

**Social networks in the initiation of the high tech firm's  
internationalisation**

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### **ABSTRACT**

Entering foreign markets is often seen to be a big challenge for small firms due to the small amount of resources available for internationalisation. However, through interpersonal networks, firms can gain access to, as well as, mobilise external resources to aid the initiation of internationalisation. Thus, to understand small firm's internationalisation, knowledge of the factors influencing the internationalisation and an analysis at the social relationship level is needed. The present study is concerned with the initiation of the internationalisation of small high-technology firms. It concentrates in particular, on social networks and their influence on internationalisation. The paper develops an empirically grounded framework for understanding the roles that a social network can play in the initiation of small firm internationalisation. The framework acknowledges the roles of personal relationships as sources of critical information about foreign business opportunities and potential international business partners. Moreover, social relationships are important door-openers for international relationships. This study contributes to the existing research by bringing forward the very active role that the interpersonal network can play as a mediator in the initiation of small firm's internationalisation. The mediation can provide the small firm publicity, contacts, and legitimacy resulting in first international contacts and development of international business relationships.

### **INTRODUCTION**

Entering foreign markets is often seen to be a big challenge for small firms due to the small amount of resources available for internationalisation. Therefore relying on relationships with others for resource acquisition is almost a necessity when striving for a share in a foreign market (see e.g. Neergaard 1998; Tuusjärvi 2003). In the case of small firms these relationships are often of a personal nature between the entrepreneur and the members of her/his social network (see e.g. Johannisson et al. 1994). Hence, the social networks inevitably influence the initiation of a firm's internationalisation. Through interpersonal networks, firms can gain access to, as well as, mobilise external resources. In addition, they can economise by utilising existing sources of information – such as interpersonal networks – instead of the more formal and expensive option of market research (Wong and Ellis 2002). This initiation of internationalisation then greatly

affects the dynamics of future international operations of the firm (Leonidou 1995). In order to understand small firm's entire internationalisation process, knowledge of the factors influencing the initiation of internationalisation and an analysis at the social relationship level is important.

Mainstream internationalisation literature suggests that internationalisation is mostly based on objective information gathered through market research, and that it is always a well-considered, rational decision (Coviello and McAuley 1999). In addition, internationalisation research mainly concentrates on issues concerning either the choice of the operation mode or the sequence of markets entered. A large number of studies are based on so-called stage models, most commonly the Uppsala internationalisation model. These studies look at the operation mode and market choices longitudinally, as a gradual development process from operation modes that require less commitment and psychically closer markets towards modes which require much more commitment and more distant markets. These studies do not, however, explicitly take into account either the importance of the network context in which companies are embedded, or the social network (Holmlund and Kock 1998). In the business world it has always been acknowledged that individuals and their networks are crucial to a businesses' success. Establishing contact with new foreign partners is a complex, social activity that often appears to be a result of chance encounters, - being in the right place at the right time (Axelsson and Agndal 2000, Ellis and Pecotich 2001). However, the research into entry and export behaviour largely disregards the social dynamics that are inherent in the initiation of internationalisation.

In particular, challenges to older internationalisation models have been posed by the researchers into internationalisation of small high-technology firms (e.g. Bell 1995; Coviello and Munro 1995; Crick and Jones 2000). Small high-tech firms operate in a highly competitive and turbulent environment in which a product's short life cycle and small domestic markets are

typical determinants of business. Therefore, firms don't have the time to slowly generate their at-home markets as well as acquire experience from the geographically and culturally close export markets. Not much is known, however, about how the first customer relationships abroad are established. In this present study we rely on the notion that "interpersonal contacts lie at the heart of the interaction between companies" (Cunningham and Turnbull 1982), when investigating the initiation of internationalisation.

