Network Relationships in the Market Entry of Small and Medium-sized Software Firms

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Abstract

This paper employs a multi case study to investigate the market entry of eight Finnish small and medium-sized software firms into the Japanese market through network relationships. The findings suggest that firms which were actively seeking market opportunities in Japan used formal or mediated relationships, whereas passive firms were invited into the market through their informal relationships. Findings in this study highlight the important role of mediated relationships with non-profit government-owned consulting firms and exhibition organizers which, in earlier studies, had been largely ignored. These mediated relationships were found to play a central role for firms which do not have other (formal or informal) relationships available for the market entry. These research findings differ somewhat from the earlier studies which have focused on internationalization without any particular target country. When firms focus on a particular market, the role of network relationships does not seem to have a major impact on the choices of foreign market or entry mode.

KEYWORDS: Networks, Internationalization, Market entry, Software firms, SMEs, Finland, Japan, Case study

1. Introduction

The importance of network relationships on firms' internationalization behavior has been highlighted in many studies. Especially in research related to small and medium-sized enterprises (SMEs) in the high-technology sector, these network relationships between firms or individuals have been seen as determinants of internationalization (Coviello, 2006;

Coviello & Munro, 1995, 1997; Crick & Spence, 2005; Moen et al., 2004; Zain & Ng, 2006). These studies have commonly challenged earlier incremental internationalization models (Bilkey & Tesar, 1977; Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975; Luostarinen, 1979) by suggesting that a network approach can better explain the internationalization of small entrepreneurial firms.

In current literature, researchers (Coviello & Munro, 1995, 1997; Moen et al., 2004; Zain & Ng, 2006) have found that formal and informal network relationships have a significant impact on high-technology SMEs' market and entry mode choice. However, these studies have investigated firms' internationalization in several markets, without focusing on any specific target country, and analyzed mainly initial market entries and entry mode choices. Although there are some studies related to internationalization through network relationships into a particular country, such as Ukraine (Bridgewater, 1999), these studies have focused on large multinationals. Due to the differences between large-sized firms and SMEs, these findings are not comparable (Lindqvist, 1988). Therefore, studies focusing on the internationalization of SMEs in the software industry into a particular country through network relationships remain non-existent.

As commonly known, firms' major intention in expanding internationally is to get access to markets which offer a large customer base for their products and services. Thus, firms tend to favor countries with attractive markets since these countries provide opportunities for greater returns (Agarwal & Ramaswami, 1992). Research findings related to high-technology SMEs are parallel. The conceptual study of Bell et al. (2003) suggests that small entrepreneurial firms start to seek competitive advantages and sales opportunities in several countries soon after establishment. In addition, the empirical findings of Ojala and Tyrväinen (2007) indicate that small and medium-sized software firms enter to the leading software markets at a very early phase in their internationalization process. A limited domestic market, niche market segments, and high research and development costs can function as drivers for entering markets with a large customer base and purchasing power (Bell et al., 2003; Ojala & Tyrväinen, 2007).

Due to these reasons, this study focuses on small Finnish software firms' internationalization into the Japanese market through network relationships. The Japanese market was selected for this study due to its importance for foreign software firms. Japan is the second largest market for software products (EITO, 2006); therefore Japan can be characterized as 'leading market' for software firms. In addition, Japan External Trade Organization has ranked ICT industry in Japan as the most attractive sector for foreign firms (JETRO, 2007). However, Japan has commonly been cited as a difficult country to enter for foreign firms (e.g., Czinkota & Kotabe, 2000).

This paper proceeds as follows: the literature relating to industrial networks and networks in the internationalization process of small and medium-sized software firms is reviewed first. Based on earlier literature the need for the research is recognized and four research questions are presented. Then the research method applied in this study is described. Thereafter, the findings from eight case firms are presented followed by an analysis and research findings. Finally, the last section summarizes the research and suggests some future research directions.

2. Literature Review

The network approach has been widely used to explain the internationalization of different types of firms in various industry segments. The next sub-section presents literature related to industrial networks and internationalization of firms. Thereafter, current research findings related to the network relationships in the internationalization process of small and medium-sized software firms in the fields of international entrepreneurship and international business are presented.

2.1. Industrial Networks

According to Johanson and Mattsson (1988), a firm is dependent on resources controlled by other firms and can get access to these resources by developing its position in the network. In these networks, firms have common interests in developing and maintaining relationships with each other in a way that provides them mutual benefits (Johanson & Mattsson, 1988; Johanson & Vahlne, 2003). Thus, in different markets, a firm can have relationships with various actors, such as customers, distributors, suppliers, competitors, non-profit organizations, public administration, and so on. Development of relationships with other actors in the market can be active or passive. In active networking, the initiative is taken by the seller, whereas in passive networking the initiation comes from the buyer’s direction (Johanson & Mattsson, 1988). Network relationships between firms can be divided into formal, informal (Birley, 1985; Coviello & Munro, 1995, 1997; Westphal et al., 2006), and intermediary (Havila et al., 2004). Formal relationships are related to business activities between two or more actors in the network, whereas informal relationships are related to relationships between family members and friends (Coviello, 2006; Coviello & Munro, 1995; Westphal et al., 2006). In intermediated relationships, there is no direct contact between the seller and the buyer, but there is a third party that connects the buyer and the seller together (see e.g., Ellis & Pecotich, 2001; Havila et al., 2004).

