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External Facilitation in High Tech Firm's Internationalisation

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Abstract

Internationalisation seems often to be a necessity especially to growth intensive high tech firms. Many small companies take the challenge and aim to enter foreign markets despite their limited experience and resources. There exist numerous institutions and actors who aim to facilitate the internationalisation of the small firms but there is limited amount of research on the role of these facilitators in the internationalisation process. The present paper aims to find out what kinds of roles the external facilitators have in the internationalisation process of a small high tech firm. On the basis of a literature review, we define the primary roles and contributions of the intermediating actors and the ways of learning about and entering into the international markets. We elaborate on the roles of external facilitation over the market entry process through a case-study of two small high tech firms that took part in a partly governmentally financed facilitation programme. As a result we illustrate the internationalisation as a process of actions of both the intermediating actor and the high tech firm and define the primary roles of external facilitators over the process.

Keywords: high tech SME, internationalisation, external facilitation, knowledge, networks

Introduction

The phenomenon of high tech SMEs' internationalisation provides multidisciplinary research field that has been emerging for about two decades (Rialp, Rialp, Urbano and Vaillant, 2005). These firms have been studied under different concepts, such as Born Globals (e.g. Madsen and Servais, 1997; Moen, 2002), Global-Start-ups (Oviatt and McDougall, 1994); International new ventures (INVs) (McDougall et al., 1994) and Instant exporters (McAuley, 1999). High tech firms' internationalisation, especially, has been

studied empirically in many different countries and the phenomenon of early internationalisation seems to be a global one (Madsen and Servais, 1997; Rialp et al., 2005). During the two decades the research area has been separated into three main theoretical perspectives, namely network approach, resource-based approach and international entrepreneurship (Ruzzier, Hisrich and Antoncic, 2006).

High tech SMEs face the challenges of global markets when the customers are all over the world and the business activities like design, development and marketing may be located in different countries (Blomqvist, Hurmelinna-Laukkanen, Nummela and Saarenketo, 2008). Time is often a decisive element in high tech SMEs internationalisation because the windows of opportunity are short and the challenge is to shorten the technological life cycle (Crick and Jones, 2004; Komulainen, Mainela and Tähtinen, 2006; Blomqvist et al., 2008). High tech SMEs success is often questioned because of the lack of financial and technological resources as well as personal capabilities and managerial knowledge about markets and internationalisation (Varis, Kuivalainen and Saarenketo, 2005). To overcome these resource deficiencies, SMEs are skilful in utilization of external networks (e.g. Coviello and McAuley 1999; McAuley, 1999; Sharma and Blomstermo, 2003; Komulainen et al, 2004).

In addition to networks as explanations for rapid internationalisation, international business experience in entrepreneurial team and the characters of entrepreneur have been seen to correlate with the establishment of the companies (Oviatt and McDougall, 1997; 2005; Bell, McNaughton, Young and Crick, 2003; Zahra, Korri and Yu, 2004). Also number of researchers has emphasized the role of international entrepreneurial orientation as a critical factor in the rapid internationalisation process (Knight and Cavusgil, 1996;

Oviatt and McDougall, 1997; 2005). Oviatt and McDougall (2005) also suggest that the level of market knowledge has impact on the speed of internationalisation. Some researchers argue for technological innovation as an explanation for rapid internationalisation (Madsen and Servais, 1997; Knight and Cavusgil, 2004). In the end, however, the need for more research in the area of high tech firm internationalisation is acknowledged (see Madsen and Servais, 1997; McDougall, Oviatt and Shrader, 2003; Rialp, Rialp and Knight, 2005; Weerawardena, Mort, Liesch and Knight, 2007).

A lot in the internationalisation of high tech firms is defined by new market conditions, technological development in various areas and the capabilities of people (Madsen and Servais, 1997). Because influencing the markets or technological development outside the firm is difficult, developing firms' internal capabilities is strategically emphasised. Varis et al. (2000) emphasize public training programs for the high tech SMEs to support the development of needed capabilities and resources as well as strategic planning. Welch, Welch, Wilkinson and Young (1996) argue that active participation in governmental business development programs and projects provides a possibility to create networks and develop needed knowledge. Many countries nowadays have different kind of facilitation services for companies (Bessant and Rush, 1995) and earlier research indicates that external facilitation may have positive impact on SMEs in the technology transfer likewise in internationalisation process (e.g. Welch et al., 1996; Tones, Erol and Armstrong, 2000; Albors, Hervas and Hidalgo, 2006). However, Massa and Testa (2008) still note the lack of discussion on intermediary institutions' roles and benefits for SMEs. They emphasize that there is large literature on SMEs' innovativeness and

internationalisation, but the role of intermediary institutions has been forgotten even though the ability to utilize external networks is considered important to SMEs' success.

