks are the lenders of last resort for incubators in an environment marked by a fledgling stock market and lack of many other funding alternatives (Guerrera, 2005). At the macro-level, new business creation in a market environment, such as the United States, is facilitated by the presence of well-established institutions of capitalism, such as an independent and solvent banking system, a deep stock market, clear property rights, a legal system to guarantee such rights etc. These institutions served to reduce friction by lowering transaction costs of doing business. Weak institutional structures could result in market failures, or "gaps" in the system that hinder new business creation. China and to some extent Brazil, are both in the process of developing or strengthening these

institutions that provide the framework for a market economy; hence market failure is a bigger issue in these countries. The government used business incubators as a tool to address some of these instances of market failure and to provide a safe haven to new businesses. In China, business incubators were a policy tool and instrument of choice for government-mandated, high tech driven economic development and have accordingly received vast inputs of physical and financial resources from the government. The incubation environment in China is rich in physical resources, but needs to address the issue of deepening its management capability. A government dominated banking sector that is averse to making small loans to undercapitalized new businesses was another hindrance for new ventures seeking to obtain risk capital. Interviewees in China indicated that people in China overwhelmingly preferred the safety of bank deposits over riskier investments in stocks. A risk averse culture coupled with shallow capital markets and lower levels of acceptance of entrepreneurship as a means of wealth creation translated into few angel investors and other forms of risk capital.

Whereas interviewees in both China and Brazil noted that lack of risk capital and government interference were key barriers to new venture creation, the Brazilian interviewees additionally noted that bureaucratic and regulatory burdens as key barriers to new businesses. The GEM (Global Entrepreneurship Monitor) Report on Brazil indicated that the main obstacles to business were capital scarcity and high cost, bureaucratic interference in the form of heavy taxes and regulatory burden, lack of coordinated and easily accessible information on entrepreneurial support systems / programs, and an educational system that did not foster an entrepreneurial spirit. Unlike the culture in the United States, which tended to encourage entrepreneurial risk taking, Brazilian culture tended to be risk averse encouraging people to prefer the security of a formal job with a large company over an entrepreneurial career fraught with risk and uncertain outcomes (Kantis 2005; GEM 2003; Sao Paulo Interview). Many interviewees indicated that heavy bureaucracy and red tape were key reasons why many Brazilian entrepreneurs opted to remain in the informal economy. Incorporating a start up required up to 15 procedures, three times more than in the United States. New companies had to register with the appropriate government agency, apply for licenses and permits from several state and federal departments, such as environment and labor, register for taxes at multiple levels of government and provide evidence of membership in relevant trade organizations, all of which could easily take more than 5 months (National Dialogue on Entrepreneurship 2005). Capital scarcity and lack of awareness of the incubator as a support mechanism were cited by others as hindering new business creation. Lack of private investment and high dependence on government for survival along with the lack of well developed venture capital market for risk capital in the later stages of a new firm's growth were cited as major barriers to growth. The world of incubation is not well-known in Brazil even with nearly 400 incubators in existence and the venture capital market is still in its infancy (Sao Paulo Interview 2006).

The interviews in the United States, China and Brazil indicated that incubator strategies were driven by contextual features of the incubation landscape in a country. In China, incubators were

viewed as a public good entity with a social mission, and tended to operate under a government mandate of economic development. In Brazil, there was a general lack of awareness of the world of incubation, in spite of the country's 400 incubators, whose primary goal was to foster a culture of entrepreneurship and to promote economic development. In the United States, the focus of incubation was on nurturing entrepreneurs with the goals of economic profitability, technology transfer, commercialization and job creation. However, these strategic objectives tended to vary with the business model of the incubator and type of sponsorship/level of government involvement.

Government Involvement in Incubators

Role of Government - United States

In the United States, government involvement is manifested through funding from federal, state and local levels; however, a greater diversity of incubator models has resulted in plural approaches to funding. State governments play a predominant role in supporting incubators in the United States with legislative allocations for economic development going to support incubators in many of the States, with local and federal levels playing a supportive role in incubator sponsorship. The source of incubator funding in many instances determines the incubators' strategic focus and tenant selection. For instance, government-funded incubators operate with a goal of economic development, relative to a university-affiliated incubator that may have technology transfer as its primary goal.

Role of Government - China

In China, government involvement in incubator founding and operations is typically quite high, with the government impacting incubator models, organization, funding and strategy for the incubator (Scaramuzzi 2002). The interviewees in China spoke with one voice in affirming the importance of government support for incubation. The government heavily subsidizes incubator construction as well as ongoing incubator operations and is involved in operational decisions of the incubator. In general, incubators that are funded and supported financially by the government tend to have different operational features and service emphasis compared to incubators that are primarily supported by diverse partners such as universities and private entities in countries such as Brazil or the United States. In a majority of the Chinese incubators, the government was the primary source of funds for establishing incubators with the implicit understanding that the incubator would become financially independent in due course. Even though incubators are required by the Chinese government to reach self-sustainability in three years, many of the incubators interviewed had not reached that goal and were still heavily dependent on ongoing subsidies from the government to

support operations. Rental incomes from client firms constituted a very small portion of the incubators' revenues and were not significant enough to cover operational costs.

In China, government involvement negatively impacted the incubators' market orientation and entrepreneurial proclivity, as well as their financial service intensity. Higher levels of government involvement appeared to correlate with more arms length financial involvement with incubatees, such as linking them with sources of financial assistance whereas lower levels of government involvement appeared to increase the incubator's entrepreneurial proclivity leading them to make riskier direct investment in their client firms (Chandra and He, 2008). Incubators in the southern regions, such as Shenzhen, tended to have mixed ownership structures (public/ private) and were more likely to make direct investments in incubators. In contrast, the incubators in the North with heavy government involvement tended to maintain an arms length financial relationship with their incubatees (Chandra, He and Fealey, 2007).

Role of Government - Brazil

The government works in tandem with universities and industry to support business incubation efforts in Brazil (Almeida 2005). The two major objectives of the government are technology development and social development (ANROTEC Interview 2006). Universities in Brazil have a strong interest in providing benefits to society and industry has a vested interest in home grown technologies that would benefit them. All three stakeholders, government, universities and industry, view incubators as a tool that has the potential to advance their objectives. This synchrony of objectives along with strong incubator associations has resulted in several innovative and timely initiatives from different levels of government to facilitate new business creation, such as the new Innovation Law passed in 2005, which legalized the act of a researcher at a federal university setting up a company in his/her name. The Law clarified the work relationship between the researcher and the federal government by allowing a researcher to leave the university for a period of time to work for a private company and then return to the university, if she/he desired. The most innovative element of the law is the possibility of using money from the government to support companies. Under the law FINEP, a government agency would be authorized to provide federal grants to companies for specific research. These research grants aimed at fostering innovation was noted as probably the most innovative aspect of the law (Rio de Janeiro, Belo Horizonte, ANPROTEC, Sao Paulo Interviews 2006).

The interaction between the incubators and elements of the triple helix (Etzkovitz et al 2005), such as government, university and industry could be responsible for some of the innovative approaches developed by some incubators to incubating new firms. A technology incubator in Belo Horizonte described their approach as "demand-oriented" incubation, which was aimed at creating companies based on cluster or market-based needs in a particular region. Qualified professionals with industry experience were used to conduct a market analysis along with expert panels that

identified products based on the market analysis of industry need. Subsequently, this technology driven incubator sought to develop new ventures in the areas of specific, identified needs in a quest to drive market-based innovation (Belo Horizonte Interview 2006).

