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The objective of this thesis is to investigate the role that business networks have in the internationalisation process of a Finnish software service firm entering to Sweden. To achieve this goal, the ARA-model was used as a theoretical framework. This thesis focused only on the positive network functions affecting the internationalisation of the case company. The selected research strategy for this thesis is a single case study. The data collection was conducted with three interviews. The interviews were semi-structured themed interviews. ARA-model proved to be useful in describing internationalisation of a Finnish software service firm, Futurice. It helped to show that the business networks had a major positive impact for the internationalisation of Futurice. It was evident that certain key actors, especially key individuals, had the greatest positive impact for the internationalisation. This impact was achieved through their network relationships and through their knowledge about these networks. These networks and network relationships were mainly used to find potential new customers, to gain better positions in existing customers, to find new specialised recruits and to gain better position in the market. To put short, networks were used to overcome limitations and to mobilise resources that Futurice needed. Findings suggest that resources related to knowledge, experience, and skills (KES resource) are key for success. Most important activities were related to networking, sales and recruiting. Management should focus on leading these activities and resources and they should be closely monitored and quantified clearly. Especially activities related to networking should be emphasised. Main suggestions for further research are to add time dimension to ARA-model, conduct similar study for other firms and conduct research which focuses or incorporates the possible negative effects of networks.

Key words	Internationalisation, Software service company, ARA-model, Sweden, Futurice, business networks, networks, Software services
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Tämän tutkielman tarkoituksena on tutkia liiketoimintaverkostojen vaikutusta suomalaisen ohjelmistokehityspalveluyrityksen kansainvälistymiseen Ruotsiin. Tavoitteen saavuttamiseksi työssä sovellettiin Actor-Resource-Activity –mallia eli ARA-mallia. Tutkimuksessa keskityttiin ainoastaan verkostojen positiiviseen vaikutukseen yrityksen kansainvälistymisessä. Tutkimusstrategiaksi valittiin yhden esimerkkitaapauksen malli. Tutkittavaksi yritykseksi valittiin Futurice Oy. Tiedonkeruu suoritettiin kolmella haastattelulla. Haastattelut olivat puolistrukturoituja teemahaastatteluja. ARA-malli osoittautui hyödylliseksi Futuricen kansainvälistymisen kuvaamisessa. Erityisesti se auttoi osoittamaan, että liiketoimintaverkostoilla oli suuri myönteinen vaikutus kansainvälistymiseen. Tutkimus myös osoitti, että tietyillä avaintoimijoilla, erityisesti avainhenkilöillä oli suuri positiivinen vaikutus kansainvälistymiseen. Tämä vaikutus muodostui pääosin näiden henkilöiden liiketoimintaverkostosuhteista sekä heidän tietämyksestä liittyen näihin verkostoihin. Tällaisia verkostoja käytettiin uusien potentiaalisten asiakkaiden löytämiseen, parempien asemien saavuttamiseen asiakkaissuhteissa, sopivien rekrytoitavien löytämiseen sekä paremman aseman saavuttamiseen markkinassa. Verkostoja käytettiin rajoitettavien tekijöiden minimoimiseen sekä Futuricen tarvitsemien resurssien saamiseen. Tutkimuksen tulokset osoittavat, että tietämyksen, kokemuksen ja taitojen resurssit (KES –resurssit) ovat keskeisiä menestymisen kannalta. Tärkeimmät aktiviteetit liittyivät verkostoitumiseen, myyntiin ja rekrytointiin. Johdon pitäisi keskittyä näihin resurssien ja aktiviteettien seurantaan määrittäen ne selkeästi. Erityisesti verkostoitumisaktiviteetteja pitäisi painottaa. Merkittävimmät ehdotukset jatkotutkimuksiksi ovat aikaulottuvuuden lisääminen ARA –malliin, tutkia samalla mallilla muitakin esimerkkiyrityksiä ja lisätä mahdollisten negatiivisten vaikutusten selvittäminen tutkimukseen.

Avainsanat	Kansainvälistyminen, Ohjelmistokehitys, Ohjelmistokehitysyritys, ARA-malli, Ruotsi, Futurice, verkostot, liiketoimintaverkostot, ohjelmistopalvelut
Lisätietoja	



THE BUSINESS NETWORKS IN THE INTERNATIONALISATION OF A FINNISH SOFTWARE SERVICE COMPANY

Futurice Ltd Sweden

Master's Thesis
in International Business

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The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

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1 INTRODUCTION

1.1 Development and internationalisation of the Finnish software service business

This research concentrates on the internationalisation of software service companies and studies their internationalisation from a network perspective, shedding light on the substances of the networks involved in the internationalisation. But first it is crucial to understand the basics of the software industry. The software industry and its development has had a significant positive effect not only on productivity and gross domestic product (GDP) growth globally, but also on our everyday life. However, the software business, which basically refers to commercial activity of the software industry, has received surprisingly little attention from the academic community given its worldwide importance. (Tyrväinen et al. 2010.)

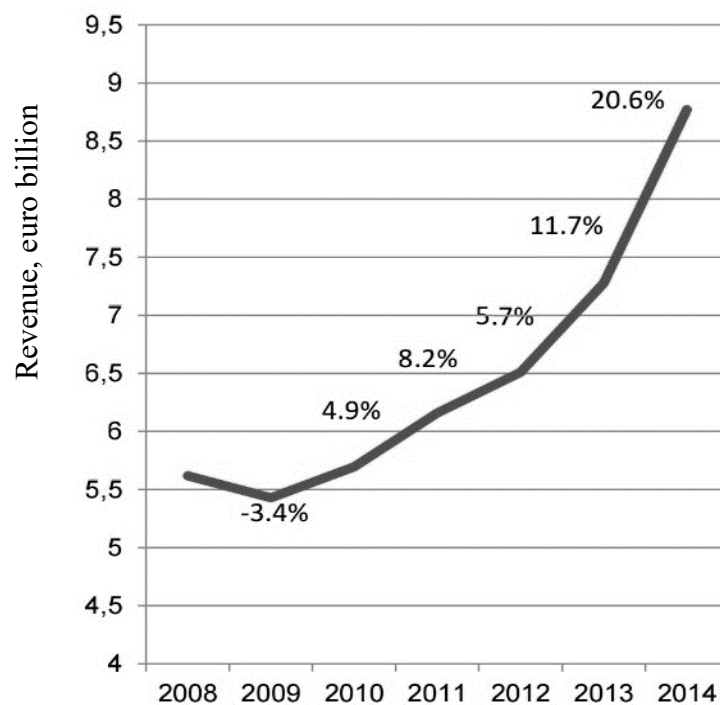
The global information and communications technology (henceforth ICT) industry has grown rapidly: by 2011 it accounted for 5.4% of the global GDP. According to Gartner (2015), the overall worldwide information technology (hereafter IT) expenditure was more than 3,500 billion dollars worldwide, and the global software revenue totaled 407.3 billion dollars in 2013 (Gartner 2014). Within five years, the global software markets have grown 5–8% a year (Luoma & Kinnunen 2015).

The role of the software industry within the ICT sector is significant. In 2007, a report by the European Commission stated that half of ICT industry employment was accounted for by the computer services and software sub-sector in the EU. In addition, this sub-sector produced 42% of the total ICT sector value. (Rönkkö & Peltonen 2011.) The Finnish software and IT services industry grew a sizeable 20.6% in revenue in 2014, totaling over 8.7 billion euros. This development is presented in Figure 1 (Luoma & Kinnunen 2015). Much of this growth was cumulated by small and medium-sized enterprises (hereafter SMEs), which rely on digital channels and information technology consumerism. However, the number presented is slightly skewed from the software service point of view, as a significant part of the large growth was produced by the digital gaming industry, which is usually seen as a part of the software product sub-sector (Luoma & Rönkkö 2014; Luoma & Kinnunen 2015.)

The importance of the service side of the software industry can be perceived and understood via employment statistics. In Finland, IT services employ more than three times as many IT professionals as the software product industry (Lilius 2012). Furthermore, software are becoming more ubiquitous and software development has

become a central part of product development and service design of many businesses (Rönkkö & Peltonen 2011). In addition, in 2014, nearly a half of the value of the total service exports from Finland was generated by computer and information services, totaling over 6.5 billion euros (Statistics Finland 2015).

Figure 1: Annual growth of the Finnish software and IT services industry



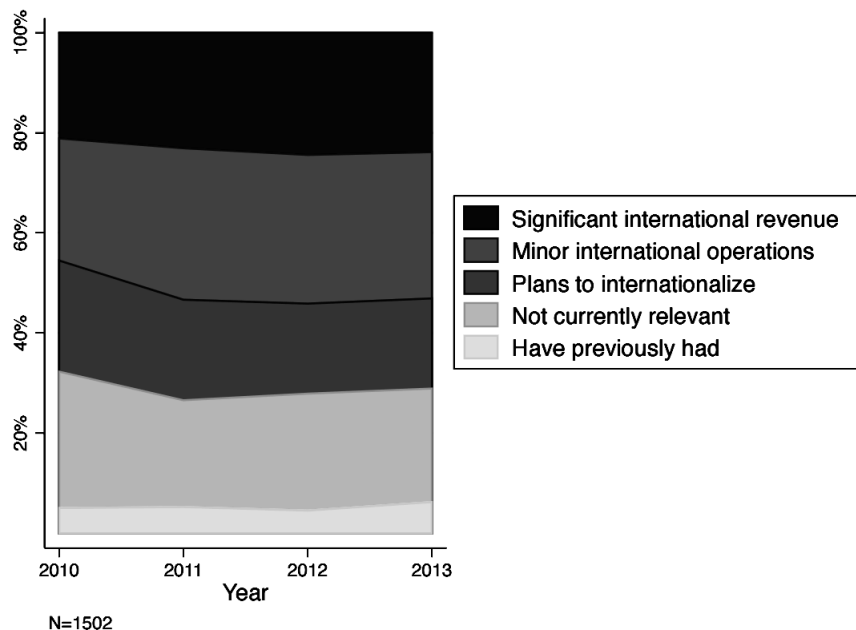
Source: Luoma and Kinnunen (2015, 5).

As the home market is considered tiny, internationalisation is usually a natural step for a Finnish software and IT services firms. However, the software industry is atypical regarding international expansion, and the traditional export statistics seem to cover software somewhat insufficiently. Atypical here refers to the fact that firms within the software industry can usually use Internet as their main distribution channel, thus basically having instant access to global markets. Furthermore, many firms in the software business can achieve their first international sales before home markets. This is especially evident in firms that provide specialised systems and applications to other companies. (Rönkkö & Peltonen 2012.) Although most visible Finnish international success stories in the software business have lately been from the products side (e.g. game firms), a typical Finnish firm in the software business is an SME focused on providing

information systems (e.g. customer relationship management, CRM) that serve both private and public sector customers. These companies are usually serving home market, but the limited size of the local market can be seen as a driver to pursue internationalisation. (Rönkkö & Peltonen 2012.)

According to Luoma and Rönkkö (2014), over a half of the firms operating in the software business have international revenues. In addition, they argue that internationalisation is usually a slow process. Besides, according to Rönkkö and Peltonen (2012), it seems that a vast share of software firms internationalises only a little, when examining the phenomenon through overseas revenues. This could mean that the firms engaging in international markets are either unsuccessful in their operations or they never meant to become strongly international in the first place. The latter could mean that they just opportunistically take home the scant additional revenues by selling to foreign markets when it is easily achieved. However, Finnish software surveys have pointed out that there is also a large share of companies reporting significant international revenues. (Rönkkö & Peltonen 2012.)

Figure 2: The development of the Finnish software industry internationalisation



Source: Luoma and Rönkkö (2014, 16).

In the Finnish Software Industry Survey 2014 (Figure 2), more than a half of the responded firms (N=1502) reported revenues from international markets. Slightly over 20% of them reported significant international revenues. Approximately 30% or so reported minor international operations and just shy of 20% had plans to internationalise.

Around 25% thought internationalisation is currently not relevant and around 5% reported that they previously had international operations but not anymore. (Luoma & Rönkkö 2014.) In addition, the findings of the software industry survey suggest that firms which do not see internationalisation as relevant get most of their revenues from software development services (Rönkkö & Peltonen 2012.) Hence, it seems that most of the software service firms do not see the internationalisation as important to them as it is to software product firms. However, it seems that many software service firms still have, at least to some extent, international operations. Why and how some of these firms become international and others do not is an intriguing question.

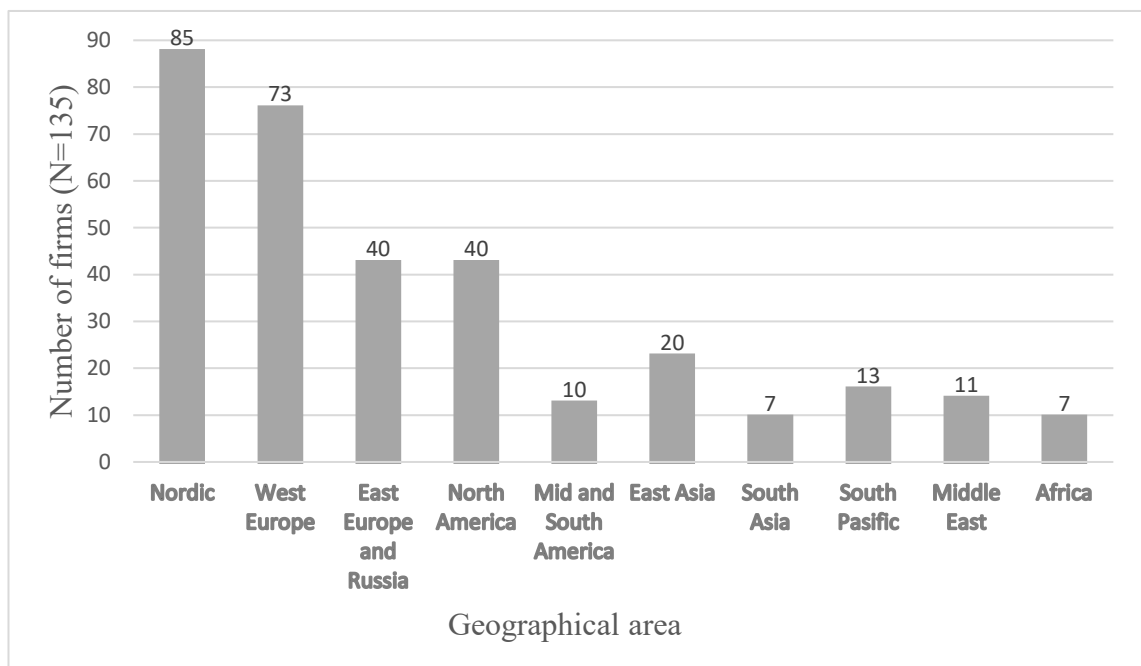
Rönkkö & Peltonen (2010) found that 41% of the companies had at least some degree of international operations and revealed that device manufacturers and software product companies were most likely to expand internationally whereas software service and consulting firms tended more often to remain in the home markets. In addition, they found out that firms are less likely to be international if they are older and more likely to expand internationally if they have higher revenues. They argue that their results support the conclusion that internationalisation can be considered as a natural stage in the life cycle of a firm, but that the patterns of internationalisation differ across companies. Furthermore, they find it surprising that many firms seem to choose to internationalise only a little, gradually. The authors compare firms that do not plan to internationalise and those that do, noting that non-internationalising firms are typically smaller, less product-oriented, and more profitable than the other firms. They argue, that one possible explanation is that such firms are mainly software service firms that seek neither fast growth nor international expansion. They continue, that for those firms it probably makes sense not to internationalise, since service businesses usually lack some of the economies of scale present in product business and hence the possible gains from internationalising are probably not worth the risks and costs associated. Overall, their findings suggest that software firms usually internationalise gradually in a stage-based manner, when they do internationalise.

So how do Finnish software firms internationalise and where? According Rönkkö and Peltonen (2012), Finnish software industry firms usually follow three general patterns in their internationalisation. The first pattern is gradually entering foreign markets that are geographically and culturally close. Second is tagging along with a current customer to go to a foreign market regardless of the geographical location. Third is entering the global markets right from the birth of the firm, following the so-called born-global model. As reported in the 2014 survey, the Nordic countries are the most important destination followed closely by West Europe. More than a half reported having international revenues from these two market areas, thus meaning the European market is the most important

international market for most Finnish software firms. Third and fourth places were reported to be East Europe coupled with Russia and North America, both encompassing less than a third of the firms reporting international revenue. The different areas of Asia were also reported, but their share is minor, with the small exception of East Asia that has been increasing rapidly mainly due to the economic growth of China. (Luoma & Rönkkö 2014.)

Furthermore, as can be seen in Figure 3, some of the companies reported having international revenues from various areas. However, it seems that internationalising software firms usually target only one or two areas. This was especially evident with the software service firms, which reported to be internationally non-diversified. (Luoma & Rönkkö 2014.)

Figure 3: Sources of international revenues of Finnish software firms by geographical areas in 2013



Source: Luoma and Rönkkö (2014, 17).

As the European market is the most important for the Finnish software service companies, it deserves a closer look. According to Rönkkö and Peltonen (2012), the software market of the European Union is expected to grow between 3–6% compound annual growth rate (CAGR) from 2008 to 2020. In 2009, the software and software-based services market was about 231 billion euros in the EU, which is the world's second largest market after the USA with a share of 36% of the global markets. While the majority of the software market's product sector in Europe is dominated by US companies, European

companies are doing much better on the software service side. The same trend is seen in Finland as the country is a net exporter of software services (Rönkkö & Peltonen 2012.) In the next section, earlier empirical studies on the matter of internationalisation of software firms from the network perspective are studied in greater detail.

1.2 Earlier empirical network studies on internationalisation of software firms

There exist a variety of studies concerning the internationalisation of software firms in general. From the vast amount of such studies only the ones using network theories or at least to certain extent involving a network approach to internationalisation are highlighted in this section. Hence, a multitude of studies concerning internationalisation of software firms were excluded, since they did not involve networks in their approach, but instead used for example traditional internationalisation theories (e.g. Rönkkö et al. 2008; Ojala & Kontinen 2010), born global theories (e.g. Ciravegna & Kundu 2009; Wren & Gabrielsson 2011; Hajela & Akbar 2013) or studied other phenomena related to internationalisation, such as exporting problems (e.g. Bell 1997; Touru & Rönkkö 2008). Master and bachelor theses were also ruled out. The included studies were written either in English or Finnish. However, the included studies deal with the software firms in general, not just software service firms, due to the difficulties in defining industry borders (see Chapter 1.4) and a sheer lack of such studies dedicated solely on software service firms.

Bell (1995), using a sample of small software firms from different countries, was among the first to suggest that the software firms do not follow the incremental models of internationalisation. He found out in his research that both domestic and foreign client followership strongly influenced the internationalisation of these firms. In addition, he argued that the explanation of the internationalisation process could benefit from network theory and these explanations held for the software firms but not for others.

Coviello and Munro (1997) published their study of New Zealand-based small software firms and demonstrated that they used their networks extensively to expand into foreign markets. They conclude that early in the life cycle of a small software firm, when the firm might still lack knowledge of foreign markets and of its own network of relationships, it may depend on an initial relationship with a larger or a more established firm. They found out that a relationship with a larger company provided small software firms with a mode and mechanism of entry to psychically close markets. Facilitated by the initial relationship with a larger firm, the small firm could then develop its own

network of formal and informal relationships. Via these relationships, a small software firm could acquire useful market knowledge, financial and human resources, as well as a mode of entry to different markets around the world, regardless of the psychic distance. Psychic distance refers to factors preventing or disturbing the flow of information between potential or actual suppliers and customers. Usually at this phase the internationalisation process was rapid, and firms entered a diverse number of markets abroad within three years. In addition, the study found that the network relationships can both facilitate but also sometimes inhibit product development and market diversification activities of the focal firm. Furthermore, usually as the international visibility increased and firms network provide even more knowledge, the managerial experience also increases, leading to even greater knowledge and confidence in market and relationship decisions.

Turcan and Jones (2002) published their case study of four companies of which two operated in software sector. Their findings show that the initial international expansion of those companies was influenced mainly by network relationships within both domestic and international markets. However, the impact of networks on subsequent internationalisation of these companies diminished over time if a strategic approach was not adopted and if resources lacking at the beginning of internationalisation were not acquired in time. As far as the choice of location is concerned, primarily firms entered psychically close markets. Regarding entry mode decisions, the most frequently used mode of entering foreign markets was exporting either through foreign agent or directly. As an alternative entry mode, firms used product development partnerships. In addition, their findings suggested that firms could make reversal decisions and can reduce or even withdraw from their international activities due to external reasons (e.g. complex relationships, economy recession, creation of new competitor) or internal reasons (e.g. lack of resources, lack of strategic focus).

In 2004, Moen, Gavlen and Endresen (2004) studied five small Norwegian software firms in their case study. Their findings suggest that the firm's network relationships (both on a company and individual level) are determinant regarding what foreign entry forms they choose and which markets they decide to enter. The firm may choose different entry forms on different markets, depending much upon the options available in terms of their network relationships. The entry forms found in their study were various and they often included complex partnership arrangements. Their study demonstrated that the firm's first international operation is usually conducted through a network partner in to a psychically close market, but the later market choices are not influenced by the psychic distance. They also noted that the Internet plays a crucial part in the internationalisation process by increasing the growth pace of the network and thus introducing more market opportunities

to the internationalising firm. They also saw that the main challenge for the software firm managers was to find suitable partner by trying to balance in the allocation of limited resources between the expansion of the network through existing relationships or to focus on building new relationships outside of the existing network.

Zain and Ng (2006) found a significant influence of network relations on the internationalisation of small software firms operating in Malaysia. They studied three software firms. These firms relied heavily on the network relationships in their initial decisions to internationalise, in the development of international market and in supporting their international marketing-related activities. In overall, the network relationships were found to be very useful in facilitating the internationalisation process. Relationships were used to lower the costs and to minimise risk associated with the process of internationalisation, to mitigate negative country-of-origin perception or stereotypes as well as to establish initial credibility, to harness needed market knowledge and to use marketing skills of partner companies. They found out in their study that two of the software firms used extensive social and technical networks of their personnel to stimulate foreign business operations. However, one of the firms did not have personnel with international experience and networks, and their first international operation was after 17 years of domestic operations. This international operation was influenced by informal network relationship that introduced the opportunity to go abroad.

Ruokonen et al. (2006) published their study about two case companies. They found out that the product has a significant influence on the international partnership strategies. They conclude, that the suitable internationalisation partnership strategy should be based on a careful evaluation of the company's products, own resources, and requirements for potential partners. They also suggested: "Managers *should also pay particular attention to creating a revenue logic that is mutually rewarding for the company itself and its partners. Although partnership with a local distributor is often the most sensible operational mode, the company should remain sensitive to customer needs and requirements.*" (Ruokonen et al. 2006, 554).