The present paper aims to find out what kinds of roles the external facilitators have in the internationalisation process of a small high tech firm. On the basis of a literature review, we define the primary roles and contributions of the intermediating actors and the ways of learning about and entering into the international markets. We elaborate on the roles of external facilitation over the market entry process through a case-study of two small high tech firms that took part in a partly governmentally financed facilitation programme. As a result we illustrate the internationalisation as a process of actions of both the intermediating actor and the high tech firm and define the primary roles of external facilitators over the process.

External facilitation in high tech SMEs internationalisation

High tech SMEs are relatively vulnerable, compared to MNCs, because they have fewer resources that can be directed to their internationalization efforts (Coviello, Brodie and Munro, 2000; Ellis, 2000; Oviatt and McDougall, 1994). In practice, many SMEs are dependent on a single product that they commercialize in lead markets first, regardless of where the markets are situated geographically (Weerawardena et al., 2007). Because of the lack of resources in challenging markets these firms are trying to find partners who complement their own competences in the lead markets (Johanson and Mattsson, 1988; Oviatt and McDougall, 1994; Varis et al. 2005). In addition to business partners, firms may complement the lacking competencies by using intermediaries which assist SMEs in many ways like providing market knowledge, developing networks and evaluating technological

innovations (Albors et al., 2006; Smedlund, 2006; Vonortas, 2002; Welch et al., 1996). McEvily and Zaheer (1999) even argue that embeddedness in geographical clusters and external facilitation relates to firms' competitive capabilities.

Networks in high tech SMEs internationalisation

Research of high tech SMEs internationalisation has been lately focused on the role of networks in the internationalisation process (Coviello and Munro, 1995; Coviello and McAuley, 1999; McAuley, 1999; Sharma and Blomstermo, 2003). Freeman (1991) emphasizes that networking is not a new and technology driven phenomenon, but it has been “a normal feature of the industrial and regional landscape long before the advent of modern information technology”. However Coviello and Munro (1995), Elfring and Hulsink (2003) and Weerawardena et al. (2007) emphasize that the networks help SMEs to discover opportunities by testing of ideas, and garnering of resources for the formation of the new organizational structures. Networks provide the type of information that contributes to lowering of risk and uncertainty that companies face in international operations, and facilitate acquisition of knowledge and development of complementary resources (Madsen and Servais 1997; Selnes and Sallis, 2003, Weerawardena et al. 2007). Building and maintaining relevant, superior and effective networks are an integral part of a successful internationalisation process (Liesch, Welch, Welch, McGaughey, Petersen and Lamb, 2002).

The importance of networks and knowledge for internationalising high tech SMEs has been widely recognized among the researchers and also the role of intermediaries as network developers has been emphasized (Howells, 2006). Muller and Zenker (2001) even

argue that the development of the intermediary services may be one reason for the recent economic evolution in industrialised countries. Millar and Ju Choi (2003) note that when intangible value of the products increases the role of so called knowledge intermediaries becomes more important in the relationship between customers and producers. Popp (2000), as well, emphasize the role of intermediating actors in lowering information costs in adaptation to new markets. McEvily and Zaheer (1999) impressed that even though firms within a region tend to have similar resources, cost structures and competitive behaviour the companies differ from each other by the ability to acquire and maintain competitive capabilities through their networks.