In the network approach (Johanson & Mattsson, 1988), internationalization means that a firm starts to develop relationships with another firm that belongs to a network in a foreign country. Relationships between firms can act as a bridge to new markets and make it easier for a firm to get into networks in foreign markets (Johanson & Vahlne, 1990). The main differences between incremental internationalization models (e.g., Bilkey & Tesar, 1977; Johanson & Wiedersheim-Paul, 1975; Luostarinen, 1979) and the network model are that the network model is not gradually progressing in nature and it ignores countries where a firm is entering to (Johanson & Vahlne, 2003). Although the network model has gained a great deal of support from studies related to large multinational corporations (Bridgewater, 1999; Salmi, 1995) as well as to SMEs (Bell, 1995; Bell et al., 2004; Coviello & Munro, 1995, 1997; Chetty & Campbell-Hunt, 2003; Moen et al., 2004), there has also been some criticism towards its capability to explain some aspects of internationalization. For instance, Malhotra et al. (2003) criticize the network approach due to its non-predictive and ad hoc nature. In addition, Malhotra et al. (2003) and Bell (1995) propose that the network approach cannot be used to explain the internationalization of those firms that do not have any network relationships available.

2.2. Networks in the internationalization process of small and medium-sized software firms

This sub-section presents research findings related to the internationalization process of SMEs in the studies which investigate network relationships in the market entry. In addition, the majority in their sample consists exclusively of software firms.

The findings of Coviello and Munro (1995, 1997) related to New Zealand based small software firms imply that the choice of entry mode and market selection depend on firms' formal and informal network relationships which evolves over time. The network relationships of a firm first give access to psychically close markets and, in time, these formal and informal relationships also facilitate the market entry to psychically distant markets (Coviello & Munro, 1997). These findings support the incremental internationalization model (Johanson & Wiedersheim-Paul, 1975), with the exception that the internationalization process of small software firms was found to be very rapid, included fewer stages, and a number of different entry modes were used simultaneously. Later study of Coviello (2006), related to the network dynamics of early-stage software firms, gives support to the idea that initial market entries of software firms are associated more with formal (economic) relationships than with social relationships with family members or friends.

Bell (1995) investigated the internationalization of small software firms in Finland, Ireland, and Norway by testing the relevance of incremental internationalization models in explaining the internationalization behavior of these firms. He found that the internationalization process of small software firms is related to customers' followership, niche markets, and industry-specific characteristics rather than systematic steps or stages. The study of Bell (1995) also suggests that the network relationships of a firm can explain the internationalization process of small software firms to some extent, but are incapable of explaining the internationalization of firms without network contacts to particular markets.

The study of Moen et al. (2004) focuses on internationalization of small and medium-sized Norwegian software firms through network relationships. They found that these relationships determine the entry mode and market selection of software firms. These findings support the earlier study of Coviello and Munro (1997) claiming that small software firms first internationalize to nearby countries, whereas later market choices are less dependent on psychic distance. The findings of Moen et al. (2004) only give limited support to the incremental internationalization model (Johanson & Wiedersheim-Paul, 1975) related to firms' international experience, selected entry mode and internationalization stages.

Crick and Spence (2005) studied the internationalization strategies of 12 UK high-technology SMEs. They found that internationalization decisions involve a number of factors that are mainly related to a firm's networks and resources. Although the firms were capable of using existing networks to increase their business activities in existing markets, they could only use these relationships to a limited extent when entering new markets. In their study, none of the firms followed the incremental internationalization model (Johanson & Wiedersheim-Paul, 1975). The main conclusion of Crick and Spence (2005) is that understanding the internationalization of high-technology SMEs requires a combination of various theories, because a single theory cannot fully explain the internationalization behavior of high-technology SMEs.

In their study, Zain and Ng (2006) examine the impacts of network relationships on the internationalization of Malaysian high-technology SMEs. The research results in their study indicate that network relationships activate and motivate case firms' internationalization behavior. They also found support to propositions that network relationships affect case firms' target market and entry mode choice. The market entry of the firms was seen to be more related to the opportunities created by network relationships than to strategic decisions by managers.