Ojala (2008) applied a different approach claiming that most of the earlier studies only looked at the entrance of knowledge intensive SMEs into physically close markets. In a multiple case study including eight Finnish software companies entering the Japanese market, it was found that these companies did not use their network to select the foreign market but instead selected their market and mode of entry first and then started developing the network relationships to support these decisions. Thus, companies did not passively follow their networks to foreign markets (e.g. pulled by customer or partner), but instead were highly active in seeking opportunities in the markets abroad and to develop their networks to realise these opportunities. The findings of the study imply that

companies entered the Japanese market at a very early stage by using direct entry modes. He argued that reasons for this were to be found in the size of the market, sophisticated industry structure, and needs for intensive cooperation with the customers during the sales process. Regardless of the psychic distance between Japan and Finland, the firms were able to enter the market by recruiting Japanese employees and western managers whom already had previous experience of working in the local market. Moreover, Ojala's findings present that firms used formal, mediated, and informal relationships in entering the Japanese market. Formal and mediated relationships were used by firms that were actively seeking for market opportunities, whereas informal relationships were in favour of the more passive firms, which were invited to Japanese markets. The mediated relationships included mainly non-profit government owned consulting firms and/or exhibition organisers. Lastly, the study revealed that the entry barriers and the success factors were mostly related to the firms' capabilities to execute business in Japanese market and to the firms' resources. Firms used the network relationships to overcome these barriers to achieve the needed resources, for example to recruit managers who had pre-existing knowledge of the market.

Sasi and Arenius (2008) studied the internationalisation process of ten ICT companies, and their findings revealed that the case firms gained access to and mobilised resources through established long-term relationships. They found out, that these relationships were usually originated from the founders, not from the firm. Furthermore, they found out that the relationships were based on a high level of trust and commitment, especially in the early phases of the internationalisation. They argue that it is useful to divide the internationalisation process into two phases: the early internationalisation and the subsequent internationalisation. Their empirical evidence shows that the firms relying on dyadic relationships are usually successful in completing the first phase. However, the dyadic relationship can become a limitation during the subsequent international growth. In the second phase, only firms that can transform the dyadic relationships to multilateral network relationships can achieve large international growth.

Touru et al. (2009) studied the internationalisation patterns of 124 Finnish software companies, combining quantitative and qualitative methods. They revealed that some of the entry market choices are in accordance with the older Uppsala model of internationalisation (1977); these firms have often started their internationalisation from countries geographically and psychologically close to Finland, such as Sweden or Estonia. However, some firms started their internationalisation from geographically and/or psychologically distant countries, such as the China, Japan, Korea or USA, which contradicts the older Uppsala model. From the network perspective, they did not find results from the quantitative part of the study that would support usage of networks since

they did not have any questions concerning usage of networks. However, in the qualitative part, from the four interviewed case firms one company reported they had expanded to Asia from the request of their partner organisation, which is in line with the network approach.

Forsell (2010) studied one Finnish company and argued that the network theory is better in explaining international success and introduces a more concrete view on internationalisation than the stage models of internationalisation. In addition, he argues that the business network formed during the internationalisation process in a foreign country has more effect on the success than the chosen internationalisation mode. Main conclusions are that the actors involved in the everyday activities in a foreign office and their interconnectedness with the rest of the company are important. Forsell concluded that the participation of a multi-divisional company's board of directors does not have consistent effect on the success of internationalisation.

Rossiter (2011) used logistic regression in the analysis of empirical data gathered through a national survey consisting of a sample of 148 Brazilian software companies. Her findings suggest that the business networks are an important strategic mechanism when firms develop their international business. Further, the network collaboration was seen to have a strong positive impact on exports by smaller software companies. In addition, she argues that the studies implementing the network approach of the internationalisation should consider more the impact of other factors at contextual, organisational and entrepreneurial level. She continues that by bringing these elements into research of internationalisation of firms could enhance our understanding of the phenomenon by giving new insights allowing researchers to go beyond one-dimensional and usually quite static theorising.

Reuwer et al. (2013) conducted a multiple case study about Software as a Service (SaaS) firms. In their study they used three theoretical internationalisation models: stage theory, network theory and international entrepreneurship theory. Their findings suggest, that a dominant model explaining the internationalisation cannot be identified. Instead, they suggest that firms appear to act intuitively and opportunistically, without a distinctive internationalisation strategy specific to SaaS. Companies selling both SaaS and onpremise software seem to internationalise by using their existing international infrastructure and the firms exclusively selling SaaS internationalise much faster. In addition, firms that sell exclusively SaaS or use a SaaS platform provided by other companies, use networks in their internationalisation process. However, firms that also sell software onpremise use networks more locally. The authors also argue, that a specific important network actor cannot be pointed out. It was found that the providers of

globally used SaaS platform can play a crucial role in creating bridges to foreign countries, while reducing companies' development resources.

Ochoa-Giraldo et al. (2014) made a case study of a Colombian software company. They summarise that multiple internationalisation theories can be related to the different internationalisation strategies of the case firm: e.g. Uppsala Model, the network model, and the Non-Sequential Internationalisation model. However, they argued that firm's strategy could not be fully explained by any of the existing internationalisation theories. They also noted that knowledge mainly influenced the internationalisation, by the decisions of the manager and by his network relationships that he had generated earlier. In summary, the studied company held a position inside an international business network, which they used as means to discover and create more business.

As a summary, it can be said that there is a vast amount of studies concerning the internationalisation of software firms from a variety of angles and implementing a variety of theoretical frameworks (e.g. Bell 1997; Rönkkö et al. 2008; Touru & Rönkkö 2008; Ciravegna & Kundu 2009; Ojala & Kontinen 2010; Wren & Gabriellsson 2011; Hajela & Akbar 2013.) It has also been concluded in a relatively small amount of academic studies that the business networks and relationships within them do influence the internationalisation of the software firms in many ways, such as foreign market choice, foreign entry mode choice and so on. In the literature review, 12 studies were found that researched the internationalisation phenomenon of software firms implementing network perspective as their theoretical framework or as a part of the theoretical framework (Bell 1995; Coviello & Munro 1997; Turcan & Jones 2002; Moen et al. 2004; Ruokonen et al. 2006; Zain & Ng 2006; Ojala 2008; Sasi & Arenius 2008; Touru et al. 2009; Forsell 2010; Rossiter 2011; Reuwer et al. 2013; Ochoa-Giraldo et al. 2014). However, only one of these studies (Forsell 2010) investigated the substance and the contents of the business networks and what was their role in the internationalisation of a software firm. Furthermore, Fonfara et al. (2012) argues that the impact of the business networks on firms' internationalisation and performance and the mechanism by which the business networks emerge have not yet been subject to in-depth and extensive empirical studies. Thus, the contents of the business networks, relationships, and the key elements within those critical for the internationalisation of a firm should be investigated more.

The studies found concentrated heavily on the firms operating in the software product business. But, none of the studies concentrated purely on the software service side of the business. Thus, there is a lack of studies concentrating on the software service side (e.g. software development project contractors or software development consultancies) of the business, which is quite alarming when taking in to account the differences in the business logics of the software product firms and the software service firms. Lack of studies

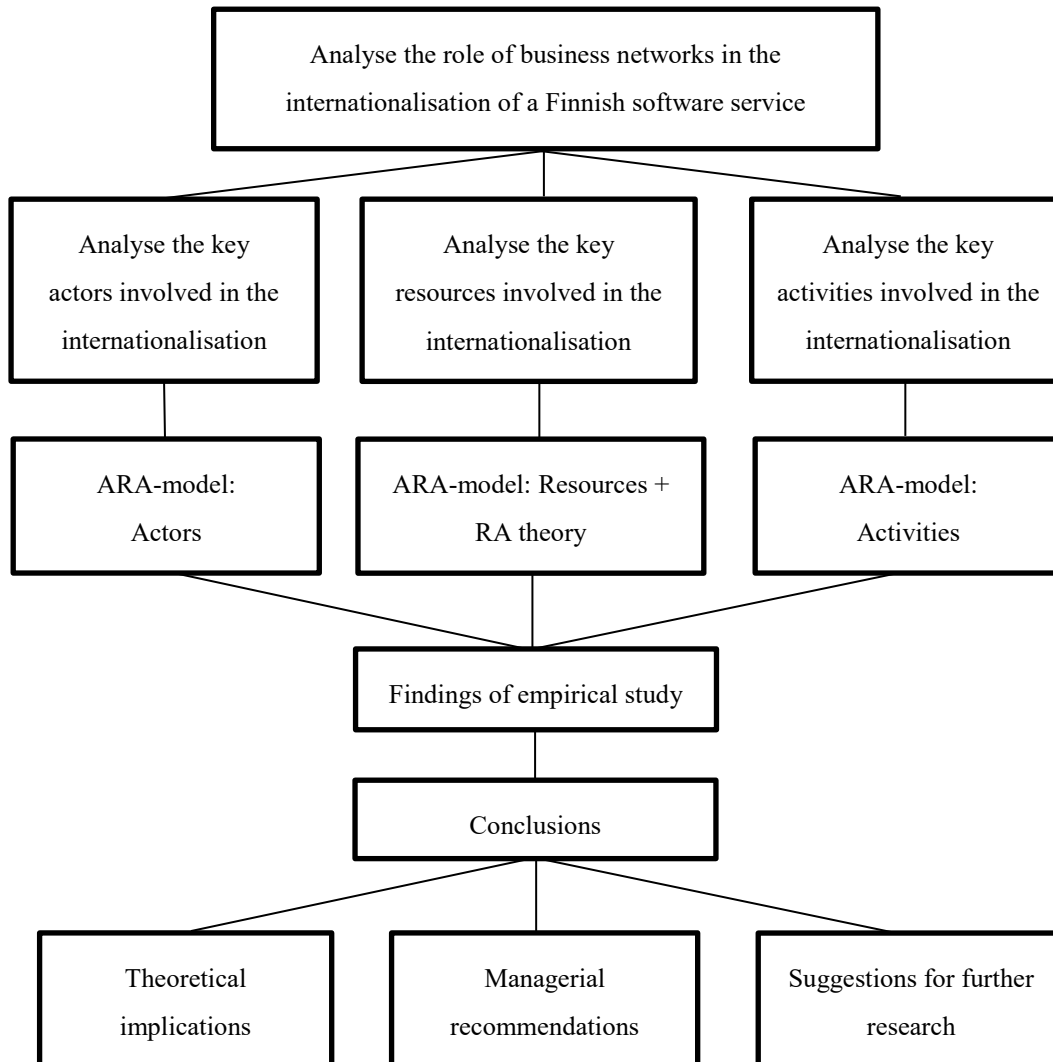
concentrating solely on the different sub-sectors of the software industry has also been noted, for example by Ojala and Tyrväinen (2006), who agree that current studies related to internationalisation of software firms do not pay enough attention to differences between various types of software firms. The evident lack of research focusing on the software service sub-sector is especially peculiar since the role of the services is expected to grow because of the trend of replacing products with services in the IT market. (Cusumano 2008; Lilius 2012; Rönkkö & Peltonen 2012.) This warrants for further study concentrating on the internationalisation of software service firms.

1.3 Objective and structure

To contribute to filling the research gaps identified in the previous sub-chapters, this study concentrates on the internationalisation of the software service companies from the network perspective. Thus, the objective of this study is to *analyse the role of business networks in the internationalisation of a Finnish software service company*. This goal is divided into sub-objectives according to the ARA-model to pinpoint the critical elements affecting the internationalisation:

1. Analyse the key actors involved in the internationalisation
2. Analyse the key resources involved in the internationalisation
3. Analyse the key activities involved in the internationalisation

This thesis focuses only on the positive network functions affecting the internationalisation of the case company. Furthermore, this thesis aims at improving the understanding on the rationale why and how such firms do internationalise. The structure of this thesis is presented in Figure 4.

Figure 4: The structure of the thesis

1.4 Defining the software service company

Software business is an important sub-sector of the ICT industry. According to Castells (2006), the ICT industry produces software, services, and hardware. The software industry can be further divided into smaller sub-sectors, usually to software product and software services sub-sectors. This division is reasonable because they follow distinct business logics. (i.e. Hoch et al. 2000; TEKES 2003; Cusumano; 2004.) However, many authors (i.e. Mowery & Nelson 1999; Rönkkö et al. 2007) argue that defining the ICT industry borders can be a very difficult task. According to Lilius (2012, 14), the problems of defining clear borders have led to some severe practical and scientific problems. He argues that” *the dominant research methods, confusions in terms and definitions, sometimes also data credibility issues, often result in a rather limited and even skewed picture of the current state and development of the Finnish ICT industries. It is difficult to get to consistent answers or estimates even on basic matters like the contents and size of the Finnish ICT sector.*”

So, what is the software service business? As the industry borders are difficult to define, the software service business should be observed in relation to the ICT and IT industry. Thus, we can continue by defining IT services within the IT industry. Lilius (2012, 74) defines IT services” *the IT services industry is defined to include the production and providing of IT services based on use of human competence or technological capacity.*” However, as Lilius (2012) points out, the IT services industry, just like other parts of the ICT industry in general, can be defined and observed from various perspectives and levels. Thus, it is impossible or at least very difficult to define any stable structure of IT services industries, of which the software service industry is part of.

One way to look at the IT industry boundaries and software business firms operating in it is to observe the companies through their customers. For IT service firm’s customers have traditionally been IT departments of different organisations that are using IT to develop, run and manage their operations. As information technology is being applied increasingly to different products and services virtually in all industries, the IT firms helping their clients in doing this adapt new ways to serve the needs of their clients. By doing so they expand beyond their traditional business and market segments. At the same time, the borderlines between IT service vendors and their clients have become more blurred, thus leading into deeper relationships and dependences. This has led to changes in the traditional vendor-customer relationships. (Prahalad & Ramaswamy 2004; Vargo & Lusch 2004.)

As we move on towards the definition of software service firm, the software firms in general need to be defined and Sallinen (2002) provides such a definition. She writes about software suppliers, which provide software for their clients through sub-contracting relationship. These software suppliers can operate in a number of different ways as Sallinen (2002) describes; first option is hiring out human resources to the customer at an hourly rate. The second option is building customised software for the customer in independently managed projects or subprojects. The third option is building software modules independently according to specifications given by the customer. The fourth and final option is building and selling software products independently. From these four ways of operation and from the degree of supplier's dependence on the key customer, Sallinen (2002) continues to divide the software firms into five distinct types: resource firm, resource firm with supporting projects and products, software product company, software product company with supporting projects and system house.

The definition given by Sallinen (2002) can be further enhanced by using the definition given by Rossiter (2011, 31):” *software services can be related to outsourcing (of personnel, equipment, systems, etc), and to the typical software development lifecycle: from specification and analysis, through design and implementation, to testing and maintenance. Software services also include data entry and other software-intensive IT services that can also be further classified as low and high added value.*”

Hirvonen et al. (2000, 4) take it further as they describe: “*professional software development services [...] refer to software that is usually built in the form of projects, together with the customer organization. Consequently, the software is always more or less unique. Much emphasis is put on managing the seller's long-term relationship with its customers. Communication between the customer and seller organizations is intense and regular, and mutual learning and adaptation takes place through several successive projects, where the parties' technical experts and managers are involved.*”

This study adapts the combination of these definitions given by Sallinen (2002) and Rossiter (2011), and takes them a bit further by defining software service firm as a company that does one or any number of these activities: hires out human resources at an hourly rate, builds customised software and/or software modules for the customer in independently managed projects at a fixed price, consults and helps customers in service and IT architecture specification, data analysis, machine learning, design, implementation, testing and maintenance related to the software and helps customers with other related services. These other related services include business consulting, service design, user-experience, and customer-experience consulting.

2 INTERNATIONALISATION AND BUSINESS NETWORKS

In this section, the internationalisation theories born of the so-called Swedish school are briefly introduced to understand the internationalisation of a firm. After that, the internationalisation via networks and business networks themselves are introduced in greater detail, as they are the phenomenon under study. According to Fonfara et al. (2012), the internationalisation of a firm usually refers to a firm's expansion to foreign markets.

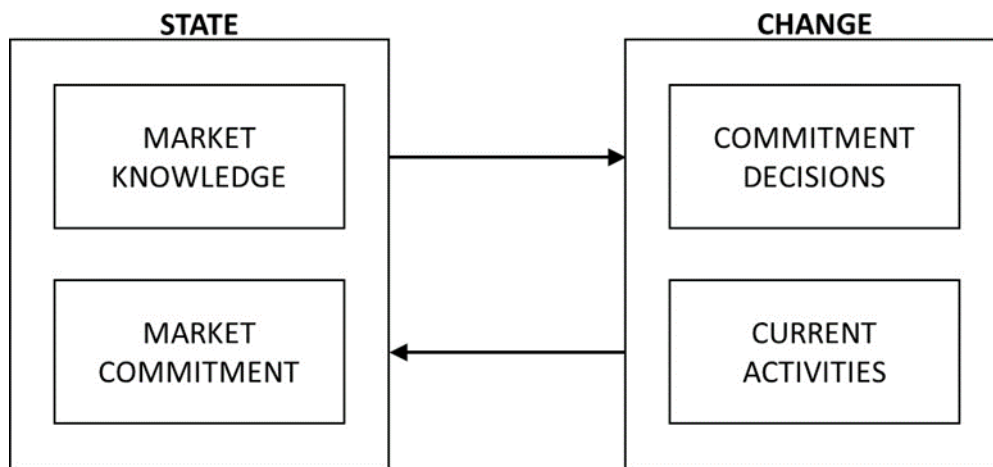
For the last five decades, researchers have made several studies describing internationalisation. It is evident that most of the traditional internationalisation theories imply that internationalisation is a slow and gradual process and it happens in stages. (i.e. Johanson & Vahlne 1977; Johanson & Wiedersheim-Paul 1999; Hollensen 2011.) For example, Johanson and Vahlne (1977) introduced a model whereby firms gradually acquire, integrate, and use knowledge about foreign markets and operations, and incrementally increase, after usually a long domestic period, their commitments in foreign markets. This model became later known as the Uppsala model of internationalisation (hereafter, U-model) and quickly found its home amongst the most cited models in the international business studies. (Johanson & Vahlne 1978, Johanson & Vahlne 2009.)

In the U-model one of the focal points is to see the process of internationalisation as incremental with various stages. Johanson and Vahlne (1978) called this internationalisation pattern as establishment chain. They found out, as they studied Swedish companies and Swedish-owned subsidiaries, that companies often first began internationalising with ad hoc exporting and then, as the commitment and experience increased, moved to more demanding operations.

Other major aspect of the U-model is the psychic distance; the assumption that companies usually start their internationalisation and exporting to culturally and politically close countries, mostly to neighbouring countries. According to the U-model, further internationalisation builds slowly through the influence of increasing market experience and firms gradually start pursuing more distant markets in terms of psychic distance. (Johanson & Vahlne 1977.) This process can be seen having its roots in the concept of liability of foreignness, which means that foreign firms have disadvantage when comparing with the host countries native companies. And, the larger the psychic distance is the larger is the liability of foreignness. In order for firms to be competitive and prevail in these foreign markets, they need to possess significant firm-specific advantage to fill the gap (disadvantage) created by this liability. (Johanson & Vahlne 2009.)

The 1977 U-model is based on two fundamental assumptions: uncertainty and bounded rationality. It also has two important change mechanisms. First change mechanism depicts that companies' change by learning from their experience of current activities in foreign markets. These current activities are different operations conducted by the firm. Second change mechanism depicts companies to change through commitment decisions they make in order to strengthen their positions in the foreign market. Johanson and Vahlne (1977) defined commitment as the product of the size of the investment times its degree of inflexibility. Furthermore, they add that experience gained from the operations increases firm's market knowledge which in turn influences decisions about the level of market commitment to the market. And, from those commitments subsequently grows out possible new business operations (or more accurately, current activities, as stated in the model). As the model is dynamic these new business operations then in turn possibly lead to higher level of commitment which produces more learning and so on. The U-model is shown in Figure 5. (Johanson & Vahlne, 2009.)

Figure 5: The 1977 U-model



Source: Johanson and Vahlne (1977, 26).

The model does not specify the form that increased commitment might take: the commitment might decline or even cease if prospects or performance in the foreign market are not promising enough. And if the performance and prospects become favourable, the process of internationalisation will continue. (Johanson & Vahlne, 2009.)

In addition, Johanson and Vahlne argued that learning and commitment building can be very time consuming endeavour, especially when entering psychically distant market.

Therefore, firms tend to move incrementally into those riskier, but potentially rewarding markets. (Johanson & Vahlne, 2009.)

Johanson and Vahlne (2009) see their model as descriptive and in academic literature it has also been generally seen as behavioural. In addition, according to Johanson and Vahlne (2009), empirical studies conducted by other researchers have shown that the internationalisation process as explained by U-model has a positive impact on firm's performance. Thus, they imply that their model can be considered as a model of rational internationalisation and can be used as such for prescriptive purposes.

In contrast to the traditional incremental internationalisation theories, such as 1977 U-model, which emphasise the gradual and slow process of internationalisation, some newer models and theories have emerged to meet the needs of modern business environment involving the idea of business networks. Indeed, several studies have shown that business networks play a crucial role in the internationalisation of firms (Johanson & Vahlne 2009). As this study researches relatively small internationalising Finnish software service firms, operating in a relatively new or quite new industry, it is crucial that these newer internationalisation theories are brought under the magnifying glass. These theories are the network perspective theory for internationalisation and revised U-model. Network perspective emphasises the role of networks and relationships within those networks in explaining the internationalisation of a firm. Revised U-model (2009) is a newer version of Johanson's and Vahlne's (1977) U-model: it has been modified to take business networks into account. In addition, after the internationalisation theories, the industrial marketing and purchasing groups (IMP group) ARA-model, which also serves as the backbone of this study, will be introduced in order to better understand the business networks at hand and their role in the internationalisation of a software services firm.

2.1 Network approach on internationalisation

The literature related to networks and internationalisation of firms is both rich and extensive, including several types of different approaches, models, and theories to investigate the phenomenon (e.g. Johanson & Mattsson 1988; Ghauri 1989; Axelsson & Johansson 1992; Coviello & Munro 1997; Moen et al. 2004; Ojala 2009). In addition, networks and network relationships have been widely used to explain the internationalisation of firms in various industries and their segments (Ojala 2009). This section first defines the concept of business networks and then presents how network approach explains the internationalisation of a firm.

In the history of the internationalisation theories, there have been many different views among scholars on the definition of a business network (Axelsson & Johanson 1992). One definition given by Cook and Emerson (1978, 725) states that networks are a “*set of two or more connected exchange relationships*”. A more modern approach to the concept of business networks is to see networks as webs of connected relationships. This means that exchange in one relationship is linked to possible exchange in another. (Johanson & Valhne 2009). In this study the author has chosen to use the latter one as it is born of the Swedish/Uppsala school of internationalisation, which is closely related to the IMP Group and covers the basic meaning of networks, most likely suiting the needs of this study best.