The aim of the present study is to explore the initiation of the internationalisation of high-technology firms by concentrating on social relationships and the influence that they hold over the process. The general research question of the study is: *How can the social network influence the initiation of the internationalisation of a small high-technology firm?*

Theoretically the study is based on the Network approach to internationalisation (Johanson and Mattsson 1988; Johanson and Vahlne 2003) and particularly on the social network research. Research into social networks has origins in studies concerning interpersonal and inter-group relationships in sociology (e.g. Granovetter 1973). After that social relationships and networks have been studied in, for example, industrial marketing (e.g. Turnbull 1979) and entrepreneurship (e.g. Birley 1985; Johannisson 1987). We will firstly examine the initiation of internationalisation based on existing research into network-based internationalisation. We then consider specifically the influence of social relationships on internationalisation. Thereafter, we describe the method through which the empirical grounding of the study takes place. The empirical part of this study analyses a single case study about the initiation of the internationalisation process of a small high-technology firm. As a result, an empirically grounded model of the role of social networks in the initiation of a high-technology firm's internationalisation is presented.

## **SOCIAL NETWORK-BASED INITIATION OF INTERNATIONALISATION**

The internationalisation of small firms has been approached based on three major theoretical frameworks. The FDI-theory explains internationalisation by arguing that firms choose their optimal structure for each stage of production by evaluating the cost of economic transactions. Firms therefore choose the organisational form and location from which overall transaction costs are minimised. Critics of the FDI theory argue that research in this area is used primarily to explain a pattern of investment (in terms of its extent, form, and location of international production), and not the long-term process of international expansion (Coviello and McAuley 1999.) The internationalisation stage model of the Uppsala School (Johanson and Wiedersheim-Paul 1975) views the internationalisation of a firm as a process in which the firm gradually expands its international involvement. Critics have noted, however, that firms often begin their international operations in far off markets or leapfrog, not going through the steps identified in the stage models (Axelsson and Agndal 2000, Crick and Jones 2000). The Network approach to internationalisation, in turn, sees internationalisation as a cumulative process of relationship creation, maintenance, development and ending (Johanson and Mattsson 1988). The present study adopts the last viewpoint due to its emphasis on relationships and networks, and the generally accepted notion of resource scarcity of SME's for internationalisation. Johanson and Vahlne (2003) recently combined the two last mentioned approaches and developed a network model of the internationalisation of the firm. Although it does not emphasise the influence of social relationships, it provides interesting insights for the present study.

### **The initiation of internationalisation from the network perspective**

Different factors may have an effect on the start-up of the internationalisation process (see Leonidou 1995; Morgan and Katsikeas 1997; Johnsen and Johnsen 1999). According to Reid

(1983) the internationalisation process cannot be initiated without the coexistence of three necessary conditions: (1) the capability to go abroad, (2) the motive to go abroad, and (3) the awareness of a particular market opportunity. Ellis and Pecotich (2001) emphasise that the initiation of exporting requires an awareness of a commercially viable opportunity abroad. Hence knowledge of opportunities is a critical factor.

The Network approach to internationalisation focuses on the problems and opportunities associated with the establishment of customer and supplier relationships. All relevant business information is seen to be channelled through network relationships (Johanson and Vahlne 2003). While the FDI-theory and U-stage model place a lot of emphasis on economic and cultural/psychic distances between countries, according to the Network approach, the expansion of the firm is not affected by country borders (Johanson and Vahlne 2003). A firm may be forced to become international if it wants to defend or maintain its position in a particular business network, or if other firms in the same business network establish relationships with counterparts abroad (Johanson and Mattsson 1988). On the other hand, the fact that the customers are international or connected to a particular country can also be a means of accessing international markets (Holmlund and Kock 1998.) Holmlund and Kock (1998) emphasise the importance of the present network, as it is from present relations that a small firm gains many of the needed resources.

Both transacting parties are important given the dyadic nature of exchange relationships (Araujo and Easton 1996). However, also other exchange parties should be taken into account as initiators of the internationalisation. The foreign exchange relationships may be seller, buyer or broker-initiated, or a result of a trade-fair or chance encounter (Ellis 2000). Therefore, relationships are important factors that need to be taken into account when examining

internationalisation. In addition, small firms are often dependent on social relationships in order to be able to access critical information regarding international businesses, e.g. upcoming projects and potential purchases. Thus, it can be argued that the internationalisation process is impacted by the firm's existing social relationships, as the knowledge of foreign market opportunities is developed through these relationships (Johanson and Mattsson 1988, Coviello and Munro 1997, Johnsen and Johnsen 1999).