Overall, companies need support in many areas during the internationalization process, like in technology, human resources, financing strategy, business strategy and implementation of the technology transfer (Bessant and Rush, 1995). According to Bessant and Rush (1995) and Massa and Testa (2008) there is high incidence of failures in SMEs technology transfer process and the main reason for that is the lack of needed managerial capabilities. Managerial capabilities are the ones that can be especially improved by external support and various kinds of intermediaries. Prashantham and McNaughton (2006) emphasize that high tech SMEs create knowledge and access to international markets through social capital in networks of relationships. They noted that lack of information, lack of collaboration processes and lack of trust are the main barriers to social capital formation. Bessant and Rush (1995) list the intermediaries to technology brokers, university liaison departments, regional technology centres, innovation agencies, external consultants and cross-national networks. Both the public policy and academic research can have a positive impact (Venkataraman, 2004) on developing SMEs managerial capabilities.

Role of external facilitation

There are social, historical, and contextual differences between communities that can influence entrepreneurial economic development, technology-based start-up activity and the net of economic investments (West and Bamford, 2005). However, especially in small countries the external consultants, research projects, governmental export programs and support services have a great impact on small firms' internationalisation process (Welch et al. 1996). These intermediaries provide companies external facilitation to enhance business activities.

Intermediaries have been researched in different research fields, like in technology transfer and diffusion literature, in innovation research literature and in the systems innovation literature (Howells, 2006). Intermediaries have also been described by various names in the literature, like third parties, intermediary firms, bridges, brokers, information intermediaries and superstructure organizations (Howells, 2006). Some researchers also research the intermediaries using the concept "knowledge intensive business services" (KIBS), which are defined as knowledge bridges and bridging institutions (Muller and Zenker, 2001; Kohl and Stahlecker, 2006).

While the literature on intermediating actors is rather diversified to different approaches, also the role and contribution of the intermediating actors is seen differently depending on the viewpoint. According to Howells (2006) intermediaries may have very practical contribution in technology transfer, such as identifying partners, supporting decision making and contractual licensing arrangements. Koschatzky and Zenker (1999 via Muller and Zenker, 2001) describe those as either advisory services when contribution is in business activities or technical services when the intermediary supports the technical issues.

Also activation of innovation potentials is one of the functions of intermediaries as well as interactive knowledge development and internal capability building (McEvily and Zaheer, 1999; Muller and Zenker, 2001; Howells, 2006).

Information and knowledge transfer seem to be important for intermediaries. Weerawardena et al. (2007) raise the concept of knowledge as a central factor in high tech SMEs internationalisation process. Glazer (1998) emphasizes that codified knowledge as well as tacit knowledge both have economic value in exchange, meaning that the value increases with usage. Millar and Ju Choi (2003) even argue that knowledge has no value unless it is used. Fletcher (2007) emphasizes that there are three types of knowledge identified as important in the internationalisation process of firms; those are market knowledge, general internationalisation knowledge and product/technological knowledge.

The roles of the intermediaries can also be defined focusing on the actions taken by the intermediaries and on the effects of their actions, i.e. their contributions (Bessant and Rush, 1995). Bessant and Rush (1995) present four roles and six contributions for intermediating actor. The first role is *direct transfer of specialized expert knowledge* which has been emphasized also by McEvily and Zaheer (1999). They specify the specialized expert knowledge to market knowledge, situation-specific knowledge, technological knowledge and source of advices. Secondly intermediating actors can have a role of *experience sharing*, either implicitly or explicitly. The role of experimental knowledge has also been emphasized by many researchers in high tech SMEs internationalisation literature (eg. Kuivalainen, Kyläheiko, Puumalainen and Saarenketo, 2004; Sharma and Blomstermo, 2003; Arenius and De Clercq, 2005).

Third role of intermediary is '*marriage broker*', providing contacts to access a wide range of specialist services and business partners (Bessant and Rush, 1995). McEvily and Zaheer (1999) discuss about marriage broking as bridging ties and linkages to economic, professional and social circles which are not available for the companies in other ways. Already Oviatt and McDougall (1995) emphasized the importance of networks in high tech SMEs internationalisation and furthermore networks are emphasized in SMEs learning and knowledge creation (Coviello and Munro, 1995; Weerawardena et al., 2007; Elfring and Hulsink, 2003). The last role that Bessant and Rush (1995) present is *diagnostic role* in which consultants are helping companies to articulate and define their particular needs in innovation. Also Muller and Zenker (2001) emphasize the role of intermediaries in innovation evaluation and development.