There are some noted features that seem to describe the characteristics of networks. Johanson and Valhne (1992) found out that the relationships in networks are non-transparent; they are personal, unstable, and ambiguous, thus meaning it is hard for outsiders to recognise them, rendering the whole network basically almost invisible to outsiders. In addition, Johanson and Valhne (1992) found out that the networks are unbounded; they may expand limitlessly through various actors in the network. Anderson, Håkansson and Johanson (1994) and Hollensen (2011) back this up by concluding that two connected relationships can be both directly and indirectly in connection with other relationships that are part of a much larger business network.

The basic elements of the network perspective to internationalisation theory was introduced by Johanson and Mattsson (1988) as they studied industrial networks. Since then, that perspective has been studied, used, and revisited by multiple scholars (e.g. Ghauri 1989; Axelsson & Johanson 1992; Johanson & Vahlne 2009; Ojala 2009;). The network theory holds a basic assumption that an individual firm is dependent on resources controlled by other firms and to gain access to these important external resources the firm must establish and secure a position within a network. Theory notes that the access to networks is gained through different activities in the network. (Johanson & Mattsson 1988.)

In addition, Johanson and Mattsson (1988) concluded that the degree and route of the company’s internationalisation depends greatly on both networks already established by the firm and on the position the firm has in those networks. This leads to the situation where the network itself affects the company’s internationalisation; the more internationalised the network is the more likely firm is to internationalise. (Johanson & Mattsson 1988.)

According to the Johansson and Mattsson (1988), the internationalisation of a firm can be achieved through activities; by establishing and developing networks positions in relation to other counterparts in domestic and/or foreign networks (Johanson & Mattsson

1988.) This internationalisation can be achieved in three ways (Johanson & Mattsson 1988; Axelsson & Johanson 1992):

- (1) through the establishment of positions in relation to counterparts in the national networks that are new to the firm; international extension;
- (2) by developing existing positions and increasing resource commitments in those networks abroad in which company already has positions; international penetration; and
- (3) by increasing co-ordination between positions in different national networks; international integration.

Furthermore, internationalisation and entering new foreign markets can be seen as happening through active or passive networking. Former refers to the situation where initiation for networking comes from the firm itself. In contrast, the latter is the situation where the initiation for networking comes from outside of the firm, i.e. from a customer or a partner. (Johanson & Mattsson 1988; Ojala 2009.)

Additionally, Coviello and Munro (1997) identified that there are two kinds of focal network relationships having impact on the internationalisation of a firm; formal relationships and informal relationships. First is about the relationships with business actors. Second refers to social contacts with friends and family members, for instance. Furthermore, Pecotich (2001) present a third kind relationship type: the intermediary relationship, which means that a third party connects the firm to the network and to the market. (Ellis & Pecotich 2001, for reference see Ojala 2009, 52)

However, Johanson and Mattsson's model has been somewhat criticised. For example, Chetty and Blankenburg Holm (2000) identified that the model does not support the concepts of decision-maker or firm characteristics. In addition, they state that the model does not take into account the role of relationships and their utilisation in problem solving nor the aspect of external uncontrollable factors. Furthermore, their criticism is related strongly to the differentiation criteria of firms and categories and their overlap. In addition, Chetty and Blankenburg Holm (2000) imply that the lack of position shifting of a firm from one category to other and the absence of other dimensions (such as customer and government) hinder the models explaining power. Johanson and Vahlne (2009) argue that the model can be seen lacking the dynamic elements.

Next, we take a look at the modern version of the U-model. Due to the overwhelming evidence that the business networks do have a crucial role on the internationalisation process of a firm, Johanson and Vahlne (2009) revisited their original U-model. In the revisited model, Johanson and Vahlne (2009) see that the firm is part of a business network that is at the same time both enabling and constraining. They see that these business networks consist of actors linked to other actors, forming vast variety of

interdependent relationships. Furthermore, they argue that the internationalisation is the outcome of company's actions to strengthen their network positions by improving or protecting their positions in the network and thus in the market.

Moreover, Johanson and Vahlne (2009) claim that existing business relationships the firm has achieved play a crucial role in the choosing of a foreign market they wish to enter and/or in the mode of entry they see best suited. This is since they make it possible to identify and exploit opportunities. Also, learning and commitment building take place in those relationships and they see them closely related to the identifying and exploiting of opportunities. (Johanson & Vahlne, 2009.)

This new model, like its predecessor, is based on uncertainty. However, the concept of psychic distance and liability of foreignness are replaced with the concept liability of outsidership. This means that the uncertainty is not born of differences between target foreign market and home market (i.e. culture, institutions, and such aspects), but from the fact that firm might not be insider in a relevant network or market and therefore might not be able to identify and exploit relevant opportunities. As in the older U-model, the new model also consists of two parts: the state variables and the change variables. These variables are relevant to the both sides in a relationship and affect each other in dynamic and cumulative processes of learning and commitment building. (Johanson & Vahlne, 2009.)

Although the basic structure and dynamics of the model have remained intact, some changes have been implemented. Johanson and Vahlne (2009) added recognition of opportunities to the market knowledge concept, opportunities being a subset of knowledge. By adding this variable, they wanted to emphasise how the opportunities drive the process as most important part of the body of knowledge. Other important components of knowledge are needs, capabilities, strategies, and networks of directly and indirectly related firms in their institutional contexts. In addition, they changed the second state variable from market commitment to network position, as they now perceive the internationalisation process being pursued within a network. (Johanson & Vahlne 2009.)

Johanson and Vahlne (2009) made some modifications to the change variables too, as can be seen in Figure 5. In the new U-model, the current activities is replaced with process of learning, process of creating knowledge and trust building. The speed, intensity and efficiency of these processes are greatly affected by the existing levels of knowledge, trust and commitment found in the relationship. Particular importance is placed on how appealing partners perceive the opportunities. Here learning is seen as a higher level of abstraction, being more than just experiential learning from operations. Creating refers especially to the creation of opportunities, which according to the model, is a knowledge-producing dimension. This is highlighted in the model, as Johanson and Vahlne (2009)

believe that developing opportunities is a critical part of any relationship. They add that the higher the level of knowledge, trust and commitment in relationship is, the higher the efficiency of the creative process.

The second change variable, commitment decisions, has also been modified and is now known as relationship commitment decisions. The relationship was added to emphasise the revisited model's argument that commitments are made to relationships or to networks of relationships. According to the model, this implies that the company may make decision on about increasing or decreasing the levels of commitment to any number of relationships in its network. These decisions can then manifest either in psychological level or in some concrete changes e.g. in entry mode choices, in the size of investments, on the organisational changes and especially in the deepness of dependence. Furthermore, a change in commitment will either strengthen or weaken the relationship. (Johanson & Vahlne 2009.)

From a network point of view there are two kinds of decisions regarding the commitment to the relationship:

- (1) to develop new relationships, mostly new businesses or to build bridges to new networks and to fill structural holes; and
- (2) to protect or support company's existing network of strategic relationships.

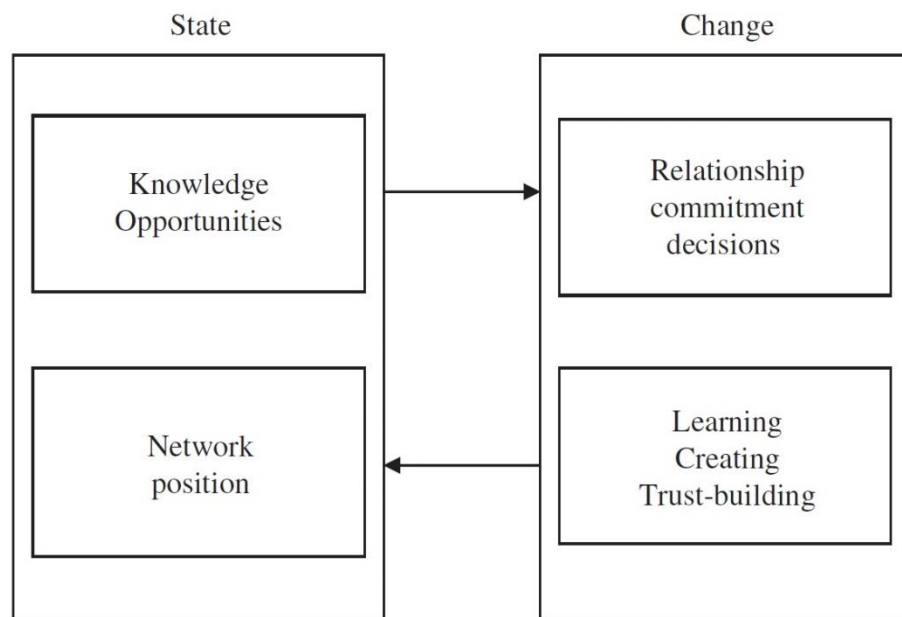
According to Johanson & Vahlne (2009), their revisited U-model has some important implications for the internationalisation process of a firm. For first, as the internationalisation depends on a firm's relationships and networks, the focal firm is predicted to go to foreign markets based on its relationships with important partners, foreign or domestic, whom are committed to developing the business through internationalisation. It is also common for a focal firm to follow a partner abroad if that partner firm already has established important and valuable network positions in one or more foreign countries. The model suggests that there are two possible reasons for such a firm to go abroad:

- (1) to discover, identify and exploit interesting opportunities through interrelated partner bases of knowledge; and
- (2) to follow an internationalising – or already international – partner that wants the focal firm to follow. By following, the firm demonstrates its commitment to the relationship.

When considering foreign market choice, the revisited U-model states that internationalising focal firm goes to a market where it and its partners see opportunities. Alternatively, it can be a foreign market in which the partner already has a strong position. In addition, it is crucial to understand that the foreign market choice can vary from situation to situation, depending greatly on the actions of the focal firm's partners.

However, if the focal firm does not have any valuable partners, it may go where it might be easiest to connect with new partner that already has established a position in a market abroad. As an example, firm may first connect with a middleman (i.e agent or a distributor), and eventually as the firm has managed to establish relationships with customers, it may bypass the middleman and proceed to founding of its own foreign subsidiary. The U-model suggests that a short psychic distance can facilitate easier and speedier establishment and/or development of relationships, from which the opportunities can be identified and exploited. Thus, the new model still incorporates the concept of psychic distance from the older model; it just is not that crucial anymore. (Johanson & Vahlne 2009.)

Figure 6: The revisited U-model: The business network internationalisation process model



Source: Johanson and Vahlne (2009, 1424).

What about the starting point of the internationalisation process? Johanson and Vahlne (2009) argue that it is not of great importance, as the starting point can be considered the founding of the company, the first foreign market entry or even the establishment of a certain relationship. The model implies, that it is more important to understand how the internationalisation process starts and the answer should be searched from the state variables, i.e. knowledge, trust, or commitment to the specific relationships. Johanson and

Vahlne (2009) give an example by stating that the focal firm may exploit some of its existing connections by using the trust that a partner has established with another party or parties.

These business relationships give the firm an extended and unique resource base that it only partially controls. Firms then seek to use and exploit these partially controlled resources and in order for them to do so, the focal firm's own resources are to be co-ordinated in turn by its partner(s). This kind of business network co-ordination is conducted in the name of joint productivity. This can be very difficult as it basically means that partner co-ordinates other partner's activities. (Johanson & Vahlne, 2009.)

2.2 Business networks

In the previous section, the definition and the role of business networks as part of the internationalisation process have been highlighted. However, the network internationalisation models introduced do not provide tools to picture the actual network at hand; meaning that those theories do not provide means to analyse the network and/or its parts, especially the parts that are crucial for the successful internationalisation of a firm. Therefore, in this section, the IMP group's industrial network model and Actor-Resource-Activity (ARA) model (Håkansson & Johanson 1992; Håkansson & Snehota 1995) are introduced in order to gain a more accurate picture of the relevant business networks found in the internationalisation process, the most important relationships included in those networks and the substances of those relationships.

The ARA-model (Håkansson & Snehota 1995) makes it possible to study the substances and functions of a specific firm, or a specific relationship between two firms or of a whole network. Moreover, according to the model, the business relationships do not exist separate from empirical actor bonds, resource ties, and activity links, as will be introduced in this chapter. (Baraldi et al. 2012.)

The ARA-model is based on vast empirical studies spanning over 30 years in the IMP research stream. The model is built on three layers of substance in a relationship and/or in networks. These are layers of substance are actors, resources, and activities. Actors can for example be individuals, companies, group of individuals, departments within companies or different organisations, such as governmental bodies and other stakeholders. The model depicts that these actors perform different kinds of activities, such as communication, distribution, or production, to carry out functions in order to create value. To do so, actors need to have a direct or indirect access to resources controlled by themselves or by other actors. These resources can for example be knowledge, production equipment, raw materials, energy, software and so on. The model suggests actors therefore control activities and/or resources. (Håkansson & Johanson 1992; Axelsson 2010.)

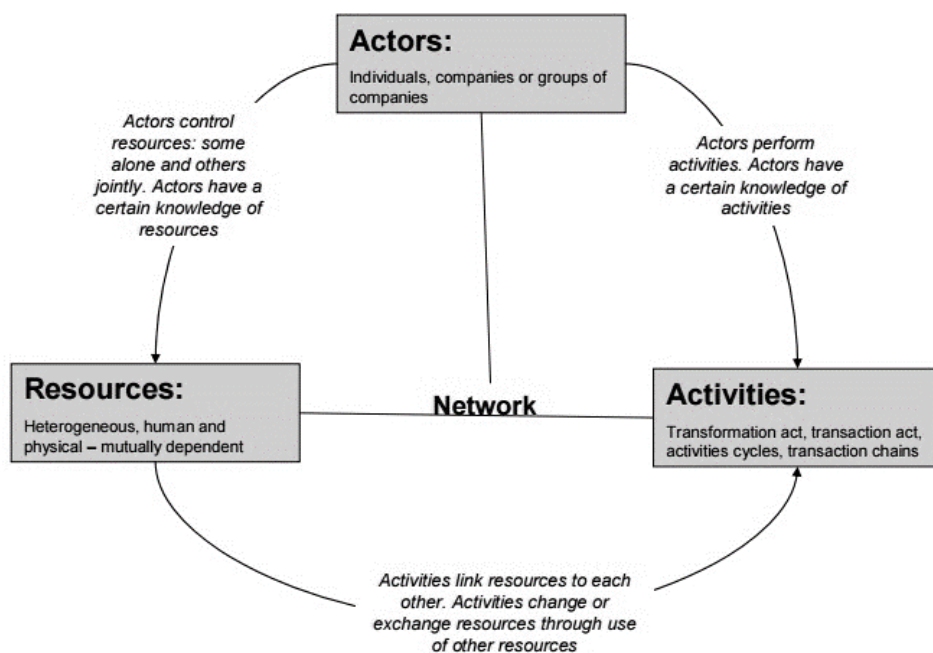
As the actors conduct different activities, they create connections (activity links) between activities among multiple actors. This leads to the emerging of the 'networks of activities'. In addition, the sole existence of activity networks makes it possible to connect activities; meaning that the activity networks present possible activities to be connected to. Furthermore, ongoing activities need mobilisation of resources, thus causing related 'networks of resources' to arise. The resource networks form an important base for needed and new resources. Moreover, performing of activities and acquiring of resources involve various kinds of different actors; thus causing 'networks of actors' to emerge.

These networks of actors, networks of resources and networks of activities, are all interconnected and overlapping. (Håkansson & Johanson 1992; Axelsson 2010.)

The original model was further developed by Håkansson and Snehota (1995), as they took the concepts of substance layers further and emphasised the importance of relationships. These layers entwine together the three original concepts of the model, forming actor bonds, resource ties and activity links. The layers are all inter-connected and hence form even wider webs of actors, constellations of resources and patterns of activities.

According to Håkansson and Snehota (1995), the vast empirical research has shown that a limited number of relationships have a significant effect on how a firm performs in a market. The market performance is therefore dependent on firm's relationships to others. This means for example the growth, market share, profits and sales volumes are largely dependent on how the firm takes care of and form its relationships. In addition, they argue, that the both the majority of firm's costs, and revenues have a source in main business relationships. Håkansson and Snehota (1995) build on the network model by stating that these business relationships – for example the outcomes of an interaction process or the content of a business relationship – can be perceived via the three layers presented; activity layer, resource layer and actor layer. A more comprehensive and summarising view of the basic ARA-model is depicted in Figure 7.

Figure 7: Network ARA-model



Source: Håkansson (1987, 17).

In addition to the three layers presented, the relationship can also be perceived through primary and secondary functions. According to Anderson et al. (1994), the 'primary functions' refer to the positive and negative effects that occur in the relationship between two companies due to their interaction in a focal dyadic relationship. The 'secondary functions' refers to the indirect positive and negative effects caused by a relationship because the focal relationship is directly or indirectly connected to other relationships. It is important to understand, that the secondary functions (also sometimes called network functions) can be as or even more important to a firm as the primary functions.

The effects of the primary functions related to the actors, resources and activities are greater performance through interlinking of activities, creative leveraging of resource heterogeneity and mutuality based on self-interest of actors. This can for example mean that activities performed by two actors in one relationship can lead to better co-operation and through deeper adaptation to each other, producing greater efficiency in the activities. In addition, the two firms in relationship can learn more about each other's resources leading to the discoveries of new and/or better ways to combine them. Thus, a relationship may also have an innovative effect. (Anderson et al. 1994.)

The secondary functions are a result of the connections between relationships. They too can be viewed regarding the layers presented earlier. From the activities point of view, secondary function of a relationship can be seen as chains of activities involving more than two firms, leading to adaptation of activities over multiple companies outside the focal relationship, thus creating 'activity chains'. From a resource point of view, resources developed and combined in the focal relationship are important to the parties involved outside the focal relationship, because these third parties might for example gain important insight on how to use their own resources or resources of others. Thus, innovations developed as a result of an interaction in several relationships may support each other. From the actors point of view, the actors involved in the focal relationship, may gain better understanding of themselves, their partners or their partners partners outside the focal relationship. (Anderson et al. 1994.)

Anderson et al. (1994) view relationships as dyads, but because of the existence of the secondary functions, the relationships themselves are also parts of networks. A business network is build up from business relationships, but the business relationships are also created by the secondary functions of the relationships. Furthermore, a development of a relationship can have stabilising and/or destabilising effects, meaning that if the relationship developed or strengthened is a relationship already achieved, it will stabilise the network from that relationships point of view. However, if the development of a relationship leads to other new relationships to emerge, then the development actually has

a destabilising effect on the current network, but at the same time extends the current network even further.

The essence of the network function of a business relationship is that as they arise they form a structure of ‘actor bonds’, ‘activity links’ and ‘resource ties’ where third parties are integrated. These three layers can be seen as three different building blocks that add up as a relationship and they can be seen as the basic determinants of the values involved in a relationship. The relationship between two firms can be characterised by the relative importance of these three layers. How the relationships develop and unfold is important for the features of the actors' organisation, activity pattern and resource constellation and thus on the properties of the network structure such as its stability. The emergent structure has in any given moment a limiting effect on its actors at the same time as it provides the base for future development. (Håkansson & Snehota 1995.)

Sometimes the relationships might simply consist of ‘weak bonds’ between actors, without any deeper existing co-ordination or exchange. In some other cases, the relationship may include both bonds between actors, and links between resources controlled by the involved actors. Moreover, in some cases the situation might be so that link between activities in the relationship might be stronger than the ties between resources. How particular kinds of relationships are seen and what their roles are depend on the characteristics of a segment or an industry and on the essence of the operation of the company itself. This means practically that the mutual relationships between activities, resources and actors play a crucial part in how the intercompany relations develop. (Fonfara et al. 2012.) However, it is important to understand that all relationships, for example based on actor bonds, do not necessarily automatically lead to resource ties or activity links, but they serve as a context which provides the possibility of for those ties to emerge and exist (Håkansson & Snehota, 2000.)

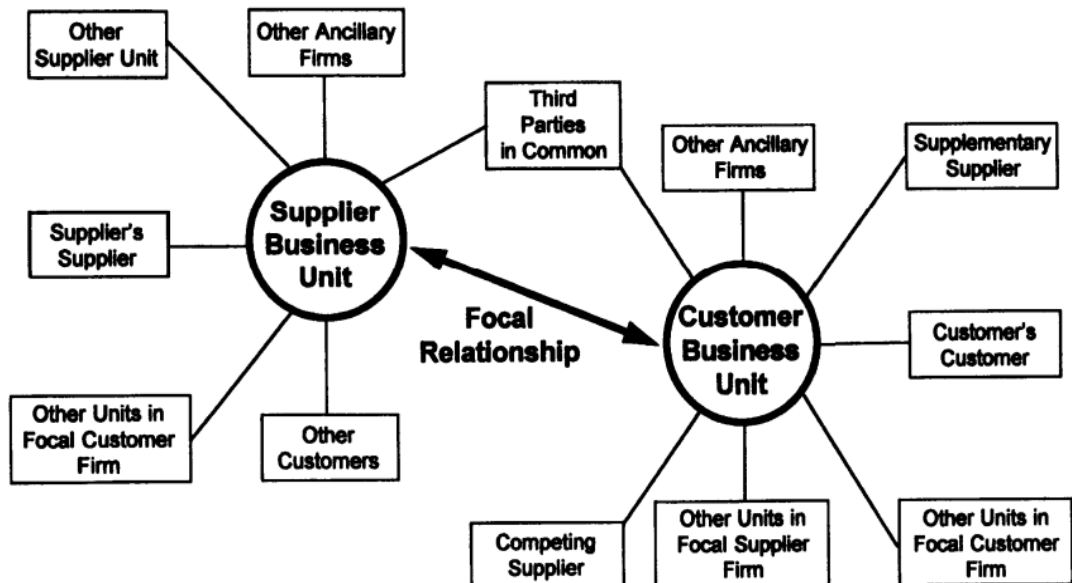
When the actors interact between each other in a relationship, they develop and build trust. This trust enables the exchange of valuable resources, opinions, information, data or knowledge. The information, for example, that is transferred (mobilised) from one company to another is singular and unique; there are no two other organisations that have the same knowledge. (Fonfara et al 2012.)

According to Håkansson and Snehota (1995), a change in the substance of any of the linked relationships brings change to the whole relationship's structures. Thus, the focal relationship can be the source of the change or the target of the change.

Summarising, the two firms connected via relationship can be both directly or indirectly connected with other relationships, forming a larger business network. This is presented in Figure 8. A focal relationship between supplier and customer is connected to several different relationships, i.e. customer's customers, supplementary suppliers,

supplier's suppliers etc. Moreover, the supplier and the customer in the focal relationship might have a shared direct connection also via a common third party. (Anderson et al. 1994.)

Figure 8: Connected relations for firms in a dyadic relationship



Source: Anderson et al. (1994, 3).