### **Role of social relationships in the initiation of internationalisation**

It is impossible to analyse economic exchange without considering the social context in which it is embedded (Granovetter 1985). Organisational behaviour is always a result of the actions of the individuals representing the organizations and therefore the social relationships, i.e. person-level ties between individuals inevitably intervene in the business processes (Mainela 2002). It can be argued that social relationships are a prerequisite for all business exchanges (Björkman and Kock 1995). Hence, it is obvious that an individual's networks of contacts can also influence the internationalisation of firms.

Axelsson and Angdahl (2000) and Ellis (2000) emphasise the role of the social relationships as the initiator of the SME internationalisation. Large, diversified firms enjoy more opportunities to exploit firm-level network ties than smaller, less-connected companies. The firm-level analysis offers little knowledge of those firms' internationalisation whose network horizon is limited to the local markets, i.e. presumably most small firms. Therefore, a social network theory which considers the transmission of information through interpersonal networks is seen to provide relevant insight to the internationalisation process of an SME. Social networks are particularly beneficial to small firms with limited resources because the network constitutes a

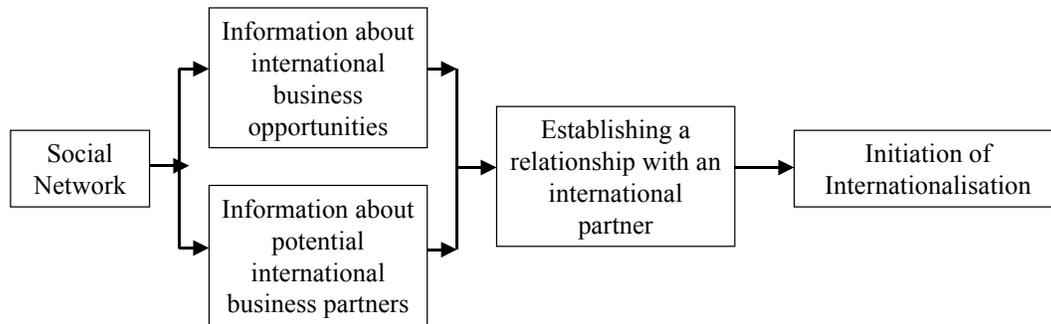
resource – a form of social capital that may compensate for the lack of other resources (Tsai and Ghoshal 1998; BarNir and Smith 2002).

The key actor in the internationalisation process of a small firm is often the entrepreneur as he often initiates the internationalisation, and it is through his personal contacts that information is generally acquired (Holmlund and Kock 1998). According to Ellis (2000) internationalisation is more strongly affected by the characteristics of the entrepreneur than other variables such as firm size and age. In addition, Beamish and Munro (1985) point out that most small firms lack a specific export department when the role of the personal relationships is emphasised. Ties between individuals are based on personal trust, which usually originates in mutual sympathy and confidence. Emotions and intuition are emphasised as guiding forces in the interaction (Johannisson 1995). Friendship is also said to play an important part in the building of an entrepreneur's social network (Mainela 2002, 42).

For small firms the most commonly used operation mode in foreign markets is exporting via agents (e.g. Holmlund and Kock 1998, Johnsen and Johnsen 1999, Ellis 2000). This indicates that using a partner and his social network in going international is seen as important among small firms in order to access a foreign business network (Holmlund and Kock 1998). According to Ellis and Pecotich (2001) a market is selected due to the identification of a specific exchange partner or opportunity abroad. They emphasise that when faced with the uncertainty involved in entering new markets, social relationships help to minimise these risks. Axelsson and Agndal (2000) indicate that market selection appears to be based less on rational decision-making and more on corporate relationships. It has recently been suggested by Johanson and Vahlne (2003) that psychic distance should actually be seen as related to organisations and even individuals, not countries.