2.3. Summary and Research Questions

Current studies have discovered support for the claim that the network approach is applicable, to some extent, to explain the internationalization of high-technology SMEs. However, these studies (Bell, 1995; Coviello & Munro, 1995, 1997; Crick & Spence, 2005; Moen et al., 2004; Zain & Ng, 2006) have not focused on market entry to any specific target country. Thus, research related to internationalization of small and medium-sized software firms through network relationships into a particular country remains non-existent. There are several issues, related to market entry through network relationships into a particular country, which earlier studies have been unable to explain satisfactorily. Firstly, as the theoretical framework of Bell et al. (2003) and empirical findings of Ojala and Tyrväinen (2007) suggest, entrepreneurial firms start to seek sales opportunities in leading markets soon after establishment due to a limited domestic market, niche market segments, and high research and development costs. For firms focusing on leading software markets (such as USA and Japan), the importance of different kinds of network relationships (formal, informal, intermediary) they use when entering these markets is still unknown. In addition, earlier studies (Birley, 1985; Coviello, 2006; Coviello & Munro, 1995, 1997; Westphal et al., 2006) have found support for formal and informal network relationships, whereas the role of third parties (triadic intermediary relationship) in market entry process has received less attention (Havila et al., 2004). Secondly, due to the lack of country specific focus in earlier studies, it is not clear how actively firms develop their network relationships when entering into a particular country. Thus, question is about whether firms actively develop their network contacts to get into the market or whether the market entry takes place due to a client followership (Bell, 1995) where the initiation comes from the buyer's direction. In other words, is a firm actively developing their network relationships on entry to a specific country or just passively driven there by the customer, merely being one country among a number of possible countries. Thirdly, current literature (Coviello & Munro, 1995, 1997; Zain & Ng, 2006) suggests that network relationships have a significant impact on high-technology SMEs' market and entry mode choice. However, if a firm focuses on a particular market (in this study, the Japanese market), it is unknown to what extent the network approach can explain the choices of its market and entry mode.

For these reasons, the study deals with the topic from the viewpoint of entry into the Japanese market. Investigating the following questions is of particular interest in this study:

1. What kinds of network relationships (formal, informal, intermediary) do firms use in entering the Japanese market?
2. What does the firms' activity consists of when developing network relationships for the market entry into the Japanese market?
3. To what extent do the network relationships impact the market entry choice?
4. To what extent do the network relationships impact the entry mode choice?

3. Research Method

Following suggestions by Eisenhardt (1989) and Yin (1994), the multiple case-study method was selected for this study due to the explanatory nature of the research question. Eisenhardt (1989) argues that multiple case-study enables studying patterns that are common to the cases and theory under investigation. The case study method also makes it possible to explain the significance and cause-and-effect relationships of the examined phenomena (Yin, 1994).

The case firms selected satisfied the following criteria: they a) have the headquarters in Finland, b) have direct business operations in the Japanese market, c) are doing business in the field of software, and d) have a maximum of 500 employees worldwide. In this study, the case firms were selected based on the definition of SMEs, i.e., covering firms with 500 or fewer employees at the time of interviews. However, the case firms identified for this study fit also pretty well to the Finnish government's and European Union's definition for SMEs as firms with less than 250 employees (OECD, 2003), due to the reason that only one of the case firms had more than 250 employees at the time of the interviews. In fact, when this firm started their internationalization to the Japanese market, they had only 205 employees. Focusing on one single sector in this study helps to complement existing studies related to the software industry (Bell, 1995; 1997; Coviello, 2006; Coviello & Munro, 1995, 1997; Moen et al., 2004) and reduces the potential for confusing results (Rouse & Daellenbach, 1999). In addition, it enables comparing research results to earlier findings in the software industry, especially those related to internationalization through network relationships. In this study, Finland was chosen as the country of origin due to its small and open economy with a very limited domestic market. For Finnish high-technology SMEs, internationalization is generally a common growth strategy (Autio et al., 2000). Japan was chosen as the target country for the following reasons: Firstly, Japan has the second largest market for software products. Thus, it is among the leading markets for software firms. Secondly, as recognized in several studies (e.g., Czinkota & Kotabe, 2000; Namiki, 1989), Japan is also a very challenging country to enter and conduct successful business. Thirdly, choosing Finnish software firms in Japan enabled addressing the target group to a large extent, by using a qualitative case-study method.

Suitable firms for this study were identified from the websites of the Finnish Chamber of Commerce in Japan and Finnish Software Business Clusters, as well as from a list of firms in the publication "Software Product Business Cluster in Finland 2005". By using these sources a total of nine suitable firms were identified. These firms were contacted with an e-mail request to attend the research. Eight of the nine firms responded and were willing to share their knowledge and experience of the Japanese market.

Altogether 16 semi-structured open-ended interviews were conducted with managers in each firm's headquarters in Finland and their units in Japan. All executives (CTO, Director, Executive Vice President, President, Managing Director, Sales Administrator) interviewed had an in-depth knowledge of their firms' international operations and entry into the Japanese market. The 60-90 minutes long interviews were digitally recorded, carefully listened to, and transcribed verbatim with the help of a word processor. A second listening was made to ensure correspondence between the recorded and transcribed data. Complete case reports were sent back to the persons interviewed to ensure validity and authenticity of the collected data. Whenever interviewees in the case firms found some inaccuracies in the text, these were corrected based on their comments. In addition, some telephone and e-mail interviews were used to collect further information from the interviewees. The collected data was also compared with other sources, such as websites and annual reports of the case firms.

