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Master's Degree Programme in International Marketing Management (MIMM)

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**DYNAMICS OF NETWORKING KNOWLEDGE AND
INTERNATIONALIZATION OF THE FINNISH CLEANTECH SME**

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ABSTRACT

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The aim of this master's thesis was to examine and increase knowledge on Finnish cleantech SME internationalization from network perspective. Further objective included identifying possible networking knowledge from earlier internationalization process that might be utilized to facilitate new market entry process. The theoretical framework was based on SMEs internationalization and knowledge transfer literature. Moreover, this study aimed at bringing more knowledge about cleantech sector in general and cleantech in Russia and in Sweden in particular.

The study is a qualitative study, in which the research method adopted was a case study. The empirical part was implemented by collecting data through semi-structured interviews with one of the case company's founders, observations and by going through internal documents of the company.

The empirical findings indicated that due to the differences between cleantech markets in Russia and in Sweden, the amount of networking knowledge that can be utilized is limited. In Russia, social network relationships were found to be of a great importance. On the other hand, in Sweden the focus should be kept on institutional relationships and business relationships because of Sweden's high level cleantech expertise and commitment towards environmental sustainability. Moreover, some other knowledge that was identified as being useful for the case company refers to partner selection process and some possible internal and external factors affecting network establishment and new market entry.

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LIST OF ABBREVIATIONS

BMSTU	Bauman Moscow State Technical University
CEO	Chief Executive Officer
EU	European Union
FDI	Foreign Direct Investment
HSE	Higher School of Economics
IB	International Business
OECD	Organization for Economic Cooperation and Development
R&D	Research and Development
SMEs	Small and Medium-sized Enterprises

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1 INTRODUCTION

1.1 Background

Internationalization process of companies is seen as a journey into the unknown future where companies learn and uncover opportunities and challenges (Barkema et al., 1996; Barkema & Vermeulen, 1988). Going international is considered to be a mean for companies to continue their future growth and expansion of their business. Over the last two decades, network approach on internationalization has gained acceptance and recognition in the field of IB and been found to be a common pattern among small and medium-sized enterprises by numerous scholars (Johanson and Vahlne, 1992), (Johanson and Mattson, 1988).

Throughout the world, there is a growing evidence that small and medium-sized enterprises play a crucial role in the national economic development of any country. In Europe SMEs represent more than 99 percent of all the business (Eurostat, 2016). Furthermore, the role of SMEs in Finnish economy and the employment is also significant, however, only 16 percent of all these Finnish SME's have international operations (Yrittäjät, 2016).

The markets for clean technologies, while still nascent, are growing constantly. Clean technologies aim to provide a path for both developed and developing countries to address such serious problems as air and water pollution, resource scarcity, greenhouse gas emissions and deforestation (Clean Edge, 2016). Many players are committed to the development of cleantech cluster, including governments, academia, investors and multinational corporations. However, entrepreneurial startups are in the center among all these players, being the most common platforms to bring an idea to market (Knowles et al., 2012).

The future of internationalizing cleantech SMEs, however promising, will not come easily or cheaply. The problem in context of cleantech sector is that companies may face a number of cluster specific challenges such as high regulatory barriers, a need for large capital expenditure and frequently long lead times. This can result into market failure at the start up stage. Consequently, it is important to study and understand the different

aspects of the internationalization process in order for Finnish SMEs in cleantech sector facilitate new market entries.

1.2 Research Aim

Even though the importance of previous internationalization experience and networks has been studied by many researches in the past decades, there has been little research conducted in relation to the context of the current study. Therefore, this paper considers foreign market entry as a process of using relevant target market networks rather than as the structural organization of international expansion.

The research is carried out for a small Finnish cleantech company that is interested in entering the Swedish market. High level of environmental awareness, environmental protection laws and regulations, innovative and industrious society have made Sweden one of the global leaders in the cleantech sector (Eco-Innovation Observatory, 2015). Therefore, Sweden is considered to be a home to innovative cleantech companies and an ideal base for launching new products and technologies. Since the company has already internationalized to Russia, the objective of the study is to understand how can Finnish SME in the cleantech sector make use of its previous networking knowledge and experience in order to facilitate market entry process to Sweden.

Network and reputation positively affect both ability to internationalize as well as the speed and the scope of the internationalization (Zahra et al., 2000). Thus, the outcome of the research aims to identify the key successful factors of SME internationalization from network perspective and knowledge transfer through a theoretical background. Above all, this study could be useful for the case company to get the better understanding of how market knowledge from previous market entry can be used and what kind of knowledge might be transferable to Swedish context.

1.3 Research Questions

The study investigates the possible influence of SME's previously acquired networking knowledge during international entry in the context of cleantech sector in Sweden. Since the company has already internationalized to Russian market, the aim of the study is to understand to what extent the company might utilize knowledge and experience gained from previous market entry to facilitate market entry to Sweden as its next

internationalization destination. To achieve set goal, the main research question and sub questions should be stated:

How can Finnish Cleantech SME utilize networking knowledge acquired from previous internationalization process to Russia to facilitate internationalization process to Sweden?

Sub questions:

- How can a clantech SME establish networks when entering Russia?

First sub-question is intended to identify the possible ways of establishing relationships in Russian cleantech networks. The researcher aims to gain knowledge on existing actors within selected context and the most valuable types of networks through answering this question.

- What kind of network knowledge is transferable to Swedish context?

The second sub-question is aimed to investigate the type of networking knowledge gained from previous market entry that might be transfered on a corporate level to facilitate market entry to Sweden. The theoretical synthesis combined with empirical evidence is expected to serve as a basis for the answer to the following question.

Therefore, in order to answer the main research question, a critical evaluation of the the Network approach to internationalisation theory as well as cleantech markets both in Russia and Sweden provide understanding on possible network experience that might be utilized by the Finnish cleantech SME.

1.4 Theoretical Framework

Theoretical framework is designed by looking into the existing theories and research regarding SMEs' internationalization with a focus on a networking theory. It is followed by review of different types of relationships in networks, network relationship development and partner selection aspects. Moreover, role of networks in Russia is discussed as it is a context of the study. Additionally, knowledge transfer is introduced as a way to accelerate new market entry. Literature on factors affecting knowledge transfer is also briefly covered to provide a basis for understanding the impact of different aspects that can influence knowledge transfer effectiveness.

Therefore, the aim of the literature review section is to provide a primary level understanding on the network relationship development, their influence on the internationalization process and knowledge transfer. Moreover, this study aims to bring more knowledge and highlight the perspective of internationalization process of Finnish cleantech SMEs. Thus, this paper also brings more knowledge about cleantech sector in general and cleantech sectors in Russia and in Sweden in particular.

The theoretical framework presented in Figure 1 represents the literature covered within the research area and depicts the main theories and concepts.

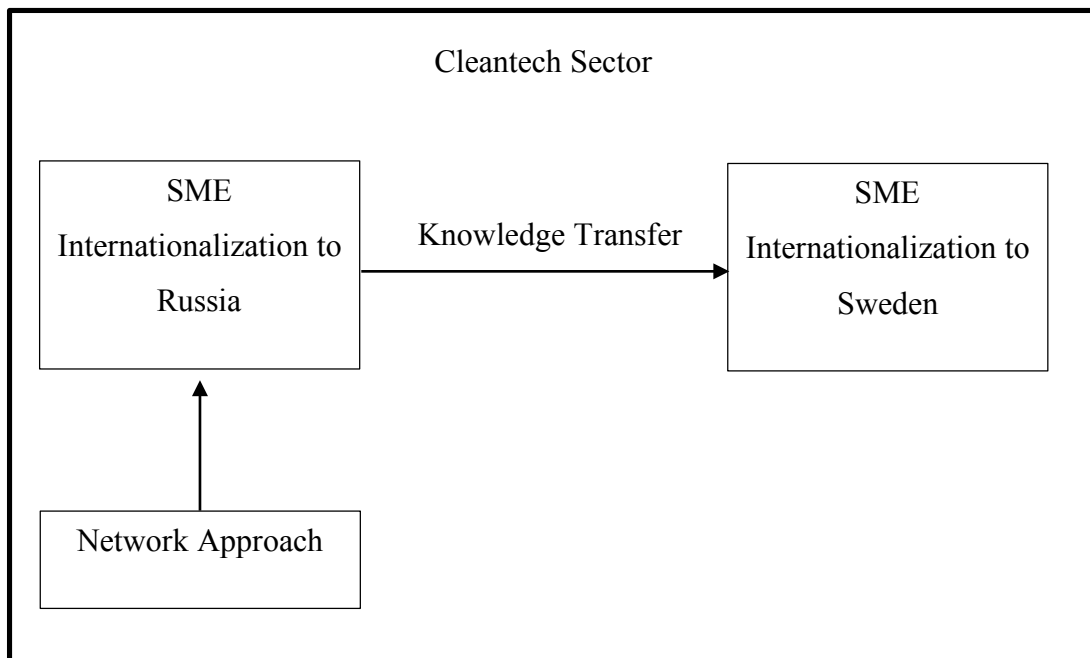


Figure 1. Theoretical Framework

1.5 Definitions and Delimitations

Since the context of the research is relatively precisely limited, it creates delimitations. Due to the fact that the research is focused on internationalization process of one specific type of company (SME) in a specific field (cleantech) and compares two specific markets (Sweden and Russia) the results cannot be easily generalized to outside of the context. Nevertheless, this study is not purposed to generalize the results but rather offer deep understanding of phenomena with rich descriptions and explanations (Eisenhardt, 1989).