The six contributions that Bessant and Rush (1995) identified are *capability building* which means that the intermediating actors develop key management capabilities. McEvily and Zaheer (1999) also emphasize the intermediaries as a source of firms' competitive capabilities. The second contribution is *institutional building* which means that the intermediating actor offers an opportunity to develop strategic capabilities across the supply side. The importance of intermediaries as a source of practical resources has also been emphasized by McEvily and Zaheer (1999) and they impress that through the external facilitation a firm has access to the pool of skilled labour, available capital, qualifies suppliers, R&D labs and professional service companies. Third one is *failure avoiding* by offering targeted advices and direct technical and managerial support for the strategic choices. All these three contributions can be explained by learning. According to Fletcher (2007) firms gain knowledge through imitative learning by observing other firms, by

acquiring or hiring people with the necessary knowledge, company acquisitions, licensing, strategic alliances and by conducting focused research for new information rather than through experiences from their own activities.

While the first three contributions are related to the SMEs capability development, the last contributions are comparable to other innovation policy actions like financial support mechanisms. *Lower cost* of consultancy services means that innovation support through information and consultancy advising are less expensive than other innovation policy options like soft loans. Fifthly, *targeting of support* means that consultants as active intermediaries are able to advise directly the companies because the relationships are dyadic between the company and intermediating actor. The last contribution is *decentralized operation* which means lower bureaucracy inside the innovation transfer program because project management does the monitoring and control.

Prashantham and McNaughton (2006) use simpler matrix of intermediary activities dividing the activities to architecting, brokering and coaching. The activities are developing during time and architecting is the first stage where the needed resources and support is identified together with the intermediary and the company. In the next step brokering involves introducing the company to potential collaborators and facilitating the company to make satisfying contracts with them, such as Bessant and Rush's marriage brokering. In the last phase coaching means that the practicalities and managerial capabilities will be embedded to the organization. During the process the intermediating actor aims to enhance the company's visibility, efficiency and intimacy in the network by overcoming the lack of information, networking processes and trust in network. (Prashantham and McNaughton, 2006).

High tech firms entry modes

Even though the high tech SMEs have been researched lately a lot there has been paid little attention to high tech companies' strategic decisions (Burgel and Murray 2000; Gabrielsson and Kirpalani, 2004; Varis et al., 2005). Burgel and Murray (2000) argue that entry choice decision is the most important strategic decision that company does and still only couple of researchers have been interested in it. Internationalisation has been taken as an axiomatic character in high tech SME literature (Knight and Cavusgil, 1996; Madsen and Servais, 1997; McDougall et al., 2003) and therefore the entry decisions cannot be ignored when researching the phenomenon.

Gabrielsson and Kirpalani (2004) argue that high tech SMEs have four possible channels to international markets. The first one is MNCs acting as system integrators, secondly the MNCs can be distributing high tech SMEs products and services, or the SMEs can either use networks or internet as a channel. Notable is that high tech SMEs can use many of the channels at the same time. Burgel and Murray (2000) argue that limited resources and managers' previous international experience influence SMEs entry decision; managers with international experience are likely to use direct export and use their social networks in internationalisation rather than distributors. The companies with no international experience gain from distributors, especially because of experimental learning (Burgel and Murray 2000; Varis et al. 2005). Also highly customized products are more likely to be internationalized through direct exports, but standardized or new and innovative technology products lead typically to using distributors (Burgel and Murray, 2000).

Howells (2006) emphasized the intermediaries' role in SMEs strategic decision making process whereas Burgel and Murray (2000) and Varis et al. (2005) noted the role of

previous experience and knowledge in SMEs entry mode selection. While intermediaries are providing market knowledge, acting as a marriage broker and evaluating the market potential of technology and innovation, intermediaries can be seen affecting also the entry mode decisions.

Impact of external facilitation in high tech SMEs internationalisation process

The paper aims to research the external facilitation in high tech SMEs internationalization process. Above we concluded that high tech SMEs face many difficulties when targeting to global markets. The limited internal resources and lack of experimental knowledge of international markets as well as lack of visibility, lack of networking processes and lack of trust in networks are the major challenges which lead easily to failures or partial success in markets. The market knowledge and effective networks are crucial for a firm especially in turbulent markets where high tech products have short windows of opportunity. The role of SMEs in economic wellbeing has been noticed and therefore various facilitation institutions have been established to compensate the lack of managerial capabilities as well as to develop effective networks for SMEs in the internationalisation process. On this basis we build theoretical framework for researching the impact of external facilitation on high tech SMEs internationalisation process (Table 1).