Incubator Financial Sponsorship

Incubator Financial Sponsorship - United States

The United States had a greater diversity of incubation models, along with an attendant diversity of funding sources for these incubators. While many incubators in the United States were government funded, through federal, state and local level sources, county grants and corporate sources added to the range of funding for incubators. In addition to rental income and service fees, in a few cases some incubators generated revenue by cashing in on their equity positions in their successful incubatees. University affiliated incubators in the United States were largely funded by their parent universities with additional support from government/private grants. Other sources of funds for incubators were federal agencies, such as the U. S. Department of Commerce, state and local economic development agencies interested in job creation, local banks interested in creating a potential business relationship with incubator clients, the local Chamber of Commerce, and corporate and community foundations.

Several types of formal and informal support were available to incubators in the United States. Formal support included capital funds from the State's legislative allocation for incubator infrastructure, competitive grants from the State to select incubators, matching grants for service support for new ventures and funds that were channeled through the State Economic Development Agency. Informal sources of support included tax incentives in the form of tax credits to businesses investing in incubators, low interest loans to local government agencies to support investment in incubators, and private partnership funding where incubators raised money from a coalition of businesses and banks for operational funds. In addition, a few incubators had seed fund programs that invested in new ventures in the early stages (Knopp 2007).

Incubator Financial Sponsorship - China

Lalkaka, Feng-Ling & Lalkaka (2000) provided a typology of sponsors for Torch incubators in China, which included in order of importance, Provincial/ Municipal Science and Technology Commisions (STC), High Tech Enterprise Zones, Jointly by STC and Tech Zone, State-Owned Enterprises, Universities, Economic Zones, and Jointly by University and Economic Zone. In general, incubators in China were fully sponsored and funded by the government, university sponsored, state-owned enterprise sponsored or in some rare cases public/private sponsored.

A majority of incubators in China were sponsored by the Ministry of Science and Technology's (MOST) Torch Programme, which is a government program focused on developing and promoting the commercialization, industrialization and internationalization of high technology research in the country (Torch Center 2003). The Torch Programme had several lines of funding for incubators and incubatees. The Construction Fund from the Torch Program, along with financial support from the local governments, formed the mainstay for incubator funding. Science and Technology (S&T) Commissions at local levels were in charge of organizing, developing and financing high tech innovation centers at the local level. Construction funds from the central government were earmarked for buildings/facilities, salaries and office expenses. A part of the construction funds was used to assist incubatees with business development expenses. Hence, the government covered the initial cost of investment, as well as a large part of the operational cost of these high tech innovation centers/business incubators. Private involvement in incubation is still not common in China, except in the South where mixed partnerships for incubation are gaining ground. Government-sponsored incubators in China enjoy preferential tax policies, and in some cases, their incubatees enjoy tax breaks as well. Thus, incubator sponsorship in China tended to be more monochromatic, with the government playing a very big role relative to the United States, which has a much greater range in incubator sponsorship, resulting in greater variety in sources of funds compared to China.

Incubator Financial Sponsorship - Brazil

Universities played a pivotal role in the creation of incubators in Brazil (Almeida 2005). Government agencies at the federal and state levels played an important role in supporting incubators, but appeared to work synergistically with universities and industry associations. A representative example was the CIETEC incubator created in 1998 and housed in the University of Sao Paulo, Sao Paulo. CIETEC, a technology based incubator center was created as a partnership between the MCT (Ministry of Science and Technology), SCTDE (Science, Technology and Economic Development Secretary of the State of Sao Paulo), USP (University of Sao Paulo), IPEN(Nuclear and Energy Research Institute), IPT (Institute of Technological Research) and SEBRAE (Brazilian Support Service for Micro and Small Business) along with support from CNPq (National Council for Scientific and Technological Development), FAPESP (Research Support Foundation of the State of Sao Paulo) and FINEP (Financing Agency for Projects and Studies) (Interview and archival data, August 2006).

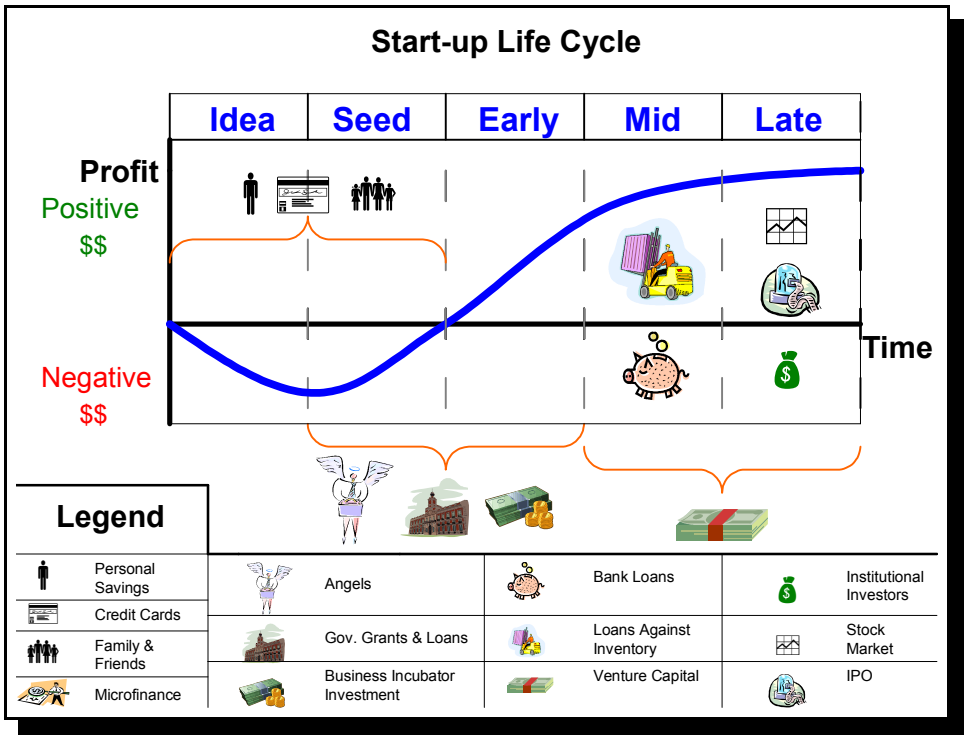
FINEP (Federal Agency for Research and Projects), a division of the Ministry of Science and Technology has a program, the PNI to support Brazilian national incubation. It is linked to the Ministry of Science and Technology and is instrumental in formulating policy for business incubators (ANPROTEC Interview, Brasilia, 2006 SEBRAE (Brazilian Support for Micro and Small Businesses) is a non-profit public-private entity that supported incubator and small business

development by a utilizing a mix of funds from government payroll taxes and private sources. Initially, SEBRAE provided infrastructure funding for many incubators in the first round and is now focused more on providing start up funding and training to new ventures (SEBRAE Interview, Brasilia 2006). Brazilian incubators received support from a broad spectrum of federal agencies, such as FINEP, public-private entities like SEBRAE, strong national incubator associations, such as ANPROTEC as well as local, state and city governments. The interaction between government, universities and industry appeared to be synergistic and relatively well-coordinated with incubator industry associations playing a boundary spanning role.