In the data analysis, guidelines suggested by Eisenhardt (1989) and Yin (1994) were followed. All eight individual cases were written out as standalone case histories. After that, the unique patterns of each case were identified and similar patterns categorized under common themes. This helped to organize and summarize the collected data. In addition, analytical tools were applied within and across the cases as proposed by Miles and Huberman (1994). For instance, checklists and event listings were used to identify critical events related to market entry and networking of each case firm.

4. Research Findings

First, this section presents the overview of the case firms' market entry to the Japanese market. Thereafter, a framework for analyzing the focal relationships and firms' activity in the market entry is developed based on earlier literature and case findings. Finally, short case descriptions are provided to show how the network relationships influence the market and entry mode selection of the case firms.

4.1. Overview of the case firms

The average number of employees in the case firms was 127. All the case firms were established between 1990 and 2000, except for firm C that was established already in 1966. Firms had operated in the Japanese market from three to seven years. Table 1 summarizes key information for the case firms and demonstrates the case firms' foreign direct investments until the market entry to Japan. Entry modes used by each case firm in Japan are presented in a chronological order. In addition, the case firms' target industry segments in Japan are indicated.

Table 1
Key information on the case firms

	Number of employees	Year of establishment	Foreign direct business operations	Entry modes in Japan	Target industry segment in Japan
Firm A	30	1998	USA 1998 Hungary 2000 Japan 2002	Representative 2002	Mobile phone manufacturers, telecom operators, and electronics industry
Firm B	90	1992	USA 2000 Japan 2002	Representative office 2002	Mobile phone and semiconductor manufacturers
Firm C	300	1966	Sweden 1995 USA 1999 Malaysia 1999 Germany 1999 UK 1999 Japan 2000	Distributors 1999 Representative office 2000 Subsidiary 2001	Building and construction industry
Firm D	240	1990	USA 1998 Japan 1999	Representative office 1999 Subsidiary 2000	Banks, financial institutions, Internet operators
Firm E	100	1995	USA 1998 Japan 2000	Direct sales 1999 Subsidiary 2000	Banks, financial institutions, fortune 500 companies
Firm F	210	1991	Sweden 1999 Hong Kong 2000 Japan 2001	Distributor 1997 Joint Venture 2001 Subsidiary 2005	Telecom operators, R&D companies related to mobile networks
Firm G	12	1998	Japan 1999	Joint venture 1999	Mobile game players
Firm H	35	2000	UK 2000 Japan 2003	Corporate 2003	Video game players in broadband networks

4.2. Framework for analyzing the focal relationships and firms' activity in the market entry

Based on the interviewed data and earlier studies (Birley, 1985; Coviello, 2006; Coviello & Munro, 1995, 1997; Havila et al., 2004; Westphal et al., 2006), it seems reasonable to classify the focal relationships that the case firms used for market entry in formal relationships, informal relationships, and mediated relationship (see Table 2).

In this framework, formal relationships are related to existing business relationships, whereas informal relationships are related to relationships with friends, as presented in earlier studies (Birley, 1985; Coviello, 2006; Coviello & Munro, 1995, 1997; Westphal et al., 2006). The third group consists of mediated relationships, which are relations mediated by non-profit government-owned consulting firms or exhibition organizers. These mediated relationships differed somewhat from the intermediary relationships presented in Havila et al. (2004) or Ellis and Pecotich (2001), because the mediating organizations in this study did not have business transactions either with the buying or the selling party. The main purpose of these mediating organizations is promoting, encouraging, and facilitating business-to-business linkages between a buyer and a seller. Importance of these kinds of non-commercial ties is also highlighted in the study of Christensen and Lindmark (1993). In addition to the type of the relationship, firms' activity in the networking process is categorized as being either active or passive. Active networking describes a situation where the case firm takes the initiative to network for the purpose of market entry whereas passive networking refers to a situation where the initiative comes from outside of the firm.

Table 2
The focal relationships and firms' activity in market entry

	Formal Relationship	Informal relationships	Mediated relationships
Active	D, H	-	A, C, E, F
Passive	-	B, G	-

4.2.1. Active Market Entry through Formal Relationships

Firms D and H were actively seeking business opportunities in the Japanese market and were able to use their existing formal relationships for market entry. These firms recognized Japan as a very attractive market for their software products due to the large number of potential target customers and sophisticated industry structure. One informant at firm H commented their reason for the market entry in the following way:

> "The nature of our product, if we think about it, is technology used in videogames, including the aspect of broadband. The markets where these both [markets for videogames and broadband connections] are advanced are Japan and South-Korea."

Firm H used their existing relationships with their distributor, who marketed and sold their products worldwide, for the market entry. With the help of this relationship, they found a large Japanese corporation interested in their software. Firm H noticed that successful market entry into the Japanese market also required a great deal of financial resources and local knowledge. They decided to sell their shareholding to the Japanese corporation in question and corporated with them in 2003. This strategy enabled a successful market entry. One unit of the Japanese corporation started to sell and market firm H's products in Japan and in other East and Southeast Asian markets.