To summarize, it is here argued that both individuals and their social networks alike, play important roles as driving forces and enablers in the start-up of internationalisation. Individuals' contact networks influence what kind of business relations evolve and what market opportunities are identified and reacted to. These networks can be considered as social capital that can be crucial to the initiation of the internationalisation process when a large amount of resources are not readily available. In the present study a consciousness of foreign market opportunities is considered as crucial antecedent of internationalisation process (Johanson and Vahlne 1977, Grønhaug and Kvitastein 1992, Ellis 2000) as it provides the motivation to start the process. For companies marketing industrial products, the key questions are; how does one obtain information about up-coming purchasing decisions and, how does one establish relationships with potential partners (Björkman and Kock 1995)? The critical information thus relates to the identification of business opportunities or on how to get in touch with potential business partners. According to Ellis (2000, see also Axelsson and Agndal 2000) information is commonly acquired via social relationships of the entrepreneur.

In addition to providing information about foreign business opportunities, social relationships facilitate screening and evaluating potential exchange partners (Axelsson and Johanson 1992, Ellis 2000, Ellis and Pecotich 2001). In other words, the social network of the entrepreneur/manager searching for an international exchange partner often provides a direct or indirect link to potential partners. Using social ties helps in the searching process and reduces the costs of, for example, market research. The firm is also more likely to start internationalisation if a counterpart is identified through social relationships, as having a known partner reduces the risks that are associated with internationalisation.



**Figure 1.** Theoretical model on the influence of the social network on the start-up of internationalization process.

The previous theoretical discussion is illustrated in Figure 1. Research on the roles of social relationships in the start-up of the internationalisation emphasises especially the acquisition of information through social relationships. This information, in turn is seen to typically point out a new business opportunity in foreign markets or provide new connections and a basis for evaluating potential foreign partners. Whether the internationalisation is then initiated through the establishment of a foreign customer relationship depends on the actions taken by the manager of the high-tech firm. If s/he utilises the information, then internationalisation will begin. In the following case-study the internationalisation of a small Finnish high-technology firm is presented.

### **A CASE STUDY ON THE HIGH-TECH FIRM'S INTERNATIONALISATION**

We chose a qualitative, theory building methodology to address the research objective of the study. The basic ideas of grounded theory (Glaser and Strauss 1967) were adopted in the study because of its specific objective of building theory from qualitative data and interpretation. It is

appropriate in order to gain novel understandings and the intricate details about a specific phenomenon under investigation (Strauss and Corbin 1998, 19). The study began with creation of an initial theoretical understanding of the phenomenon. Then the empirical data was collected and the interview data and notes were carefully transcribed and read through in order to form a general understanding of the studied phenomenon. The empirical grounding of the presented model took place in the process of gathering, coding and analysing the data over and over again as suggested by Glaser and Strauss (1967, 47-50). During the analysing process other researchers' theories were utilised and reflected against the empirical data. This way the theory was left to evolve during the research process from an open interaction between the theoretical ideas and empirical data.

When choosing the research method for the study three conditions suggested by Yin (1987, 3-9) have been taken into consideration: the type of the research questions posed, the extent of control the researcher has over actual behavioural events, and the degree of focus on contemporary as opposed to historical events. As the present study aims at answering the "how" question regarding a contemporary set of events over which the researcher has no control, a case study can be seen as a preferred research strategy. Our goal is not to statistically generalize, but to examine the case carefully in order to bring out the substance of the phenomenon, which commonly reflects the phenomenon at a more general level (see e.g. Hirsjärvi et al. 1997, 181-182). In addition, the case study method has been commonly used in research on internationalisation and social networks (e.g. Johnsen and Johnsen 1999, Axelsson and Agndal 2000, Ellis and Pecotich 2001). In the present study the data collection (see Appendix 1) has been conducted through an extensive semi-structured interview with one of the owners of the case company complemented by several personal e-mails with the owner and the CEO of the

company, as well as the collection of archival material (e.g. articles, press releases, product data sheets, company web-pages).