Incubator Services / Financial Services

A new venture's capital needs vary over its life cycle from inception through its growth stages. Access to financing is crucial factor for innovation to occur (Mytelka and Farinelli 2003) Gaps in financing, particularly for early stage ventures can be a major deterrent to new business creation, often leading to a fledgling venture's early demise, since financial institutions are hesitant to lend money to a firm with little or no track record and no collateral. Figure 1 provides an overview of a typical financing chain for a new venture over its life cycle with its changing capital needs.

Figure 1: Financing Chain for a New Venture



Incubators provided administrative / managerial as well as financial service support to incubatees, whose financial needs evolve in tune with their life cycle as they from concept to seed to early, mid and late stage growth (Zedvitz 2003). Gaps in the financing chain were most obvious in the early stages of the start up and in all three countries incubators sought to fill early stage growth capital needs for new ventures with varying levels of success.

All three countries shared similarities as well as notable differences in their service mix and approach to providing financial services, which to a large measure was influenced by the larger institutional context. The following section outlines the findings related to general services as well as financial services provided by the incubator to incubatees in each country.

United States - Services

The service mix in United States incubators varied with the strategic agenda of the sponsor's motives and the type of incubator model. Community-based incubators were more likely to offer basic, tangible services, since their tenant mix generally consisted of a range of businesses from various industries. University-affiliated incubators were focused on technology transfer and commercialization and tended to draw upon the resources and networks of the parent university to assist incubated firms. Since faculty is a rich source of expertise, these incubators tended to emphasize the consulting and networking dimension to a larger extent. Corporate incubators typically grow firms related to the parent firms' technology and provided targeted assistance to the firms housed in their incubator. Specialized incubators leveraged their locational or resource-specific advantage to help incubatee firms in areas related to their advantages. In general, incubators in the United States were moving toward a service mix that emphasized higher, value-adding services such as networking, which is now recognized as more valuable in the service continuum of incubators (Ekholm and Haapasalo 2002).

United States - Financial Services

Incubators in the United States provided a range of financial services to the incubatees, including assistance in securing grants from various government agencies at the federal, state and local levels. During the early growth stage, bank loans were an option for a financially viable business. To secure bank loans, a strong business plan that included credible financial projections was a necessary part of the process. In most cases, United States incubators provided assistance in business plan development. A network of relationships, built by the incubator with banks and other service providers, also helped facilitate access to funding from banks for the venture by providing some added credibility. Angel investors may step in at the early stages to fill the growth capital gap, in some cases, in the United States. In the later stages of the venture's life cycle, the incubator may use the power of its network to connect the venture with venture capitalists. Once the growing

venture had reached profitable maturity, it had several exit options such as an IPO or acquisition. Even with fewer gaps in the financing chain in the United States, new venture failure is quite high, partly due to financing gaps in the seed to early stages when the new venture was most vulnerable. A few incubators in the United States had seed funds that invested directly in their incubated firms with the expectation of realizing gains upon the success of the incubated firm; however this type of direct financial participation was relatively uncommon. China, on the other hand, had a service mix that was notably different and also lacked the range and depth of financial services as compared to the United States.

China - Services

Incubators in the United States and China provided a varying mix of tangible and intangible services. For instance, incubators in China tended to focus on the basic services, which were tangible in nature ranging from office space/equipment/labs to conference rooms, as well as some consulting advice. The latter came in the form of providing assistance to incubatees on ways to access government grants and to navigate government bureaucracy. Networking assistance was provided to help connect firms to banks and other forms of financial assistance. However, the emphasis was clearly on tangible services.

China - Financial Services

While early stage financing gaps are problematic in most countries, but the result could be devastating to new business creation in a country such as China that is transitioning to a market system. Business incubators in China helped incubatees access government grants / "seed funds" in the early stages of the new ventures' life cycle, and from banks, and in rare cases, from angel investors and venture capitalists at later stages. Other types of financial services come in the form of low interest loans and loan guarantees. In addition, some incubators made direct investments in the incubated firms along with providing soft loans for use as circulating capital. Incubators in China facilitated access to these government funds by their client firms as part of their services. In China, shallow capital markets, difficulty in accessing capital from banks, and a paucity of angels/venture capital added to the inhospitable environment for start-ups at the later stages of growth when its capital needs go up exponentially. Lack of fully developed capital markets limited exit options for new ventures in China. In the United States, it is not uncommon for a successful new venture to be acquired by a large firm or go to the capital market for additional funds through an IPO. In China, acquisitions by larger firms were also relatively rare and. most of the start-up capital available to new ventures was provided by the government (Lalkaka, 2003; Chen, Yin, & Zhu, 2003) in the form of grants or soft loans.

Brazil - Services

The Brazilian incubator movement is defined by its provision of unique and specialized services to support new businesses by providing an innovative environment for their growth through guidance, consulting, in addition to physical space and operational infrastructure (CIETEC Report 2003/2004). Particular services provided include traditional services, i.e. physical services, access to university labs and infrastructure, and training courses sponsored by SEBRAE. Higher value services included technology breakfast networking focused on different areas, i.e. biotech focus.

Brazil - Financial Services

In the early stages of a new venture's life cycle, bank loans are difficult to secure due to lack of collateral, high interest rates, and a general distrust of the banking system by Brazilian entrepreneurs (Rio de Janeiro, Sao Paulo, Belo Horizonte Interviews 2006). The federal agency, FINEP provided money for projects done in conjunction with a university or research institute, since Brazilian law does not allow direct flow of government funds to a company, the money went to the university to finance projects within the company (Belo Horizonte Interview). FINEP addressed the need for financing at various stages of firm growth from inception with a 0% interest program to stimulate firm growth in early stages. BNDES (Bank for Social Development) which used to support only big companies now has a support program for micro-enterprises. Bank loans were not a feasible alternative for small companies in Brazil, since high interest rates made it difficult for micro-enterprises to borrow money without collateral (ANPROTEC Interview, Brasilia Interview 2006).

Brazilian incubators rarely invested their own money in their client firms, though some incubators were experimenting with this approach. One incubator manager discussed their intent of moving from a service model where the incubator offered services, infrastructure and management services in return for rental fee to a "partnership" model where the incubator took a financial stake in the firm in lieu of rent and the payoff for the incubator would come in the form of profit sharing (Belo Horizonte Interview) Currently, most Brazilian incubators, as in China, followed a more conservative model of linking client firms to potential investors.

The INOVAR Project led by FINEP was a consortium of local and foreign VC firms for establishing an institutional structure for promoting the capacity and culture of venture capital. The goal was to set up a $200 million fund for tech based ventures, a web site for information and virtual matchmaking, a Venture Forum and network to support high potential entrepreneurs (Lalkaka 2003). In general, interviewees agreed that there was a mix of state, federal, some private funds / venture capital and some seed money, but there clearly were gaps in the financing chain for seed / early to mid-stage growth capital that needed to be addressed.

CONCLUSIONS AND POLICY IMPLICATIONS

Incubation approaches in developed and developing countries had many similarities; however at the macro level incubation was very much influenced by the nature of the institutional and cultural context and at the incubator level the strategic focus of the incubator along with its service mix appeared to be impacted by the nature of its client base as well as the resources available to the incubator in its immediate environment. This study has focused to a large measure on the nature of incubator financing and the financial services it in turn offers its incubatee clients, both of which were very much dependent on political, economic and institutional factors in each country context. For instance, in both China and in Brazil, financial institutions have not fully addressed the risk / growth capital needs of early stage ventures; hence in both instances the government had stepped in to fill the gaps in the financing chain by setting up various lines of seed capital funds separately and in conjunction with business incubators. Incubators in all three countries facilitated access to a range of financial services to their incubatees by serving as an intermediary, but very few had the resources to make direct investments in their incubatee firms. This may indicate that in the early stages governments may need to address market failure by stepping in with some form of support for early stage start ups, since most countries had a paucity of risk/growth capital for early stage firms.