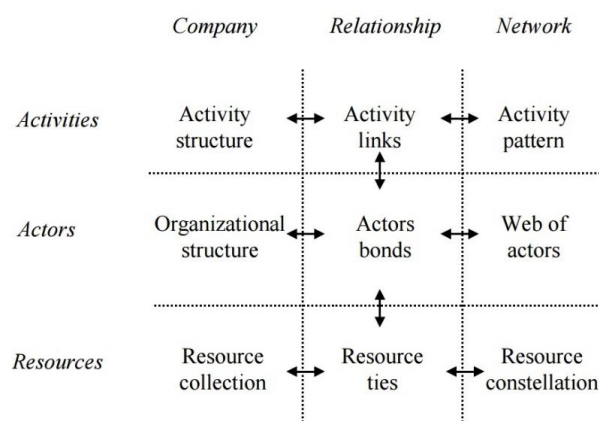
Basically, it could be argued that the network is endless, and the so-called borders of the network depend heavily on the perspective and thus all defined boundaries are arbitrary. However, for analysis, it is meaningful to define a 'network horizon', which is basically dependent on how extended the actors view of the network is. Anderson et al. (1994) argue that the network horizon is greatly dependent on the experience of the actor and on the structural network features. This means, that the important network horizon usually changes over time as business is being conducted. The part of the network horizon that the focal actor considers important at any given time is called the 'network context'. Network context can be understood being structured of the three basic concepts of the ARA network model. Usually, these network contexts are shared by at least two actors that are close to each other. (Anderson et al. 1994.) In addition, according to Håkansson and Johanson (1988), companies develop so-called network identities which are borne of the relations between companies. 'Network identity' can be defined as how firms see themselves in the network and how other actors in the network see them. The identity can be seen as a scale that has two extremes: attractiveness and repulsiveness. These two

extremes are borne of how other companies see the focal company or actor as a possible partner due to its unique set of relations with other firms, links to other firms' activities and ties with their resources. (Håkansson & Johanson 1988.)

Furthermore, a concept of 'network picture' (Ford et al. 2002) is introduced. It is a close relative to the three concepts presented in the last paragraph. Network picture refers to the fact that there is no single, objective network but a network is always a subjective construct, meaning that different companies and individuals each have different views of the content, extent and characteristics of a network. This network picture serves as a base of analysis and actions for them. The network picture of an Actor depends on their own experience, relationships, and position in the network. Thus, it is always influenced by one's own experience, abilities, problems, uncertainties and the limitations of their knowledge and understanding. (Ford et al. 2002.)

The ARA-model highlights the importance of the interaction in the relationships on the three concepts, actors, resources, and activities. These three concepts are equally important in the network. In addition, these three concepts can be examined on three different levels; the company level, the relationship level, and the network level. 'Company level' consists of activity structure, organisational structure and resource collection. Activity structure refers to the activities firm performs or can perform; organisational structure refers to the different actors found in the firm and the resource collection refers to the set of resource the firm has access to. The 'relationship level' consists of activity links, actor bonds and resource ties, connected via relationship between two actors, usually companies. Finally, the 'network level' that includes the activity pattern, web of actors and resource constellation, referring to the interconnected vast networks. Figure 9 illustrates these levels and connection between them. (Håkansson & Snehota 1995; Haugnes 2010.)

Figure 9: The ARA-model and its levels



Source: Håkansson and Snehota (1995, 45).

2.2.1 *Actors*

In this sub-section, we explore actor dimension. Actors can be individuals, groups, departments, organisations, and nets of organisations (Lenney & Easton 2009; Rusanen 2014). According to the basic model generated by Håkansson and Johanson (1992), the actors perform and coordinate activities. This is their most important characteristic. They can perform activities either in co-operation with other actors or alone. In addition, they decide which activities they wish to perform, with whom they are performed, how they are performed, and which resources are to be used. And, to perform activities actors need to have direct or indirect control of needed resources. Direct control means basically the ownership of the resource and the indirect control means that the resource is accessed through relationship(s) with another actor(s). Through this kind of exchange processes actors develop relations to other actors. However, it is not always clear who controls which resources and it is argued that such differences in perceiving the concept of control are common in the networks. Some resources can also be controlled jointly.

The model also presents that the actors are goal orientated. They try to establish and increase their positions in the networks in order to gain control over the network. Gaining control over the network is done through controlling resources and/or performing activities. The goal orientation of the actors does not necessarily mean that the actors are always trying to gain the network control on the expense of other actors; in some cases, the increased network control of one actor can also lead to increased control of other actors. Hence the actors' goals can be mutual and are by no means always conflicting. (Håkansson & Johanson 1992.)

The actors have different knowledge about other actors, resources and activities in the network. Usually, the actors have best knowledge of the nearest parts of the network. However, actors can also have knowledge about the parts of the network further away. Moreover, different actors may have knowledge about the same parts of the network, but the knowledge may differ due to different experiences accumulated from earlier activities. Basically, to gain more knowledge, actors need to perform activities from which they gain experience, and by using this experience they can develop their knowledge of network even further. (Håkansson & Johanson 1992.)

As actors become connected to each other they form different business relationships. In the ARA-model, these connections are also called 'actor bonds' and they are formed through interaction between the actors; when two actors direct a certain amount of attention and interest towards each other. This can be seen as a development where they become mutually committed, which means they prioritise each other over others in the network. These bonds affect and influence how actors in the relationship see each other,

treat each other, and evaluate each other. Through these bonds the actors form their identities in relation to each other, which means that actors internal activities and resources are usually largely characterised by the external activities and resources to which they are connected (Håkansson et al. 2009). In addition, it can be argued, that the sole existence of actor in the network is based on other actors and on the amount of concern and interest that actor awakens in those other actors. Moreover, through actor bonds the companies gain understanding what they can do; thus, they are dependent on the actions of other actors. The actor bonds are an important part of the ARA-model, Håkansson and Snehota (1995) argue that to perform deeper analysis of a certain relationship between two firms, the strength and the type of actor bonds should be considered. These bonds can be economic, technological, logistical, knowledge related and informational, social, administrative, legal, and time-based. (Håkansson & Snehota 1995; Håkansson et al. 2009.)

Each of the actors develop more or less strong bonds, ‘weak bonds’ or ‘strong bonds’, usually to relatively limited number of other actors in their network, such as customers, suppliers or for example development partners. These bonds are formed of – but also encourage themselves to – mutual orientation, preferences and commitment. It is usually through bonds, that actors gain knowledge of their counterpart’s activities or resources. The bonds that form between actors are not a result of unilateral action but of interaction over time. This interaction matches some of the actor’s resources and activities to those of other actors. Thus, the interaction affects the resources and the activities of actors’ counterparts as well as their knowledge of the actor. (Håkansson et al. 2009.)

Håkansson and Snehota (1995) summarise the actor dimension when observed from the relationship perspective as follows: (1) Actors develop bonds in order to overcome their limitations. (2) Different types of actors develop bonds when they mutually develop trust, build up certain identities of each other and become committed to the relationship. (3) On a company level, the actor bonds are important because they direct their resources and activities towards certain other actors. (4) Bonds between two companies, and how third parties perceive them, influence the actual development of the companies; thus, bonds have an influence on companies’ scope to learn and to develop themselves. (5) Bonds organise the networks; as bonds mold the network identities of the actors, they at the same time affect to whom the actors want to be connected and committed to. (6) Actor bonds can be utilised in order to learn and to develop firm’s capabilities and to mobilise external resources. Hence, they have a major impact on the development of a firm and its capabilities.

As the actors are never isolated from other actors, whatever they do has direct effects on some set of actors and usually some indirect effects on another set of actors. Thus,

actor bonds can be seen as 'direct' or 'indirect'. Direct actor bonds mean that actor interacts directly with other actors. Usually these bonds are formed with the closest actors in network. By closest is meant those actors whom are usually close to the focal company in terms of interdependence, knowledge or for example geographical vicinity. Usually, direct interaction occurs between a specific set of companies that have similar resources and/or are involved in similar activities. The indirect actor bonds refer to situation where the interaction occurs through intermediaries. (Håkansson et al. 2009.)

As actors are goal-orientated, they may seek to develop their own dependence on certain actors. However, they may also avoid dependences with specific actors. They might also pursue to avoid or to develop their counterpart's dependence on them. This kind of action, or 'interactive manipulation' as Håkansson et al. (2009) calls it, is a major element of choice for the actors, be they individuals or collective business actors. This interactive manipulation has deep effects on the focal actor's own activities, resources and connections between them as well as the resources and activities of others. (Håkansson et al. 2009.)

According to Håkansson et al. (2009), when considering the actors from the business interaction perspective they are seen as a variable entity, meaning that it is very hard to identify common characteristics that would fit all kinds of actors or to detect types or groups that are homogeneous. However, there are two features that seem to fit the characterisation of all kinds of actors in the business network setting. (Håkansson et al. 2009.) First characteristic, or feature, is the fact that the actors' characteristics and even existence depends on other actors and their doings. The second feature is that the actors have both deep but partial competence and knowledge, on which they base their interaction. Thus, each actor has specific knowledge about some actors, resources and activities. However, they can never fully anticipate the actions or behaviour of other actors nor they can ever fully comprehend their activity and resource interdependencies. This is due to the fact that all of their counterparts are related indirectly to other actors, which are more or less unknown to them.

Relationship emerges and develops because the actors involved in it believe that they can help each other to solve one or more specific problems. These problems can be for example technical, financial or can relate to other other relationships. Usually, a relationship develops if two actors have a mutual understanding and a belief that they can exist and develop their activities together. Usually, actors form certain views about the use and the value of specific relationships. These views are based on actors' previous experience, relationships, and network picture. These views are also affected by complex patterns of interaction both interfirm and between companies which affect the firm's interpretations and perceptions of expectations of others and mutual convenience.

(Håkansson et al. 2009.) To perform an ARA-analysis, it is crucial first to pinpoint the relevant actors. After that it is possible to look at the relationships (actor bonds) between them.

2.2.2 Resources

In the ARA-model, the actors need the resources to perform activities: to transform them to other form or to transfer them to other actors. Thus, on a higher level, resources can be characterised as ‘transformation resources’ and ‘transfer resources’. These two types of resources are dependent on each other; for example, the value and usage of a certain resource is specified by how it is combined with other resources. Regardless of the characterisation, the resources can take any form and can be utilised in any way possible to imagine. The value of the resource can also be measured by its availability; the less available the resource is the more important is control over it. (Håkansson & Johanson 1992.) However, some resources cannot be transferred physically between organisations and individuals, and hence can be accessed and utilised only through mobilisation. Such resources include, for example, knowhow, market intelligence, and technological knowledge. (Håkansson & Snehota 1995.)

When a relationship develops and deepens, it can connect different resources that are controlled by the two companies involved. These resources can be ‘tangible resources’ in example technological or material, such as manpower or technical facilities or they can be ‘intangible resources’ such as knowledge, ability, skills, goodwill, trust, customer base, supplier base or company image. A relationship can tie together resources, forming ‘resource ties’. And there can be any number of different resource ties in a relationship, and their substance can vary greatly. In addition, a relationship can be seen as a resource itself, as it makes various resources available and it can be used and exploited as such. However, a relationship cannot be owned and controlled by only a single firm, rather they are controlled jointly by the parties involved. In addition, they cannot deplete by using, they can only decay if not taken care of. All in all, the availability of resources is very important, as they provide new activity opportunities but at the same time can restrict the activities that the firm can perform. Hence, the relationships the focal firm creates are of crucial importance, as they can provide the needed resources for the company to take advantage of. (Håkansson & Snehota 1995.)

As these resource ties emerge, the resources found in firms’ resource collection become tied to the resources found in other companies’ resource collection. When this happens, it usually means that the two firms involved in a relationship direct their

resources towards each other and by doing so also conduct adaptations to their resources, resource collections and to the ways to use resources (activities). In addition, the same resource can be tied to various firms' resource collections at the same time. Thus, the same resource can be involved in many relationships via resource ties and the connected resource ties form a structure called 'resource constellation'. This leads to the fact that the resource ties can be direct or indirect. 'Direct resource ties' refer that the resources used or provided are directly tied to the actors' direct relationships. The 'indirect resource ties' refer to the situation, where the resource are accessed or provided indirectly through intermediary or intermediaries. (Håkansson & Snehota 1995.)

From the economic point of view, resources are crucial for many reasons. For first, companies economise on use of resources. Thus, the costs can be measured by the resources used up. In addition, according to the ARA-model, companies also use resources – their own and others – to create or develop resources for the use of others. For example, the products, raw materials and services of a firm are resources for others. Hence the performance of the company (revenues, profits etc.) hinges on how and what kind of resources are controlled and/or developed for others. Second, firms' performance is limited by its available resource collection. The resources found in resource collection can be provided 'internally', but usually a substantial amount of resource is acquired 'externally' through relationships. Third, as the set of resources controlled directly or indirectly (resource collection) limits what the firm can do and achieve, it is very important for firm to have relationships with resource ties which provide access to the resources needed. Equally important is that the firm has demanding partners or customers, whom demand, direct and pull the firm to develop its resources, i.e. products or services, to better serve them. Furthermore, the resources accessed can also be intangible, for example valuable insights about how and for what purposes certain resource can be developed. Thus, resource ties can greatly affect the innovation in a firm (Håkansson & Snehota 1995.)

Resource ties are also important because they generate learning. According to Håkansson and Snehota (1995), there can be indentified three different types of learning with respect to provision and/or use of resources. First is by 'single actor experimentation'; learning by doing. Second refers to the situation where two involved actors use each other's experience and knowledge; 'learning from others'. Third, is the situation where several (more than two) actors learn from the knowledge and experimentation of each other; this is called 'joint learning'. In addition, all these three modes of learning can be combined in several ways in resource ties. (Håkansson & Snehota 1995.)

Håkansson and Snehota (1995) argue that the resources can be summarised from the relationship point of view as follows: (1) resources are variable; they are not given. The value of resources spring from their usage and it evolves over time. Thus, in addition to the availability, the development of resources is crucial in any business. (2) Resources are heterogeneous both in use and in value. Their value comes from the combination with other resources and they can only be used in combination with other resources. (3) The business relationships should not only be seen as a way to gain access to resources, but they should be seen as means for resources to be provisioned and used. When these two elements are adapted to each other, resource ties arise. These ties affect the value of resources. (4) In a relationship where resource elements are used, there are usually also adaptations that can lead to new and unique resource combinations. In addition, resource ties have both direct and indirect innovative functions as the relationship counterparts gain more experience about the use and provision of the resources. (5) There are internal (firms own resource collection) and external resource (accessed from someone else's resource collection). However, the resource ties and the concept of linked resource collections blur this classical view of resources, as external resources can be viewed to be as part of focal firms' resource collection. (6) Relationships can be seen as resources themselves, and their value derives from how they are combined (tied) with other resource ties that form the resource collection of a firm and in a grander scale, the resource constellation in the network. (7) The firms' ability to manage the resource ties can be more important for firms' performance and results than the type and amount of resources it has. In addition, firms' total capability derives from the totality of resources it can mobilise via relationships. (8) The usage of a resource can always be developed even further. In addition, new resource ties developed within a relationship can bring about new ties in other relationships.

However, the ARA-model does not categorise the resources in any unified or clear way but sees them as heterogeneous and variables (Håkansson & Snehota 1995). Thus, the model suggests the resources can be anything. However, when performing an empirical analysis, difficulties can emerge in the operationalisation such a vague concept. Thus, adapting from Rusanen (2014), the ARA-model is enhanced with the 'resource advantage theory' (hereafter RA theory) in order to classify and categorise the resources in a more systematic manner (Hunt & Morgan 1995; Hunt 1997b), which helps in operationalising and in gaining a clearer picture of the studied phenomenon.

According to the RA theory, the resources are categorised into financial, physical, legal, human, organisational, informational and relational resources. The financial resources refer to cash reserves and access to financial markets (Hunt & Morgan 1995). Physical resources include raw materials (Hunt et al. 2002), plants, hardware, software,

and other equipment (Madhavaram & Hunt 2008). Legal resources are for example trademarks and licenses. Human resources can be split to skills, knowledge, and experience of individual actors, i.e. employees (Hunt 1997b; Madhavaram & Hunt 2008). Organisational resources refer to company's competences, controls, policies, culture, procedures, and routines (Hunt 1997b; Madhavaram & Hunt 2008). Informational resources refer to knowledge on consumers and competitors and technological knowledge (Hunt & Morgan 1995; Hunt 1997a). Relational resources refer to relationships, for example, with competitors, customers, employees and suppliers (Hunt & Morgan 1995; Hunt 1997b; Hunt et al. 2002). The resource categories of RA theory are presented in Figure 10, which was assembled by and adopted from Rusanen (2014).

Figure 10: Resource categories according to the RA theory

Resource type	Examples of resources
Financial resources	Cash reserves, external financing
Physical resources	Raw materials, plant, facilities, hardware, software, and other equipment
Legal resources	Trade-marks, licenses
Human resources	Knowledge, skills, and experience of employees
Organizational resources	Competences, controls, policies, culture, procedures, and routines
Informational resources	Customer knowledge, competitor knowledge, and technology knowledge
Relational resources	Relationships with employees, competitors, suppliers, customers, etc.

Source: Adopted from Rusanen (2014, 39).

2.2.3 *Activities*

Activities can be understood widely as a concatenation of different acts aimed towards a certain purpose. An activity occurs when an actor or actors combine, exchange, develop or create resources (Håkansson 1987). 'Resource combining' refers to the situation where actors connect their resources in a business relationship towards a certain purpose, mostly to create value. When they combine the resources to create value, it accumulates knowledge over time, which may lead to new and better ways to combine the resources. Usually, the knowledge related to resource combining is employee specific and implicit and its roots are in experience. (Håkansson & Johanson 1992; Håkansson & Snehota

1995; Gadde & Håkansson 2008.) ‘Resource exchange’ refers to exchanging of resources between actors. According to Easton (1992), it includes everyday firm-to-firm transactions of business, social or informational nature, such as sharing or trading information about markets, or selling and purchasing of services or products. Resource development means changing of the features of a specific resource (Gadde et al. 2012). Resource creation in turn refers to situation where new resources are created by using other resources. The situation of resource creation basically refers to a very tight interaction between actors with a goal of creating new resources. (Håkansson & Snehota 1995; Rusanen 2014.)

According to the ARA-model, on a higher level, activities can be categorised to two kinds of activities: ‘transfer activities’ and ‘transformation activities’. The former means basically that an actor moves its direct control of a resource to another actor. The latter refers to a situation where actor performs changing activities on a resource they directly control, altering the resource. The transfer activities link the transformation activities of different actors to each other. Transformation activities are never fully controlled by one actor, and they affect and are affected by the relationship between the actors involved. In addition, the links between activities can be ‘direct or indirect’ and they can be described as ‘tight linkages’ or ‘loose linkages’. (Håkansson & Johanson 1992; Håkansson & Snehota 1995.) The activity links themselves are intangible, but their impact on business relationships and business can usually be seen clearly. And a firm that handles the activity links well can exploit them to gain advantage. (Håkansson & Snehota 1995.) In regard to the activities presented above, the transfer activities could be seen as exchange activities, and the transformation activities would cover the combining, development and creation.

Furthermore, as activities are linked to each other, they can form more or less repetitive ‘activity cycles’ consisting of various interdependent activities. As these activities are repeated in the cycle they create experiential learning for the actors performing them, which results in routines and creates a type of institutionalised and stable form for the activities. This linkage of the closely coupled activity cycles is called ‘transaction chain’. However, the activity network is constantly changing, meaning that these transaction chains are changing too. Thus, it is not meaningful to see them as systems that can be easily optimised or configured. (Håkansson & Johanson 1992.)

The model suggests that knowledge and experience are very important. When heterogeneous resources are combined it creates new knowledge through learning from activities and activity cycles. And this new knowledge can lead to new and improved ways to for example to combine the resources and this in turn can lead to the breakage of the current activity cycles and transaction chains and to the forming of new activity cycles and transaction chains. Thus, the knowledge and experience developed in the activity

cycles can be seen as the root of development and change in the whole network. Furthermore, the model suggests that as the resources used are heterogeneous, this change can result in further changes in the whole network. (Håkansson & Johanson 1992.)

In the ARA-model, when considering activities, a relationship is built from activities connecting various internal activities (activity structures) of the two parties involved. Activities carried out by a company are related to those of others. Activities can be viewed as ‘internal activities’, taking place inside firm’s activity structure. Examples of such activities are administration, production, and research. Activities taking place outside company in relationships with other companies are ‘external activities’. These can be for example be sales, purchasing, financing, personnel selection. However, it is crucial to understand that according to the model, all activities are, directly or indirectly, linked to the activities of other companies. Hence both internal and external activities are core activities of a firm. (Håkansson & Snehota 1995.)

In general terms, relationship is the essence that links activities and the activity links affect the outcomes of the relationship. At the same time, these links affect the ‘activity structures’ of a firm and the activity pattern in the larger business network. The ‘activity links’ can regard in example to administrative, technical, commercial, or other activities (such as developing products, producing, processing information, purchasing, and selling) of a company that can be linked in various ways to other companies’ activities as the relationships deepens. To describe, explain and/or predict the effects of a relationship, the activity links are considered as a crucial starting point. The ‘type’ and the ‘strength’ of activity links are important parts of the ARA-model. (Håkansson & Snehota 1995.)

Type means that activities can be linked ‘directly’ or ‘indirectly’, and the strength refers to the fact that links themselves can be strong or weak. Indirect activity link refers to a situation, where the actors performing the activities are not present together in time and space, thus being divided from each other by activities of at least one other actor (intermediary). Direct activity links mean, as one can easily postulate, a situation where the actors are present together in time and space. What comes to the strength, Haugnes (2010) brings forth three initial definitions on how the strength can be perceived. First, activity links can be considered strong when both (or all) of the involved actors’ activities are adjusted and have influence on each other mutually. If only one of the actors is dominant in the relationship, the activity link can be considered weak. Second, the activity link can be considered strong if there are many links: for example, when each of the involved actors link two or more of their activities, the selected activity link can be seen as strong. Hence, relationship can be considered weak if it consists only of one activity link. Third, activity link can be seen as strong when it stands out from the other comparable activity links. In addition, it should be noted that if an activity link is to be

considered strong, it cannot be characterised as general; it needs to be specialised at least to some extent. (Haugnes 2010.)

The strength of activity links (strong or weak) can be determined by the development of the relationship and by the level of attention the relationship arouses; the more the actor understands the activities of the counterpart and the more the activities of the counterpart become visible, the stronger the activity link can grow. Usually this happens when the actors perceive each other as important, meaning they see that the counterpart can help in achieving a desired outcome. And usually, the stronger the links are, more easily and willingly the activities can be adjusted and adapted to fit the activities (activity structures) of the counterpart, thus enhancing the outcomes of the activities for example by providing monetarily more advantageous balance of standardised and differentiated activities. However, the counterpart can also raise attention and thus become more visible for other reasons, such as by being unique or being interesting for several other reasons. New opportunities (i.e. business opportunities) can arise when the firm tries to come up with new ways of linking its own activities to those of its counterpart. This can lead in example to development of new products or services concepts (resource transformation). Furthermore, the strong activity links can also be limiting as they bind the actors and thus can prevent certain pursued changes for example in the internal activity structure of a firm. (Håkansson & Snehota 1995.)