The literature review in this study leans toward specific perspective on internationalization of Finnish SME from Network theory. Thus, network approach is addressed to better understand the internationalization process of the case company and how networks may have a role in their internationalization processes. Another delimitation of this study concerns the focus on two specific markets – Russia and Sweden, former is the one where the company has already internationalized and latter is one of interest for the case company.

Below are some important definitions of concepts which were used in this study:

Internationalization: “a process of increasing involvement in international operations” (Welch and Luostarinen, 1988).

Small and medium enterprise: “enterprise with fewer than 250 employees and a turnover of no more than €50 million or a balance sheet total of no more than €43 million” (European Commission, 2016).

Network: Axelsson and Easton (1992) defined network as a set of two or more connected exchange relationships.

Network theory: According to network theorists, internationalization is seen as a natural development from network relationships with foreign companies and individuals (Johansson & Mattson, 1988).

Knowledge: “Knowledge is a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment and framework for evaluation and incorporating new experiences and information. It originates and is applied in the minds of knower’s. In organizations it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices and norms” (Davenport and Prusak, 2000).

Knowledge Transfer: “the process through which one unit (e.g. group, department or division) is affected by the experience of another” (Argote & Ingram, 2000).

Cleantech: economically competitive and productive technology that facilitates more efficient and ecological use of resources (Skene & Murray, 2015).

1.6 Structure of the Study

The thesis is made up of seven chapters and it is broadly divided into two parts. Part one deals with theoretical issues, while empirical results are discussed in part two. Figure 2 illustrates the overall structure of the study.

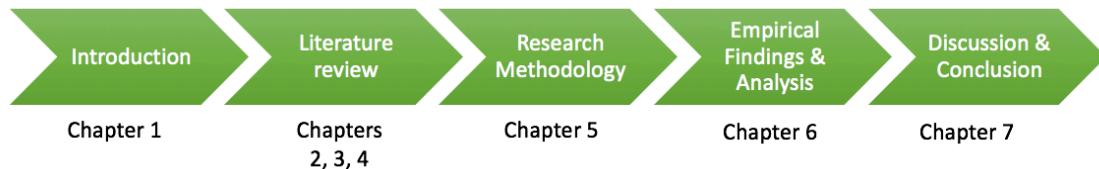


Figure 2. Structure of the study

Chapter 1 is the introductory chapter to the entire research carried out. It offers a brief research background, outlines the aim and the objectives of the research, highlighting its relevance and significance. Moreover, Chapter 1 states the research questions, provides information on the theoretical framework and presents delimitations and some important definitions of the concepts which were used in the study.

Chapters 2, 3 and 4 aim to build a theoretical foundation for the research through a review of the relevant literature. The chapters examine the literature on SME internationalization, knowledge transfer and cleantech. Chapter 2 explains the internationalization of SMEs and brings Network model of internationalization. Chapter 3 addresses knowledge and knowledge transfer, highlighting their critical importance to companies. Finally, Chapter 4 introduces cleantech phenomenon and provides cleantech markets overview in Sweden and in Russia, since it is a context of the current study.

Chapter 5 presents the methodological approach of this study and justifies its suitability for this particular research. The study employed a qualitative single case study approach. The data was collected through semi-structured Skype interviews with one of the case company's founders, observations and by going through internal documents of the case company. The main advantages of using semi-structured interviews in this research was that it is the best way to gather data leading to deeper understanding of the studied issue,

giving the opportunity to ask follow-up questions and check the interviewee's understanding of the topics and questions.

Chapter 6 presents the empirical findings. First, some background information was offered about the case company. Then, the interview results were presented and analysed. The topics covered in the interview included general reasons to internationalize, motivation to enter Russian market and Russian market entry strategy, partner selection criteria, founder's role, factors affecting networks establishment and comparison of cleantech markets in Russia and in Sweden.

Chapter 7 is the final chapter of the thesis. It discusses key findings and presents the overall conclusions based on the findings of the research. Moreover, it offers theoretical and managerial implications and provides limitations of the study and recommendations for further research.

2 INTERNATIONALIZATION

Internationalization is a phenomenon researched heavily over the last few decades. The concept of internationalization is vague and ambiguous, therefore definitions varied over time, depending on the development of the concept. One of the earliest definitions of internationalization was proposed by Penrose (1959), which focuses on the firm's core competences and opportunities in the foreign environment. Welch and Luostarinen (1988) defined it as "a process of increasing involvement in international operations". Similarly, Johanson and Vahlne (1977), the authors of the Uppsala-model, defined internationalization as "a process in which the firms gradually increase international involvement". Based on the definitions of internationalization presented above, it can be generalised that all of them have the involvement of cross border activities in common. Various internationalization theories have been developed in order to explain the internationalization behavior of companies, however with a somewhat different focus. Some theories considered transaction costs, the role of entrepreneurs or the influence of relationships, while other look at it as a stepwise process that evolves over time. It is also important to highlight that internationalization does not only refer to the export activities but is also a concept for subcontracting abroad and import (Teirlinck and Kelchterman, 2013).

2.1 SME Internationalization

The process of internationalization has changed over the years and nowadays international opportunities are explored not only by large companies. Even small and medium size enterprises are able to expand operations into overseas markets and become global. According to the European Commission definition, enterprise is called a "SME" when it has annual turnover of up to 50 million euros and the number of employees fewer than 250 (Table 1).

Company category	Staff headcount	Turnover	or	Balance sheet total
Medium-sized	< 250	≤ € 50 m		≤ € 43 m
Small	< 50	≤ € 10 m		≤ € 10 m
Micro	< 10	≤ € 2 m		≤ € 2 m

Table 1. EU definition of SME (European Commission, 2016)

Despite the fact that SMEs consider less options for internationalization due to lack of financing and limited resources, the recent data demonstrates that SMEs represent more than 99% of all the enterprises around the world, thus constituting an important part of economic growth and dynamics of all economies. Moreover, more than 50% of SMEs are engaged in international operations. (Savlovski and Robu, 2011). Traditionally, SMEs prefer to internationalize by export and import activities, partnerships with foreign companies, foreign investments and cross border networking (European Commission, 2014). At the overall EU level, more than 25% of SMEs are involved in exporting or importing and only 10% are active in the other internationalization modes, including technical cooperation, subcontracting and FDI (Berger, 2013).

SME internationalization differs from the internationalization of larger enterprises due to several factors, including the entrepreneurial orientation, venture capital, opportunities to work with larger companies, flexibility and quick adaptability to change (OECD, 2000). In general, the motives behind internationalization of SMEs are associated with the specific industries, products, services, networks, and the domestic environments. Moreover, the mindset and visions of owners and other influential key people within the company can be identified as a motive for internationalization (Oviatt and McDougall, 1995). If taking a more precise look at the motives for internationalization, they can be divided into categories: proactive and reactive ones (Hollensen, 2008). They are summarized in Table 2 below.

Proactive motives	Reactive motives
<ul style="list-style-type: none"> • Profit and growth goals • Managerial urge • Technology competence or unique product • Foreign market opportunities or market information • Economies of scale • Tax benefits 	<ul style="list-style-type: none"> • Competitive pressures • Domestic market : small and saturated • Overproduction or excess capacity • Unsolicited foreign orders • Extend sales of seasonal products

Table 2. Primary motives for internationalization leading SMEs (Hollensen, 2008)

Therefore, in this study, the focus is kept on the more contemporary researches, which describe the internationalization of SME's. Additionally, it is important to take into consideration the fact that most of the Finnish cleantech companies are small in size, so it is crucial to identify the models that most accurately describe their internationalization processes.

Several theories and models have been suggested to explain the internationalization process of SMEs. However, in recent years, more researchers have applied networking approach to justify the internationalization of SMEs. Uppsala-model has been challenged by network theorists, whose central argument is that network perspective is more consistent with modern business models, that are focused on higher level of technology and global marketing. (Overby and Min, 2001). According to Mitgwe (2006), rapid growth and internationalization is achieved through the experience and resources of network partners.

Therefore, next subchapter is specifically focusing on view that internationalization happens via networks – network theory. It is followed by review of different types of relationships in network, network relationship development and partner selection process.