The downside of this approach was a high level of dependence on government, which is a hallmark of incubators across countries. Ironically, incubators were set up as intervention tools to address market failure, such as gaps in financing for new ventures in many cases, yet many of them were run as non-profits and had trouble meeting self-sustainability goals in almost all country contexts. Chinese incubators had a singular focus on high technology based incubatees, were heavily dependent primarily on government funding and did not have the range of incubation models seen in Brazil. By contrast, Brazilian incubators had a range of funding sources from different levels of government along with a mix of public-private support, and strong networks amongst the triple helix worked in their favor in terms of gaining policy support from government. Yet, they too like their Chinese counterparts had trouble meeting self-sustainability goals in many cases. Policy implications of this finding at the incubator level were that incubators may need to consider gaining support from plural sources, both government and private in order to reduce excessive dependence on any one source and may also need to have clearly articulated performance criteria in order to be exposed to the full effects of the market in the same way as the new ventures they foster and to eventually become self sustaining in the future.

Figure 2 summarizes the key differences between incubation approaches in the United States, China and Brazil. The strategic foci of incubators in the United States was more on technology transfer / commercialization and economic development, whereas Chinese incubators had a clear social mission mandated to them by the government. In Brazil, incubators worked under a Darwinian system with a range of government programs designed to promote competition and

support the fittest through awards to incubators with the most innovative proposals. As a result, incubators in Brazil had to earn government monies rather than receive it as a matter of fact.

Figure 2: Comparison of Incubation Models in the United States, China and Brazil

	USA	CHINA	BRAZIL
Strategic Focus	Economic development, tech transfer and commercialization.	Social mission, economic development with high tech focus.	Foster entrepreneurship, economic development, job creation, technology commercialization.
Sponsorship / Incubator Funding	Multiple levels of govt., economic development organizations, private funding	Govt. is predominant funding source for incubators and incubatees	Plural sources of funding include different levels of govt., universities and some private funds
Type of Incubatee Business	Mixed, high-tech, specialized.	Mostly high tech (software, hardware, bio-tech etc).	High-tech, mixed in social, culture and design incubators.
Service Mix	Tangible and specialized, value adding services	Mostly tangible services of an administrative nature	Both hard and soft services, such as networking.
Financial Services	Provides links to sources of financing with a few investing directly in incubatees	Links to various sources of govt. grants, bank loans and some VC funding. Rare cases in South of direct investment in incubatees.	Links to various sources of govt. funding lines, angels and VCs. Bank loans difficult to secure for start ups. Rare cases of direct investment in incubatees.
Role of Govt.	Low-supportive, but not dictatorial.	High - Visible hand.	Visible, carrot and stick, synergistic approach.

There is general recognition in recent incubation literature (Hansen et al 2000; Grandi and Grimaldi 2004; Ekholm and Haapasalo 2002) incubators are emphasizing softer, intangible services such as networking. Here the Chinese and Brazilian approaches offered a stark contrast. Chinese incubators, driven largely by government fiat tended to be housed in large buildings, with space for an average of 100-150 incubatees, whereas their Brazilian counterparts were smaller averaging 15 – 20 incubatees with emphasis placed on softer services, such as networking and training. Many of the Chinese incubators were staffed by former state owned enterprise managers; hence management capability to nurture new firms in a free market environment was not very strong, compared to the United States or even Brazil, where managers tended to have relatively more market experience.

Hence, a study of incubation and the innovation ecosystem in these leading incubation markets will have relevance not just in cross cultural comparative settings, but also to global incubation in developed and developing countries, both in terms of policy and practice. Successful incubation requires adaptation of global models to local needs as well as the creation of an entire incubation ecosystem that encompasses networks linking government, businesses, universities, trade associations, entrepreneurs, service providers and financial institutions that can meet the needs of a new venture's capital requirements.

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A CONCEPTUALISATION OF DIRECT AND INDIRECT IMPACT OF EXPORT PROMOTION PROGRAMS ON EXPORT PERFORMANCE OF SMES AND ENTREPRENEURIAL VENTURES

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ABSTRACT

Despite wide reporting of the general association between the use of government-sponsored export promotion programs (EPPs) and firm export performance, export sales and macro level export performance, very little is know about the real impact of these programs on firm export performance. This paper provides a conceptual framework for understanding the direct and indirect impact of government export promotion programs on export performance of Small and Medium-sized Enterprises and entrepreneurial ventures. Using internationalization process theory and resource-based theory, it conceptualizes direct role of EPPs on a number of organisational- and management-related factors that have direct or indirect impact on firm export performance. This provides a new direction for future researchers, managers and policy-makers.

Keywords: Export promotion programs, Export performance, Organisational factors, Management factors, Entrepreneurship, SMEs.

INTRODUCTION

Export plays an important role in a nation's economic prosperity. A country's ability to compete successfully in the world markets, ability to maintain a favorable balance of trade, and ability to control its external payment situation, reflect the economic strength and marginal competence of the nation. Government plays a key role in stimulating international business activity of domestic firms through export promotion programs (Cavusgil and Michael, 1990). From a government's point of view, offering export support programs is intended to improve the international competitiveness of domestic firms. From a firm's perspective, export promotion measures reinforce the motivations to export. These motives include exploitation of technological and locational advantage, the ability to offer unique products, the maximization of comparative marketing advantages, and the need for market diversification (Seringhaus and Rosson, 1990). The

use of export promotion programs (EPPs) provides better pay-off in terms of a firm's competitive position (overall strength of the firm) and efficiency (profitability). Moreover, it reflects in export performance of existing exporters while encouraging more firms to export (Czinkota, 1996; Gencturk and Kotabe, 2001; Francis and Collins-Dudd, 2004). Despite the propagation of their benefits, the empirical evidence to substantiate the rationale for use and demonstrate the effectiveness of export promotion programs on firm export performance is either "limited and mixed" (Kotabe and Czinkota, 1992: 640) or conflicting (Lages and Montgomery, 2005). Though export marketing has evolved into an integrated and systematic field of study over the years (Balabanish, Theodosiou and Katsikea, 2004), the role of export promotion programs on firm export performance has not received much scholarly attention (Francis and Collins-Dudd, 2004). In fact the conceptualisation of the relevant constructs and their interrelationships is far from holistic and comprehensive. It is in fact very narrow.

It has been argued that government export promotion programs as an external environmental factor define the premise for successful exporting activities of the corporate sector and play a key role in stimulating international business activity of domestic firms (Cavusgil and Michael, 1990; Seringhaus and Rosson, 1990; Marandu, 1995; Wilkinson, 2006). An extensive search of the literature reveals that most mainstream studies on export performance are narrowly focused on firm- and management-related internal determinants. Not many past studies have even explored the impact of export promotion programs on firm export performance in a rigorous and systematic manner. Only studies by Donthu and Kim (1993) and Katsikeas, Piercy and Ioannidis (1996) make some attempts to formalize the relationship. While Donthu and Kim (1993) found a positive relationship between firms' usage of export assistance and export growth, Katsikeas, Piercy and Ioannidis (1996) found national export promotion policy to be an export stimulus, positively influencing export performance.