According to Håkansson and Snehota (1995), when looking through a relationship lens, activities can be summarised by several conclusions: (1) borders of activity are always defined by the actors involved. There is no clear way to define them; their delimitation is always arbitrary. Activities can always be cut up into smaller activities and/or to be integrated into larger. (2) When activities are designed, it can be seen as a process that includes some economic considerations such as standardisation and scale, behavioural considerations such as differentiation and uniqueness, and relationship considerations such as interdependencies. The process results in activities that are linked to each other in different ways. (3) Through activity links between two actor's activities can usually be synchronised and matched leading to, for example, decreased costs and/or better outcomes. This can also be a rational choice, as the relationship can become linked due to the development of the relationship. (4) Each activity in a relationship between two actors is part of a larger activity chain either directly or indirectly. (5) Activity chains are connected to each other by links and thus are part of a larger activity pattern. This means that change in one link can change the whole activity pattern leading to the possible need of adaptation in a certain link. (6) Activity links are highly important for a firm as they define how well a firm's internal activity structure fits into the larger activity pattern (activity structures of others) that it is part of. Thus, activity links are crucial for the

outcome of the activities the firm conducts. (7) Activity links are formed through the relationships, e.g. usually between customers and suppliers. The links in different relationships are combined with each other. In addition, they must be combined with the internal activity structures inside each of the companies involved. Based on how this is done, and how well the firm succeeds in doing so, defines the capabilities of the firm.

Overall, activities can refer to various operations or actions performed by companies, such as developing products, producing, purchasing, coordination, administrative, personnel selection, selling, information processing and so on. It is crucial to understand that the activities are never truly carried in isolation from others, but they are always dependent on the activities of others and are more or less integrated and linked together. (Håkansson & Snehota 1995; Hakansson et al. 2009.)

2.3 A synthesis of the theoretical framework of this research

In this section, the theories are summarised, based largely on the work by Rusanen (2014). The purpose of this section is to clarify the theoretical constructs used and to provide an understanding on which parts of the extensive ARA-model are emphasised. In addition to the model by Rusanen (2014), the network dimension is enhanced with the concept of network picture for operational reasons and for placing emphasis on the focal firm's understanding about their relevant network from the internationalisation point of view. This is important, given the time-limitations of this thesis, because ARA-model does not picture clear borders for the network making a full ARA-analysis radically time consuming.

In summary, business network consists of actors, resources, and activities per the ARA-model. Actors control resources and perform activities, which use the resources. Actors can be categorised to individuals, groups, departments, organisations, and nets of organisations. However, for clarity, the nets of organisations are discarded from the actor dimension as the network element already comes from the ARA-model itself, not from the categorisation, thus rendering the concept of 'nets of organisations' obsolete.

Resources, adapted from Rusanen (2014) and in accordance to resource advantage theory (RA-theory), are categorised in seven different categories and are used, accessed, and provided via relationships in different ways. These categories are financial resources, physical resources, legal resources, human resources, organisational resources, informational resources, and relational resources. The financial resources are basically cash reserves, funding, and access to financial markets (Hunt & Morgan 1995). Physical resources include raw materials (Hunt et al. 2002), plants, hardware, software, and other equipment (Madhavaram & Hunt 2008). Legal resources include for example trademarks and licenses. Human resources are skills, knowledge, and experience of individual actors (Hunt 1997b; Madhavaram & Hunt 2008). Organisational resources include company's competences, controls, policies, culture, procedures, and routines (Hunt 1997b; Madhavaram & Hunt 2008). Informational resources refer to knowledge on consumers and competitors and technological knowledge (Hunt & Morgan 1995; Hunt 1997a). Relational resources refer to relationships, for example, with employees, competitors, suppliers, or customers (Hunt & Morgan 1995; Hunt 1997b; Hunt et al. 2002).

Resources are used or activated through activities by actors, and usually these activities either change or exchange resources between actors. Activities can be categorised as resource combining, resource development, resource creation, which are part of the transformation activities, and resource exchange, which belongs to transfer activities. The resource integration, as presented by Rusanen (2014), has been discarded from the model

to minimise the complexity and to improve the operationalisation of the model. In addition, the actual difference between resource integration and resource combining has lacked explanation or has been only scarcely or fuzzily explained (Rusanen 2014). Thus, they are seen overlapping, and in this thesis the concept of resource integration is included inside resource combination activity.

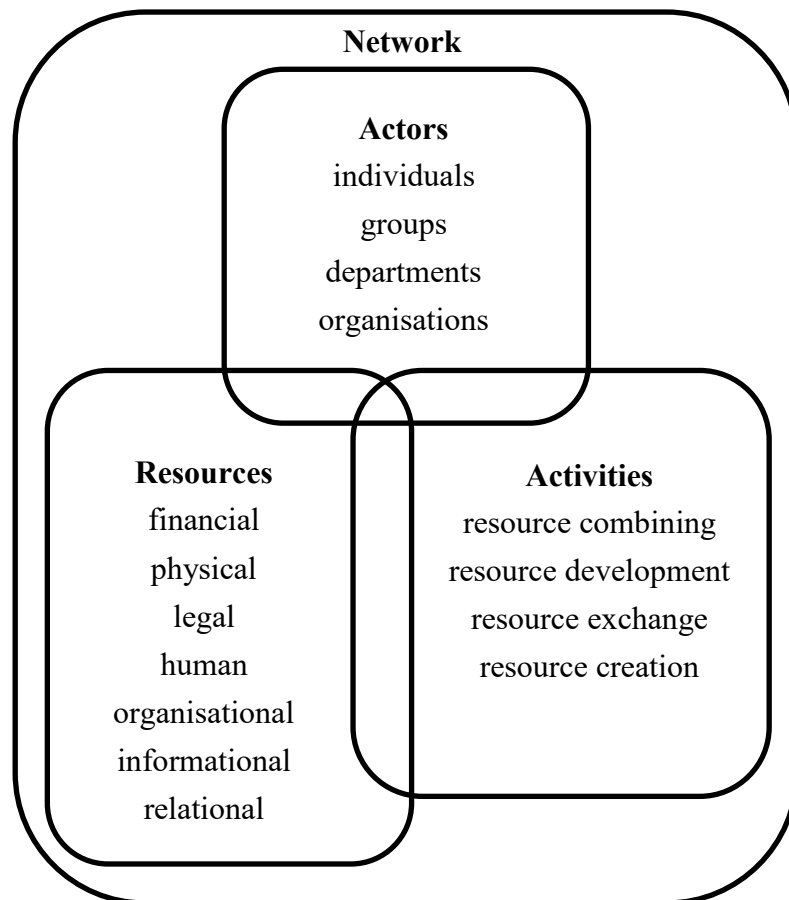
The resource combining basically means situation where certain actors connect their resources in a business relationship towards a certain goal, usually to create value. Combining of the resources to create value usually generates learning and knowledge over time, which might lead to new and better ways to combine the resource. Usually, this kind of knowledge is very much employee-specific, implicit and it has roots in the earlier experience. (Håkansson & Johanson 1992; Håkansson & Snehota 1995; Gadde & Håkansson 2008.) Resource exchange refers to exchanging of resources between actors. According to Easton (1992), it refers to everyday firm to firm transactions of business, social or informational nature, such as sharing or trading information about markets, or selling and purchasing of products or services. Resource development means changing of the features of a specific resource (Gadde et al. 2012) and resource creation refers to situation where new resources are created by using other resources. The situation of resource creation usually calls for tight interaction between actors with a goal of creating new resources. (Håkansson & Snehota 1995; Rusanen 2014.)

Actors, resources, and activities are all part of the network and can be linked directly (primary function of network) or indirectly (secondary function of network) together in various relationships, which can include any number of actor bonds, resource ties and activity links. These network functions can have a positive or negative effect. Because of the time constrains and limitations, this thesis is only focused on the positive network functions affecting the internationalisation of the case firm. Positive functions refer to revenue streams, profit, and other factors, which lead towards the set goals of succesful internationalisation process. Set goal can be for example to reach certain international revenue or establish certain client base or reach a certain level of recognisability in the target market.

Because of the same limitations described above, this thesis is more interested in the company level (activity structure, organisational structure, and resource collection) and the relationship level (activity links, actor bonds and resource ties) than the greater network level (activity patterns, web of actors and resource constellations). Furthermore, the types of relationships referring to weak or strong and tight or loose are not to be examined in greater detail due to the same limitations. Moreover, the stability of the network and the concept of network identity (attractiveness or repulsiveness of actor) is not emphasised for the same reasoning as above.

In addition, only the key actors, resources and activities affecting the internationalisation are emphasised. The theoretical framework is presented in Figure 11, where actors, resources and activities are all interconnected (overlapping) via relationships, which can include actor bonds, resource ties, and activity links, in a relevant network.

Figure 11: A summary of the theoretical frame used in this thesis



Main emphasis of the theoretical framework is put on understanding the relevant network from the internationalisation perspective, to better understand the network position of the focal firm and to understand the relevant actors related to it, and to analyse what role the different key actors, resources and activities have in the internationalisation process.

3 RESEARCH METHODOLOGY

3.1 Research approach

Two main alternatives can be identified for a research method: qualitative and quantitative. The qualitative research method uses text as empirical material and can be seen to be focused on interpretation and understanding of a phenomenon. In qualitative research, the data collection and data analysis are sensitive to the context and the research aims to a holistic understanding of the issue of interest. In addition, the major point in the qualitative research is to understand the reality as a social construct, which is produced and interpreted through cultural lens and meanings. The quantitative research focuses on explanation, testing of hypothesis and statistical analysis by using numbers and standardisation. Furthermore, the quantitative research method usually is more structured, standardised and has a more abstract mode of collecting and analysing empirical data. (Flick 2007; Eriksson & Kovalainen 2008.) This thesis is qualitative by nature, because of its aim to form a understanding of the complex social constructs that a business network is and what was its role in the internationalisation process.

The selected research strategy for this thesis is a single case study. Yin (2003) states that case study research enables an in-depth exploration of the complex phenomenon of interest within its real-life context. By choosing a case study method, the researchers can form a holistic and meaningful characteristic of real-life events (Yin 2003). In addition, according to Easton (2000), case study is a powerful research method and it is particularly suited to the study of networks. This is supported by Järvensivu and Törnroos (2010), who argue that case studies are typically used when studying business networks and relationships, as they provide the means to develop a multidimensional perspective on the phenomenon in a specific context. In addition, there can be identified three different case studies as suggested by Yin (1984); exploratory, descriptive, and explanatory, which each are characterised by their own specific features. However, these strategies are overlapping, and their boundaries are not evident. This thesis is an explanatory case study, as the business networks are studied, and understanding is created of how parts of the networks are related to each other, and what has been their role in the internationalisation of the case firm.

Thus, a single case study was the appropriate way to obtain an in-depth understanding of the key business networks and relationships involved in the internationalisation process of the case firm, given the time constraints of a master thesis and the fact that the use of the ARA-model can be very time consuming due to the complexity (Axelsson 2010). In

addition, practical limitations such as context and access also determined this approach (Silverman 2010).

In addition, according to Eriksson and Kovalainen (2008), case study can be divided into extensive and intensive study. The goal of extensive case study is to collect common patterns, mechanisms, and properties in a certain chosen context with an intention of testing, developing, or elaborating a theory. On the other hand, the intensive case study aims understand the case from the inside, and explores the case from the view point of the people involved. Usually intensive case study is less interested in theoretical propositions. This study leans towards the intensive case study as the case itself, and the key actors involved, are the point of interest, however, it is also interesting how well the ARA-model can be used to explain the internationalisation of a software service firm.

3.2 Case selection

Dubois and Araujo (2007) wrote that the case selection is the most important methodological decision in a case study. When choosing the case for this thesis it was of utmost importance that the phenomena of interest, business networks and internationalisation, are present (Stake 1995; Dubois & Araujo 2007). The purpose of the case study is to understand the chosen case itself. Hence, it is not that relevant how well the case study helps in understanding other cases.

The software services sector was chosen as the target of interest because of the lack of empirical studies on the internationalisation of such firms, especially when compared with its close relative, the software product firms, which have more of empirical research on their internationalisation.

After the software service sector was chosen, several internationalised Finnish software service firms were considered for finding a suitable firm for this thesis. The suitable firm needed to be quite recently internationalised, for that the memory about the initial internationalisation was still relatively fresh. In addition, the information in general needed to be accessible so the case firm and the interviewees needed to be favourable of research, meaning they are willing to participate and are ready to share the relevant data.

The case company selected for this study was Futurice Ltd, because they have successfully internationalised to multiple European locations within past five to six years, and the person who supervised the internationalisation, Sampo Hämäläinen, is still working for the company. In addition, Futurice is an interesting choice as they have gained international attention as they have won The Best Place to Work in Europe Award

twice, in 2012 and 2013, in the small and medium-sized workplace category (Great Place To Work 2014).

Before choosing which entry to foreign markets (internationalisation) was to be chosen as the case, Sampo Hämäläinen, person known to be responsible for the international business of Futurice, was asked that which of the internationalisation operations would be best in memory. This was done to ensure sufficient and reliable data was accessible. In addition, Hämäläinen was asked who else should be interviewed to form as in depth an understanding of the case as possible.

3.3 Data collection

The data collection was conducted with interviews. The interviews in this thesis are semi-structured theme interviews. According to Eriksson and Kovalainen (2008), in the semi-structured interviews, the interviewer plans topics or themes for the interview, which are listed in the operationalisation chart (Table 1). These themes and topics are based on the theories presented in this study, especially the ARA-model.

Before the interviews, the interviewees were sent a pre-interview guide (see Appendix 2) so that the interviewees could be prepared and would understand the concepts and the aims of the research better. In the pre-interview guide the interviewee was shortly introduced to the research question, sub-objectives, and the theoretical framework of the study. In addition, the interviewees were asked to draw with a freehand a preliminary network including the key entities, by using the categorisation provided in the theoretical section. To help them picture a business network, a rough example of a business network was included in the pre-interview guide.

Then, the primary data was collected with semi-structured interviews, in which the interviewees were asked to explain why they had drawn and chosen the entities they had chosen. Then, in co-operation with the interviewee, the business network was drawn, forming the final version of the business network, including all the relevant key actors, resources and activities and relationships from the viewpoint of the focal company and the interviewee. After this, in co-operation with the interviewer, the interviewees were asked about the substances of the relationships in more detail, for example, what was the nature and role of the network element and why was it important for the internationalisation.

By combining visual and verbal data collection methods (Tufte 1983; Zuboff 1989; Meyer 1991), a more reliable way of collecting data was assured (Denzin 1978). In addition, the combination of visual and verbal methods provides both the researcher and

the interviewee with a more structured and clearer idea of what was being said (Henneberg et al. 2010). Furthermore, Phellas et al. (2011, 182) add: “*interviews have certain advantages over self-completion questionnaires. The interviewer can explain questions that the respondent has not understood and can ask for further elaboration of replies (e.g. ‘Why do you say that?’)*”. Thus, interviews were deemed the best way of collecting data in this study, which tries to describe the role of complex business networks in the initial internationalisation of a firm when investigated from the focal firm’s point of view.

When constructing the operationalisation chart and the interview themes, the ARA-model was thoroughly investigated to find the necessary theoretical concepts on which the data collection (interviews) could be based on. Thus, the sub-objectives and the interview themes both are heavily based on the chosen theoretical framework. In order to form a clear picture of the networks, all of the themes found in the operationalisation chart were gone through in all of the interviews. However, depending on the interviewee, some themes were considered in greater detail depending on how important the interviewee felt them. In addition to the primary data collected via interviews, secondary data was utilised. The secondary data was collected from websites, for example information about Futurice, to maximise the focus of the interviews to the most relevant topics.

Table 1: Operationalisation chart

Research objective	Sub-objectives	Theoretical framework	Interview themes
Describe the role of business networks in the internationalisation of a Finnish software service firm	Analyse the key actors involved in the internationalisation process	ARA-model: Actors	Actors: - Individuals - Groups - Departments - Organisations
	Analyse the key resources involved in the internationalisation process	ARA-model: Resources + RA theory	Resources: - Financial - Physical - Legal - Human - Organisational - Informational - Relational
	Analyse the key activities involved in the internationalisation process	ARA-model: Activities	Activities: - Resource combining - Resource exchange - Resource development - Resource creation

Primary data was collected with three themed interviews, which were based on the operationalisation chart and the pre-interview guide. The interviewees were Sampo Hämäläinen, Matti Jylhä and Henrik Edlund.

Hämäläinen is the person who initially started the internationalisation of the Futurice in the first place, so he could be characterised as the father of the Futurice's internationalisation. First internationalisation targeted Berlin and second targeted London, of which both were led by him. So, he has acted as both the Managing Director and the Founding Director of Futurice Berlin and Futurice London. Hämäläinen was active in the internationalisation process to Sweden only in the early stages and has since moved on to different task in a subsidiary of Futurice called Columbia Road, which is a digital commerce consultancy. Still, in time to time he might help here and there, but basically his responsibilities towards internationalisation of Futurice Sweden per se have ended. Hämäläinen said he does not know that much about the internationalisation

process to Sweden, but he knows about Futurices internationalisation in general, thus providing essential information to understand the whole picture better.

Hämäläinen was interviewed in Helsinki on the 9th of March 2016 at the Futurices Helsinki office, in a quiet meeting room. The interview lasted for 51 minutes of which 43 minutes and 26 seconds was recorded on video with the author's laptop pointed towards a whiteboard, on which the business network was drawn in co-operation between Sampo Hämäläinen and the author. The interview was held in Finnish, since both the interviewee and the interviewer are from Finland. This helped to quickly establish an understanding of the things that were said.

Matti Jylhä is a Business Leader and the Founder of the Futurice Sweden. Before that he worked in Futurice as a Vice President of Business Development and as a Business Director. He has been at Futurice since September 2008. Before Futurice he has worked in several positions in a company called Comptel, from software developer to product owner.

Jylhä's interview was made in Stockholm on the 18th of October 2016 and it was conducted at the Futurice's Stockholm office, also in a quiet meeting room. The interview lasted for 1 hour and 16 minutes of which 1 hour and 10 seconds was, same as other interviews, recorded on video with authors laptop pointed towards a whiteboard, on which the business network was drawn in co-operation between Matti Jylhä and the author. The interview was held in Finnish, since both the interviewee and the interviewer are from Finland. This helped to quickly establish an understanding of the things that were said.

Henrik Edlund is the newly hired local Managing Director of the Futurice Stockholm and he is responsible of both Sales and Recruitment in co-operation with Matti Jylhä. In addition, they are both responsible of the operations which are needed to run Futurice Stockholm. He has been in Stockholm Futurice for six months. Before Futurice Sweden, Edlund was setting up another office to Stockholm for a Norwegian web-agency called Making Waves. Some of his networks he uses are from that period, but he also cannot use some of the networks since he has a contractual clause not to use them for the first year. The interview of Edlund was made in Stockholm on the 18th of October 2016 and it was also conducted at Futurice's Stockholm office, in a quiet meeting room. The interview lasted for 40 minutes of which 29 minutes and 57 seconds was recorded on video with authors laptop pointed towards a whiteboard, on which the business network was drawn in co-operation between Henrik Edlund and author. The interview was held in English, since interviewee did not speak Finnish at all.

3.4 Data analysis

The amount of data gathered from semi-structured interviews and theme interviews is usually large. Thus, it might be good to start the analysis already during the interviews. However, majority of the analysis and assumptions are often made after the interviews are transcribed. The process of transcription is recommended to start as close to the interview dates as possible, so that the interviews would be in fresh memory. This way the loss of important data is minimised. (Hirsjärvi et al. 2008.)

The qualitative data collected by interview can be interpreted in at least three ways. The first way is to transcribe the data and continue straight to analysis based on intuition. The second way is to transcribe the data and then code it, where the coding leads to analysis and interpretation. The third way is to combine the two other ways, transcription, and coding, and analyse the information afterwards. (Eskola & Suoranta 1998.) In this thesis, the third approach was chosen, as the data was first collected, after that transcribed and then it was coded. The coding was essential to understand the whole network picture and its parts.

There are many ways to analyse the gathered data. In a qualitative research, some standardised methods exist, but none of them are deemed better than others. Simply put, there is no certain right way. The analysis can be approached by description or interpretation and the researchers can use deductive or inductive reasoning. The deductive reasoning basically means that the reasoning is based on the theory and the researcher tries to justify the theory by analysing the collected data. The inductive reasoning is based on the data and the conclusions are derived from that data. (Hirsjärvi et al. 2008.) In addition, the data can be analysed in several ways. The methods of analysing are quantification, organisation by themes, classification by types, and classification by content or analysing the discourse or conversation. (Eskola & Suoranta 1998.) In this thesis, the combined methods of organisation by themes and classification by types were chosen, as it helps to form a detailed understanding of the complex network at hand.

The data gathered and recorded in the interviews were first transcribed using the categorisation provided by the ARA-framework, in effect filtering out irrelevant information. This happened soon after the interviews and then the transcribed data was categorised according to the themes and then coded deductively by using the chosen theoretical framework to form a more clarified understanding of the phenomenon at hand. After that the data was combined and then analysed to understand the salient business networks and their role in the internationalisation of a software service firm and to form conclusions.

3.5 Trustworthiness of the research

This section is about evaluating the trustworthiness of this thesis. When research is evaluated based on clear criteria, the transparency is improved and thus the strengths and limitations of the study can be emphasised (Eriksson & Kovalainen 2008). Lincoln and Guba (1985) categorise four trustworthiness criteria when evaluating qualitative research: (1) credibility, (2) transferability, (3) dependability and (4) conformability. The trustworthiness of this thesis is evaluated in accordance to these criteria.

When credibility is evaluated, according to Eriksson and Kovalainen (2008), few questions that should be investigated can be identified: (1) Whether the researcher has familiarity with the topic under study and whether the data is sufficient to merit the claims made by the researcher; (2) Whether the researcher has made strong logical links between observations and categories; and (3) Whether any other researcher can come relatively close to the interpretations of the researcher or can agree with the claims made by the researcher, by following the same material used by the researcher. In addition, credibility means how well a research reflects reality, and it measures how well the results and findings fit to the original constructs concerning a study. (Lincoln & Guba 1985.)