2.2 Network Theory

Johanson and Mattsson (1988) offered an external view to describe the internationalization of companies that is focused on the networks of the entrepreneur in the market. Internationalization is seen as a natural development from network relationships with foreign companies and individuals. According to Network theory, the success of company's new market entry is more influenced by the its current domestic and international relationships, rather than the chosen target market and its cultural characteristics. Therefore, increasing the number and strength of relationships positively contributes to the company's ability to internationalize.

As stated by Axelsson and Easton (1992), a network involves sets of two or more connected exchange relationships. Consequently, it is possible to define a business network as a set of connected exchange business relationships between companies (Forsgren and Johanson, 1992) that work together to achieve certain goals. Johanson and Mattsson (1988) propose that all firms in a market are a part of a network context consisting of actors such as customers, competitors, distributors, suppliers and government. All the actors that are involved in the network contribute to relationship development and may be linked to each other through different technical, social and economic relations. The co-operation between them may take different forms, depending on how beneficial networking is for both of the parties. By exchanging activities and resources with other firms, bonds and relationships are created and developed (Bernal et al., 2002).

Networking is recognized as a source of valuable knowledge and market information. Thus, networks are a bridging mechanism that promotes rapid internationalization (Mitgwe, 2006), since they have significant role in the acquisition of international knowledge, foreign market access, competitive advantages and identification of new opportunities (Ellis and Pecotich, 2001).

Johanson and Mattsson (1988) state that a highly internationalized company positioned within a foreign network takes advantage of direct relationships with international partners. Being network-oriented and identifying the roles and strengths of each actor within the network contributes to company's understanding of possible challenges and opportunities for its operations in target markets. Moreover, by having a well-established

position in a foreign network allows the internationalized firm to develop relationships that can result in further connections with other actors (Axelsson and Johanson, 1992; Johanson and Vahlne, 1992). Therefore, relationships between the firms in different markets can be characterized as a bridge to new markets (Ojala, 2009), having a direct impact on firms' internationalization process.

In 2009, Johanson and Vahlne developed a model of internationalization, stressing the importance of firms' network position (see Figure 3).

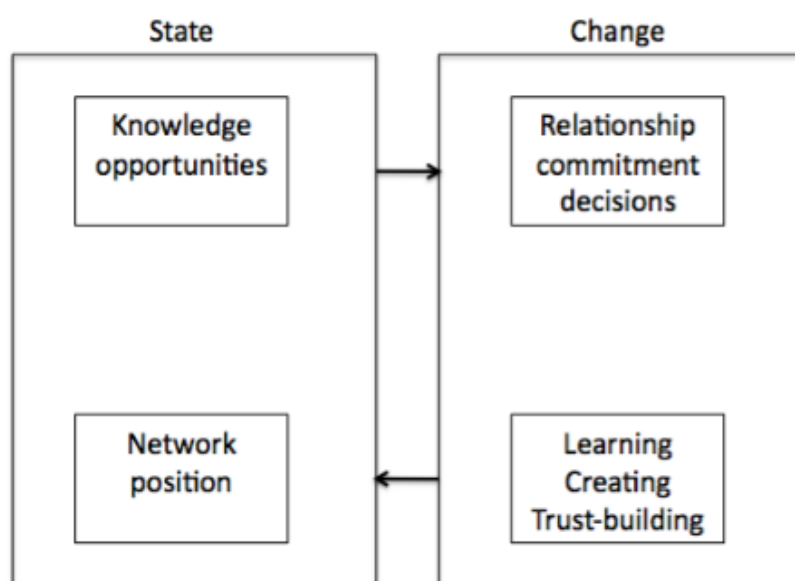


Figure 3. The Business Network Internationalization Process model (Johanson and Vahlne, 2009).

Networking relationships are based on mutual trust, knowledge and commitment towards each other. Consequently, companies are more inclined to collaborate with partners who have demonstrated their reliability, trustworthiness and cooperative ability in other relations. Furthermore, partners will be able to cooperate more effectively if they both are engaged in business networks with connected relationships (Forsgren et al., 2015).

The ties emerged from the company's network are hard to imitate. These ties have consequences in three distinct dimensions: access, timing, and referrals (Burt, 1997). Access refers to information that is not always available to everyone about current or potential partners. Timing refers to acquiring valuable information about potential

partners at the right time. Referrals can be especially important in tie formation, as existing partners may refer a company to other actors for partnering.

An aspect that may hinder successful networking is psychic distance. This concept is often studied alongside with the network model of internationalization. Johanson and Wiedersheim-Paul (1975) described psychic distance as factors that impact information flow between company and market. Such factors refer to language, culture and political system, level of education and economic development stage. Geographic distance is often connected to psychic distance; however, it does not necessary correlate with psychic distance. Even though some countries can be geographically close to each other, the psychic distance might be high (Johanson and Wiedersheim- Paul, 1975).

2.2.1 Types of Relationships in Network

Relationships, relations and ties are the concepts used to describe the linkage between different counterparts. This type of linkage is considered to be long-term oriented, stable and is distinguished by constant interaction between actors. The main factors making these relationships different from other types of transactions and exchanges are the connections to important and influential counterparts, mutual benefit to both sides in the interaction, and the aim to be long-lasting (Hakansson and Snehota, 1995).

Early network literature (e.g., Johanson and Mattsson, 1988; Axelsson and Johanson, 1992) stressed inter-firm business networks, focusing on close cooperation and resource exchanges between customers and suppliers. There is no doubt that business relationship approach still plays a primary role in the internationalization process of the companies (Blankenburg Holm et al., 1999). According to the authors, companies are the focus of the research, and they build relationships with other actors through sales and purchase activities. Even though social relationships exist between managers in both companies, they are not that important for relationship building and maintenance. The network as business relationships tradition takes a long-term perspective of relationships, assuming that the network can operate as a special governance instrument that is separate from market transactions and hierarchy. In addition, this form of relationship is comprised only of selling and purchasing activities. This sole focus might assume that the business relationship approach may face challenges in describing the internationalization process of companies that operate in industries apart from manufacturing, industrial or service.

Consequently, under the logic of business relationships, it is difficult to clarify how and why companies utilize different types of entry modes that do not fall under the category of buying from key suppliers and selling to key customers.

Social relationships were paid more attention only in the middle of 90s. Before that they had been widely neglected in the initial stages of network theory development. Various studies started to integrate social actors and their relationships among the units of analysis. Several theorists argue that business relationships between suppliers and customers appear after the social relationship is built between individual actors in companies from both sides (Harris and Wheeler, 2005; Vasilchenko and Morrish, 2011). Social relationships can also be considered as a more reliable source of information for decision-making than formal strategic planning (Ellis, 2000). As stated by Sharma and Blomstermo (2003), companies can gain knowledge and identify opportunities abroad through social ties, which positively affect the speed of internationalization (Ghauri et al., 2008).

Importance of social relationships in the network is often highlighted in studies of the internationalization of SMEs. The role of entrepreneurs in this type of internationalization is much more significant, they identify and create the business opportunities and engage in social networks that provide necessary assistance for firms (Chetty and Blankenburg Holm, 2000). Loane and Bell (2009) pointed out that existing business and social contacts from former job positions might be utilized by the managers when working abroad that can help the company to internationalize. Ellis (2011) also found out that more experienced entrepreneurs utilized social ties more often than beginners. According to him, opportunities recognized through network ties will lead to better exchanges than opportunities found elsewhere, for example via trade fairs or advertising. Therefore, social relationships play a crucial role in facilitating a company's expansion into foreign markets, since there are also many important network actors other than simply customers and suppliers that affect company's internationalization process.

A third type of network describes relationships with institutional actors, including governmental agencies, banks, international development agencies, innovation centers, research institutions and other agencies which provide support services that can enhance company's knowledge transfer and internationalization propensity (Séror, 1998). These

actors can be further divided into two groups. The first group is comprised of profit-driven actors, such as banks, law firms, consulting firms and others. The second group includes actors belonging to authorities, industrial associations, trade unions and chambers of commerce.

Institutional actors and relationships with them is a continuous phenomenon in studies of the internationalization of the company. Evers and O’Gorman (2011) state that institutional and governmental agencies can support firms in terms of knowledge access and business opportunities identification in their early stages of internationalization. The focal firm can enter extensive network created by the public agency, gaining resource support. Networking with institutional actors can also eliminate risks, uncertainties and information inaccuracy that derive from the lack of clarity (Jansson, 2007; North, 1990). Moreover, institutional relationships can not only provide companies with valuable contacts and connections during international market entry, but also with legitimacy for entering the foreign network.

In the table below, the framework of Slotte-Kock & Covellio (2010) is applied to demonstrate the difference between social networks, business networks and institutional networks research.