Export promotion programs related studies have mostly concentrated on developing and targeting export promotion programs, and implicitly offered guidance to export assistance providers regarding the allocation of their resources and the content of their programs (Kotabe and Czinkota, 1992; Moini, 1998; Seringhaus and Botschen, 1991). However, only a few studies have examined the direct relationship between the usage of export promotion programs and export performance (Francis and Collins-Dodd, 2004; Gencturk and Kotabe, 2001; Marandu, 1995; Singer and Czinkota, 1994). Research results reveal that the extent of usage of export promotion program is positively related to the 'number of export outcomes achieved' (Singer and Czinkota, 1994), firm's extent of efficiency and competitive position in exporting (Gencturk and Kotabe, 2001), and the achievement of export objectives, export competence and export strategy of different categories of exporters (Francis and Collins-Dodd, 2004). Despite the significant contributions of these studies in conceptualizing the effect of EPPs on firm export performance, none of them has investigated the complex interrelationship among different factors in the export promotion programs and export performance. A recent study by Lages and Montgomery (2005) empirically tested the mediating effect of pricing strategy adaptation on the export assistance and export performance relationship.

Interestingly the total effects of export assistance on annual export performance improvement was found non-significant because the direct positive effect on performance was severely affected by its negative indirect effect through export pricing strategy adaptation. The unexpected negative indirect effect was seen as a peculiarity of the country context, where price adaptation strategy assisted by Portuguese government export promotion programs was found dysfunctional (Lages and Montgomery, 2005). This unexpected result indeed requires further investigation using relevant theoretical basis.

The complex relationship between export promotion programs and export performance can be explained using internationalization process theory and resource-based theory. Internationalization process theory indicates how gradual knowledge acquisition leads to greater commitment to exporting and international operations (Johanson and Vahlne, 1977). Resource-based theory proposes that competencies in the form of knowledge and expertise are critical to superior organizational performance (Barney, 1991; Coff, 1997). While these competencies are internal and are acquired by firms, export promotion programs help firms to obtain the information, knowledge, experience, and resources they need to develop an export strategy and achieve better performance (Singer and Czinkota, 1994). This suggests that government export promotion programs help develop firm and managerial capabilities such as knowledge and skills, and commitment that influence a firm's export strategy and performance. More candidly, government export promotion program not only influence export performance directly (Donthu and Kim, 1993; Katsikeas, Piercy and Ioannidis, 1996; Francis and Collins-Dodd, 2004; Gencturk and Kotabe, 2001), but also influences firm export performance indirectly by directly contributing to firms' information gathering, knowledge and skill building, perception improvement and increasing commitment. This paper conceptualizes the indirect effects of export promotion programs on firm export performance through a number of firm- and management-related antecedents of export performance. It also discusses the conceptual model of firm export performance and highlights the possible theoretical and practical implications of this framework.

LITERATURE REVIEW, CONCEPTUALISATION OF THE RELATIONSHIPS, AND HYPOTHESES

A review of the theories of internationalization, export behaviour and performance literature suggests that firm export performance is likely to be highly correlated with key decision makers' international business attitudes, commitment, knowledge and skills (Aaby and Slater, 1989; Cavusgil and Zou, 1994; Donthu and Kim, 1993; Evangelista, 1994, 1996; Johanson and Vahlne, 1977; Katsikeas, Piercy and Ioannidis, 1996; Moen, 2000; Capel, Ndubisi and Hamid, 2008; Wang and Olsen, 2002). Similarly, positive strategy-performance relationship is well accepted in the literature (Aulakh, Kotabe and Teegen, 2000; Cavusgil and Zou, 1994; Kleinschmidt and Cooper, 1984; Leonidou, Katsikeas and Samiee, 2002; Morgan, Kaleka and Katsikeas, 2004). A few studies have revealed direct impact of export promotion on export performance, but its impact on the

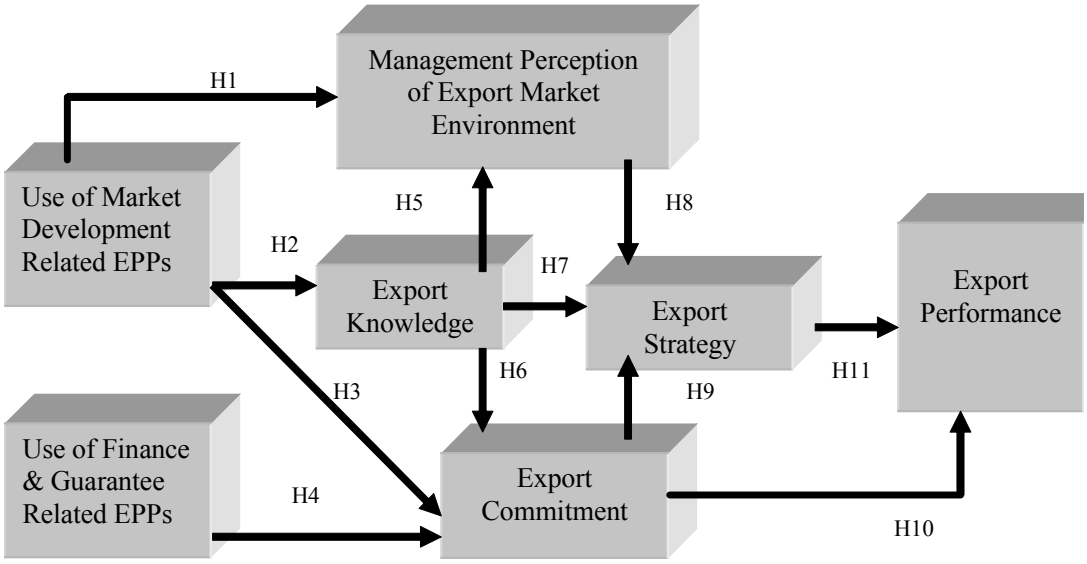
abovementioned determinants of export performance has not attracted adequate research attention. Drawing on the extant literature on export performance and export promotion, the proposed conceptual model integrates export strategy, management perception of export market environment, export knowledge, export commitment, and use of export promotion programs that influence export performance of a firm. While the other variables are incorporated into the model, this article focuses on the impact of EPPs on these variables in a fully mediated model where the effect of EPPs on firm export performance is mediated by these firm- and management-related factors.

The methodological problem of measuring the impact of export promotion programs is another critically pressing issue in the literature. One side of the problem is the use of proxy measures to examine program effectiveness through measuring managers' awareness, usage and satisfaction of the programs (Ali, 2000; Marandu, 1995). These certainly measure effectiveness of marketing the programs by providers rather than effectiveness of the program itself (Francis and Collins-Dodd, 2004). The other side of the problem is the development of a workable measurement method to assess the impact of export promotion programs on export performance (e.g. economic, non-economic or achievement of objectives) or firm and managerial capabilities. Most of the prior studies examining the impact of export promotion programs on firm export performance in a relatively rigorous model have used a global measure (Francis and Collins-Dodd, 2004; Gencturk and Kotabe, 2001; Singer and Czinkota, 1994). Since different assistance programs are designed for different target audience in mind, the global measure cannot capture the impact of a category of programs designed to achieve specific objectives. For example, export workshops and seminars, trade missions, marketing assistance for exporting new product, overseas promotion of the firms' products, assistance in establishing contact with the foreign buyers and establishing sales and display centres abroad, providing market information, are usually designed for initial exporters to develop their foreign markets. On the other hand, income tax rebate, credit guarantee, insurance facilities and duty drawback programs are designed for more advanced level exporters. Export promotion programs, therefore, can be classified into two major categories in terms of the broader purposes of use: market development-related programs, and finance and guarantee-related programs. These two categories of export promotion programs will be used in the proposed conceptual model.