Table 1. Actions in intermediation relationship between intermediary and user company

Actions of intermediating actor		Actions of user company	
Roles of intermediating actor	Contributions of intermediating actor	Ways of learning	International entry strategies
Knowledge transfer Experience sharing 'Marriage broker' Diagnostic role Architecting Coaching	Capability building Institutional building Failure avoiding Lower costs Targeting of support Decentralized operation	Observing other firms Acquiring people with the necessary knowledge Company acquisitions Licensing Strategic alliances Focused research for new information Through external networks	Direct exporting Agents/distributors Internet as a channel Existing networks as a channel

We study external facilitation in high tech SMEs internationalisation process as a dyadic relationship and therefore we will separate the actions of intermediary and user company in the internationalisation process. Intermediating actor has six roles which can be simultaneous and the actions of intermediary cause different contributions to the user company. High tech SME as a user company has typically rather limited internal and external resources and therefore it tries to benefit from the intermediating actors knowledge and relationships. During the internationalisation process the user company uses different ways to develop the internal capabilities by learning from the facilitation of intermediating actor. Gaining market knowledge and development of internal capabilities and external networks affect the way of penetrating into the international markets and developing network position.

Methodology

The study is qualitative by its nature and the phenomenon is researched as a case-study in its real-life context (Yin, 1994). While the external facilitation in high tech SMEs internationalisation is under examined area and in this research the phenomenon has been followed processually over time, it will give a deep understanding about the determinants behind the actions in the internationalisation process (Langley, 1999). Through process research the complex phenomenon is researched as a whole with different types of data and also the context of the phenomenon can be taken into account (Langley, 1999). The longitudinal case study method allows researchers to examine new and complex elements in creating understanding of the external facilitation in high tech SMEs internationalisation. According to Saunders, Lewis and Thornhill (2003) longitudinal data enables study of change and development of firms over time.

The empirical part of the study relates closely to Global Clusters program which is a business development program in Finland. The project is specifically designed for high tech companies targeting critical mass of international customers and global market presence. Global Clusters program is organized by the University of Oulu in cooperation with the city of Oulu and business development institutions Oulu Innovation Ltd. and Oulu Wellness Institute Foundation. The program is divided to four phases in one year period and the purpose is to facilitate development of unique internationalisation strategies to the lead markets. The process begins from market positioning and through tailoring the business strategy and product validation the purpose is to end up to launching the product into the target markets. During the process the companies are trained and evaluated by consultants who have long experience in acting and consulting high tech companies in target markets.

The empirical data has been collected during one year period by using multiple methods. The primary data-collection method consisted of interviews with a semi-structured questionnaire as well observation during the process. Two managers of two companies involving the Global Clusters program were interviewed as well as two key actors in the program. In order to enhance the reliability of the study also the notes of external consultants have been used as a secondary data source. The data collection is presented in Appendix 1. In the empirical part the phenomenon is examined from two viewpoints; from intermediary's angle and from the viewpoint of the companies that took part in a Global Clusters program and aim to be global players in the near future. The actions of the intermediating actor and user companies are analysed over a one year period to be able to research the change and development during the Global Clusters program.

Case companies

Alpha was established in 1996 and it operates in the field of ICT and digital media. Company provides solutions for the needs of digital communication and advertising. The product is standardized by its hardware but easily customized for each customer's needs. It enhances customers' communication with the target group as well as reduces costs of advertising. The target customers are large retail or service chains globally that could benefit from the centralized and real time managed digital advertising independent of the location. Company has nine full time employees in two cities in Finland and it has positive income. Company had no international actions before taking part in the Global Clusters program and the managing director of the company had no previous international experience.

Company Beta is founded in 2004 and it operates in the ICT industry, specifically in the development of wireless technology. The product is a development platform for wireless technology products and at the moment the company is a subcontractor for large telecommunication companies. Company acts in project business and aims to develop the strategy from subcontracting to product business. Beta has headquarters in Oulu, Finland and sales and marketing division in Dallas, USA and it employs 15 full time people. The managing director and marketing manager both have over 20 years of experience in ICT industry and they also have strong international experience.