<i>Dimension</i>	Social network research	Business network research	Institutional network research
<i>Actors</i>	Individuals, family, friends, colleagues, employees and other acquaintances	Business partners, suppliers, customers, competitors and other stake-holders	Government agencies, Financial institutions, Business incubators, R&D institutions, NGOs, Chambers of commerce, International development centers etc.
<i>Focus</i>	Studies patterns of whole networks of individuals or organizations, occasionally including dyads	Focuses on dyadic interaction (specific interorganizational relationships within the broader network) but argues it is possible and necessary to understand the mutuality of tie and network development	Focuses in the interaction between institutions and organizations relationships in order to support market opportunity recognition and connection of the organization with other resources
<i>Main area of influence on performance</i>	Creating and developing social capital and business know-how	Business deal, supplement or acquire resource advantage, business know-how	Support functions and institutional-based business environment

Table 3. Comparing the three types of network research (Adapted from Slotte-Kock & Covellio, 2010)

2.2.2 Network Relationship Development

Network development contributes to further expansion of international activities. In fact, many SMEs have a strong recognition of the power and value of their networks for exploration of new market opportunities. Much of their efforts are aimed at promoting and supporting collaborations and networking activities (Agostini, 2015). As follows, networking becomes an integral part of the firm's internationalization strategy, rather than the unintended outcome (Welch and Welch, 1996). Slotte-Kock and Coviello (2010) assert that companies actively develop their network relationships across various developmental stages through a process of exploration, selection, and utilization of ties,

and over time network diversity, interdependence and complexity are increased. SMEs proactively manage network relationships to achieve desired organizational outcomes. Network development can deliver various benefits for the companies, including an abundance of opportunities, competitive advantage, and management of risks and uncertainties.

Networks can be characterized as a dynamic source of resources supporting SMEs' prosperity, international expansion and growth far beyond their initial stages (Sepulveda and Gabrielsson, 2013). Foreign network development and maintenance is closely connected with the learning process that impact overall internationalization. Therefore, a crucial part of a firm's knowledge is usually generated and maintained within relevant networks through its actors (Welch and Welch, 1996). All companies are engaged in a number of business relationships with customers and suppliers, which have further connections with other companies. Consequently, every company is a part of an unbounded business network (Johansson and Vahlne, 2003). The approach company adopts towards developing and utilizing its network has a significant impact on its future development and foreign market engagement. This is especially obvious in small firms with limited resources that actively look for business knowledge and devote little effort to the acquirement of country specific and institutional knowledge, which is usually obtained through their current network ties (Sharma and Blomstermo, 2003).

Various perceptions that firms have on networks and their effect have been identified by scholars, depending on the overall goal behind networking. Firstly, it is seen as a learning opportunity, secondly - as strategic means ensuring development and finally - as a source of more opportunities to pursue.

Organizational learning is defined as an assimilation of new knowledge into the organization's knowledge base (Autio et al., 2000). For SMEs this knowledge is linked with international market operations. Knowledge and learning are associated with faster international growth, so firms must capture, share, and assimilate new knowledge in order to successfully compete and grow in markets where they have little or no experience. When a company goes international, it must obtain completely new knowledge (Ghoshal, 1987), including experiential knowledge about the foreign markets, customers and competitors (Autio et al., 2000).

Network ties are the best source of this type of knowledge, since SMEs often lack resources and time to gain experiential knowledge themselves. Moreover, SMEs usually do not have enough international experience with established routines in entering foreign markets, thus they might be innovative in combining their own resources with the resources of others through partnerships (Das, 2011). In this case, partnerships may partially compensate for the resource shortages of internationalizing firms. Therefore, the internationalization process of SMEs is characterized by the strategy of opportunity seeking (Sharma and Blomstermo, 2003).

Identifying international opportunities is especially important for SMEs as they are often formed by existing network relationships (Ellis, 2000) — and networking has a positive impact on the survival of companies. Thus, one way to achieve international competitive advantages is through networks. SME may be pulled into an international network by a network insider located in the target country on the basis of the company's public reputation or on the experiential knowledge.

Network development can be also seen as a strategy. Several academics (Barney, 1991; Lavie, 2006) suggest that network content and involved relationships are strategic, being a source of sustainable competitive advantages when they create value. They are quite hard to get into and are difficult to substitute or imitate. (Welch and Welch, 1996).

As mentioned earlier, it is quite challenging for companies to incorporate networks in the strategic planning cycle, as network development may happen in an unintended way or as an unexpected consequence of deliberate operations. SME may be pulled into an international network by a network insider located in the target country on the basis of the company's public reputation or on the experiential knowledge. Moreover, there is a tendency to underestimate the strategic value of networks and their development, due to their inherent intangibility. They are not evaluated in financial terms (e.g. financial statements) nor are they part of the criteria used in planning techniques (Welch and Welch, 1996). Networks are also difficult to control and they can change over some period of time. Another challenge for strategic planners is that they are often outsiders to some of the relevant networks (Welch and Welch, 1996). Outsidership represents a highly uncertain position, when internationalizing company is not able to access the most beneficial actor.

It is argued that the disadvantage of being a market-entering firm is not simply related to its country of origin, but also where it is positioned in the network. This is especially noticeable in case of foreign markets with high cultural and geographical distances, when actors are isolated from each other. Several actions can be undertaken towards overcoming this distance. First of all, systematic and deliberate building of connections with key actors within the internal and external networks of the company, thereby eliminating the risk faced by strategic planners. The problem of becoming excluded from relevant networks appears because planners abstract themselves from the detail of daily activities. The collaborative relationship has to be maintained by SMEs despite any distance. Regular foreign market visits by management team in combination with hiring international marketing employees is vital way of staying in contact with the foreign network. Strategically important contact networks are based on key individuals. When key people leave the network, network ties may be weakened (Welch and Welch 1996). Strong network ties can not only protect networks but also enhance knowledge development (Welch and Welch, 1996) among connected counterparts.

As mentioned earlier, network membership in itself can be a powerful source of competitive advantage. However, the probability of gaining competitive advantage by a SME in the early stages of relationship development is very low, since trust, mutuality and interdependence have not yet formed. When companies develop and accumulate internal resources, network content becomes more strategic, strong ties turn less prevalent, and centrality improves (Sepulveda and Gabrielsson, 2013).

2.2.3 Partner Selection

Careful partner selection has been recognized as crucial for successful and fruitful collaboration (Geringer, 1991). According Heide (1994), the relationship initiation is supposed to be selective. The partner selection criteria were grouped by Geringer (1991) into task-related and partner-related criteria. This provides interesting insights and solid understanding about the process of partner selection and how companies proceed in choosing partners.

Task-related criteria refer to operational skills and resources needed for competitive advantage. Task-related criteria describe the complementary competences the partner can offer, including market knowledge, knowledge of the political and environment

influence, technical know-how or assets. By contrast, partner related criteria are used to assess the efficiency and effectiveness of the operation of a chosen partner. Partner related criteria include trust, reputation, commitment, professionalism, national culture or partner's organizational size (Mat et al., 2009).

Selecting the right partners for cooperation who possess compatible goals, required expertise and complementary strategic orientation is the key to develop strong partnerships to pursue beneficial market-opportunities (Dacin et al., 1997). However, developing new relationships and establishing necessary conditions for starting collaborating process might be an expensive and time consuming activity. According to Fraser et al. (2003) most firms choose their partners in ad-hoc way (e.g. 'word of mouth') which may result in some difficulties in later development stages.

To ensure that chosen partners are capable of accomplishing the given task, a large number of selection criteria need to be carefully identified and considered, involving tangible and intangible factors. The partner selection process itself is relatively subjective and is usually dependent on a combination of experience and judgement along with current records of business. This method does not, however, reflect the accurate and realistic view of company's performance (Lau et al., 2001). Furthermore, the evidence shows that schedule delay in projects may happen, as well as quality issues, budget overruns and litigation claims – both in large and small companies (Lau et al., 2001).

Despite the fact that most authors agree on the importance of partner selection, it has been difficult to determine the 'right' or 'proper' criteria that can standardize the selection process. Some researchers have associated partner selection with compatible and complementary skills, resources and procedures, however several studies have attempted to determine which specific criteria predicts a good partner match (Nielsen, 2002). Previous studies demonstrate that the partner selection process has a significant impact on networks' collaborative operations. The selected partners can affect the overall mix of available knowledge, skills, resources, the operating regulations and procedures, as well as the short-term and long-term viability of collaboration (Geringer, 1991).

In comparison with task-related criteria, partner-related criteria have a greater impact on both manufacturing and business performance (Vonderembse and Tracey, 1999). Furthermore, it can influence the efficiency and effectiveness of cooperation between

partners (Thomlinson, 1970). When during the selection stage the partner-related criteria such as culture compatibility, level of commitment or trust is considered, it can help relationship management become easier and improve the chances of a successful partnership (Arino et al., 1997). However, measuring and evaluating such intangible factors is obviously difficult.