Firm D utilized their current business relationships with a large international firewall provider, whose products worked together with firm D's products, for the market entry. By using this relationship, they got access to the same distribution channel that already sold the products of their partner in Japan. Close contacts with the large firewall provider also enabled easy networking with potential customers, because firm D was able to benefit from the references and existing contacts of their partner. In 1999, they established a representative office in Japan, and transformed it into a sales subsidiary in 2000.

4.2.2. Passive Market Entry through Informal Relationships

Firms B and G were not actively internationalizing their business into the Japanese market, although they recognized Japan as a very attractive market for their products. In both cases, the initiation for market entry came through an informal relationship.

Firm B internationalized to the Japanese market through informal relationships with managers of a microprocessor designer firm located in the UK. This microprocessor design firm was entering the Japanese market, and their potential customer in Japan needed a video codec that could be used together with their microprocessors. Firm B developed video codecs for mobile phones, and the managers of these firms knew each other well from their earlier jobs. By using this informal relationship, the microprocessor designer firm contacted firm B and introduced firm B to a customer in Japan. Firm B got access to the Japanese market and in 2002 they established a representative office in Japan.

Firm G's entry to the Japanese market was initiated by their management team's Japanese friends. These friends in Japan realized that firm G's game solutions had a huge market potential in Japan. One informant at firm G explained this in the following manner:

> "Our business in Japan is based on a product with high demand...We were a fast internationalizing firm in the field of mobile technology and we had long-term relationships from earlier businesses with persons in Japan. They had a good position [and willingness] to establish this kind of company [joint venture]."

Thus, using these earlier personal relationships from former jobs enabled the market entry. Firm G established a joint venture with their Japanese partners in 1999. By using local personnel, they were able to network in the market and get access to telecom operators who deliver their mobile games to consumers.

4.2.3. Active Market Entry through Mediated Relationships

Firms A, C, E, and F were actively searching business opportunities in the Japanese market, but did not have any existing formal or informal relationships that they could use for entering the market. These firms networked actively with non-profit consultancy organizations or participated in exhibitions. These kinds of mediated relationships acted as focal relationships for networking with customers or distributors in Japan.

Firm A started to search a suitable distributor in the Japanese market with the assistance of a Finnish non-profit consultancy firm. By using this relationship, they were able to identify a suitable firm for delivering their products in 2002. One informant at firm A highlighted this as follows:

> "The target group for our products are actors in the mobile industry, such as mobile phone manufacturers, operators, and related electronic industry. This is strong in Japan…We participated in Finpro's [Finnish non-profit consultancy association] export partnership visit to Japan and we found a distributor for our purposes."

Firm A also sent a representative to Japan. The representative worked together with the distributor and gave technical support in the sales process. However, because selling firm A's products required in-depth technical knowledge, the first distributor was unable to handle the sales in the market. Therefore, firm A needed to find a new distributor for the Japanese market. The current distributor was discovered with the assistance of the earlier distributor.

Firm C used relationships with a Finnish non-profit organization in finding a suitable distributor for the Japanese market, and in 1999 they got two distributors who handled the market. However, quite soon the other of the distributors closed their business, and firm C found themselves in a situation where they needed to find a new distributor or establish a unit for the Japanese market. Firm C had good relationships with the employees of their earlier distributors and they understood the value of these employees, who had good contacts with customers in the market. Due to this, firm C decided to hire these employees, and in 2000 they established a representative office in Japan. One year later they changed their operation mode into a sales subsidiary.

Firm E used relationships with non-profit consultancy organizations both in Finland and in Japan. By utilizing these relationships, firm E was able to acquire a better understanding of the market, and started to develop relationships with potential customers. Although the relationships with non-profit organizations facilitated the market entry, these organizations did not help firm E in finding potential customers or distributors in practice. Both customers and a distributor were found by participating in exhibitions and contacting potential customers directly.

Firm F was actively seeking business opportunities in Japan and other Asian countries by attending an exhibition in Singapore. This exhibition helped them find a firm that was interested in their products. In 1997, this firm started to distribute firm F's products in Japan. When their business started to grow in Japan, firm F decided to establish a unit of their own for the market. By using the relationships with their distributor in Japan, firm F found local employees who worked for their distributor and had good contacts with potential customers in the market. They established a joint venture with their Japanese partners in 2001, and changed it to a sales subsidiary of their own in 2005.

Based on the case findings described above, Table 3 sub-categorizes the case firms' target country and entry mode selection either into strategic decision or impact of the network relationships.

Table 3
Impact of the network relationships to the target country and entry mode selection.