Teknovisiot, a small five-person Finnish high technology company, was established in 1988. In 2002 its turnover was approximately 500.000 euros. The first foreign customer relationships were created and export activities commenced during 2002. In 2002 the company's main product –Automatic Visit Logging System– broke-through onto the domestic markets and in the same year the first important export deals were undertaken with customers in Great-Britain. It can be said that the company is in a transitional phase as its international exporting activities have recently begun and the Visit-system has become the main product of the company. The internationalisation of the company was not intentional. It was rather the result of chance and circumstance:

“Foreign partners contacted us and wanted to buy our products. It was as simple as that. We thought that internationalisation is good for our image and believe that foreign references also enhance our sales at the home market. That's why we started exporting.”

The company still considers the home market to be its main market area and foreign operations are seen more as complementary business opportunities. However, the importance of international operations is expected to grow in the future and therefore it is seen as sensible to operate abroad.

### **Social relationships in the start-up of internationalisation**

The three most influential partners from an exporting point of view can be identified as the two foreign partners, English Nature and Middle Tennessee State University (MTSU) and one Finnish partner Metsähallitus (National Board of Forestry). Each relationship will now be described in more detail.

First we take a look at the relationship with Metsähallitus which differs from the others due to the fact that it takes place in the home market of the case company. Despite this however, it has had the greatest impact on the internationalisation process. Cooperation between the two partners started in the late 1980's when Metsähallitus became one of the case company's first customers. Since then the relationship has developed into a more and more intimate and co-operative one, and the parties share, for example, common R&D projects. Both parties are highly interested in visitor counting statistics which is a main reason for such close co-operation. In the beginning the relationship with Metsähallitus was based strictly on business but during the years it has progressed onto a more personal level:

“Our relationship with the contact persons is now more like friendship. For example, we have known ‘Henry’ (Special Designer in the Environmental Protection Central Unit of the National Board of Forestry) since the beginning and we still keep in touch regularly.”

From the very beginning the relationship with Metsähallitus has been important, not only because of the cooperation in R&D but because it has initiated the introduction of many new contacts and relationships for the case company. For example, Metsähallitus, while informing the company about its own contacts, also promotes the company through these contacts in Finland as well as abroad.

Presenting a poster together with Metsähallitus in the international conference of “Monitoring Management of Visitor Flows in Recreational and Protected Areas” in January 2002 in Vienna can be seen as a cornerstone in the internationalisation of Teknovisiot. It was through the relationship with the special designer of Metsähallitus that the CEO of Teknovisiot was given the opportunity to participate in conference. As it was the only company aside from Metsähallitus that represented Finland at the conference, Teknovisiot gained plenty of attention

and was able to establish new contacts with potential foreign business partners. The conference is considered to be a starting point in the internationalisation process:

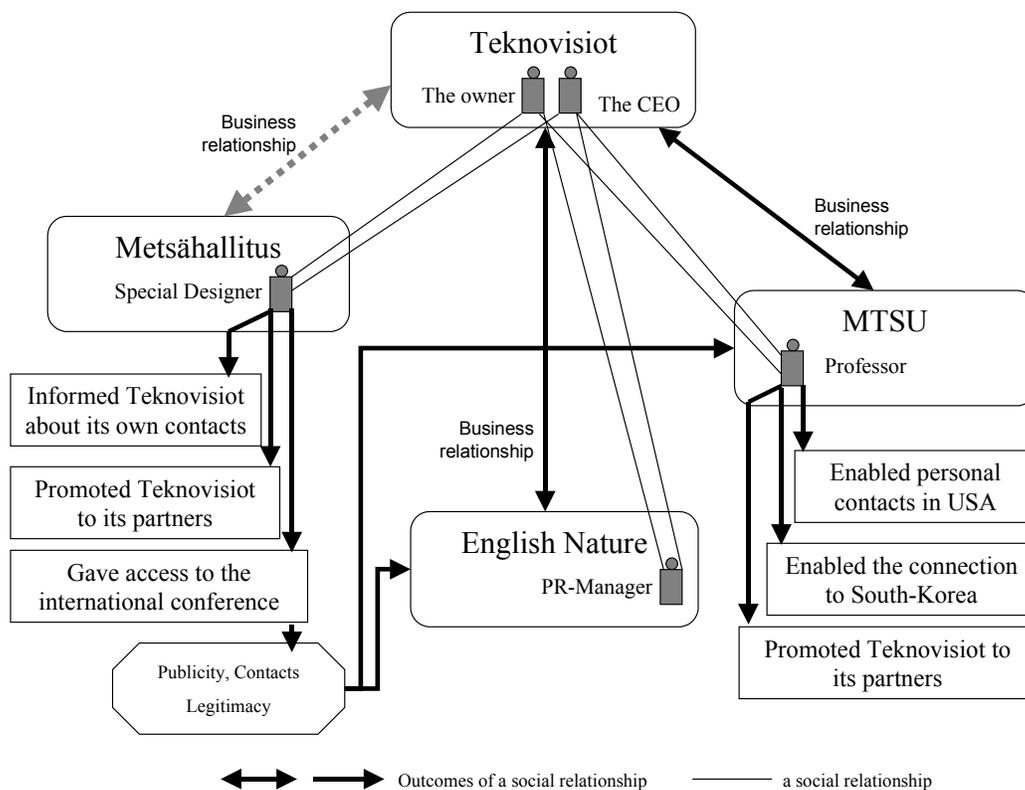
“The start-up of our internationalisation is based on the contacts the conference brought us. It was a kind of a snowball – the relationships established after the conference have already brought us entirely new relationships and that is exactly how our internationalisation has been proceeded.”