2.3 Role of Networks in the Russian Market

Networks and their importance in the Russian market come from various barriers including high level of corruption (Frye & Shleifer, 1997) and government interventions (Shleifer & Vishny, 2002), a weak institutional environment and an arbitrary enforcement of property rights (Puffer et al., 2001). Therefore, good contacts are considered to be helpful in overcoming above mentioned limitations. As stated by Aidis and Adachi (2007), networks link companies and officials with significant power of decision that is a precedent of successful business operations. Additionally, the Russian business environment is characterized by a relatively low level of trust towards business partners, competitors, the government and officials (Puffer et al., 2001). According to Radaev (2005), trust within the Russian business environment is developed through repeated interactions between involved parties, meaning that the exchange of information and recourses, as well as constant support strengthens the relationships. Finally, Aidis et al. (2008) note that network insiders who have access to already existing businesses or contacts to state administrative are in a better position when they enter the Russian market when compared to network outsiders.

This attitude of knowledge sharing resistance in Russia also derives from the values and behaviors that historically disrupted the knowledge and information flows during the Soviet times and which still exists in Russia in both the public and private sectors (May and Stewart, 2014). This “knowledge hoarding” in Russian organizations was explained by Michailova and Husted (2003) in terms of three features: “(1) the need to cope with high levels of uncertainty regarding how the receiver of information will use the shared knowledge; (2) the cultural proclivity to accept and comply with a strong hierarchy and formal power; and (3) the fear associated with anticipated and actual negative consequences of sharing knowledge with subordinates.”

Furthermore, Russians are more likely to distrust those who are outside their personal circle (Ayios, 2004; Michailova and Husted, 2003). Thus, it is not surprising that in Russia business activities and transactions are usually based on long-term relationships rather than formal procedures and codes of conduct. Russians like to develop close, long-standing personal relationships and connections which are used to protect individual and group interests for personal gain (Puffer and McCarthy, 1995). For example, people keep in contact with their school and university friends, former neighbors, acquaintances met during holidays and others who can be trusted, expecting mutual favors during their lifetime.

As stated by Barnes et al. (1997) social networks can be described as “oil in the wheels of Russian business”. Even nowadays social relationships in Russia are extremely important since they can provide necessary support to overcome obstacles and allow access to information or other resources which would otherwise not be given (Butler & Purchase, 2004). Table 4 demonstrates comparison of extraordinary role of social networks in Russia and Western countries, taking into consideration important aspects of social networks.

Social Networks in Russia	Social networks in Western countries
Vitally important; often a matter of survival	Important
Highly frequent exchange	Exchanges are discrete in time
Exchanges take place in a workplace	Exchanges take place outside the workplace
Extended relationships/mediated exchanges	Dyad-based relationships/direct exchanges

Table 4. Comparison of Social Networks in Russia and Western Countries (Michailova and Worm, 2003).

Michailova and Worm (2003) argue that in the Russian market social networks are vital and are often a matter of survival as was mentioned above. For Western countries, social networks are less important due to the considerable high level of trust in official institutions, so there is no need to rely as much on personal contacts. For Western countries, as well as for Russia, in order to strengthen the level of trust between the

parties, frequently repeating exchange relationships are needed (Radaev, 2005). In Russia, favor exchanges usually happen at work because most of the time personal help is used to solve issues another party is working for. On the other hand, social networks in Western countries act more as support to solve some private issues such as borrowing money, baby-sitting, looking after a pet and so on.

In addition to direct participants, Russian social networks can also include third party relationships from which an actor can benefit (Michailova and Worm, 2003). It can be referred to as “friends of friends,” meaning that one’s social reach is equal to the range of her/his friends’ personal networks. According to the interview conducted by Michailova and Husted (2003), a Western manager supported the fact that “one needs friends or friends of friends” in order to achieve anything in Russia. Mattsson and Salmi (2013) also found that even distant relationships can affect the international business network of a company, providing a “safety net” to eliminate risk and uncertainty.

Because the distrust of network outsiders is an obstacle to develop new business relationships in Russia (Mattsson and Salmi, 2013), Russian companies normally stay within the boundaries of their existing personal networks when they enter a new market. These networks influence company’s internationalization and define its positioning within the new market (Chen and Chen, 1998). In other words, the initial personal network established within the home market acts as a bridge to other future international networks (Harris and Wheeler, 2005).

3 KNOWLEDGE

In order to examine knowledge transfer properly, it is first important to understand what is exactly meant by the knowledge. According to Grant (1996), knowledge is defined simply as “that which is known”. However, this definition is completely exclusive, due to the fact that information and data can be also known and are both accepted as parts of the definitions of knowledge.

As stated by Nonaka (1994), the difference between knowledge and information is that information attributes to the flow of messages being independent from its context. On the other hand, knowledge is generated and organized by this flow of information, is context specific and is related to human action. Especially this relation with human action highlights the fundamental aspect that knowledge is “anchored on the commitment and beliefs of its holder” (Nonaka, 1994). Consequently, knowledge is more difficult to transfer than information. According to Grant (1996), the latter characteristic is called “transferability”, which is one of the most significant characteristic of knowledge, aiming at knowledge transfer within and between companies and individuals. Moreover, transferability is even more important considering the context of this research, taking into consideration the context of the current research, transferability is even more important.

Thus, the comprehensive view of knowledge offered by Davenport and Prusak (2000) is used: “Knowledge is a fluid mix of framed experience, values, contextual information, expert insight and grounded intuition that provides an environment and framework for evaluation and incorporating new experiences and information. It originates and is applied in the minds of knower’s. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices and norms”.

3.1 Knowledge Transfer

Several research papers that study knowledge transfer consider it as a core of how knowledge management can become a competitive advantage (Baum and Ingram, 1998) (Epple et al., 1996). Knowledge transfer is defined as: “the process through which one unit (e.g. group, department or division) is affected by the experience of another” (Argote and Ingram, 2000); or as “the communication of knowledge from a source so that it is

learned and applied by a recipient” (Ko et al., 2005). The dominant idea behind those two definitions is that a recipient unit becomes more aware about a subject through the knowledge gained from another unit that already possesses this knowledge. While the transfer of knowledge on an individual level is important, the knowledge transfer on organizational level with bigger groups is even more crucial.

Firm’s internationalization process is made challenging when there is a lack of foreign market knowledge and experience (Eriksson et al., 1997). According to the same authors, three types of foreign market knowledge exist: internationalization knowledge, market-specific knowledge and customer-specific knowledge.

Internationalization knowledge is general as it is based on the firm’s overall experience of entering foreign markets and thus it can be applied to business operations across different countries (Sharma and Blomstermo, 2003; Eriksson et al., 1997). It can be embedded in the processes, routines and structures of the firm, so companies possessing such knowledge are better at recognizing international business opportunities than firms with less knowledge (Hohenthal et al., 2003). Since internationalization knowledge is observed to be useful across various markets, it is valuable both when entering new foreign markets and when increasing commitment in an existing market (Sharma and Blomstermo, 2003).

Market-specific knowledge refers to certain markets and is comprised of two parts: foreign institutional knowledge which concerns the macro-environmental institutions in the host country including local government, laws, culture, and norms; and foreign business network knowledge which refers to knowledge of the business network in the specific country market, including suppliers, customers, and competitors, as well as of certain market conditions (Sharma and Blomstermo, 2003; Eriksson et al., 1997). As stated by Zhou (2007), the level of market knowledge is positively affected by Lumpkin and Dess’ dimensions (1996), which are: innovativeness of a firm, risk taking and proactiveness. Furthermore, the findings are built on the theories stating that knowledge is the most important resource for the internationalization process of a company (Autio et al., 2000; Johanson and Vahlne, 2003). For Zhou (2007), international entrepreneurial attitudes positively contribute to foreign market knowledge acquirement. Brennan and Garvey (2009) draw a conclusion that knowledge plays a more complex part in the

internationalization process that what had been considered in earlier models. Moreover, internationalization knowledge is already in the beginning of a company's operations since it is brought by individual founders. It can also be acquired through experience, gained by hiring employees with internationalization knowledge or through international partnerships and alliances. Lastly, customer-specific knowledge relates to social capital, i.e., the accumulated resources found within the business network (Chetty and Agndal, 2007). Social capital refers to relationship-based norms, divided into the social resources of relationships and of social capabilities, which is the trustworthiness formed through the relationships in the business network (Jansson, 2007).

As stated by Argote and Ingram (2000), knowledge transfer is more effective and smooth across organizations that are embedded in a network or relationships. Successful knowledge transfer is a source of competitive advantage and requires that the knowledge gained from one context must be compatible with the new context they are addressed to. (Argote and Ingram, 2000).

Knowledge transfer typically happens when one unit of an organization is affected by the experience of another unit. It can occur explicitly when a unit communicates with another unit about a procedure or method that it has discovered to improve performance. On the other hand, knowledge transfer can also happen implicitly without the recipient unit being able to articulate the knowledge it has gained. For example, if a person applies a tool that has been renewed to improve its performance, the individual does not need to understand the modifications in order to benefit from the productivity enhancement in the tool. Furthermore, norms or techniques can be transferred to group members without them being able to articulate the norm or understanding the knowledge embedded in it (Argote and Ingram, 2000).