	Target country selection		Entry mode selection	
	Strategic decision	Networks	Strategic decision	Networks
Firm A	X		X	
Firm B		X	X	
Firm C	X		X	
Firm D	X		X	
Firm E	X		X	
Firm F	X			X
Firm G		X		X
Firm H	X			X

5. Analysis and Research Results

The findings from these eight case firms demonstrate that market entry into the Japanese market was facilitated by using formal, informal, and mediated relationships. The firms (D and H) that used formal relationships were able to use their existing business relationships with their distributors in other markets, whereas firms B and G used informal relationships with their friends in other countries. Friendships had been established in their earlier jobs and there was no existing business activity between them. These findings are consistent with the earlier studies (Birley, 1985; Coviello, 2006; Coviello & Munro, 1995, 1997; Westphal et al., 2006), which suggest that formal and informal relationships facilitate SMEs' market entry. Mediated relationships were important for firms (A, C, E, and F) that did not have any existing relationships that they could use for market entry. These firms networked actively with non-profit consultancy organizations in the home and/or host country, or participated in exhibitions which enabled networking with potential distributors for market entry. These findings are somewhat consistent with Havila et al. (2004) suggesting that firms use triadic relationships. However, unlike in the triad model of Havila et al. (2004), there were no business transactions between the buyer and the intermediary or between the seller and the intermediary in the case findings. This finding highlights the importance of non-commercial organizations in the market entry of small and medium-sized software firms as a valuable resource when there are no other relationships available for facilitating the market entry. This finding gives also empirical support to the conceptual study of Christensen and Lindmark (1993).

Case firms' level of activity varied in the market entry process. In total, six out of eight firms were actively seeking market opportunities in the Japanese market by using their existing formal relationships or mediated relationships. They had selected Japan as the target country due to the high market potential and advanced industry structure that suited their narrow product offering. This supports the framework of Bell et al. (2003) and empirical findings of Ojala & Tyrväinen (2007) suggesting that SMEs in high-technology sectors tend to enter leading markets early on in their internationalization process due to their niche product offering. In the cases of passive market entry, initiation for market entry came through informal relationships. These findings suggest that firms which are actively seeking market opportunities in a target country use their existing formal relationships or mediated relationships to find their way into the market. Alternatively, firms that are not actively seeking market opportunities in a particular county are invited into the market through informal relationships.

As the case descriptions demonstrate, network relationships only had limited influence on the choice of target country. This is somewhat inconsistent with the earlier studies (Coviello

& Munro, 1995, 1997; Zain & Ng, 2006) that have investigated firms' internationalization to several different countries. Most of the firms had made a strategic decision to enter the Japanese market, because of the market potential for their products, before they started actively developing their formal or mediated relationships for market entry. Almost all of the case firms produced their software for fields such as mobile phones, telecom networks, data security and others that were regarded as very attractive markets for foreign firms in Japan (JETRO, 2007). A stronger influence of network relationships on the target country choice became evident in the passive market entry, where initiation into the market came through informal relationships (firms B and G). In these cases, the Japanese market was also recognized as a potential market for the firms' products, but the informal relationships opened the way into the Japanese market. These findings are consistent with those of Lindqvist (1988) proposing that due to the niche product offering, high-technology firms are forced to internationalize into markets where their target customers are located. This also supports the empirical findings of Bell (1995) and the conceptual model of Bell et al. (2003) stipulating that knowledge-intensive firms tend to enter markets which suit their narrow product offering.

In addition to target country selection, the case findings give only limited support to that network relationship might have influenced entry mode selection on entering a particular country. These findings somewhat contradict with earlier studies (Coviello & Munro 1995, 1997; Zain & Ng, 2006). Only in three cases (G, H, and F), there were obvious connections between the nature of the network relationship and the choice of entry mode. In these cases, network relationships led firms to use joint ventures, corporation, or distributors. The entry mode choice of the other five case firms' was based on their product strategy and requirements for implementation and after-sales support. Presence in the market was important due to the complex nature of the software products which required close cooperation with customers and/or distributors throughout the product life-cycle, including sales process, implementation, and after-sales support. Although firms C and F used distributors and firm E direct sales as the first entry mode, after a very short time period they started direct business operations in the market. These findings are consistent with Bell's (1995, 1997) observation that the nature of a firm's product offering and complexity of software products is connected to that firms' market entry strategies. It also supports the findings of Burgel and Murray (2000) which suggest that requirements for customer support affect the entry mode selection in high-technology industries.

Finally, it may be noted that the case firms did not generally follow the incremental stepwise internationalization processes (Bilkey & Tesar, 1977; Johanson & Wiedersheim-Paul, 1975; Luostarinen, 1979) in entering the Japanese market. Japan was chosen as the target market very early in the firms' internationalization process, although it was not a psychically close market to Finland (see for e.g., Luostarinen, 1979; Ronen & Shenkar, 1985). This finding gives further support to earlier studies (Bell, 1995; Coviello & Munro, 1995, 1997; Crick & Spence, 2005; Moen et al., 2004) which investigate the internationalization process of technology-intensive SMEs.

6. Summary and Further Research

This paper investigates the internationalization of SMEs in the software industry into the Japanese market through network relationships. The main interest in this paper is to evaluate the types of network relationships, activity in market selection, and the influence of network relationships on the firms' choice for market and entry mode. This study reveals that the case firms used three different kinds of network relationships for their market entry. Two of the firms used formal relations with their distributors in other markets; four of the firms networked by using mediated relationships with government-based non-profit consulting organizations or by participating in exhibitions, and two firms used informal relationships with friends. Firms that were actively seeking market opportunities in Japan used formal or mediated network relationships, whereas firms that were passive and not actively seeking market opportunities in Japan were invited to the market through their informal network relationships.