Analysis

The central actors in Global Clusters program are the program director, who has been in the program through the 10 years history, and the project manager. The program director and the project manager are operational leaders in the program and coordinate all the practicalities with the other program employees. Program has also four consultants from USA which are providing strategy development training and market knowledge for the companies accompanying the Global Clusters program. The program is divided to four phases and each phase focuses to develop one part of the international market strategy. In phase I the focus is on developing marketing strategy and positioning in markets. Phase II focuses on tailoring business strategy and includes market research and competitive analysis. The first two phases are implemented in Finland by the experienced consultants from Silicon Valley, USA. Phase III includes product and market validation and part of it is implemented in Silicon Valley. In the third phase the companies meet potential customers, partners and venture capitalists in Silicon Valley in arranged meetings and networking

events. The fourth phase is launching the product into lead markets. In the analysis the roles and actions of business development program will be analysed processually during time.

Global clusters program

The consultants in the program have the main role of facilitating actors in business development process. In the beginning of the program the consultants' had very extensive role and the importance of their support to the companies diminished during the program. The program director and project manager emphasized the consultants' role in the first phase as transferring knowledge, sharing experience, developing global mindset, the diagnostic role and also the architecting role. The first phase included the group sessions where the consultants lectured about different business strategies both from the theoretical point of view and shared their own experiences in high tech markets in USA. In individual sessions the consultants analysed the companies market potential and market position in lead markets. In the individual sessions the architect role as well as diagnostic role emphasized while the consultants identified the needed capabilities and resources for international growth. According to the director the program is also encouraging the companies to change the attitude to be more global, to see the opportunities, to develop the risk taking ability and also to target to the lead markets with high expectations. In the second phase the companies had individual sessions with consultants and after analysing the company's business the consultants provided a market research and competitive analysis for the companies. The roles of the consultants remained the same during the first phases.

According to director and project manager consultants' main contribution in the first phase was to develop managers' capabilities by enhancing the knowledge and experience for the needed level as well as by helping the company to understand the marketing point of view and to develop the conceptual thinking. Purpose was that after group session lectures and individual meetings the companies would be able to understand their own segment as well as the position and possibilities in markets. Both of the companies also expected to develop their internal capabilities during the first phase especially with the targeted support in individual sessions. In the second phase the consultants were acting as architects by tailoring the business strategy for the companies as well as marketing research. However capability building during the individual sessions was the key contribution of consultants in the second phase.

In the third phase the consultants' role as marriage broker and coaching emphasized because the consultants arranged meetings and networking events in Silicon Valley. Consultants also trained the companies to act in US markets since the business culture is a different and the consultants also provided their experiential knowledge for the companies by going into the meetings with companies. The program director impressed that the support in the meetings has been important to avoid failures because previously there have been misunderstandings about the result of the negotiations because of differences of culture. Practicing the elevator pitches, small talk and acting in international environment was also part of the facilitation as well as the other practicalities like providing office space, accounting company and other needed resources in USA. The director emphasizes also that the Global clusters program tries to develop the capabilities of the company by arranging meetings with different kind of actors in the markets like venture capitalists, partners as

well as clients and therefore coach the companies to the international business. As program director said the aim of the third phase was to take the companies to the lead markets to meet the people so that the companies' one hand gets experiences in international markets and on the other hand they would notice that business and actors in the lead markets are not so different from home markets. The director argues that meeting the actors in lead markets is the best way to develop global mindset.

In the last phase the role and contribution of consultants' decreased because the companies had developed their internal capabilities as well as networks during the process. The program director noted that marriage broker was the most important role in the last phase and the contribution of the consultants was institutional building so that companies would be able to learn in the future either from the strategic partners or by hiring experienced people to support the international operations.

Alpha

Alphas expectation for the project was to look out the possibilities to enter to international markets. According to CEO of Alpha they saw the consultants' main role of in the first and second phase of the program as knowledge transfers' though there was no previous international experience in the company. Also the diagnostic and architecting role was seen as important because analysing own business with external expert gave new insight to the own business as well as tools to conceptual thinking. Both of the companies,

Alpha and Beta, also expected that they would to develop their internal capabilities during the first phases especially with the targeted support in individual sessions.