As explicit knowledge is knowledge which is articulated, it can be expressed in written forms such as instructions, manuals, documents or specifications. Further knowledge in the minds of individuals can be considered to degrees of tacitness, being one of the most valuable source of data and knowledge (Grassler and Glinnikov, 2008). Tacit knowledge reflects an individual's experience of work and know-how, which is an important intangible resource that is difficult to imitate and acquire (Nonaka, 1994). As a result, it is looked upon with importance of accessibility to the holder of knowledge, being the one who obtains the capabilities to execute the knowledge. Table 5 below summarizes the main differences between these two types of knowledge.

Tacit Knowledge	Explicit Knowledge
Thinking, experience, competence, intuition etc.	Information, data, documentation, files etc.
Personal in nature, difficult to extract from people, difficult to access.	Can be easily articulated, codified and stored.
Can be transferred by moving people within or between organizations.	Can be disseminated in the form of documents, drawings, manuals, best practices, etc.
Learning is encouraged by gathering the right people together under the right circumstances and conditions.	Learning through structured, managed, scientific processes.
Hard to copy or steal	Can be easily imitated or copied

Table 5. Main characteristics of Tacit vs Explicit Knowledge.

Finally, knowledge can be integrated in methods and processes to achieve results. Since it is neither related to explicit or tacit, it is considered as implicit knowledge. This type of knowledge is found in processes of expertise performing different tasks (Frappaolo, 2008). In general, knowledge transfer is emphasized by interactions and is seen as an important resource for acquiring knowledge and learning (Inkpen, 1998).

3.2 Factors Affecting Knowledge Transfer

Factors influencing knowledge transfer can be grouped into 4 dimensions: characteristics of knowledge, knowledge transfer channels, absorptive capacity of receivers, cultural and organizational contexts. They are further discussed below.

The first dimension, characteristics of knowledge, allows to measure different aspects which may influence the success of knowledge transfer. According to Zander and Kogut (1995), three characteristics affecting knowledge transfer can be highlighted: tacitness, complexity and specificity (or degree of contextualization). Knowledge tacitness and explicitness were discussed earlier in this paper. In short, tacit knowledge is more difficult to transfer in comparison with explicit knowledge due to the fact that it requires more cognitive efforts of a sender and receiver to be transferred (Dalkir, 2011). As for the knowledge complexity, it refers to the number of tools and routines that are needed in the process of knowledge transfer (Reed and Defillippi, 1990). Szulanski (1996) defined routines as “actions based on unstated conventions that were derived from previous experiences and can embody the application of knowledge within an organization”. Consequently, the complexity of knowledge transfer depends on the amount of routines needed to interpret and appropriate the knowledge (Argote and Ingram, 2000). Finally, specificity refers to the degree to which knowledge is dependent or not on many different contexts of use (Zander and Kogut, 1995). When knowledge can be adapted to the context of the receiver and can be easily applied and utilized, the more it is valuable. For example, knowledge tightly connected with local markets, can be problematic to transfer, since it is less valuable in another environment.

Knowledge transfer channels in organizations are driven by communication processes and information flows. Existence of transmission channels and their richness are considered to be success factors for knowledge transfer (Gupta and Govindarajan, 2000). Knowledge transfer channels can be informal or formal, personal or impersonal (Holtham and Courtney, 1998). Informal mechanisms, such as lunch break conversations or unscheduled meetings promote socialization and may be more effective in small companies (Fahey and Prusak, 1998). However, these mechanisms may involve certain amounts of knowledge loss due to the absence of formal coding of the knowledge (Alavi and Leidner, 2001). Formal transfer mechanisms, such as factory tours or training

sessions tend to be more effective but they may prevent creativity. Personal channels, such as apprenticeships, allow sharing of highly contextual knowledge more effectively while impersonal channels, such as knowledge repositories, are more suitable for knowledge that can be easily generalized to other contexts.

Absorptive capacity of receiving units was characterized by Gupta and Govindarajan (2000) as an essential feature for successful knowledge transfer process. It is defined as “the ability of a firm to recognize the value of new, external information, assimilate it, and apply it” (Cohen and Levinthal, 1990). Absorptive capacity is very difficult to control due to the fact that the knowledge goes through a re-combination process in the mind of the knowledge receiver, which depends on the recipient's cognitive capacity to process the incoming stimuli (Vance and Eynon, 1998).

Cultural and organizational contexts mostly refer to inter-organizational knowledge transfer which is more complex in comparison with knowledge transfer within the organization. This is because cultural distance can raise barriers for understanding and transferability of knowledge-based assets. Moreover, differences in organizational structures can lead to the difficulty of transferring knowledge through inter-organizational relationships (Simonin, 1999).

3.3 Importance of Experience

The importance of experience in the internationalization process has been emphasized by many academics and businessmen (Delios and Beamish, 1999). The only way to learn about how customers, intermediaries, competitors and public authorities act and react in different situations in a specific country market is to do business there. Therefore, only by doing business in a foreign country it is possible to obtain extensive and valuable understanding of the market that can never be replaced by general market information, statistical surveys or questionnaires. As a result, it means not only that developing international business knowledge and skills is a time-consuming process, but also that these knowledge and skills relate to the specific situations and contexts where they have been developed. For that reason, it might be challenging to transfer this kind of experiential knowledge to other markets.

According to several empirical studies, a distinction can be made between market-specific experience and operation experience. Market-specific experience is developed by operating in that particular market and can only be transferred to, and utilized in, other markets with considerable difficulty (Eriksson et al., 1997). Operational experience refers to organization and development of international business activities, such as the establishment of sales subsidiaries, and can be transferred from one foreign market to another more easily. Operational experience might be also considered as internationalization experience. Specifically, experiential knowledge refers to the use of various modes of operations in the internationalizing company (Eriksson et al., 1997). It reduces the risks and allows companies to acquire information and opportunities abroad (Johanson and Vahlne, 1977).

In general, a crucial implication of the process view of internationalization refers to the development, the integration and the transfer of knowledge that should be seen as fundamental elements in the strategic management of internationalization. For example, in planning foreign market entry, an attention should be kept on any resultant learning or any opportunities for exploiting the new knowledge in the overall international development of the company (Forsgren et al., 2005).

4 CLEANTECH

The cleantech sector was born in the early 2000s (Caprotti, 2011). As a sector and investment category, cleantech refers to an economically competitive and productive technology that facilitates more efficient and ecological use of resources (Skene and Murray, 2015). Cleantech covers any product, service or process that improves efficiency while eliminating the negative impacts on the environment. The main features that make a technology “Cleantech” include reduction of the waste, environmental pollution and costs, as well as efficient use of existing natural resources (Niskakangas and Teivainen, 2015).

Over the last few years, demand for such solutions and technologies has increased dramatically in global markets mainly because of the changes in global economy, emerging markets of developing countries as well as EU and other legislative requirements and regulations for the levels of pollution in manufacturing and ineffective use of resources. Apparently, one of the main objectives for cleantech sector is to decrease and prevent pollution by developing new clean technologies and promoting economically effective and environmentally friendly solutions (CleanTech Latvia, 2016). Consequently, some of the macro trends, including rapid urbanization, climate change and natural resource depletion will continue to drive the need for investments in clean technologies.

According to O’Brien (2008), cleantech is found in a broad range of industry sectors, including energy, transportation, manufacturing, agriculture, environment and others. This diversity is illustrated in Table 6 below which classifies industries that are considered by the Clean Tech Group (2016).

Energy Generation	Energy Storage	Energy Infrastructure	Energy Efficiency
<ul style="list-style-type: none"> - Wind - Solar - Hydro - Biofuels - Geothermal - Other 	<ul style="list-style-type: none"> - Fuel Cells - Advanced Batteries - Hybrid Systems 	<ul style="list-style-type: none"> - Management - Transmission 	<ul style="list-style-type: none"> - Lighting - Buildings - Glass - Other
Transportation	Water & Wastewater	Air & Environment	Materials
<ul style="list-style-type: none"> - Vehicles - Logistics - Structures - Fuels 	<ul style="list-style-type: none"> - Water Treatment - Water Conservation - Wastewater Treatment 	<ul style="list-style-type: none"> - Cleanup/Safety - Emissions Control - Monitoring - Trading & Offsets 	<ul style="list-style-type: none"> - Nano - Bio - Chemical - Other
Manufacturing/ Industrial	Agriculture	Recycling & Waste	
<ul style="list-style-type: none"> - Advanced - Monitoring & Control - Smart Production 	<ul style="list-style-type: none"> - Natural Pesticides - Land Management - Aquaculture 	<ul style="list-style-type: none"> - Recycling - Waste Treatment 	

Table 6. Cleantech Industries (adapted from O'Brien, 2008)

To sum up, cleantech is not yet a distinct group, but rather a group of diverse sub-sectors. It is all about technologies, products, services, processes, and investment classes that are aimed at promoting the sustainable development and greening of different industries as well as societies. Moreover, through efficiency gains or innovative alternatives it decreases the unsustainable usage of natural and societal resources. Finally, it provides industries, businesses and consumers with superior value propositions when compared to traditional solutions (Kotiranta et al., 2015).