Interestingly, the research findings in this study differ somewhat from earlier studies (Coviello & Munro, 1995, 1997; Moen et al., 2004; Zain & Ng, 2006), which have investigated the internationalization of software firms through network relationships to several different countries. These studies have discovered strong support to the idea that network relationships have a substantial role in choosing the target country and entry mode. However, in this study, when the focus was on examining internationalization of software firms into a particular country through network relationships, the network relationships did not play such an essential role in the target country choice. This is in line with Crick and Spence (2005) implying that existing network relationships have only limited role when a firm is entering new markets. The role of the network relationships became evident in the target country selection only in two of the eight cases. The Japanese market was selected as the target market due to the advanced industry structure in Japan that suited the case firms' niche product offering. Almost all the firms developed their software for industry segments, such as mobile phones, telecom networks or data security, where the Japanese market offered a huge market potential. The network relationships had influence on the entry mode choice in only three of the eight cases. The choice of entry mode was mainly based on the high-level of complexity of software products, which was also the main reason why firms favored direct business operations. A unit of their own in the market enabled close cooperation with the customers in the sales process and in the implementation phase, and also made it possible to offer after-sales services near the customers.

The main theoretical contribution of this study is that it recognizes the importance of mediated relationships with non-profit government-owned consulting firms or exhibition organizers, which earlier network studies related to the market entry have largely ignored. These mediated relationships act as focal links for firms which do not have other (formal or informal) relationships available for the market entry. This finding contradicts earlier studies of Malhotra et al. (2003) and Bell (1995), which propose that the network approach cannot be used to explain internationalization of firms that do not have any network relationships available. From the managerial point of you, mediated relationships are a valuable resource for SMEs that do not have network relationship available to facilitate their market entry. These firms can benefit from non-profit consulting firms when entering new markets and can use their connections for further networking in the target country.

The main limitation of this study is in the generalizibility of the research findings. This study focused on a single industry by conducting a qualitative multi case-study. Although findings in this study can be used to compare and complement earlier case findings related to software firms, the results cannot be fully generalized for other industries. Further research is needed to test the generalizibility of these findings for other vertical markets. Secondly, because this study is based on the case method, research findings can only be generalized to a limited extent. Thirdly, as indicated earlier, there is a lack of research focusing on market entry of high-technology SMEs through network relationships into a particular country. Thus, the findings in this study need further validation related to other important software markets. For instance, the Japanese market includes its own special characteristic and the market differs culturally (Ronen & Shenkar, 1985) from other main software markets. These country specific characteristics might elevate the role of mediated relationships highlighted in this study.

References

Agarwal, S. and Ramaswami, S.N. (1992). Choice of foreign market entry mode: Impact of ownership, location and internationalization factors, *Journal of International Business Studies*, 23/1, 1-27.

Autio, E., Sapienza, H.J. and Almeida, J.G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth, *Academy of Management Journal*, 43/5, 909-924.

Bell, J. (1995). The Internationalization of Small Computer Software Firms: A Further Challenge to "Stage" Theories, *European Journal of Marketing*, 29/8, 60-75.

Bell, J. (1997). A Comparative Study of the Export Problems of Small Computer Software Exporters in Finland, Ireland and Norway, *International Business Review*, 6/6, 585-604.

Bell, J., Crick, D. and Young, S. (2004). Small Firm Internationalization and Business Strategy: An Exploratory Study of 'Knowledge-intensive' and 'Traditional' Manufacturing Firms in the UK, *International Small Business Journal*, 22/1, 23-56.

Bell, J., McNaughton, R., Young, S. and Crick, D. (2003). Towards an Integrative Model of Small Firm Internationalisation, *Journal of International Entrepreneurship*, 1/4, 339-362.

Bilkey, W. and Tesar, G. (1977). The Export Behavior of Smaller-sized Wisconsin Manufacturing Firms, *Journal of International Business Studies*, 8/1, 93-98.

Birley, S. (1985). The Role of Networks in the Entrepreneurial Process, *Journal of Business Venturing*, 1/1, 107-117.

Bridgewater, S. (1999). Networks and Internationalisation: the case of multinational corporations entering Ukraine, *International Business Review*, 8/1, 99-118.

Burgel, O. and Murray, G.C. (2000). The International Market Entry Choice of Start-Up Companies in High-Technology Industries, *Journal of International Marketing*, 8/2, 33-62.

Chetty, S. and Campbell-Hunt, C. (2003). Explosive International Growth and Problems of Success amongst Small to Medium-sized Firms, *International Small Business Journal,* 21/1, 5-27.

Christensen, P.R. and Lindmark, L. (1993). Location and Internationalization of Small Firms. In L. Lundqvist and L.O. Persson (eds.), *Visions and Strategies in European Integration: A North European Perspective*, Berlin: Springer-Verlag, 131-151.