The Conceptual Model

The conceptual model presented in Figure 1 shows complex relational links in the export promotion program and export performance relationship. The first part of the model conceptualizing the relationships between the usage of market development, finance and guarantee related EPPs, and different firm- and management-related antecedents of firm export performance. That encompasses the core research focus of this paper. The widely tested relationships between the firm- and management-related variables and firm export performance are hypothesized at the end of the model to demonstrate the indirect impact of EPPs on firm export performance in the comprehensive model.

Figure 1: A Conceptual Model of Firm Export Performance



Use of Export Promotion Programs and Management Perception of Export

The management perception of the overall environment of a foreign market is an important factor for a firm to consider exporting or expanding export activities. Managers' favourable attitudes towards the foreign market environment normally encourage them to consider exporting as an attractive growth potential of the firm. Perceptions relate to managers' levels of awareness of, and concerns about, external environment, particularly international market opportunities and threats, attractiveness of export, obstacles, competitive position, risks and returns (Schlegelmilch, 1986). Eshghi (1992) argues that committed exporters' assessment of exporting risks and returns is much more positive than non-exporters. Any firm planning to internationalize should adequately understand the foreign market environment. However, because of the complexity of the international business environment and the comparative scarcity of resources, small and medium-sized enterprises (SMEs) are at a disadvantage if they decide to compete internationally (Ramaswami and Yang, 1989; Seringhaus and Botschen, 1991; Seringhaus, 1986, 1987). The uncertainties of the exporting, ignorance about foreign markets, and the daunting nature of exporting processes all militate against such firms becoming committed exporters (Seringhaus and Rosson, 1990; Weinrauch and Rao, 1974).

Silverman, Castaldi and Sengupta (2002) found that firms without export experience have a wide range of information needs in order to overcome perceived external barriers. Nontheless, many of these firms may not realize the services of public-sector organizations to satisfy their information needs. A major impetus for export development and success is the need to develop the capability required to manage exporting problems (Yang, Leone and Alden, 1992). Wiedersheim-Paul and his colleagues (1978) propose that pre-export activities, particularly the level of a firm's activity in information search, are a major indicator determining the likelihood of a firm to export. As a result, firms must increase their ability to gather information so that they can react appropriately to environmental changes and adopt proactive strategies for the international market.

Government export promotion programs include a variety of initiatives to deal with different export barriers. Some of these initiatives (such as seminars) highlight the benefits of export involvement, thus providing a motivational boost to reluctant managers (Seringhaus and Rosson, 1990). Other programs (such as market reviews and overseas visits) help companies to assemble timely and inexpensive foreign market information, and so deal with the informational barriers. The operational/resource-related barrier is also dealt with in various ways (such as bid preparation and trade fair participation), easing the burden facing many new or expanding exporters. Therefore, export promotion programs are not only designed to provide foreign market information and financial support; primarily they encourage firms to export by propagating the benefits of exporting and motivating them to explore foreign markets. This helps overcome mental barriers and develop positive perception in managers toward exporting operation. The above normative logic is used to conceptualise the relationship depicted in the theoretical framework to guide further research. Therefore, we can propose that:

> *The use of market development-related export promotion programs is positively related to favourable management perception of the export market environment (Proposition 1).*

Use of Export Promotion Programs and Export Knowledge

Export knowledge is the knowledge possessed by the exporter about how to market the firm's products and services abroad (Seringhaus, 1993). Wang and Olsen (2002) identify two types of export knowledge as having critical bearings on a firm's exporting success: knowledge of exporting procedures and knowledge of the foreign market. Knowledge of exporting procedures enables the firm to deal effectively and efficiently with exporting procedures such as financing, shipping and forwarding, processing paperwork, and receiving payment. Knowledge of foreign market includes understanding of the macro- and microenvironment, infrastructure, buyer behaviour of the foreign market, and the knowledge of how to effectively deal with these market factors. Export knowledge in this context relates to both exporting procedures and the foreign market.

Both objective and experiential knowledge are needed for overseas expansion of a firm (Johanson and Vahlne, 1977). Objective market knowledge can be "taught" (Johanson and Vahlne, 1977, p. 28) or "obtained from secondary or primary sources" (Seringhaus, 1986, p. 27). On the other hand, experiential knowledge "can only be learned through personal experience" (Johanson and Vahlne, 1977, p. 28) and "must be personally acquired through direct market or customer contact" (Seringhaus, 1986, p. 27). Johanson and Vahlne (1977) argue that experiential knowledge is the critical kind of knowledge because it provides the framework for perceiving and formulating opportunities. Experiential knowledge enables managers to recognize export opportunities, to evaluate them, to adopt the appropriate export behaviour, and to achieve their export objectives. With experience and learning, the firm develops competencies to become a committed and regular exporter (Johanson, et. al., 1976). Wang and Olsen (2002) also suggest that the firm's export-related knowledge and marketing expertise positively affect export performance. So, it has become increasingly apparent that the critical factor in competing in foreign markets is knowledge and expertise.

Export promotion programs in general facilitate acquisition of knowledge. Initially an uninterested firm become aware of foreign markets through export promotion programs (advertising, export workshops and local seminars), gains interest in exploring opportunities and starts sporadic exporting to gain first-hand experience of the trade. Some programs (eg. providing export information related publications, list of agents and distributors in foreign markets, sales leads, export training) are designed to provide objective knowledge to explore exporting. Other programs (such as export planning support, trade fairs, and trade missions) enable managers to gain the experiential knowledge. Most of the export promotion programs are designed to improve management quality and enhance its knowledge and expertise in developing export markets. Once the firm passes the cultural barriers and has its first experience of foreign operations with the help of export assistance programs, it generally increases commitment to export and willingness to conquer one market after another (Johanson and Vahlne, 1977; Lages and Montgomery, 2004). The more managers gain international experience, the more they use assistance programs (Lages and Montgomery, 2005). This occurs because assistance programs help to accelerate the acquisition of objective and experiential knowledge, and develop firms' competitive competence (Singer and Czinkota, 1994). Gencturk and Kotabe (2001) also argue that export assistance programs are important resources for building necessary knowledge and experience for successful foreign market involvement. We propose that:

The use of market development related export promotion programs is positively related to firm's export knowledge (Proposition 2)

Use of Export Promotion Programs and Export Commitment

Organizational commitment to exporting is defined as a general willingness by management to devote adequate financial, managerial and human resources to export related activities (Aaby and Slater, 1989). Commitment is made up of two components: attitudinal and behavioural (Axinn and Athaide, 1991). The attitudinal component is analogous to the cognitive and affective elements of attitude and has been referred to in other studies under such labels as favourability of management's expectations, perceived attractiveness, or management's perception, of the benefits and risks associated with exporting (Cavusgil and Nevin, 1981; Aaby and Slater, 1989). Styles and Patterson (2005) in a recent study used the Theory of Reasoned Action (Ajzel and Fishbein, 1980) to explain managers' attitudinal and behavioural commitment to exporting. The behavioural component refers to the expenditure of considerable effort and resources associated with export related activities (Axinn and Athaide, 1991) or the extent of resource allocation or resource commitment (Cavusgil, 1984).