4.1 Cleantech in Sweden

Sweden has often been rated as one of the world's leading countries in the cleantech sector, being in the forefront of environmental protection due to its environmental awareness, early environmental regulation and an innovation-oriented society (Jansson, 2015). According to OECD's 2014 environmental performance review, Sweden has been acknowledged as "a front-runner in environmental policy". Commitment to reduce environmental pollution and active innovation encouragement have fostered clean technologies. In 2012 Sweden was able to achieve its goal of a 50 per cent renewable energy share eight years ahead of the Swedish government's 2020 plan. Moreover, one of the ambitious goals set by the Swedish government is 100% of Swedish energy consumption to come from renewable energy sources by 2040 (Business Insider Nordic, 2016).

Sweden, Switzerland, UK, the USA and Finland lead the 2016 rankings in the Global Innovation Index. Sweden has wide experience and expertise within most aspects of Cleantech and is outstanding within the areas of renewable energy, sustainable technologies, green vehicle technologies and waste management (WIPO 2016).

Moreover, Sweden ranks fourth in the overall Global Cleantech Innovation Index 2014, being above the rest of Europe apart from Finland. The country has especially strong innovation inputs, entrepreneurial attitudes, above-average public R&D, and a high innovation drivers' scores (Cleantech Group, 2014).

The approach towards environmental performance in Sweden can be characterised as rather pro-active, clearly highlighted within national environmental policy. A strong focus on academic knowledge and energy technology knowledge has given Sweden an edge in innovative cleantech technologies. Sweden has much evidence of emerging cleantech innovation, being home to a large proportion of high-impact cleantech start-ups. In fact, Sweden's cleantech sector is comprised mostly of smaller start-up companies, rather than large enterprises (Smith, 2015). Every year between 300 and 900 new cleantech companies are incorporated in Sweden and the sector currently comprises over 6,500 companies with an annual turnover of 23 billion EUR (Cleantech In Sweden, 2016). These companies cover nearly all the cleantech sectors, including wind and solar

energy, waste management, water treatment, bio-fuel, transportation, sustainable building, etc. By niche turnover, the top three sectors in Swedish cleantech are energy efficiency, renewable energy and waste management (Nordic Innovation Report, 2012).

In commercialised cleantech, Sweden has high scores for high cleantech revenues, renewable energy consumption and a good density of publicly traded cleantech companies. However, Sweden has one of the largest gaps between ‘evidence of emerging cleantech innovation’ and ‘evidence of commercialised cleantech innovation,’ (see Figure 4), thus having improvement potential.

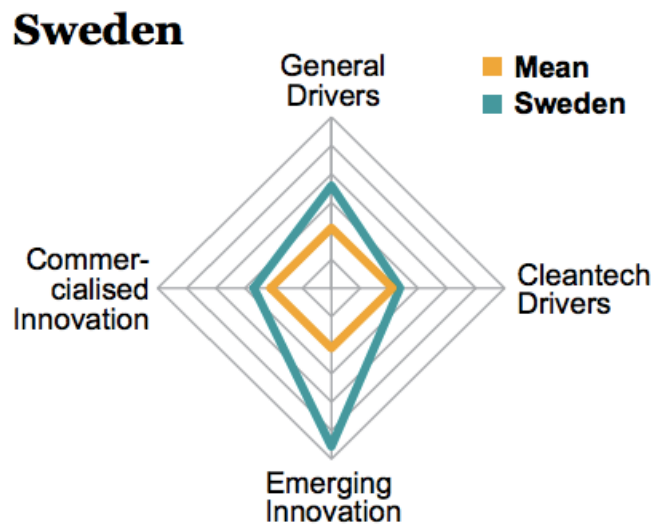


Figure 4. Indicators for Sweden (Cleantech Group, 2014).

4.2 Cleantech in Russia

In comparison with Sweden, Russian Cleantech sector is not well established. Russia holds the bottom spot (40th) on the overall Global Cleantech Innovation Index 2014 (Cleantech Group, 2014) and only 43rd position in the Global Innovation Index 2016 (WIPO, 2016). Russia's score is very low on all cleantech-specific innovation driver indicators except cleantech funds, where the score was above average. The country also has poor general innovation inputs and entrepreneurial attitudes. Russia's record of venture capital investment and evidence of emerging cleantech innovation is especially poor (see Figure 5). Similarly, the country has a lack of later-stage deals, publicly traded cleantech companies, and renewable energy consumption (Cleantech Group, 2014).

Moreover, public awareness is very low. According to HSE researchers (2016), engagement in innovation is not a priority business strategy for nearly 90% of Russian companies, which might limit their experience of innovative collaboration.

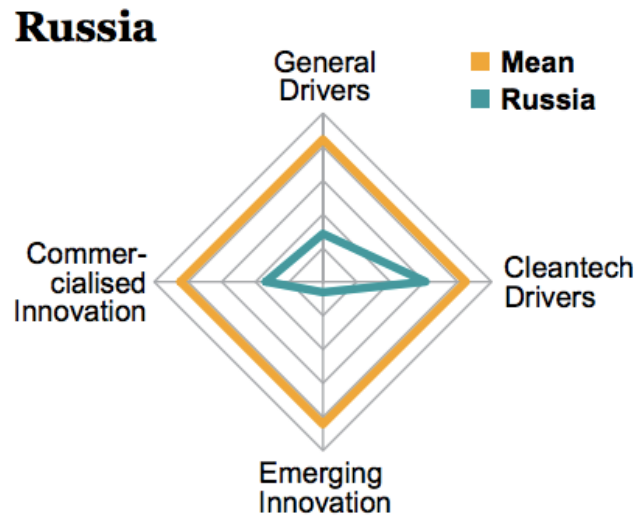


Figure 5. Indicators for Russia (Cleantech Group, 2014).

Even though Russia is in the bottom of both rankings, it has demonstrated an increased interest in developing enabling supporting policies and systems to foster sustainable innovation (Cleantech Group, 2014). There is already a significant potential for the development and implementation of cleantech innovations in Russia associated with an increase in energy efficiency, renewables, green building, waste and water treatment and some other cleantech sectors (Piskulova, 2012). Moreover, some political incentives were introduced recently by the government which can potentially support cleantech development in Moscow and across Russia (Peris-Ortiz et al., 2016). For example, the strategic priorities of Russia’s Energy Strategy in the Period until 2030 include energy security, ecological safety and the energy and economic efficiency of the energy sector. The aim of the strategy is the development of non-fuel energy and the creation of conditions for the extensive application of energy-saving technologies (Piskulova, 2012). However, in some cases actual implementation of policies in Russia might be slow and often inconsistent.

Furthermore, a few other developments in the country could represent potential for cleantech startup development. For example, the Wermuth-Tatarstan Fund, which was setup in 2012, is the first venture cleantech fund dedicated to investing in the Russian market. Another foundation is Skolkovo Innovation Center, located in a suburb of Moscow, also initiated the first of its kind high technology business area with various investors, incubators and cleantech companies residing within the ecosystem. It includes an Energy Efficient Technologies cluster that introduces breakthrough technologies to reduce energy consumption by industrial, housing and municipal infrastructure facilities. Today this cluster links over 80 companies (Cleantech Group, 2014).

5 RESEARCH METHODOLOGY

Taking into consideration the nature of the research question, the qualitative research method has been applied to examine available practices and link them to the theoretical constructs. Qualitative method typically gives answers to questions “what”, “how” and “why” (Yin, 2009) and is based on data collection from real-life and natural setting, which fits the purposes of current study. In this case, researcher’s role is to act as a data collection instrument and to ensure alignment of gathered data with the theoretical part of research. Through qualitative research, data interpretation derives from researcher’s individual perception and observation, therefore leading to unique findings and results.

The purpose of the current study is to get the picture of how the previous networking experience of Finnish cleantech SME might be used to facilitate a new market entry. Therefore, the empirical research has been conducted as a case study to identify what type of networking knowledge and experience from previous market entry to Russia might be valuable for the company in order to internationalize successfully to Swedish market.

Case study research method is defined as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Yin, 1984). Crouch and McKenzie (2006) noted that even one case can lead to new insights when such a case can be shown to have what the authors specified as “social reality”. It offers the possibility for deep understanding of phenomena as it generates abundant descriptions and explanations (Eisenhardt, 1989). The table below illustrates the appropriate solutions to use different research strategies. It justifies the selection of case study as a research method in this study. The current analysis is reinforced by the data obtained from interview of the owners of the case company.