Coviello, N. (2006). The network dynamics of international new ventures, *Journal of International Business Studies*, 37/5, 713-731.

Coviello, N.E. and Munro, H.J. (1995). Crowing the entrepreneurial firm: Networking for international market development, *European Journal of Marketing,* 29/7, 49-61.

Coviello, N. and Munro, H. (1997). Network Relationships and the Internationalisation Process of Small Software Firms, *International Business Review,* 6/4, 361-386.

Crick, D. and Spence, M. (2005). The internationalisation of ‘high performing’ UK high-tech SMEs: a study of planned and unplanned strategies, *International Business Review,* 14/2, 167-185.

Czinkota, M.R. and Kotabe, M. (2000). Entering the Japanese Market: A Reassessment of Foreign Firms' Entry and Distribution Strategies, *Industrial Marketing Management*, 29/6, 483-491.

Eisenhardt, K.M. (1989). Building Theories from Case Study Research, *Academy of Management Review,* 14/4, 532-550.

EITO (2006) *European Information Technology Observatory 2006*, Berlin, Germany.

Ellis, P. and Pecotich, A. (2001). Social Factors Influencing Export Initiation in Small and Medium-Sized Enterprises, *Journal of Marketing Research,* 38/1, 119-130.

Havila, V., Johanson, J. and Thilenius, P. (2004). International business-relationship triads, *International Marketing Review,* 21/2, 172-186.

JETRO (2007) *Attractive Sectors: ICT.* Retrieved May 22, 2007, from http://www.jetro.go.jp/en/market/attract/ict/

Johanson, J. and Mattsson, L-G. (1988) Internationalisation in Industrial Systems – A Network Approach. In N. Hood and J-E. Vahlne (eds.), *Strategies in Global Competition*, London: Croom Helm, 287-314.

Johanson, J. and Vahlne, J-E. (1977). The internationalization process of the firm – a model of knowledge development and increasing foreign market commitments, *Journal of International Business Studies,* 8/1, 23-32.

Johanson, J. and Vahlne, J-E. (1990). The Mechanism of Internationalisation, *International Marketing Review*, 7/1, 11-24.

Johanson, J. and Vahlne, J-E. (2003). Business Relationship Learning and Commitment in the Internationalization process, *Journal of International Entrepreneurship,* 1/1, 83-101.

Johanson, J. and Wiedersheim-Paul, F. (1975). The internationalization of the firm: four Swedish cases, *Journal of Management Studies*, 12/3, 305-322.

Lindqvist, M. (1988). *Internationalization of small technology based firms: Three illustrative case studies on Swedish firms*. Research Papers 88/15, Sweden: Stockholm School of Economics.

Luostarinen, R. (1979). *The Internationalization of the Firm*. Ph.D. dissertation, Finland: Helsinki School of Economics.

Malhotra, N.K., Agarwal, J. and Ulgado, F.M. (2003). Internationalization and Entry Modes: A Multitheoretical Framework and Research Propositions, *Journal of International Marketing,* 11/4, 1-31.

Miles, M.B. and Huberman, A.M. (1994) *Qualitative Data Analysis: An Expanded Sourcebook*. California: Sage Publications.

Moen, O., Gavlen, M. and Endresen, I. (2004). Internationalization of small, computer software firms: Entry forms and market selection, *European Journal of Marketing,* 38/9-10, 1236-1251.

Namiki, N. (1989). Japanese Trade Barriers: Perceptions of Small Business Exporters, *SAM Advanced Management Journal,* 54/1, 37-41.

OECD (2003) *Officially-supported export credits and small exporters.* Organization for Economic Co-operation and Development, Paris, France.

Ojala, A. and Tyrväinen, P. (2007). Market Entry and Priority of Small and Medium-Sized Enterprises in the Software Industry: An Empirical Analysis of Cultural Distance, Geographical Distance, and Market Size, *Journal of International Marketing,* 15/3, 123-149.

Ronen, S. and Shenkar, O. (1985). Clustering Countries on Attitudinal Dimensions: A Review and Synthesis, *Academy of Management Review,* 10/3, 435-454.

Rouse, M.J. and Daellenbach, U.S. (1999). Rethinking research methods for the resource-based perspective: Isolating sources of sustainable competitive advantage, *Strategic Management Journal*, 20/5, 487-494.

Salmi, A. (1995) *Institutionally Changing Business Networks: An Analysis of Finnish Company's Operations in Exporting to The Soviet Union, Russia and the Baltic States*. Ph.D. dissertation, Finland: Helsinki School of Economics.

Westphal, J.D., Boivie, S. and Chng, D.H.M. (2006). The strategic impetus for social network ties: reconstituting broken CEO friendship ties, *Strategic Management Journal,* 27/5, 425-445.

Yin, R.K. (1994) *Case Study Research: Design and Methods*. California: Sage Publications.

Zain, M. and Ng, S.I. (2006). The impacts of network relationships on SMEs' internationalization process, *Thunderbird International Business Review,* 48/2, 183-205.