A large export development budget and a specialized export management staff have been seen as critical to successful business performance in foreign markets (Cavusgil and Zou, 1994; Evangelista, 1994). These studies suggest that management should increase its commitment to exporting by investing greater resources in export management and enhancing the firm's competence to increase their export sale. Many of the tasks associated with export marketing are new to firms, and they require additional financial and human resources. These tasks include gathering foreign market information, hiring and training new staff, learning about export tasks such as documentation and export financing, and formulating basic planning toward export marketing. The "management element" is crucial in carrying out these tasks (Cavusgil and Naor, 1987). Therefore, top management's reluctance to allocate sufficient resources for exporting, especially those related to building the exporting infrastructure, is a significant deterrent to export marketing.

Public institutions in the form of export promotion programs do play a major role in creating management commitment to exporting. Some of these programs (advertising, local seminars, workshops, training) highlight the benefits of export involvement, thus providing a motivational boost to reluctant managers. The theory of reasoned action (TRA) is at work at this stage in boosting management commitment through boosting social and national feelings. Other programs (such as overseas visits, and export market information) help firms to assemble timely and inexpensive foreign market data, and so deal with the informational barrier. The operational and resource-based barrier is also dealt with in various ways (trade fair participation, subsidy on product/productivity development or market development activities, income tax rebate, rebate on insurance premium, duty drawback scheme on imported materials and capital goods), easing the burden of many new or expanding exporters. An export credit guarantee scheme (pre and post-shipment credit guarantee, export payment risk guarantee) reduces risk on export credit, commercial and political risks, and thereby encourages managers to commit more resources toward exporting. Government export promotion programs make an important indirect contribution to create a pro-exporting attitude and

assist in making exporting a positive social experience for the firm. This, in turn, fosters a high level of export commitment. Cavusgil and Nevin (1981) argue that managers who have committed themselves to exporting, and actually engage in it, invariably take a more positive view on foreign operations. When managers become more competent in exporting through acquiring knowledge, they commit more resources to exporting. Singer and Czinkota (1994) found that, managers who were committed to use greater number of export promotion programs, tended to perform more pre-export activities and achieve better export performance than those who used less or none. This clearly indicates that managers' greater use of export promotion programs encouraged them to commit more time and resources toward information gathering, export planning, establishing export market contacts and developing marketing channels to achieve their export objectives. However, lack of further empirical findings to support this argument requires an investigation to explore the following propositions.

A firm's export commitment is positively related to the use of market development-related export promotion programs (Proposition 3).

A firm's export commitment is positively related to the use of finance and guarantee-related export promotion programs (Proposition 4).

Export Knowledge and Management Perception of Export

The theoretical explanation for the relationship between ongoing export stimuli and the level of export development rests with the issue of uncertainty and the way in which firms cope with it (Erramilli, 1991). Exporting knowledge and information gaps in many firms contemplating export market entry create a barrier (Reid, 1984) and subsequently discourage many firms from pursuing exporting as an ongoing activity. Therefore, it has been suggested that acquisition of knowledge through experience from business operations in a specific overseas market is the primary means of reducing foreign market uncertainty and consequently becomes a driving force in the internationalization of the firm (Davidson, 1982; Johanson and Vahlne, 1977, 1990). Those firms with a high degree of international exposure are generally more able to manage and overcome potential barriers in export markets. As a firm gains more market experience and knowledge, it gradually gains positive perceptions of export market environment. Gripsrud (1990) argued that the more experienced the firms were in exporting to a foreign market, the more positive the attitude they would have toward that market. The resource-based theory also proposes that objective and experiential knowledge/skills are intangible firm capabilities that create sustainable competitive advantage for the firm and help performance better than competitors (Hamel and Prahalad, 1994). This suggests the following proposition:

Firms' export knowledge is positively related to the management perception of favourable export market environment (Proposition 5).

Export Knowledge and Export Commitment

Internationalization process theory (Johanson and Vahlne, 1977, 1990) focuses on firms' gradual acquisition, integration and use of knowledge about foreign markets and operation, and on its successively increasing commitment to foreign markets. According to this, the lack of knowledge and resources is an important obstacle to internationalisation but this can be reduced through learning about the foreign markets and operation, thus shifting incremental decision-making toward further internationalisation (Johanson and Vahlne, 1977, 1990). This indicates a direct relation between a firm's knowledge acquisition and increasing commitment to international operation. Resource-based theory posits that capabilities as organisational processes combine and transform available firm resources into deployable value offerings for (export) markets toward achieving competitive advantage (Amit and Shoemaker, 1993; Day, 1994; Morgan, Kaleka and Katsikeas, 2004). Export knowledge as a valuable resource input (preferably a dimension of the human resources) to the complementary capabilities can assist a firm leverage its product and other marketing capabilities for the foreign market (Morgan, Kaleka and Katsikeas, 2004), and consequently contribute to better performance experience and increased export commitment (Lages and Montgomery, 2004). This suggests that the better the tacit and experiential knowledge about an export market, the more the firm can leverage its other resources and capabilities for better performance and the stronger is the commitment to the markets. Johanson *et al.* (1976, p. 37) also argues that the experiential information "enables us to perceive opportunities for new or enlarged business activities … [and] serves as input in the decision process that will eventually lead to commitment decisions". Therefore, the following hypothesis could provide further revalidation to the theories:

Firm's export knowledge is positively related to export commitment (Proposition 6).

Export Knowledge and Firm Export Strategy

Traditionally, the export marketing strategy has been defined in terms of market selection (i.e., degree of world wide orientation and market segmentation) and product strategy (Ames, 1968; Cooper and Kleinschmidt, 1985; Corey, 1962). Contemporary marketing focuses not only on product strategy but also on integrated marketing activities, i.e., product, price, promotion and distribution (Cavusgil and Zou, 1994; Namiki, 1994; Zou, Andrus and Norvel, 1997). However, export strategy in this context relates to the strategies covering identification of export customers, developing strategies for competing in export markets (cost leadership, marketing and service differentiation), establishing distinct goals and objectives for export operation, developing

capabilities to collect necessary information, providing sufficient budget to exploit overseas markets and identifying export countries to enter.

A firm's physical resources (production facilities, access to valuable supply sources), experiential resources (market and operating knowledge) and its capabilities (the mental models of its managers) interact to create competitive advantage (Day, 1994; Mahoney, 1995). McKee and Varadarajan (1995) argue that competitive advantage is the cornerstone of strategy, and enacted knowledge is the essence of competitive advantage. Lack of this knowledge makes exporting more risky (Sullivan and Bauerschmdt, 1989). Improved export knowledge significantly reduces the perceived barrier and complexity of exporting and help to implement proactive export marketing strategies. Singer and Czinkota (1994) found that export knowledge increases pre-export activities such as decision, planning, contacts and channels. Morgan, Kaleka and Katsikeas (2004) also reported a positive impact of available resources (knowledge, scale and physical) on export venture competitive strategy. Therefore, knowledge may help a firm select its export markets and formulate and implement its proactive marketing strategies more effectively (Cavusgil and Zou, 1994; Douglas and Craig, 1989). This leads to the following proposition:

Firms' export knowledge is positively related to firms' export strategy (Proposition 7).