There is always the question about the credibility of the study. Basically, is the data sufficient for the study and does the writer have enough familiarity on the subject. These things are very hard to evaluate. But, as a professional working in the industry for seven years, it can be argued that the author has a sufficient amount of understanding of the investigated subject. However, as a single case study with three sources of data, it could be argued that there could be more data. In addition, the fact that the CEO of Futurice Group and the Founder of the Futurice Sweden both read and agreed on the findings with only minor changes here and there proves that the study reflects reality.

In this study, the categorisation was highly important to even gather the data in the first place. Thus, there is a logical link between observations and categories. However, some difficulties emerged from the categorisation as in the ARA-model, the elements are overlapping and the categorisation is vague. To overcome this difficulty, author used a more structured categorisation tool with clearer boundaries, which helped in forming the logical links between categories and observations.

Transferability is achieved by providing as much of information as possible by the researcher (Lincoln & Guba 1985). In addition, the similarities between earlier research and the thesis at hand should be pointed out as clearly as possible (Eriksson & Kovalainen 2008). It could be said that at least in theory the research in this thesis is repeatable and any other researcher could come relatively close to the interpretations of the researcher or could agree with the claims made by the author. However, it seems the only way to

prove this is to conduct another research by another researcher based on the same material.

As the information gathered and recorded in the interviews were first transcribed using the categorisation provided by the ARA-framework, in effect filtering out irrelevant information and leading to a situation where the relevant information is easy to use by other researchers. On the other hand, early filtering is based on then current understanding of relevance which might have led to a situation where some relevant information has been filtered out. One could argue that the transferability is decreased due to this.

To assure dependability, the research should be documented accurately and rationally, and the research should be traceable (Eriksson & Kovalainen 2008). In addition, Lincoln, and Guba (1985) notes, it should be demonstrated clearly that the data supports the findings, interpretations, and recommendations.

ARA-model leads towards traceability as such. It also helps to document findings by setting a clear structure for research. Following the rationale offered by the ARA-model and its categorisation, the sufficient amount of dependability was achieved. This should be verified by conducting another research or inquiry audit.

The use of ARA model helps to build a clear structure. Selected naming convention of ARA entities in this study leads to compressed expression which helps to understand complex relations between entities. As a negative consequence these coded entities are not self explanatory; reader needs either to remember the meaning of these entities or refer to definitions in another part of the research, which decreases the conformability of this research. Since CEO of Futurice Group and the Founder of the Futurice Sweden both read the findings and agreed with them, an acceptable level of conformability was reached.

According to Eriksson and Kovalainen (2008), conformability means that the interpretations and findings are clearly and illustratively linked to the data gathered. This should be done in a way that assures there are no difficulties for the reader to see and understand the connections.

Concerning similarities with other studies in the field, there has been a number of studies on the subject, but only few of the studies have taken into account the networks in general and not one of the studies used ARA-model to map the key elements found in the network. In addition, only Forsell (2010) and Ochoa-Giraldo, Gurusamy and Gonzalez-Perez (2014) used a single case study method, which is warranted due to the complexity of the network. Multiple case studies could have easily produced overwhelming number of data and the detail could have suffered greatly. Thus, the similarities with earlier studies seem to be limited mainly on the subject of the research. However, findings about the importance of the networks for the internationalisation of

various software firms seem to be in accordance with the findings of the Coviello and Munro (1997), Turcan and Jones (2002), Zain and Ng (2006), Sasi and Arenius (2008), Forsell (2010), Rossiter (2011) and Ochoa-Giraldo, Gurusamy and Gonzalez-Perez (2014).

4 EMPIRICAL FINDINGS

4.1 Futurice Ltd and its internationalisation to Sweden

Futurice is a Finnish software development company creating digital services, having online and mobile software as their core business. The company develops applications in most cases by using open source software. Futurice was founded in 2000 and currently employs over 350 people (Syrjänen 2016). Futurice's revenue was 27.6 MEUR for the fiscal year 2015. Futurice operates in multiple countries, having total of six offices located in Helsinki (established in 2000), Tampere (2008), Berlin (2010), London (2012), Stockholm (2015), and Munich (2015). Futurice headquarters is in Helsinki. (Futurice 2016.) Futurice has been chosen twice, in 2012 and 2013, as the best place to work in Europe and in Finland (Great Place To Work 2014). The company emphasises transparency and trust in its culture. Nowadays, Futurice views itself as an international firm rather than a Finnish firm. (Hämäläinen)

Futurice's first internationalisation undertaking targeted Germany in 2010. According to Jylhä and Hämäläinen, the internationalisation to Germany began because there was a good client opportunity, which acted as a pulling factor to that market. Unlike Germany, the internationalisation to Sweden began with a decision of Futurice wanting to establish operations there even before there was any significant revenue from local Swedish clients. After the internationalisation decision, a timetable and a vision were created and then the actual work for gaining clients and other important activities, such as recruiting suitable local professionals, started. (Hämäläinen; Jylhä)

Futurice first served Swedish companies also operating in Finland, thus work for the customer projects was first done in Finland. By doing so Futurice built the customer baseline of some ten clients which were active, or to whom they had made projects earlier or to whom they had solid contacts. After the client baseline was accumulated, Futurice sent a sales-oriented business manager to build up the operations, set up an office and to seek for new clients. This manager was Matti Jylhä, and he started actively commute to Sweden in the spring of 2015. (Hämäläinen)

Hämäläinen points out that because Futurice had already practiced the internationalisation process successfully in Germany and London, it was easier to make the internationalisation decision by leaning a bit more forward and start pursuing internationalisation to Sweden with a bit more risk when compared to the earlier internationalisation projects (Hämäläinen). When the decision to go to Sweden was being made, they chose Stockholm as the location for the office. Also Malmö was considered.

Sweden in general was chosen because of Futurice's internationalisation strategy targets countries within the European Union. This is because employees are easier to move from foreign location to another within the EU, in other words, there is less friction when compared to situation outside European Union. There were also other reasons why Sweden was chosen, such as cultural closeness to Finland, short distance to travel, but also the fact that there were already some Swedish clients with whom they had business in Finland. (Hämäläinen.) Edlund points out that one of the reasons to go abroad in the first place was that Futurice did not want to operate only in a limited market of Finland, but they wanted to pursue a bigger market. He also notes that one of the reasons why Futurice wanted to establish itself in Sweden was that they wanted to pursue large Swedish clients. (Edlund)

For Futurice, it was very important first to acquire sufficient client base in the target market before establishing permanent operations and opening a foreign office (Hämäläinen). The first major client, that operates in hospitality and travel industry came through a networking activity even though it first seemed like it was just a random coincidence when they contacted Futurice. This first client was introduced to Futurice through an intermediary Swedish person (Actor R), working at an international established start-up firm, whom Matti Jylhä had met in a certain event and later Futurice had helped that start-up to establish their business in Finland. At that time, Actor R was not working for this first major client, but had later joined that company and when they needed something done they reached out to Futurice, because Actor R had good experience about Futurice. Thus, they sent a request for proposal (RFP), which Futurice quickly answered and eventually won. Jylhä notes that this RFP came at a very critical time and it was a good opportunity to build the client baseline upon and could be used as a bridge to Swedish market. Jylhä also points out, that until you do not have three big revenue clients, one should not rest. However, he adds the first one is usually the most important.

At that time, Futurice did not have any Swedish staff, so they had to work remotely from Finland and other locations. It was of utmost importance that the client find working with Futurice as easy as possible. It was important to create a feeling, that the remote workers were present. Futurice professionals and Actor M also had to fly to and from Sweden a lot. This was stressful and against Futurice's strategy to always hire a local team as fast as possible. The local team and Actor H joined the company after closing the deal with the Actor C1. This was problematic due to the constant travelling between to countries, Jylhä notes. He describes this "no-team-phase" as the hardest part of the internationalisation to Sweden so far.

Contact with the second client (Actor C2), which operates in automotive industry, initially came through the networks of Actor H. Jylhä points out that the co-operation of Actor H and Actor M worked especially well when they started to work that client. In addition, Futurice dedicated Actor RH from Finland as an automotive industry specialist for that client case, as she had important earlier experience in that field. (Jylhä.)

Third client (Actor C3) was acquired mainly because Futurice had already made projects for them and helped them in Finland. In addition, the references (Resource RE) played a crucial role in acquiring that client also in Sweden. They really wanted a same kind of solution that Futurice had already done for another customer. Other crucial factor was that Futurice had the right offering (Actors MP with Resource KES). (Jylhä.)

The fourth client (Actor C4) that Futurice acquired was also a customer whom Futurice already served in Finland. Initially the revenue that came from Sweden was small, but nowadays this client can be counted as one of the major customer accounts. As Futurice became local in Sweden it clearly positively influenced this customer's choice to order work from the Futurice Stockholm. In addition to these baseline accounts, Futurice Stockholm also has some other important clients, but from which the revenue is not that large and thus they are not that easily categorised as baseline clients. (Jylhä.)

According to Jylhä, Futurice Sweden has succeeded in everything what has been set as goal so far, but there is still a lot to do. Jylhä points out that the larger goal of certain revenue has not yet been reached. He explains that three years are considered as a period after a certain checkpoint is reached, where they can conclude have they succeeded or not. And not until after five years of operations to a certain location it can be said that the internationalisation process has been successful and the foreign site truly established. Jylhä points out that Futurice Germany is a good example of a foreign site, which has completed the international process and it took approximately five years. (Jylhä.) According to Hämäläinen, the target is to build a local functioning team in a period of one to three years.

Currently Futurice Stockholm has seven local employees, which were hired in six months, three expatriates, few local externals (also known as freelancers), and few professionals from other Futurice offices. Growth targets for Futurice Stockholm are one recruited person per month and the revenue target for 2017 is three million euros. (Edlund.)

4.2 Business network in the internationalisation process

4.2.1 Key actors in the internationalisation process

Organisations: According to Jylhä, amongst the most important organisations for this internationalisation case are the customers who have operations and are based both in Finland and Sweden (Actors SR). With these clients, the operations and services conducted by the Futurice were initially focused heavily on the Finnish end of those large firms. By doing good work in Finland, Futurice gained new contacts and references, which were used as a leverage to gain new potential projects and client prospects in Sweden, both from the same firms operating there and others. In addition, these activities generate in-bound leads from Swedish end. Examples of these kind of clients are the Actor C3 and Actor C4, who they had already helped in Finland and thus gained good reputation and important testimonials that Futurice gets the job done with excellent results. (Jylhä.)

Another very important group of actors are the Swedish customers (Actors SC), whom Futurice has met via different routes. Examples of these actors are Actor C1, which is a large company operating in the hospitality and travel industry. Another one is the Actor C2, which is a multi-national company operating in the automotive industry. (Jylhä.)

One important actor, according to Jylhä was and still is, Avaus Marketing Innovations (Actor AV), a firm, which operates in and rents the same office space with Futurice Stockholm in Central Stockholm. Jylhä says, that they have been a good pair and they help each other from time to time, for example spar each other and discuss tactical business moves. Futurice Sweden also shared the earlier office space with Avaus Marketing Innovations in Stockholm (Jylhä).

The Centre for Economic Development, Transport, and the Environment (Actor CED), which is a Finnish governmental organisation under the administrative branch of the Ministry of Employment and the Economy, dedicated to help and fund Finnish businesses in various industries. Futurice and Actor M applied for funding from them to fund the internationalisation process. (Jylhä.)

Important main actors are the Futurice Finland (Actor FF) and Futurice Stockholm (Actor FS). However, the whole of Futurice itself (Actor F), including all the international branches, is naturally and not surprisingly an important actor too. Jylhä notes Futurice is a community and the separate foreign branches operate towards the common goal and share the same culture. Jylhä points out that the company culture, which Futurice brings

to Sweden is truly unique and well received by the Swedish market, customers, and professionals.

During the internationalisation processes the other international customers (Actor OC) of Futurice have played a major role, by giving referral to other potential new customers. Futurice has also brought the important international customers to meet other customers, usually operating in same industry, which has been very useful in generating trust. (Hämäläinen.) Jylhä points out, that customers from different Nordic countries and networks related to those have been very important for gaining new customers and new relevant contacts.

Individuals: Jylhä and Edlund point out that one of the most important actors in the internationalisation process is the new Managing Director Henrik Edlund (Actor H), who was hired as a local face to run the Futurice Stockholm site. He has been working in Futurice Stockholm for ten months. According to Jylhä and Hämäläinen, it was highly important to recruit a local person, who sees Futurice Stockholm as his own. One of the most important criteria when hiring Actor H was that he already had a formidable business network in Stockholm and Sweden. In addition to this, he needed to be a smart, social, and dynamic person who can create new business networks and can leverage the already established ones. Jylhä points out that this was of utmost importance. In addition, the cultural match needed to be perfect, meaning that Actor H needed to feel like one of us, as Jylhä puts it. Amongst the business network, Jylhä brings up the recruiting network, which Actor H has also managed to build up during his twelve years of career in the software industry. Furthermore, Actor H needed to be a person who knows his strengths and knows the areas in which he needs support. And to help in these areas he must understand whom he should recruit. As an example of this, Actor H recruited a technical lead, Actor TL, to support in the more technological aspects of Futurice's business.

Actor TL is a technical lead, very familiar with technologies Futurice uses in building the digital services for their customers. He helps in hiring and can help in client meetings. He also has a big network of relationships, for example he has a lot of followers on social media service Twitter, making him a known person in the industry, which helps in recruiting. He is a friend of Edlunds friend, so he was found through the Actor H's network relationships. (Edlund.)

Alongside the managing director, one of the most important actors is the Futurice's business and sales-oriented Business Director, the founder of Futurice Stockholm, whom actively seeks out new opportunities and clients and started the internationalisation process to Stockholm. He also attends different events and conferences and basically builds up the relevant business networks to seek out customers, projects, and employees. (Hämäläinen.) This director is Matti Jylhä (Actor M), who started to commute to Sweden

in spring of 2015 to build up the needed networks to successfully internationalise to Sweden. The role of Actor M was and is very important. He brought the unique culture, value proposition and offering of Futurice to Sweden. In addition, through him the Futurice Stockholm can leverage the internal networks and knowledge of Futurice efficiently for the benefit of both the customers and the professionals working in Futurice. (Jylhä.)

Other relevant actors in the internationalisation process, according to Jylhä, are the directors of the other foreign sites (Actors KV) of Futurice. They give direct and concrete support when needed, for example help in certain activities, such as sales or in solving a problem. One of these persons was Sampo Hämäläinen (Actor S), who led the first international operations of Futurice and was the person behind the Berlin and London offices, of which especially Berlin has been successful. It is important to understand that also Actor M and Actor H belong to the group Actors KV. In addition, it is crucial to understand that this is heavily a group of individuals, and thus categorised under individuals' category rather than groups or departments categories.

The CEO of Futurice Group, Tuomas Syrjänen (Actor TS), plays a crucial role in every aspect of Futurice's operations. As Jylhä puts it, he is a sort of a catalyst and he helps and spurs in any situation, but usually the topic is sales. His way to guide is conversational and he has a very useful way to ask the hard questions, which is very valued amongst the Managing Directors of Futurice offices. (Jylhä.)

Amongst the Futurice employees, Actor RE was a very important actor as she played important role in gaining the customer Actor C2 by bringing in her earlier experience of the automotive industry in which the client operates. (Jylhä.)

Additionally, Jylhä pinpointed very important individual actors amongst the people they know from Sweden, be they from Swedish customers or Swedish individuals. Especially important in gaining customer Actor C1 was Actor R, a person whom earlier worked in an international start-up, which Futurice helped to establish to Finland. This person later joined the company Actor C1 and then recommended Futurice as a potential partner due to the earlier good experience he had encountered. Thus, Actor C1 sent an RFP to Futurice and eventually Futurice Stockholm was chosen as their supplier.

Departments: Hämäläinen sees that a very important function affecting the successful internationalisation to different countries is Futurice's Human Resources (HR) department (Actor HR), also called Group HR, which helps to find the best fitting recruits and in other activities related to human resources. The Futurice site operating in Germany has their own HR department, but other sites lean heavily on the Group HR. Especially in the internationalisation process to Sweden this department has proven very helpful, especially before Futurice hired Actor H. (Hämäläinen; Jylhä.)

Groups: Moving personnel (Actors MP) are highly important actors for Futurice. This is an organisational layer which consists of software developers, service and user experience designers, business designers, data-scientists, and other professionals. For example, the above-mentioned Actor RE belongs to this group. These actors belonging to this category are very important for gaining new customers and eventually they are the ones that work in the projects and assignments these customers have. Now Futurice Sweden has people from Finland, England and Germany who belong to this category. This group of actors and their competences are also considered the essence of the Futurice's offering, so they can also be viewed as crucial resources. Especially the competences, skills and experience developed by these individuals in their earlier career or in earlier projects are a huge strength of Futurice and play a major part in the successful internationalisation. (Jylhä.) In addition, some of the work done by this kind of personnel can be performed using remote working methods and tools, thus blurring the border between moving and stationary personnel. But to achieve best outcome and customer satisfaction, there should at least be a front-line team working at the same location as the customer is, as Hämäläinen points out. In addition, these professionals have their own networks, which can be useful in gaining new customers or recruiting new professionals.

Unlike the moving personnel, there are also stationary personnel (Actors SP), whom are mainly recruited to operate at a certain site. These personnel can essentially have the same skill-sets as the moving personnel, but they usually are more business driven and are usually personnel belonging to the middle or upper management, for example actors M, H, and S. (Jylhä.)

Furthermore, the most important actor (Actor M+H) from the perspective of the internationalisation process to Stockholm is the team consisting Matti Jylhä and Henrik Edlund. Their successful co-operation in sales, recruiting and other operations was and is of utmost importance in the initial steps of internationalisation as well as for the years to come as the Stockholm site moves towards the final steps of the internationalisation, becoming fully established foreign site of Futurice (Edlund and Jylhä). This is a team to which Actor M brings the culture, value proposition, internal networks, and the competences of Futurice. Actor H, in turn, brings his skills, networks and his understanding and knowledge of the local market. Both are (Jylhä.)

Last but not the least, Jylhä mentions the board of directors (Actor BoD) as one important group. Their main function from the perspective of the internationalisation is to help by setting goals, giving deadlines, asking the hard questions, and generally hurrying the process by helping when needed.

Summary of the key actors: The actors introduced were and still are important during the different steps of the internationalisation process of Futurice to Stockholm, Sweden. However, some of the actors were seen more important than others. Edlund concludes that the most important individual actors were himself (Actor H) and Actor M. However, both Edlund and Jylhä emphasise that they can and should be viewed as a closely co-operating team (Actor M+H). As a team, they were clearly the most important actor of the whole internationalisation process to Sweden.

Another important actor, according to Edlund, was the tech-lead Actor TL, who also has a big network, which has been leveraged in finding suitable recruits. Also his technological knowledge is essential. The importance of Actor H and his networks comes up as Actor TL came to Futurice Stockholm through Actor H's networks. Other important actors were the key colleagues from different international sites, Actors MP, and Actors KV, who helped in all kinds of situations related to the internationalisation process, for example gaining new clients and new recruits, gaining conspicuousness in the Swedish market, or to conducting operations related to customer projects or solving many kinds of miscellaneous tasks.

In addition, Jylhä sees that important actor or actor group, just after the combined Actor M+H, were the existing clients (Actors OC), who provided cash flow to keep operations running and important references and referrals used in gaining new customers or new projects in existing customers. In addition, these actors brought in their networks, which could be and were leveraged in many ways, for example to gain new clients or to meet new potential recruits. Furthermore, Jylhä points out that one important actor is Futurice itself, Actor F, and everything related to it. Most important part of the Actor F is the international mindset and the culture of the whole company, which are the corner stones for international operations.

Overall, it seems that the actors categorised as individuals (Actors M, H, TL) and their network relationships, knowledge and competences had the greatest positive impact on the initial internationalisation process to Sweden followed closely by the organisations category. However, it should be noted that the team of Actors M + H was indeed clearly the most important actor which positively influenced the internationalisation to Sweden. Third most important category was groups, of which especially the Actors MP, the moving personnel, was deemed very important. To put it shortly, they, their competences, and the unique value proposition and culture of Futurice combined are the actual offering that Futurice offers for their customers. Lastly, Futurice itself, Actor F, was naturally very important actor, because it consists of the all the important actors, but also resources within it.

4.2.2 *Key resources in the internationalisation process*

Financial resources: Futurice mainly finances their international operations with the cash flow (Resource CF) accumulated from already established clients, also known as the baseline-clients. Hence, the international operations of the Futurice are increased mainly through organic growth. However, usually there is a small starting investment (Resource SI) made by the mother company to the foreign site. Same applies for the case of Futurice Stockholm. Furthermore, some additional smaller loans are given when justifiable to ensure the foreign site does not run out of cash reserves and fail, if situation calls for that. (Hämäläinen.)

In addition, for the first time in Futurice's history Actor M applied for external funding from the Centre for Economic Development, Transport, and the Environment (Actor CED) and they received it. However, Hämäläinen and Jylhä state that this funding was not crucial for the decision to go to Stockholm and it was applied for only after the decision to go to Stockholm was made. It was considered more as a good bonus resource, but not an important one. Jylhä also points out, that the funding (Resource CED) received functions with a fifty-fifty percent logic, meaning that half of the funding needs to be originated from Futurice and the usage of the funding from the CED needs to be allocated, documented, and reported very accurately to the CED. Thus, as Jylhä puts, it can be complicated and hard to actually use, which easily leads to a situation where some of the granted CED funding can not be used at all in the given time period.

Physical and legal resources: According to the interviewees (Edlund; Hämäläinen; Jylhä) none of the physical or legal resources were seen as key resources in the internationalisation process to Sweden.

Human resources: Futurice's operations lean heavily on their professionals' knowledge, experience, and skills (Resource KES) acquired earlier on similar customers operating in same industry or earlier in their career. This kind of resources help in opening new customers within given industry in the new market (Hämäläinen and Jylhä). Basically, all actors develop Resource KES. In addition, Jylhä points out that one important resource when establishing Futurice Sweden was the earlier experience accumulated in the past internationalisation projects by both Actors SP and Actors MP. This is a good example of the resource KES.

Amongst the most important human resources, as Hämäläinen sees it, is the Futurice's business and sales orientated Director, Actor M, whom actively seeks out new opportunities and clients. He also attends different events and conferences and basically builds up business networks. He also seeks out new employees to the foreign site. In addition, Actor H is as important as Actor M. The reason for their importance lies in their

skills in networking and their ability to leverage the already established business relationships within their networks. (Jylhä.) Where as the importance of Actor H is in the external networks he has developed during his earlier career and in the knowledge about the local Swedish markets, the importance of Actor M is highlighted in his ability to bring about the internal networks and the unique culture and value proposition of Futurice to Sweden. Especially important is his knowledge of Futurice's value proposition, offering, people, culture and Futurice's internal networks, which he brings to Sweden. For example, he knows who would be best suited to help in different activities, be it sales, marketing, conducting customer projects or networking. (Jylhä.)