In the third phase Alpha saw the role of consultants as experience sharing, marriage broker and coaching. Notable is that the roles remained the same in the last phase even though the representatives of the program noticed only the role of marriage broker. When coming to the business development program Alpha had no clear vision about the internationalisation either international experience, but the company had a product which had potential in global markets. Because of the lack of international experience the company learned a lot during the program. According to CEO of the Alpha the most important thing that they founded during the process was to define the product and markets where they were acting. In fact the CEO of Alpha said that “A year ago we didn’t even know what is the product and in which markets we are playing. We thought that we were providing web based communication tools but now we know that our market is about digital signage.” Alpha and Beta both learned through external networks using consultants’ knowledge as well as the market research and competitive analysis reports. Alpha also noticed their lack on international experience and therefore they are acquiring finding experienced people to the board. Alpha used also actively other intermediary institutions during the Global clusters program to gain market knowledge.

Learning and developing the company for the lead markets is an individual process. According to program director there have been companies in the program for two or three times and that indicates on the hand that learning is a slow process and on the other hand that the companies gain benefit of the business development program. The director, project

manager and both of the companies had unanimous thought that in this phase the learning happens through the consultants and especially Alpha felt that their knowledge about the internationalisation, marketing strategy and customers enhanced during the program. Alpha saw that the consultants were a great support for the company in the meetings with international contacts because of the lack of experience in international business. Companies learned through external networks but CEO of Alpha said that he learned also by observing other companies. CEO of Beta says that meeting the venture capitalists was the biggest learning experience during the week.

Alpha had no clear internationalisation strategy and therefore it worked with several intermediary institutions to gain knowledge from several possible markets. It also does not have clear entry strategy or customer segment and it is trying to enter to markets through existing customers since its target customers are large international chains with high volume. At the moment the company uses direct sales in Finland and also has negotiations with customers in Sweden as well. In the US markets they have been negotiating about establishing a joint venture with one of the consultants. That would be beneficial for the company because they could reach the US markets with lower financial risk and lower amount of resources. Even though they would lose a little bit of the independency they could act independently in other markets if they are willing to do so. However they are able to use multiple entry modes.

Beta

Actors in company Beta also noticed the role of the consultants as transferring knowledge in the first two phases. However they emphasized especially the diagnostic and architecting role of the consultants since it clarified the business strategy and also give new ideas and tools to develop the innovations. Beta had previous experience in acting international markets and therefore the company already had a strong aim to internationalise during the following year. The expectation was to develop the company's internal capabilities during the first phases especially with the targeted support in individual sessions.

While Beta had strong international experience they did not benefit so much about the information transfer but consultants experience and analysis helped them to define their product and markets. Alpha and Beta both learned through external networks using consultants' knowledge as well as the market research and competitive analysis reports. However Beta was also using other intermediaries to gain knowledge about Asian markets at the same time though it is also attractive market for the company but they do not have so much experience from Asian markets.

Because of the lack of previous international experience Alpha saw the role of consultants more wide-ranging than Beta during the program. Beta saw the role of consultants as marriage broker in the third phase even though they were also using their own networks when arranging meetings during the networking event in Silicon Valley. Notable is that Beta saw the role of consultants as marriage brokers to enhance the institutional building for the company and Beta was very satisfied how the consultants arranged them resources for launching their product to the US markets. In the last phase of

the program Beta was so independent that it saw the consultants' role as marriage brokers and the main contribution was to support the company by institutional building.

Beta had clear entry strategy and the managing director emphasized that the company has global view in all the actions because either the customers are international players or the markets are international. At the moment company has done subcontracting for the larger technology companies, but now the company has its own product and the purpose is to change the strategy and not to stay just a subcontractor. With the own product and with the whole projects the company is more independent and is able to grow. Beta has R&D in Finland and sales unit in USA even though at the moment they do not have many customers across the borders. Having a sales unit in the main market gives them possibility to communicate with technology partners and customers in USA. Beta gets most of its customers through our technology partners and also launching to the US markets gave the visibility in markets. Direct sales is the entry strategy for the company and when the product needs to be produced in the higher volume the company has facilities to begin production in Asia very short period of time.