Two major international business relationships were initiated at the Vienna Conference. The first of them is a relationship with British English Nature. The PR-manager contacted the CEO of Teknovisiot soon after the conference. A business relationship between the companies was established in the fall 2002 with Teknovisiot commencing exportation of its Visit-system to English Nature. As the cooperation was successful the business relationship developed onto a more personal-level between the PR-manager and the owners. An example of this friendship can be seen in the PR-manager hosting the owners of Teknovisiot during their visits to London. The relationship with the company that governs the British natural parks is very important to Teknovisiot. It offers a possibility to develop a visitor counting system without the need for great investments and is also an excellent reference for the company.

The second important business relationship initiated during the conference is with the Middle Tennessee State University (MTSU). At the conference the CEO of Teknovisiot became acquainted with professor from MTSU. He is responsible for the natural park projects in the USA and Teknovisiot provided him with a prototype of the new visitor counting application at the conference. This led to establishment of a business relationship with MTSU. Also this business relationship has an important social element as is described below:

“In my opinion, spending a week in somebody’s home makes the relationship more like a friendship than a business relationship.”

At present the parties cooperate in the form of R&D, and Teknovisiot also exports counting and profiling products to the USA. The relationship is very important for the company as the contact person has significant connections to natural parks in USA. In fact, Teknovisiot has already gained new contacts thanks to the social network of the MTSU's contact person. A number of companies from South-Korea have expressed their interest in Teknovisiot and a few relationships are currently being established with companies in the USA. Thus, the personal relationship between the Teknovisiot's manager and the professor at MTSU has been crucial for internationalisation. Figure 2 introduces the three most influential relationships of the case company and the international business network created through them.