Organisational resources: Hämäläinen elaborates that Futurice sees one of their most valuable organisational resource assets to be the international mindset (Resource KV) they have developed; they see Futurice as an international firm and they act like one. They have an international culture, which is cherished all around Futurice. (Hämäläinen). Futhermore, Hämäläinen notes that Futurice does not use for example theoretical marketing research studies or similar when they are moving to a new foreign market, as they do not believe in those and do not see the need for them. More important is to have the right contacts and to have the general gut feeling that the internationalisation to a certain location should be tried. In addition, Jylhä backs this up by noting that the will to internationalise and a certain internationalisation culture is an important organisational resource during the internationalisation process to Sweden. Without international culture or mind-set, or international DNA, as Jylhä puts it, there would not be internationalisation operations in the first place (Jylhä).

As Futurice staffs the projects they are conducting in Sweden by recruiting suitable local professionals, sometimes it is not enough, as suitable recruits cannot be found and recruited fast enough. Thus, the movement of the personnel from other offices is crucial and it is made easier by using dedicated expatriate-packages (Resource EP), which streamlines the sending of professionals to foreign offices, like Sweden. (Hämäläinen). These packages are organisational resources including routines, procedures, and policies concerning internationalisation, making it easier for the personnel to understand what it means to go work in to a foreign site. (Hämäläinen.)

One important resource that Futurice uses when they pursue sales and deliver their services for customer projects is the Lean Service Creation (Resource LSC) methodology. It is something Futurice has created itself, and it is open source. It has three pillars: Agile Software Development, Lean Start-Up thinking and Design Thinking. LSC was created originally in Futurice Helsinki but used everywhere Futurice operates. Sometimes, the LSC is the perfect starting point for a conversation with a possible client in the first place. LSC could be categorised as a combination of useful routines, procedures, working

methods and culture and its used by Actors MP, but also everyone working for Futurice. It is a way of thinking and way of working. (Edlund.)

Moving personnel (Actors MP), introduced earlier, can also be a highly important resource (Resource MP) for Futurice. This is an organisational layer in Futurice, which consists of software developers, service and user experience designers, business designers, data-scientists, and other professionals. In other words, the people who work in the customer projects and build the digital solutions the customers and customer's customers want. Their competences are also considered the essence of the Futurice's offering, so they can essentially be viewed as crucial resources. Especially the competences and experience developed by these individuals in their earlier career or earlier projects is a huge strength for Futurice and plays a major part in their successful internationalisation operations. However, Futurice does not want to view their personnel as resources per se and prefer to see them as inseparable part of their offering. This kind of thinking is crucial part of Futurice's culture. (Jylhä.)

Informational resources: One important resource for Futurice in their internationalisation process to Sweden was and is the references of projects (Resource RE) made for their clients by other Futurice sites. These references were and are used to pursue new customers but also new projects within existing customers. However, most of the projects are protected with non-disclosure agreements, so Futurice can only talk about them in general terms, if at all. But the projects that are ready and published can be introduced more easily, for example, to show a software application or solution they have created, and which has been openly published. (Edlund; Hämäläinen; Jylhä.) These resources can be viewed as industry and customer specific knowledge as well as technological knowledge. Furthermore, as Futurice has internationalised to other European countries earlier, they have accumulated internationalisation knowledge and experience which is very useful in entering new foreign market. (Hämäläinen.)

In addition, amongst useful resources when gaining conspicuousness in foreign market, are the informational research documents also known as white papers (Resource W), which are made by Futurice. One example of these is the Information Technology Trends document published by Futurice. (Jylhä.) As Futurice is quite unknown in the foreign markets, when compared to the local players, this kind of material is important for gaining recognisability and credibility. (Hämäläinen.)

Relational resources: It seems that relationships and thus business networks are very essential in any successful business and same applies to Futurice's internationalisation. Edlund and Jylhä think that amongst the most important resources are the existing networks of the key actors, Actor H (resource HN), Actor M (resource MN), Actor S (resource SN) and others. For example, most of the recruitments already done in

Stockholm were originated through the business and personal networks of Actor H. Regarding the sales activities, many of the clients have been found through the networks of the key actors, e.g. Actor M and H. In addition, many clients were found through existing networks of the employees of Futurice. (Edlund; Jylhä.) For example, the Actor C1, the first large revenue customer gained in Sweden was introduced to Futurice because of Actor M had met Actor R in a certain event earlier. This relationship was one of the main reasons why Actor C1 contacted Futurice in the first place. Furthermore, many of the potential future customers were found through the combined networks of Actors M and H. (Jylhä.)

The professional network of Actor H (Resource HN) is a very important asset. Edlund points out that almost everyone they have hired to Stockholm can be linked to Edlund. Edlund continues that he does not know them all personally, but he has used intermediary contacts to find best fitting professionals. In addition to this, Edlund has a vision that the recruiting network grows exponentially, meaning that he might know three good candidates whom Futurice hires, and then these three candidates each know three more good candidates, whom they hire and so on. Edlund also thinks that the most important reason Futurice hired him was his personal networks, both recruitment networks and sales networks and the ability to create new networks. These networks were developed within twelve years, which Edlund has been on this career. Also the combined networks of Jylhä and Edlund (Resource OC) were highly important.

Jylhä points out the importance of the networks for the Futurice and he mentions, that one of the ways to staff their customer projects is by using freelance professionals they know. Futurice has a network from which they can access professional freelancers (Resource FN) when needed. According to Jylhä, this network is so important that he pictures it amongst the internal layers of the Futurice's organisation. Other layers are the already mentioned moving personnel (Actors MP) and stationary personnel (Actors SP).

Summary of the key resources: All the resources mentioned above have relevance for Futurice and have played important role in the internationalisation process to Sweden. However, same as the most important actors, some resources were seen more important than others. According to Edlund, the most important resource was networks of Actor H, Resource HN, which were used in many ways, but mostly to conduct sales operations (Activity S) and to conduct recruitment operations (Activity R). Jylhä extends Actor H's networks by adding his own to the mix, thus seeing that the networks of Actor H+M were most important.

The second important resource was a tie between the existing customers and their references (Resource RE) and their networks these customers bring about. However,

Edlund sees that the Resource LSC was the second important resource, as it was used in pursuing new customers and it was and is used in every customer project. Edlund (2016) ranks the Resource RE, the references of the completed customer projects as the third important resource, but Jylhä sees that the third important resource was the international mindset (Resource KV) and culture of Futurice. In addition, Edlund points out the relevance of the key colleagues from different international offices of Futurice, Actors KV and Actors MP, as sort of resources to be used when gaining new customers or solving hard problems. Jylhä also sees that the fourth important resource of the Futurice when examined through the lens of internationalisation process was and is the offering, which basically means the Actors MP, which can also be viewed as Resource MP. Overall, Jylhä concludes, that the combined networks of M and H were and are indeed very important, but also as important is the unique culture, competences, and value proposition of Futurice, which they have brought to Sweden.

In summary, the most important resources seem to belong to the relational resources category (OC, HN, MN), as the business relationship and the networks of different actors were amongst the most crucial elements found in the internationalisation process to Stockholm. Also, human resources (KES, MP) were ranked very relevant, of which the knowledge, experience, and skills of different professionals was most important. The organisational resources, basically competences and unique culture of Futurice (e.g. KV, LSC), were very important. In addition, the references of the existing customers (RE), which belong to the category of informational resources, were highly relevant for the internationalisation of Futurice. Financial resources were there, but they were not seen as that important. In addition, there was no single mention of physical or legal resources, so it seems they were not important at all.

4.2.3 Key activities in the internationalisation process

Resource combining: A1: Hämäläinen points out there usually is a close co-operation between Managing Directors of different locations (Actors KV) in different countries and together they pursue international clients. They combine their knowledge and experience of the industries, customers, and ways of solving different problems. (Hämäläinen). Thus, Actors KV combined their Resource KES for example with Actors M and H to help them gain new Swedish customers (Actors SC). (Jylhä).

A2: Also, resource combining takes place as an activity when Actor H+M combines and uses their knowledge, skills, and experience (Resource KES) to conduct sales operations (Activity S) and recruitment operations (Activity R) but also combine their

network relationships (Resource MN + Resource HN), to search for new clients in Sweden (Actors SC) or new recruits to Sweden (Actors SP), or in future to be used also as moving personnel (Actors MP) to help other Futurice sites with their customer projects. (Edlund; Hämäläinen; Jylhä.)

A3: Futurice Stockholm has local activities, Sales, and Recruitment. However, the recruitment function (Activity R) is not fast enough compared to sales (Activity S), so this leads to a situation where Futurice Stockholm must staff the projects by using professionals from other offices abroad (Edlund). Thus, Futurice Stockholm (Actor FS) used and uses the moving personnel (Actor / Resource MP) to staff the projects for Swedish customers (Actors SC). These moving personnel can also be used strategically for example to impress a customer. (Jylhä). A good and important example of this is (**A4**) when Futurice Stockholm (Actor FS) used Actor RE, an automotive industry specialist from Futurice Helsinki, first in closing the deal (Activity S) by bringing her expertise and knowledge (Resource KES) on board and then working in the project, using her skills (also Resource KES) for the benefit of that Swedish customer (Actor C2) operating in her speciality area. (Jylhä.)

A9: Resource combining also occurs when expatriate-packages are being used by the Actors MP or Actors KV, or basically anyone who moves to a foreign site for a certain period to conduct operations. As example, Actor M and his family used this kind of package when they were stationed to Stockholm. (Jylhä.)

A16: A situation of resource combining as an activity also takes place when Actor M contacted the Actor CED to gain funding, Resource CED. This Resource CED is then used to conduct operations of the Actor FS, for example to fund Activity S or Activity R, for example attending conferences or events and also to host them. (Jylhä.)

Resource exchange: A5: Hämäläinen points out that networking is an activity which has a great impact on the successful internationalisation. Networking, per Hämäläinen, is a basic activity and it has no given or documented process in Futurice, and everyone does it in one's own way. Networking can be done in various forms and the most usual is to be held or attend events and conferences (**Activity E**). An example of Activity E is when Actor M attended a certain event where he initially met Actor R, and later through and because of this relationship Futurice managed to close a deal to Swedish customer Actor C1. When examined closer this was due to a chain of events where the initial meeting between Actor M and Actor R led to a situation where Futurice Helsinki (Actor FF) helped Actor R's employee of that time, a start-up (Actor RS) to establish their operations in Finland. And from this positive experience, Actor R remembered Futurice and when his current employer, Actor C1, sought partners in Sweden, he recommended them to

contact Futurice Stockholm (Actor FS). This contact eventually led to a customer relationship between Actor FS and Actor C1. (Jylhä.)

A6.1: In the case of both Activity S and Activity R, it is highly crucial that Futurice can build up a convincing brand that is accepted in the current market. Hämäläinen talks about creating a scene-brand, which attracts suitable recruits but also gives Futurice a professional name in the target market. One way to achieve this, especially affecting recruitment activity, is by attending and organising local events by the professionals (both the Actors MP and Actors SP) of Futurice. Examples of these events are different hackathons, lectures, and meetups where professionals from different backgrounds gather to enhance their skills and exchange knowledge, be it from technological point of view (software development) or from design point of view (designing applications and services).

A6.2: The recruitment operations, Activities R, are very important for the internationalisation, as the goal of Futurice is to hire the right local people to the foreign site. Same applies for Futurice Stockholm (Hämäläinen). However, the recruitment function is usually not fast enough compared to sales, so this leads to a situation where Futurice Stockholm must staff the projects by using professionals from other Futurice offices abroad, either by working remotely or by flying them to the site (Edlund; Jylhä.) Overall, the recruitment is a very big issue demanding a lot of work and it has not yet been completely solved (Jylhä).

A7: When inspecting the Activity S more closely, per Hämäläinen most of the client-cases of Futurice have started via referral of the existing customers. For example, a client from Germany could open a link to a Swedish client. (Hämäläinen) Also, Jylhä adds, that very important thing when Futurice went to Sweden was the referrals and the networks created and gained in Nordic customers. In addition, sometimes Futurice has the other international clients, Actors OC, to fly and meet the customers in the target market. This is very valuable in building the trust of the clients and to prove Futurice is the right partner for them. (Hämäläinen.)

A8: Another important part of the Activity S is to get the right people working on the case. This could mean flying professionals, for example in a more technological case, fly specific technology specialist to talk to the potential client to get the deal closed. (Hämäläinen; Jylhä.)

A12: In addition, sales activities are also pursued with joint sales-trips. For example, in the early stages of the internationalisation process to Sweden, Actors M and S went together to these sales-trips. It also includes the exchanging of Resource KES, the customer knowledge and contacts created for example earlier in the previous internationalisation processes, especially by Actor S. (Hämäläinen.)

A14: The professional networks of Edlund are very important asset from the recruiting point of view. Edlund notes that almost everyone they have hired to Stockholm can be linked directly or indirectly to Edlund. In addition to this, Edlund has a plan that the recruiting network grows exponentially, meaning that he might know three good candidates whom they hire, and then these three candidates each know three more, whom they hire and so on. Edlund also thinks that the most important reason Futurice hired him was his personal networks, both recruitment networks and sales networks. These networks were developed throughout Edlund's twelve-year career. (Edlund.)

A13: Actor TS and Actors BoD spar and guide Actors KV and thus also Actor M. In addition, other Actors KV spars Actors M and H. This is done by exchange of Resource KES between these actors. (Jylhä.) Usually this would mean that Actor TS or someone from the Actors BoD or Actors KV help in conducting operations directly (for example calling someone they know) or indirectly by discussing the situation at hand. Mostly these situations are related to sales operations. (Jylhä.)

A17: Also, resource exchange occurs when Actor FS spar with Actor AV about business tactics in Sweden. This is done in a casual way by exchanging Resource KES, for example information about relevant networks and business relationships. (Jylhä.) In addition, this includes actions related to the office itself, as they share the same office. For example, they shared the earlier Stockholm office too so the relocation to the current office was made in co-operation. (Jylhä.)

Resource development: A15: The Group HR, which helps all the international offices, learns from every international process, generating valuable knowledge which helps them to support the functions of the different international offices better. Thus, every internationalisation project develops the HR functions of the Futurice group to support the leaders of the new site better. For example, HR has helped Actor M in recruitment operations, but the main responsibility is always on the shoulders of the leader of the site (Hämäläinen). For example, recruitment in Sweden needs to be highly strategic, because when compared to Finland, which has resignation period of one month, the Swedish counterpart is three months. This means that when recruiting new Swedish people, it takes quarter of a year to for them to start in Futurice Stockholm (Edlund). Another important example is the expatriate packages developed by the Actor HR. These are very useful when someone, be it from the Actors MP or Actors KV, relocates in to a foreign site. (Hämäläinen.)

Resource creation: Futurice Stockholm has local activities, sales (Activity S), which basically means creation of new business and usually new public references to be used in sales activities and recruitment (Activity R), which basically also means creation of new

human resources for the use of Futurice and its clients in their projects. Both are very important. However, there are other important resource creation activities.

A9: An example of important resource creation is the white papers done and published by Futurice. These are important resources and are used in creating and developing valuable scene-brand for Futurice in a target location, which helps in both Activity R and Activity S. (Jylhä.)

A10: The Lean Service Creation (LSC) methodology is a good example of resource creation, as it is something Futurice has created itself. LSC was created originally in Futurice Helsinki, but it is used everywhere Futurice operates. Edlund brings up that the LSC is a perfect reason to start a conversation with a new potential client. In addition, LSC is used by the Actors MP when they conduct operations for the clients of Futurice. Simply put, it is the working method applied by Futurice professionals working in customer projects, but also a tool used in opening new customer projects.

A11: In addition, when Futurice makes customer projects they usually gain references of those customer projects they have finished, and which have been published. This is also a form of resource creation. These references (Resource RE) are very important when trying to gain new customers and they are used as resources in the sales activities. (Jylhä.)

Summary of the key activities: All the above activities were important, however some of the activities were perceived more important than others by the interviewees. In the category ‘resource combining’, the sales and recruiting operations were most important. These were mainly conducted by leveraging the existing network relationships by combining them and the knowledge about them together by different actors (**A2, A3, A4**).

In the ‘resource exchange’ category, the most important activity was also related to networking. In addition, networking does not have any certain or documented process, but there were identified certain mechanisms or operations, which supported networking. Networking was done through attending or hosting different events (**A5, A6.1**) related to Futurice’s and its customers’ industries. Also, the activities related to sales and activities related to recruitment are a part of the resource exchange category. In sales, the most important thing amongst the networking was to be sure that there were right people working on the case. This was reached through joint-sales trips by different actors (**A12**) and by flying specialist to meet the relevant people (**A8**). It was also achieved by bringing the existing customers to meet the potential customers or by leveraging the networks of the existing customers (**A7**). In par with the sales activities were certainly the staffing activities. The staffing of the projects was done through three ways, of which two were most important. First is the direct recruitment to Sweden of which majority was done through networks of the Futurice employees, especially Actor H (**A14**). Second way was

to use the professionals from other sites either through remote working methods or fly the moving personnel on site (A6.2).

The ‘resource development’ was there, but it was not seen as that important. However, it could be argued, that the distinction of resource development and resource creation is vague, and in addition, one could argue that resource development takes place as part of most of the activities related to the internationalisation and to the daily operations of Futurice.

In the ‘resource creation’ category, two very important aspects were identified. First was the LSC methodology (A10), which was created by Futurice and is used both in pursuing sales activities and in conducting the customer projects themselves. Second was the reference cases gained from the finished and published customer projects. These references were then utilised in conducting sales activities by different actors.

It seems that majority of the most important activities took place within the resource exchange category and they mainly included activities related to networking, sales and recruiting. The second important category was the resource combining and, in this case, too, they were heavily related to networking activities, related to both the sales activities and the recruitment activities. The resource creation category was also deemed quite important and was placed as the third important category. These activities were aimed to create new tools or resources to be used in pursuing new customers and completing the customer projects more efficiently and serving the needs of the customers better. And by conducting these operations, new knowledge and experience is gained, which is used to further develop Futurice itself and its value proposition. The last and the least of the four categories was the resource development, which was not identified to be amongst the most crucial activities when viewed through the lens of internationalisation. However, this does not mean the resource development is not there. Quite the contrary: the resource development was seen to be part of all the activities, but it is hard to isolate and categorise.

4.3 A summary of the main empirical findings

In this sub-chapter, the most important empirical findings are presented (table 2). It is crucial to understand that it is very hard to prioritise the importance of the different actors, resources, and activities as all of them played their part in the internationalisation and likely continue to play important part in the future. However, some were deemed more important than others. In addition, many of the elements overlapped and were difficult to categorise. For example, some actors could be categorised as resources and so on.

Table 2: The key empirical findings

Research objective	Sub-objectives	Key empirical findings
Describe the role of business networks in the internationalisation of a Finnish software service firm	Analyse the key actors involved in the internationalisation process	Organisations: F, OC Individuals: H, M, TL Groups: MP, M+H Departments: -
	Analyse the key resources involved in the internationalisation process	Financial: - Physical: - Legal: - Human: KES, MP Organisational: KV, LSC Informational: RE Relational: HN, MN, OC
	Analyse the key activities involved in the internationalisation process	Resource combining: A2, A3 + A4 Resource exchange: A5, A6.1, A6.2, A7, A8, A12, A14 Resource development: - Resource creation: A10, A11

Overall, it seems that the actors categorised as individuals (M, H, TL) with their competences, knowledge and network relationships had the greatest positive impact on the initial internationalisation process to Sweden followed closely by the organisations category (F, OC). However, it should be noted that the team or group of Actors M + H was clearly the most important actor which influenced positively the internationalisation to Sweden. Especially so that Actor M brought his knowledge of Futurice, culture, their

projects, their references, Futurice's value proposition and knowledge of their people, which all was combined with the local market knowledge and networks brought by Actor H. Other important groups were the Actors MP, the moving personnel. To put shortly, they, their competences, and the unique value proposition and culture of the Futurice combined are the actual offering that Futurice offers for their customers. Lastly, the whole Futurice, Actor F, was naturally very important actor, because it consists of the all the important actors, but also the most important resources within it.

In summary, the most important resources seem to belong to the relational resources category (OC, HN, MN), as the business relationship and the networks of different actors were amongst the most crucial elements found in the internationalisation process to Stockholm. Also, human resources (KES, MP) were ranked very relevant, of which the knowledge, experience, and skills of different professionals was most important. The organisational resources, basically competences and unique culture of Futurice (e.g. KV, LSC), were very important for the successful initial internationalisation. In addition, the references of the existing customers (RE), which belong to the category of informational resources, were highly relevant for the internationalisation of Futurice. Financial resources were there, but they were not seen as that important. In addition, there was no single mention of physical or legal resources, so it seems they were not important at all.

It seems that majority of the most important activities took place within the resource exchange category (A5, A6.1, A6.2, A7, A8, A12, A14) and they mainly included activities related to networking, sales and recruiting. The second important category was the resource combining (A2, A3 + A4) and in this case too, they were heavily related to networking activities, related to both the sales activities and the recruitment activities. The resource creation category (A10, A11) was also deemed quite important and was placed as the third important category. These activities were aimed to create new tools or resources to be used in pursuing new customers and completing the customer projects more efficiently and serving the needs of the customers better. And by conducting these operations, new knowledge and experience is gained, which is used to further develop Futurice itself and its value proposition. The last and the least of the four categories was the resource development, which was not identified to be amongst the most crucial activities when viewed through the lens of internationalisation and business networks. However, this does not mean the resource development is not present. Quite the contrary, the resource development was seen to be part of all the activities, but it is hard to isolate and categorise. Figure 13 visualises the complex network involved in the internationalisation.

In the table below is a list of different actors, resources and activities.