The main difference between the Alpha and Beta was that Beta had strong vision and a strategy to be international actor. Beta also had international experience and networks before coming to the program therefore they were able absorb the facilitation that the program offered. Alpha was beginner in international operations and it needed more facilitation during the program and when coming to the last phase Alpha was not independent actor. However Alpha had great learning opportunities and they absorbed widely new knowledge but they were not able to transform the new knowledge into action in a short period of time.

Conclusions and directions for future research

The aim of the paper was to explore what kinds of roles the external facilitators have in the internationalisation process of a small high tech firm. We also researched the affects of the external facilitation during the internationalisation process. In the paper we examined the phenomenon both theoretically and empirically. Our study makes contribution to high tech firms' internationalisation literature in focusing important but under examined phenomenon of external facilitation. We researched phenomenon longitudinally and therefore gained information about the change of roles of intermediating actor as well as the development of the internationalisation capabilities in the companies.

Bessant and Rush (1995) found four roles and six contributions for intermediating actors and we enhanced the roles with the findings of Prashantham and McNaughton (2006). Therefore we had six roles of intermediating actors in the theoretical part of our study. According to our empirical study we agree that the intermediating actor has the roles in knowledge transfer, experience sharing, marriage broker as well as the diagnostic role, architecting and coaching role. In addition to these we found that the intermediating actor has also role of changing the mindset of the companies. Acting in local markets is different than in global markets and the attitude and viewpoint needs to change to be able to adapt to the global markets. External facilitation may diminish the time of changing the mindset while the companies are exposed to global viewpoint. Another important finding was that the intermediating actor may have many roles at the same time and companies experience and knowledge affects to perceived role of intermediary. The roles also changes during the internationalisation process while the companies gain experimental knowledge and build institutional capabilities.

Empirical study addressed that the main contributions of external facilitation were in developing companies' capabilities in global markets by targeted support and developing companies external networks in lead markets. Importance of different contributions was also dependent on the company's international market experience. Notable empirical finding was that intermediaries had also contribution in arranging practicalities. Learning and developing knowledge during the program was dependent on the company's previous international experience. With lower experience the company uses more different ways of learning and also multiple sources.

When analysing the companies' entry strategies we found that even small companies are able to use multiple entry modes. Small internationalising companies are also open to different entry modes and are able to see opportunities to reach market. In addition to developing knowledge and networks in global markets the external facilitation also opens opportunities for the companies.

The study consisted of two companies and despite of the longitudinal research setting the findings cannot be generalized. However the results indicates that external facilitation has impact on high tech SMEs internationalisation process and the intermediating actors have different roles during the process. Further research is needed in order to create further understanding about the different roles and impact of external facilitation. Especially longitudinal research setting would be beneficial to gain knowledge about the phenomenon.

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Appendix 1

Empirical data:

March 9th 2006, Oulu	Interview: Project manager	Duration: 1h 40 min. Theme: Programs roles and contributions.
May 21 st and May 22nd 2007, Oulu	Observation: Common seminar of reaching global markets	Duration 8 hours and 4 hours. Contained two day seminar about framing and market strategies.
May 23rd 2007, Oulu	Consultants' notes: Individual workshop Alpha	Workshop duration 4 hours
May 24th 2007, Oulu	Consultants' notes: Individual workshop Beta	Workshop duration 4 hours
June 1 st 2007, Oulu	Observation: Common seminar, feedback and future directions	Duration 4 hours
October 8 th -13 th 2007, San Jose	Observation: Networking event and appointments in Silicon Valley	Duration 6 days. Meetings with potential partners, customers and venture capitalists.
October 11 th 2007, San Jose	Interview: CEO of Alpha	Duration: 20min Theme: Company's experiences of the program and networking event.
January 25 th 2007, Oulu	Interview: CEO of Beta	Duration: 50 min Theme: Company's background and experiences of the program.
February 5 th 2007, Oulu	Interview: CEO of Alpha	Duration: 1h 30 min Theme: Company's background and experiences of the program.
May 29 th 2007, Oulu	Interview: CEO of Beta	Duration: 1h 20 min Theme: Company's background and experiences of the program.

Background information:

Companies' WebPages

Global Clusters program WebPages

Global Clusters brochures