**Figure 2.** The influence of social network on the creation of new contacts.

### **Findings of the case study**

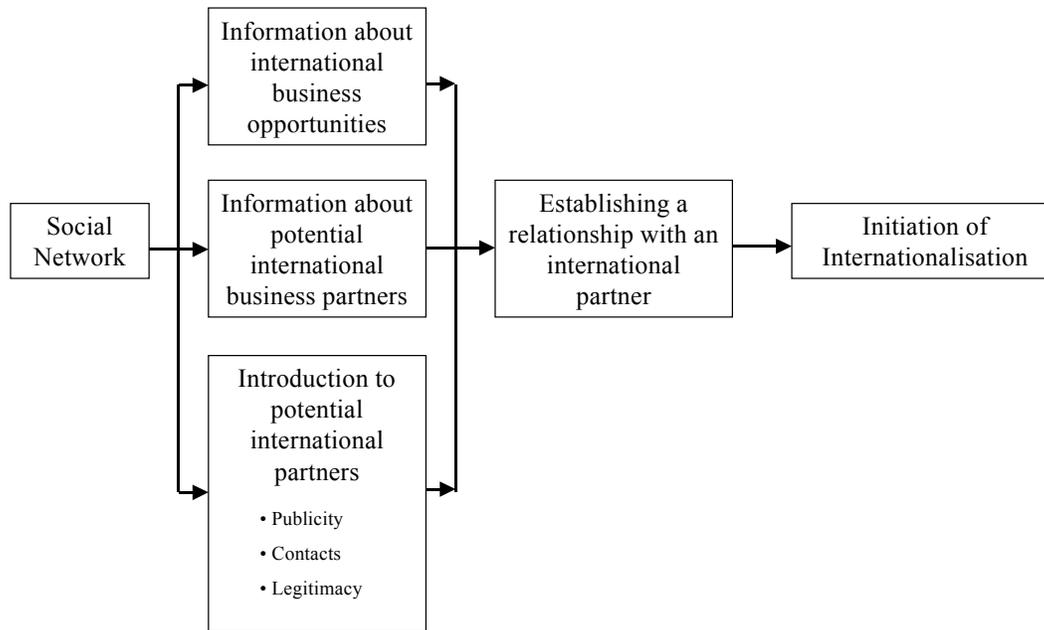
Teknovisiot's first contacts abroad were developed through personal relationships established by its managers with Metsähallitus. However, the internationalisation was not a born global –start-up, which has often been connected to high-tech firms (Coviello and Munro 1995; Crick and Jones 2000). On the contrary, Teknovisiot began exporting operations after 14 years of operation although it had no intention of doing business abroad.

The internationalisation process of the case company centred around two key people in the company whose social relationships were significant driving forces and enablers of internationalisation. The relationship between Teknovisiot and Metsähallitus has turned out to be an extremely influential one, as it has provided the company with the opportunity to represent Finland at an important international conference, and thus gain international recognition among companies, for example, English Nature. Furthermore, this has led to the creation of new relationships with international partners. Contact people within Metsähallitus also promote Teknovisiot through their own contacts and hence facilitate the creation of new connections. In addition, Metsähallitus informs Teknovisiot about their own contacts, thus sharing critical and unique information about the business opportunities and potential business partners.

Furthermore, the case study shows that the role of social relationships can extend beyond merely sharing information about business opportunities or potential partners. Social relationships can mediate or open doors to new business relationships, i.e. introduce the potential exporter to the international actors. In the case of Teknovisiot the whole idea for international introduction came from the long-lasting personal contact in a customer and cooperation partner firm. The social relationship gave Teknovisiot access, as well as the opportunity, to take part in an international conference. In the conference Teknovisiot gained notable publicity and new

contacts, which resulted in appealing international business opportunities. The presentation together with Metsähallitus can also be seen to have provided the internationally unknown, small, Finnish high-tech firm initial credibility in the eyes of the possible foreign cooperation partners. It is often difficult for a new firm to achieve legitimacy within a market, especially when it lacks a reputation on which to refer (see Starr and MacMillan 1990; Larson 1992). Provision of this legitimacy is an important function of existing relationships in the initiation of high-tech firm's internationalisation (see also Coviello and Munro 1995).

In Figure 3 the original theoretical model has been completed by the empirical insights. In the case study, the role of social network was emphasised as it included a mediator who took the initiative to pull the potential exporter towards initiation of internationalisation. It enabled the company to introduce itself to the important international actors. This brought the company foreign business opportunities which initiated the internationalisation of the company. Based on the empirical part of the study it can thus be argued that the role of social network can go beyond exchanging information. Social relationships act as door-openers and active mediators to new relationships thus enabling the company to introduce itself to the international actors.



**Figure 3.** The influence of the social network in the start-up of the internationalization.

The operation mode the case company has used in its internationalisation is ‘own exporting’, i.e. the company supplies the products to end customers. This operation mode does not involve intermediaries and the company has a straight connection to the end customer which facilitates creating social contacts with, for example, customer’s customers. The use of own exports differs from the results of Crick and Jones (2000) who noted the high-tech firms serve their core markets through subsidiaries and minor markets through exports via agents. Johanson and Vahlne (2003, 88) in turn report on a similar kind of use of own exports as Teknovisiot. These customer relationships were based on the contact network of “an old friend”. The question concerning the sequence of markets entered has been solved in the case company simply by choosing the market in which the exchange partners are located. This is consistent with previous studies (e.g. Coviello and Munro 1995; Crick and Jones 2000). Foreign market entry is often initiated thanks to existing relationships or suddenly upcoming information on foreign business opportunities and psychic distance between countries seems not to be a significant decision

factor. In their latest article also Johanson and Vahlne (2003) concluded that psychic distance can actually be related to individuals, not countries.