Management Perception of Export Market Environment and Export Strategy

Effective exporting requires development of comprehensive export strategies that take into consideration differences in the international market environment (Jain, 1989). Managers' perceived level of risks about the export market environment as well as perceived benefits of exporting significantly affects their export decision (Styles and Patterson, 2005). Managers who perceive the export market environment unfavourably tend to avoid any involvement in exporting and in developing proactive export strategies (Axinn, 1988). Those who perceive the export environment favourably tend to search for and organize the acquisition of information to make proactive export strategies and rational market entry decision (Sood and Adams, 1984). Moreover, Axinn (1988) posited that managers' positive perceptions of the relative advantages and complexity of exporting are important for export strategy making. Other studies also reveal that decision makers who have positive perceptions of the foreign market environment (cost, profit, risk etc.) invariably take a more positive view on foreign operations and adhere to more export marketing planning (Johanson and Nonaka, 1983; Simpson and Kujawa, 1974). Based on the above rationale, the following hypothesis is proposed:

Management perception of favourable export market environment is positively related to firms' export strategy (Proposition 8).

Export Commitment and Firm Export Strategy

Many researchers assert that interest and commitment among the top management levels is a critical determinant in carrying out the export marketing functions (Benito and Welch, 1997; Hunt, Froggatt and Hovel, 1967). A favourable orientation, deliberate interest, and the willingness to devote adequate resources to export related activities have been emphasized. The willingness of the top management to commit resources to the formulation and implementation of export marketing strategies is an important ingredient needed to produce an aggressive international marketing strategy (Lim, Sharkey and Kim, 1993). Limited resources commitment is likely to result in significantly less formal market research, product and service differentiation and other competitive strategies. When managers are committed to the export, they carefully plan the market entry based on their capabilities and allocate sufficient managerial and financial resources to improve offerings for the target export market. With formal planning and resource commitment, uncertainty is reduced and marketing strategies can be implemented effectively (Aaby and Slater, 1989; Christensen, da Rocha and Gertner, 1987). Though the relationship between export commitment and export strategy has been tested and supported extensively in the literature, the following proposition could be tested in the comprehensive model for further validation:

Firms' export commitment is positively related to export strategy (Proposition 9).

Export Commitment and Firm Export Performance

The amount of time and other resources which management expends on export defines the organizational commitment to export. Donthu and Kim (1993) refer to export commitment as management willingness to devote adequate financial and managerial resources to export related activities of the firm. Based on their comprehensive review Zou and Stan (1998) concluded that export commitment is a key determinant of performance, regardless of performance dimensions (they positive relation in 15 relationship contexts, but no relation was found in two contexts). High management commitment allows a firm to aggressively go after the export market opportunities and pursue effective export strategies that improve export performance (Koh, 1991). Most empirical studies reported a positive relationship between the commitment to export and export performance (for example, Ali, 2004; Evangelista, 1994; Gomez-Mejia, 1988; Seifert and Ford, 1989; Wiedersheim-Paul, Olson and Welch, 1978). Top management commitment has also been seen as critical to successful business performance in foreign markets, particularly during the early stages of internationalization (Madsen, 1994; Cavusgil and Zou, 1994). This leads to the following hypothesis to be tested in the proposed comprehensive model:

Firms' export commitment is positively related to export performance (Hypothesis 10).

Export Strategy and Firm Export Performance

Export strategy is the means by which a firm responds to market forces to meet its objectives. The export literature increasingly reflects the importance of strategy on export success (Aulakh, Kotabe and Teegen, 2000; Cavusgil and Zou, 1994; Kleinschmidt and Cooper, 1984; Moller, 1984; Yaprak, Sorek and Parameswaran, 1984). Empirical studies suggest that export performance is determined by export marketing strategies and managements' capability to implement the strategies as a whole (Aaby and Slater, 1989; Chetty and Hamilton, 1993; Cooper and Kleinschmidt, 1985; Cavusgil and Zou, 1994) as well as components of strategies such as export diversification (Aulakh, Kotabe and Teegen, 2000) pricing and promotion strategy (Kirpalani and Macintosh, 1980), product adaptation (Cooper and Kleinschmidt, 1985; Cavusgil and Zou, 1994; Koh, 1991), promotion adaptation (Namiki, 1994; Seifert and Ford, 1989; Zou, Andrus and Norvell, 1997), competitive pricing (Christensen, da Rocha and Gertner, 1987; Kirpalani and Macintosh, 1980) and pricing strategy adaptation (Cavusgil and Zou, 1994; Lages and Montgomery, 2005). A comprehensive review of the determinants of export performance revealed that general exporting strategy has received significant research attention but reported mixed results (Zou and Stan, 1998). While the examination of the impact of each component of marketing mix strategies or market entry strategies may have some significant implications for our understanding, managers should design a complete strategic mix for success in a selected target market (Leonidou, Katsikeas and Samiee, 2002). Therefore, this model focuses on export market strategy as a whole rather than any specific element of it. The proposed relationship to be tested is:

Firm's export strategy is positively related to export performance (Hypothesis 11).

DISCUSSION AND CONCLUSION

This paper presents a model where firm- and management-related factors serve as mediating variables to assess the indirect effect of Export Promotion Programs on Firm Export Performance. The model provides conceptual arguments that Export Promotion Programs play an important role in the export development process of a firm by contributing to a number of firm- and management-related factors that in turn affect firm export performance. Using the resource-based view of the firm, this model suggests that while firm resources and capabilities (firm's knowledge-base and managerial capabilities) are major determinants of performance, Export Promotion Programs facilitate the development of those resources and capabilities. Therefore, the model proposed a mediated effect in the Export Promotion Programs-Firm Export Performance relationship, where firm- and management-related variables are key mediators.

On the basis of the integrated conceptual framework of a firm export performance, important theoretical and practical (managerial and policy making) implications can be drawn. First, the model can contribute to the literature by conceptualising how export promotion programs indirectly

influence firm export performance through firm- and management-related variables. While a few studies have examined Export Promotion Programs in the export performance model as export stimulating factor, researchers basically ignored this indirect effect. Second, those who examined its impact on export performance (Francis and Collins-Dodd, 2004; Gencturk and Kotabe, 2001; Lages and Montgomery, 2005), only examined the direct impact of global measures (all export promotion programs are measured collectively) of export promotion programs on firm export performance. This global measure is likely to fail in identifying the impact of different categories of programs (designed for different purposes). This proposed model contributes to the literature by examining the indirect impact of two main categories of export promotion programs offered by governments (foreign market development-related programs, and finance and guarantee-related programs) on firm export performance.

The Uppsala model of internationalisation of firms emphasizes on experiential knowledge toward developing commitment to export, but it does not explain how the export process of a firm might start in a developing country context where lack of resources and managerial capabilities of Small and Medium-sized Enterprises (SMEs) and entrepreneurial ventures is a norm. The proposed model suggests export promotion programs as sources of educational knowledge (such as, export seminar, trade show, trade mission, training, foreign market information, sales leads) that facilitate firm entry into the initial export stage to gain experiential knowledge. Low-interest loans, export credit guarantee, duty draw-back on imported materials and parts, income tax rebates and similar finance and guarantee related promotional programs provide much needed resources support to SMEs and entrepreneurship toward achieving experiential knowledge. Similarly, this proposed model explains how export promotion programs as sources of much needed resources in terms of knowledge, information and physical support services fill the gap of entrepreneurship and SMEs' internal resources toward achieving export goals in a developing country context. The proposed model can provide a guideline for managers of exporting firms, especially in developing countries, to benefit from export promotion programs in improving their positive attitude towards export, building knowledge base and enhancing commitment to exporting for better success in their international operations. Finally, government policy makers in developing countries can also benefit from the proposed model in designing appropriate export promotion programs to satisfy the needs of SMEs and entrepreneurial ventures for export knowledge and experience toward achieving the national objectives of economic growth through internationalisation.

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