Table 3: List of actors, resources and activities

Actor C1: Client in hospitality and travel industry	Actor FS: Futurice Stockholm
Actor C2: Client in automotive industry	Actor F: Futurice Group
Actor C3: Finnish-Swedish client	Actor HR: Futurice's human resources department
Actor C4: Finnish-Swedish client	Actor BoD: Futurice Board of Directors
Actor R: Swedish contact person in start-up scene	Resource RE: References of Futurice's projects
Actor RE: Automotive industry professional	Resource KES: Knowledge, experience and skills
Actors SR: Swedish-Finnish clients	Resource CF: Cash flow from existing clients
Actors SC: Swedish clients	Resource SI: Small starting investment
Actor CED: The Centre of Economic Development, Transport, and the Environment	Resource CED: Funding from Centre of Economic Development, Transport, and the Environment
Actor AV: Avaus Marketing Innovations, a partner firm	Resource KV: Documented international mindset of Futurice
Actor M: Matti Jylhä, Business Leader and Founder of Futurice Sweden	Resource EP: Dedicated expatriate-package
Actor H: Henrik Edlund, Managing Director of Futurice Sweden	Resource LSC: Lean Service Creation methodology
Actor M+H: Managing Team, Matti Jylhä and Henrik Edlund	Resource W: Whipe papers
Actor S: Sampo Hämäläinen, Founding Director of Futurice London and Berlin	Resource HN: Eklunds's networks
Actor TL: Technical lead	Resource MN: Jylhä's networks
Actors OC: Other international customers	Resource OC: Jylhä's and Eklund's networks
Actors MP: Moving Personnel, professionals of Futurice (Also Resource MP)	Resource SN: Hämäläinen's networks
Actors SP: Stationary personnel	Resource FN: Professional freelancers
Actors KV: Directors of foreign Futurice sites	Activity S: Sales activities
Actors OC: Existing clients of Futurice	Activity R: Recruitment operations
Actor FF: Futurice Finland	Activity E: Held or attend conferences

5 CONCLUSIONS

ARA-model proved to be useful in describing the internationalisation of a Finnish software service firm, Futurice. It helped to show that the business networks, outside and inside the company, had a major positive impact for the internationalisation of Futurice. It was evident that certain key actors, especially key individuals had the greatest positive impact for the internationalisation. This impact was achieved through their network relationships and through their knowledge about these networks. These networks and network relationships were mainly used to find potential new customers, to gain better positions in old customers and to find new specialised recruits, i.e. to gain better position in the market. To put short, these networks were used to overcome limitations and to mobilise resources that Futurice and its clients needed. The needed resources were either directly or indirectly found from the already established vast business networks of the key individuals. Especially Actor H had already formed an effective network identity, which Futurice leveraged to gain better network position to attract new customers and new professionals to be recruited.

At the time when the interviews were conducted, Futurice had been operating locally in the Swedish market for 18 months. Thus, this research investigated early stages of internationalisation and what positive role networks had in it. At later stages of internationalisation, the role of networks might differ. The management of Futurice concludes that first real checkpoint for international activities is when three years have passed from the initial internationalisation steps and it takes total of five years to truly see if the internationalisation has worked out.

5.1 Theoretical implications

ARA-model has originally been developed to understand manufacturing industry. Nature of a software service company's delivery is usually more creative than character of traditional manufacturing industry. Customer deliveries are creative actions related to knowledge, experience, and skills (KES resources), which are an integrated part of actor entities. This overlapping of actors, resources and even activities make view on ARA-model slightly blurred, especially in the case of software service industry. However, regardless of this overlapping, it has been inspiring for participants of this study to fit their business into ARA-model. To adapt software service business into ARA-model steers participants really think thoroughly their business and to perceive perhaps a bit more in-depth understanding of their own day-to-day work, especially that of other actors.

Internationalisation is a chain of events taking place over time. It is a process. As ARA-model lacks time dimension it forces to integrate usually dynamic entities into a timeless model. This makes it very hard to illustrate dynamics of the events, but it leads to a summarised description of essential entities of the process. That helped to reach the objective of the study by focusing the attention of the interviewees to the entities, which influenced the internationalisation process positively. In conclusion, it seems ARA-model can be used effectively to shed light on the outcome of a process and the important entities affecting the result. ARA-model could perhaps be enhanced by introducing the time dimension.

ARA-model seems to be a bit vague on categorisation, especially on the resources dimension. Adapting RA-theory, as Rusanen (2014) did, helped to picture a clearer view of the different entities related to the internationalisation of Futurice. In addition, removal of activity resource integration produced a clearer four-step categorisation on the activities dimension. Thus, it seems ARA-model could benefit from a more precise categorisation which would make it easier to apply by researchers.

Existing academic literature offered a little help in finding a consensus for a definition of a software service company. In this thesis software service firm was defined as a company that does one or any number of these activities: hires out human resources at an hourly rate, builds customised software and/or software modules for the customer in independently managed projects at a fixed price, consults and helps customers in service and IT-architecture specification, data analysis, machine learning, design, implementation, testing and maintenance related to the software and helps customers with other related services. These other related services include business consulting, service design, user-experience, and customer-experience consulting. However, this definition is most likely incomplete, but still might prove to be useful for academics but also people working in or getting familiar with the industry.

Concerning similarities with other studies in the field, there has been a number of studies on the subject, but only few of the studies have taken into account the networks in general and not one of the studies used ARA-model to map the key elements found in the network. In addition, only Forsell (2010) and Ochoa-Giraldo, Gurusamy and Gonzalez-Perez (2014) used a single case study method, which is warranted due to the complexity of the network. Thus, the similarities with earlier studies seem to be limited mainly on the subject of the research. However, findings about the importance of the networks for the internationalisation of various software firms seem to be in accordance with the findings of the Coviello and Munro (1997), Turcan and Jones (2002), Zain and Ng (2006), Sasi and Arenius (2008), Forsell (2010), Rossiter (2011) and Ochoa-Giraldo, Gurusamy and Gonzalez-Perez (2014).

5.2 Managerial recommendations

This study and its key findings should be presented to the management of Futurice. This could be combined with a brainstorming workshop, which would generate guidance and ideas for the development of Swedish entity, as well as for any other new Futurice entities. Recommendation is that at least mother company management and both Futurice's German and Swedish management should participate that workshop. German management would bring deeper experience of internationalisation and act as a benchmark for findings about Futurice Sweden.

This thesis could be considered as a model of documenting the internationalisation process of Futurice to Sweden. It would serve as a source of experience for new international units as well as material for developing existing operations. It could be beneficial to use this study as a basis for a more documented and step-by-step model for future internationalisation projects.

It would be likely useful to compare Swedish outcome of the study to a more mature international unit of Futurice to detect early signs of success or threat of failure. Recommendation is to make another study of German site. Ultimately it would be best to have a study on all the internationalisation endeavours and cross examine them to find similarities and to find out if there are some patterns that could be generalised and then used as a tool for future internationalisation. In addition, other similar companies could also benefit from it.

All the results are based on research with internal resources of Futurice. It would be clarifying to get customers view on the network identity and position of Futurice. That would help to crosscheck some of the key assumptions of management and in the best case deepen and broaden management's understanding of Futurice as part of the business network. This kind of initiative should be mutually beneficial for both the customers and Futurice. From customer point of view this should be perceived to improve Futurice's service quality for them. Futurice would gain more understanding of the customers and their needs in the current network. Well-planned questionnaire or interviews would also serve as a marketing tool by developing customers understanding of Futurice's offerings.

In screening for potential customers some weight should be given for customers network position and their influence over the network. Analysing the networks of potential new customers could justify some extra emphasis in sales activities for those candidate customers. Shortly put, it could be beneficial to allocate interest on whose

network would create most value for Software service company. For example, extra discount could be given to secure a deal with a customer whose existing network would give reasonable positive visibility and reference on target market. This kind of ranking of potential new customers would be most effective, if analysis of their networks would be performed already while defining target market. Analysis might be based on information gathered from public information about customers, like annual reports, press releases, social media presence, meetup group memberships etc.

Findings suggest that resources related to knowledge, experience, and skills (KES resource) are key for success. It is vital that such resource is well understood and documented in detail and updated regularly according to changes. Additionally, it should be available and continuously communicated as well as within the organisation and to customers. It is crucial that all of the customer facing personnel have in depth understanding of these resources. KES resource should remain as a key component of marketing messages to customers.

Results of this study highlight importance of the knowledge of target market. Thus, as Futurice had done in Sweden, it is suggested that a person or a team with strong local knowledge and already established relevant network is recruited when pursuing new international markets. By combining knowledge of KES resource with the knowledge of the target market positive results followed. In addition, when entering a new foreign market, it could be useful to perform a market research of needed KES resource qualities to optimise offering for the market

As the findings show, most important activities were related to networking, sales and recruiting. Management should focus on leading these activities and they should be closely monitored and quantified clearly. Especially activities related to networking should be emphasised. While recruiting, attention should also be in expanding the Futurice's network. Potential candidates should be skilled, but some level of emphasis should be given for candidates access to relevant new networks. These new networks could then be leveraged in both sales and further recruitment. For all these activities clear metrics should be implemented where possible. Also, useful tools helping in networking are suggested, such as social networking services (e.g. LinkedIn, Facebook, Twitter, Instagram). Social networking connections, like LinkedIn connections of company's employees could be used as a measurement of the size and the quality of the business network of company, which in turn could be used in a variety of ways (e.g. recruitment, choosing of the target market, marketing, sales).

Recruitment of new talents is easier, if company has a reputation of employing well known, leading individuals in their jobs. In software service industry, especially in open source sector of it, there are several networks where software developers perform

publicly, often disclosing their employing companies. Such networks like GitHub, BitBucket and GitLab are perfect places to show up to improve company's reputation as a leading and cutting-edge employer and player on the market. Recommendation for management is to support top talents in their activities of committing on publicly shared development actions. Also, management could use such networks as a source of evaluated candidates for recruitment. These findings and suggestions might also be useful for other companies operating in same industry or similar knowledge intensive industries.

5.3 Suggestions for further research

As discussed in managerial recommendations an idea would be to conduct similar studies of other international Futurice sites and compare results with this study. Such a research should concern the relevant phase of each entity to improve comparability. For example, German site could be studied, which would mean that research would have to be conducted retrospectively. Of course, in such an afterwards composed history some challenges might emerge, such as forgetting some business blunders e.g. bad investments or decisions. On the other hand, it could perhaps lead to emphasising of some positive elements more than their weight was at the actual moment.

In addition, it might prove useful if ARA-model could handle time dimension i.e. changes in network over time. Author suggests that ARA-model should be expanded from a static model towards a dynamic one. An option could be to introduce sequential states of network depicted by ARA-model, enabling it to indicate correlation or causality between them. Such a dynamic ARA-model could, perhaps, be tested by conducting further research of Swedish case. It could also be useful to create such a sequential dynamic model of a more mature international entity retrospectively, such as Futurice Germany. This would make possible to compare German and Swedish dynamic models. Findings of such research could be used to develop Swedish entity.

Concerning the scope of this thesis, Swedish site, it would be interesting to conduct same interviews with CEO and chairman of the board of Futurice and compare results with the results from the management team. Potential differences in the views could be beneficial for future company development.

Similar study for some other service-oriented company trying to get into Swedish market would create a benchmark for Futurice case. For both entities this could deliver some new ideas or unfold market characteristics that should be considered in future business endeavours.

As the KES resource was seen crucial, further study about it is warranted. Such a deeper analysis of KES resource could lead to better understanding of competitive advantage it provides and withholds.

In this thesis negative effects of network functions were left out of scope. New initiatives fail easily, like attempts to internationalise. Obviously negative effects are related to weaker business performance. It would be interesting to study those negative effects of networking in the Swedish case. At least listing of main negative effects might help to avoid potential mistakes in further development of the business.

Some parts of the ARA-model were left for lesser attention in this study. Deeper analysis of different network levels could increase the value of the study for Futurice or other similar companies. Wider research of the network level would lead to an increased understanding of the market where Futurice Sweden has established a foothold. Those research results would also be applicable for other companies in similar phase as Futurice Sweden.

As the definition for software service firm produced in this research was and will most likely be incomplete, it could be of value for academics if it could be specified further. This applies for the Software service industry in general. It is safe to say that such important and huge part of IT industry is rather understudied. The author urges academics to study this field further.

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APPENDICES

Appendix 1 Earlier empirical studies on the internationalisation of software firms involving network perspective

Author(s)	Method	Main findings
Bell (1995)	Survey	Importance of client followership (pull), targeting of niche markets and industry-specific trends.
Coviello & Munro (1997)	Multiple case study	Based small software firms and demonstrated that they used their networks extensively to expand into foreign markets.
Turcan & Jones (2002)	Multiple case study	Their findings showed that the initial international expansion of these companies was influenced mainly by network relationships. However, the impact of networks on subsequent internationalisation of these companies diminishes over time.
Moen, Gavlen & Endresen (2004)	Multiple case study	Network relationships are determinant with regard to which foreign entry forms they choose and to some extent, which markets they decide to enter. The firm may choose one entry form in one market and a different one in another similar market, depending very much upon the options available in terms of their network relationships.
Zain & Ng (2006)	Multiple case study	A significant influence of network relations on the internationalisation of small software firms in Malaysia.
Ruokonen, Nummela, Puumalainen & Saarenketo (2006)	Multiple case study	They found out that the product plays a significant role in the choice of international partnership strategies, four of which are put forward as relevant to software firms. The Selection of a suitable strategy should be based on a thorough evaluation of the company's products, its own resources, and its

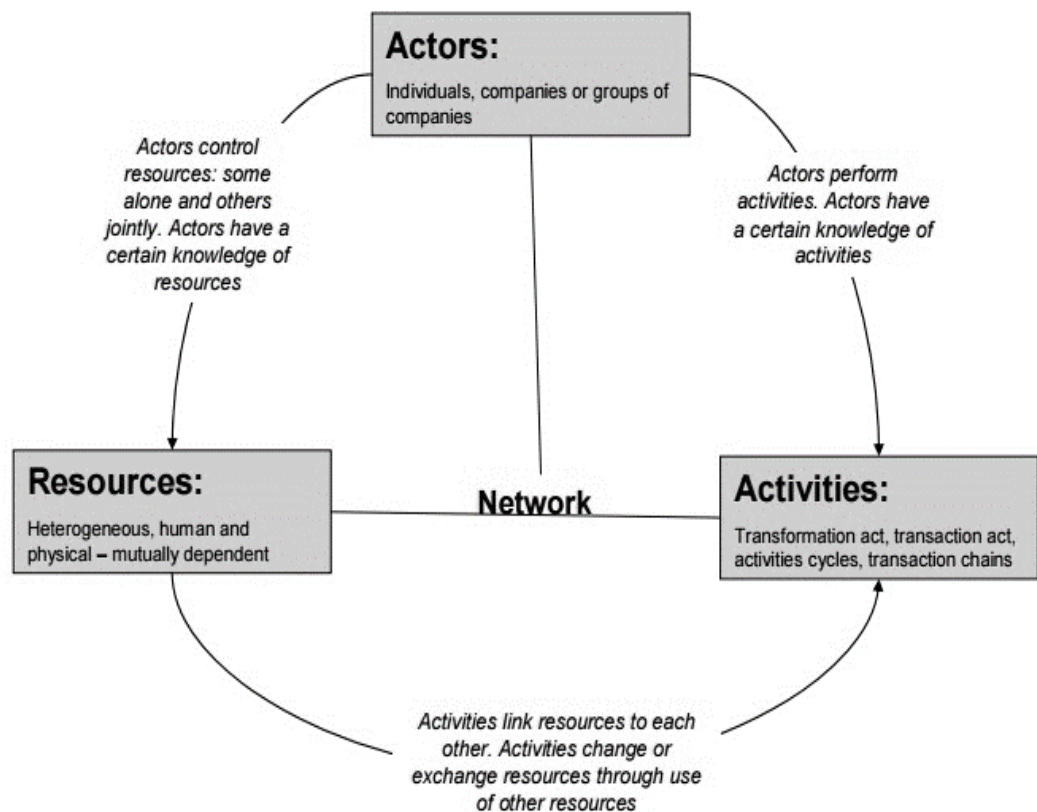
		requirements for potential partners. Managers should also pay attention to creating a revenue logic that is mutually rewarding for the company itself and its partners.
Ojala (2008)	Multiple case study	Firms do not use their network to select the market but select their market and mode of entry first and then start developing the network. Important variables in the study were found to be the formality or informality of the network relation of the firm.
Sasi & Arenius (2008)	Multiple case study	Firms gained access to and mobilised resources through established long-term relationships, which were usually originated from the founders, not from the firm. Furthermore, the relationships were based on a high level of trust and commitment, especially in the early phases of the internationalisation. Firms relying on dyadic relationships are usually successful in completing the first phase of internationalisation. However, dyadic relationship can become a limitation during the subsequent international growth. In the second phase, only the firms that can transform the dyadic relationships to multilateral network relationships can achieve huge international growth.
Touru, Suominen & Rönkkö (2009)	Combining quantitative and qualitative methods	They found out that some of the software firms followed the older U-model in internationalisation. However, they also found that some firms started their internationalisation from geographically and/or psychologically distant countries, like United States, China, Japan or Korea, which contradicts the older Uppsala model. In addition, from the four interviewed case firms one firm reported that they have expanded to Asia from the request of their partner organisation, which is in line with the network theory.
Forsell (2010)	Case study	He argues that network theory can better explain success and give a more concrete view of the internationalisation than stage models of internationalisation. In addition, the actors involved in the

		everyday actions in a foreign office and their interconnectedness with the rest of the company are important. The participation of a multi-divisional company's board of directors does not have consistent effect on the success of internationalisation.
Rossiter (2011)	Survey	Her findings suggest that the business networks are an important strategic mechanism when firms develop their international business. Further, the network collaboration was seen to have a strong impact on exports by smaller software firms.
Reuwer, Jansen & Brinkkemper (2013)	Multiple case study	Their findings suggest, that a dominant model explaining the internationalisation cannot be identified. Instead, they suggest that firms appear to act intuitively and opportunistically, without a distinctive internationalisation strategy specific to SaaS. Furthermore, the firms selling both SaaS and onpremises software seem to internationalise by using their existing international infrastructure and the firms exclusively selling SaaS internationalise much faster.
Ochoa-Giraldo, Gurusamy & Gonzalez-Perez (2014)	Case study	They found out that multiple internationalisation theories can be related to the different internationalisation strategies of the case firm: i.e. Uppsala Model, the Network model and the Non-Sequential Internationalisation model. However, they argued that firm's strategy could not be fully explained by any of the existing internationalisation theories. In addition, the internationalisation was mainly influenced by knowledge, decisions of the manager and by his network relationships that he had generated earlier. Furthermore, the firm held a position inside an international (relationship) business network, which they used as means to discover and create more business.

Appendix 2 Pre-interview guide

The objective of this research is objective of this study is to *analyse the role of business networks in the internationalisation of a Finnish software service company.*

In summary, business network consists of actors, resources and activities. Actors control resources, some alone and others jointly with other actors. Actors also perform activities, which use the resources and link resources together. Performed activities then change or exchange resources. Actors, resources and activities are all part of the network and can be linked directly or indirectly (via an intermediate) to other important relationships. A basis of the framework is shown in the figure below:



Please, identify the **key** actors that positively influenced Futurice’s internationalisation process to Sweden. Below is an example list of possibly relevant actors:

- 1) **Organisations:** i.e. customers, partners, government organisations, subsidiaries, unions
- 2) **Individuals:** i.e. employees, friends, family, clients, agents
- 3) **Departments:** i.e. departments in firm(s)
- 4) **Groups:** i.e. groups of employees, teams

Secondly, please identify the **key** resources that were relevant in Futurice's internationalisation to Sweden. Below is an example list of possibly relevant resources:

Resource type	Examples of resources
Financial resources	Cash reserves, external financing
Physical resources	Raw materials, plant, facilities, hardware, software, and other equipment
Legal resources	Trade-marks, licenses
Human resources	Knowledge, skills, and experience of employees
Organizational resources	Competences, controls, policies, culture, procedures, and routines
Informational resources	Customer knowledge, competitor knowledge, and technology knowledge
Relational resources	Relationships with employees, competitors, suppliers, customers, etc.

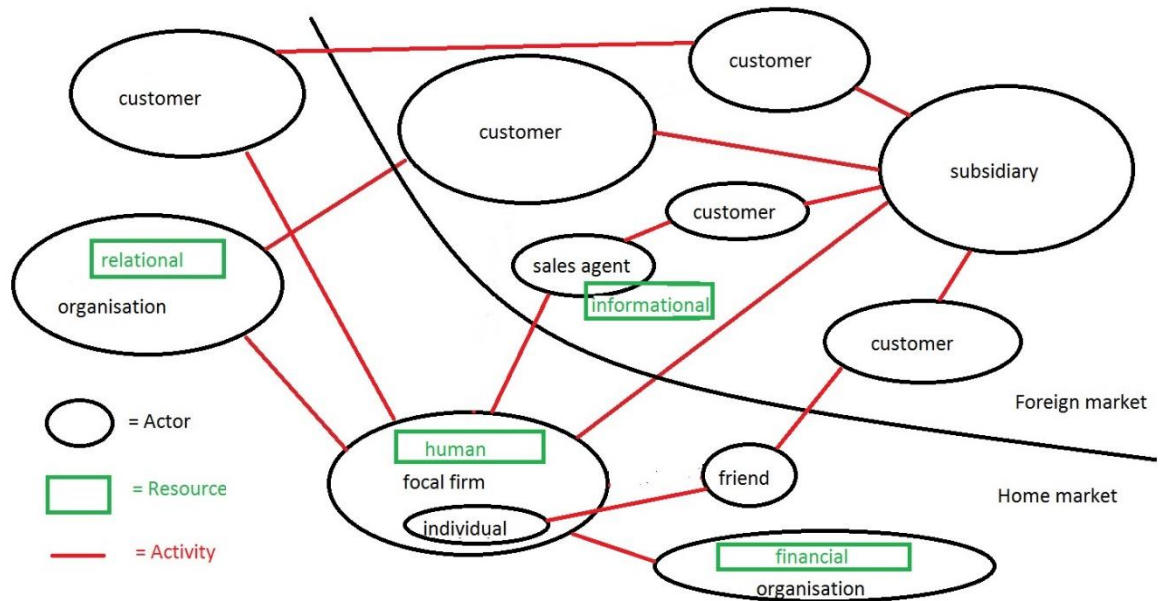
Thirdly, please identify the key activities that took place and were performed by actors by using resources during your internationalisation to Sweden. Below is an example list of activities:

A) Resource combining refers to the situation where actors connect their resources in a business relationship towards a certain purpose, mostly to create value. When they combine the resources to create value, it accumulates knowledge over time, which may lead to new and better ways to combine the resources. Usually, the knowledge related to resource combining is employee specific and implicit and its roots are in experience.

B) Resource exchange refers to exchanging of resources between actors. It includes everyday firm-to-firm (actor-to-actor) transactions of business, social or informational nature.

C) Resource development means changing of the features of a specific resource, for example to serve the needs of the customer better.

D) Resource creation refers to situation where new resources are created by using other resources. The situation of resource creation basically refers to a very tight interaction between actors with a goal of creating new resources. It is crucial to understand, that some of these concepts presented here might not be present or they might not be deemed as important, thus not be drawn in to the network.



Finally, if possible, please draw with your free hand a *preliminary business network* involving the key entities in the internationalisation process on a A4 paper (see upper example). If possible, please try to use the concepts presented in this guide. In the actual interview, a more detailed version will be drawn again in co-operation with the interviewer in order to enhance the understanding. The business network doesn't need to be complete at this point. In addition, please apply only the key entities, which in your opinion positively affected the internationalisation most. It could be easiest to start with the actors and just draw lines as relationships between the actors. In the interview, those relationships are then to be examined more closely (i.e. what activities were performed, what resources were used and why those were important). Remember, there are no right or wrong answers here! After you have made the *preliminary business network*, if possible, please scan it and send it to the interviewer before the interview.

Thank you!

Yours sincerely,

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