## **DISCUSSION**

The present study examined, both theoretically and empirically, the influence of social networks in the initiation of high-technology firm's internationalisation process. The aim was to answer the question: How does social network influence the initiation of the internationalisation of a high-technology firm?

As many researchers have noted, small firms generally lack resources to aid their internationalisation. Social interaction which takes place in the social relationships between individuals can be seen as a channel for resource flows, especially information exchange. Social relationships can be useful in getting access to the resources which are critical in the early stages of internationalisation, i.e. information about foreign business opportunities or potential international business partners. Furthermore, based on the empirical part of the study it is argued that the role of social relationships can go beyond exchanging information. Social relationships act as mediators and door-openers to international business relationships by enabling the company to introduce itself to international actors. The present study brings up the very active mediation role that a social relationship can have in the internationalisation of quite a passive potential exporter. Therefore, although a small business manager and his/her firm can be domestically oriented, a member of his/her social network can see a potential in the international markets and pull the firm to initiate its internationalisation. This kind of introduction, together with the more experienced and known partner provides the small firm with publicity, legitimacy and contacts. Typical of these social relationships seem to be their friendly nature, which further enables the transition into foreign markets.

In addition, it can be argued that social networks affect the decisions concerning international operation mode and sequence of markets entered. Although these decisions were made in the case company by mostly reacting to situation at hand, the influence of social network could be identified as a driving force behind the decisions. The present study reveals, as opposed to the common view in the internationalisation literature, that the selection of which markets to enter does not have to be based on the psychic distance. Thus, the markets entered have been chosen based on the location of the customers, and the risks or other limitations related to psychic distance concept are not considered to be key factors.

All in all, the present study contributes to the filling of the research gap in the traditional internationalisation research concerning the influence of social relationships on the internationalisation. The results are collected in the empirically grounded process model, which recognizes the crucial and multifaceted roles of the social network in the start-up of the small high-technology company's internationalisation.

It can also be argued that it is critically important for the internationalising small high-technology companies to create, maintain and develop social relationships because they can play a significant role in identifying and utilising foreign business opportunities, potential business partners and unique opportunities in order to create international relationships. Moreover, it is important to pay constant attention to social relationships so that unexpected opportunities are able to be recognized and reacted to. Timing can be critical factor in the start-up of internationalisation process.

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## APPENDIX 1: Summary of the empirical data.

<b>Empirical data</b>
<p><b>Interview:</b></p> <p>Interviewee: Ruohonen, one of the owners of Teknovisiot</p> <p>Time: 26<sup>th</sup> January</p> <p>Duration: 2 h 45 min</p> <p>Recording: tape recording and notes</p>
<p><b>Additional data:</b></p> <p>E-mail messages with the owner and CEO, in total 11 messages</p> <p>January 2003: Background information about the company (2 messages)</p> <p style="padding-left: 40px;">History and development of the company (1 message)</p> <p>February 2003: Relationship with MTSU (1 message)</p> <p style="padding-left: 40px;">Current business situation (2 messages)</p> <p style="padding-left: 40px;">Detailed information about the products (1 message)</p> <p style="padding-left: 40px;">Relationship with Metsähallitus (2 messages)</p> <p>March 2003: Reviewing and evaluating the present study (2 messages)</p>
<p><b>Background information:</b></p> <p>Company web-pages: <a href="http://www.teknovisiot.com">http://www.teknovisiot.com</a></p> <p>Article: Hyvönen, V. (2002) 'Hightechiä Paraisilta suureen maailmaan', Turun Sanomat 29.11.2002</p> <p>Press releases, product data sheets</p>