Strategy	Forms of research question	Requires control of behavior events?	Focuses on contemporary events?
Experiments	How? Why?	Yes	Yes
Survey	Who? What? Where? How many? How much?	No	Yes
Archival analysis	Who? What? Where? How many? How much?	No	Yes/No
History	How? Why?	No	No
Case study	How? Why?	No	Yes

Table 7. Relevant situations for different research strategies (Yin, 2009)

Moreover, the complete anonymity option for the interviewed SME was applied in order to avoid any form of feeling of concern that the case company may have. Therefore, in order to maintain confidentiality, the case company is called “Alfa” in this thesis. It was also essential to choose complete confidentiality since it increases the level of assurance with the interviewee and reduces the probability for response bias (Saunders et al., 2003).

5.1 Data Collection and Analysis

Data collection for this thesis was primarily obtained from the case company through multiple Skype interviews. Interviewing is considered to be a central element in the majority of qualitative research designs, and its main advantage is flexibility, meaning that it is possible for the interviewer to repeat or adapt the questions, clarify and correct. In this study, the interviewee was one of the founders of the company, who has enough needed information to share and who is assumed to know the most of the subject. As the case company has already some experience in internationalization, their opinion on many issues provided very valuable information about networking for this thesis, which worked as a building frame.

In this study, semi-structured interviews were used. Semi-structured or theme interviews were selected for this study as they are best way to gather data leading to deeper

understanding of the issue and can be used to answer both “what” and “how” questions (Eriksson and Kovalainen, 2008). The interviews were conducted via Skype. The interview questions were open-ended and the interviews were conducted in the form of conversation. According to King and Bruner (2000), indirect questioning helps to overcome social-desirability bias in self-reported data. The length of the interviews was varying from half an hour to one hour. The interview guide can be found in Appendix 1.

Before the beginning of the actual interview the topic of the thesis was explained one more time in order to highlight the focus of the study and the interview context. The interview transcriptions were done immediately after they were conducted in order to capture the sense of the interview. Moreover, the web pages as well as supplementary internal documentation provided by the case company were used to get additional information for this study.

5.2 Validity and Reliability

As stated by Carlsson (1988), high validity in a data collection method refers to how well the chosen method measures the variable that it has to measure. Moreover, Denscombe (1998) pointed out that “the idea of validity hinges around the extent to which research data and the methods for obtaining the data are deemed accurate, honest, and on target”. Yin (2009) introduces four tests to establish the quality of a research:

- Construct validity constructs the correct measures for the topic that are being studied;
- Internal validity establishes a causal relationship, where certain relationships lead to other conditions (this can only be used in explanatory studies and thus it has been excluded from this study);
- External validity defines a domain where the findings of a study can be generalized;
- Reliability means that if a researcher conducts a study following the same steps and procedures as a previous researcher they should get the same results. The aim of reliability is to minimize biases and errors.

There are many different ways to increase both the validity and the reliability. In this study, the construct validity was increased through the usage of multiple sources of evidence that were compared to each other, which is called triangulation. The sources

utilized were previous theories and concepts, interviews, and documentation (company's internal information sources etc.). The empirical data was gathered from Skype interviews with the owners of the case company who had the most knowledge about the subject. Moreover, the study was also checked by a person who possesses knowledge on the given topic to see that no errors had been made.

To further increase the construct validity, prior to the interview, the questions were reviewed by a person who possesses knowledge of the subject area. This was required in order to make sure that the questions were easy to understand to avoid any possible misunderstandings. The construct validity could have been lowered by the fact that the questions were made first in English and then translated into Russian. The interviews were also conducted in Russian and then translated into English. The interviews were conducted in Russian since it was easier for the respondent to understand the questions and to avoid possible misunderstandings.

The external validity is not strong in this study since only one case study was performed, which is not enough to be able to generalize. However, as was mentioned earlier, this study is not purposed to generalize the results. The reliability in this study was strengthened by the use of an interview guide. Therefore, the same interview guide can be used as a base by the researchers who would like to perform the same study again. The interview guide was also made in order for the researcher not influence the respondents with the previous knowledge. The interviews have been recorded and then transcribed from word to word which allowed the researcher to refer back to the content of the interviews during the actual analysis. Moreover, also the notes were taken by the researcher in order not to miss any important information and in order to ask follow-up questions.

5.3 Research Process

In this study, the overall research process includes several steps. First of all, it started with research idea and reviewing and evaluating the existing literature related to the concepts. Secondly, the research problem and research questions to answer were determined. This was followed by data collection, analysis and discussion, resulting into both theoretical and managerial implications.

In reality, a good research process is usually more cyclical than linear, as illustrated in Figure 6. This is particularly the case for a qualitative research, where data collection, analysis and problem formulation are closely bound up with each other. Therefore, in the course of the research process, there is always a possibility to reconsider, revise or correct (Henn et al., 2006).

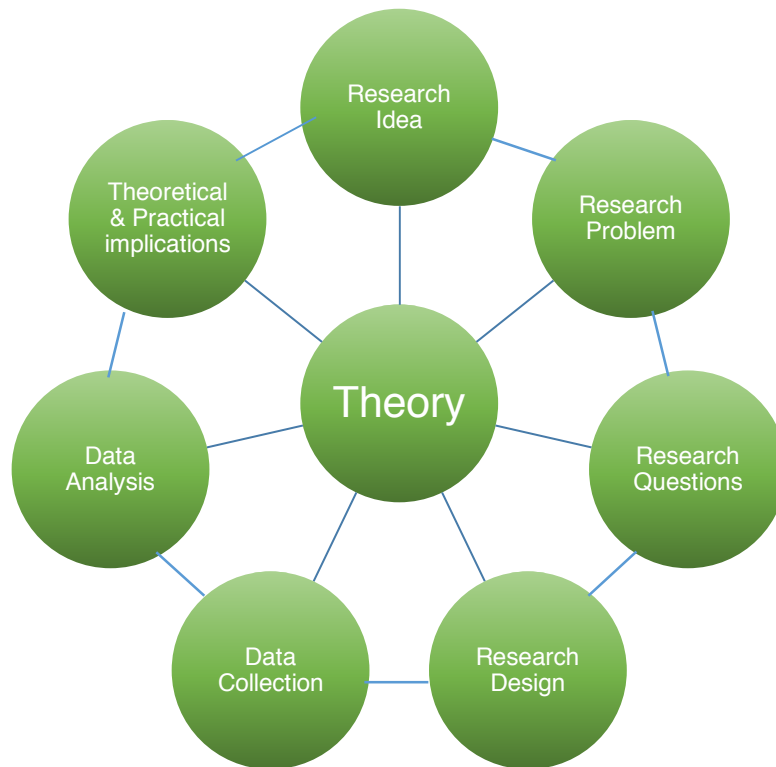


Figure 6. The Cyclical Model of the Research Process

6 EMPIRICAL FINDINGS AND ANALYSIS

This chapter aims to present the findings of the interviews with the case company's representative. Firstly, case company is introduced. Moreover, a short introduction of the interviewee is made to clear up the background of company's representative. Secondly, results of the semi-structured interviews have been presented in order to give the reader point of view of interviewee from Finnish cleantech SME.

6.1 Case Company

Alfa is a research and production start-up cleantech company, founded in 2009 in Finland. The company's main activity is to obtain a cheap, environmentally friendly heating and cooling. Therefore, development of the company is concentrated in the area of renewable energy and waste heat recuperation technologies. Alfa develops, manufactures and sells innovative energy efficient hybrid heating systems. Currently, Alfa is the only heating system provider worldwide that manufactures holistic and self-sufficient heating systems for managing heat at the facilities of different purposes - from small private homes to large industrial buildings. The company managed to create a truly affordable standalone solution for heating and hot water supply in buildings with difficult climatic conditions like in Finland.

Technological solutions of Alfa have no analogues in the world and are completely environmentally friendly and produce the cheapest thermal energy on the market, ensuring an adequate energy supply 365 days per year completely independent of climate conditions or grid connection. Given that in the Nordic countries up to 80% of energy consumed in the building is spent on room heating and hot water, the Alfa's solution is a perfect match for a growing demand for green energy. All Alfa's developments meet four key criteria: efficiency, profitability, reliability and versatility. Moreover, Alfa was the first company in Finland that made monitoring of private buildings heating systems in a real time.

The company operates with the support of Finnish Funding Agency for Innovation Tekes, Finnvera financing and VTT Technical Research Centre of Finland. Moreover, Alfa has received Phase 1 Horizon 2020 SME Instrument Programme funding from the European Commission, being the only SME from North Karelia region to be approved to this

funding instrument. Therefore, Alfa can be seen as a company with truly global business potential and the corresponding ambitions. Alfa strives to become the global leader in clean energy sector and is driven by such values as decreasing carbon dioxide wastes, independence on the fossil energy sources and energy supply independence.

Taking into consideration the complexity of the product development, it took time to execute the actual commercialization of the developed solutions. The production line was launched in 2011 and the first pilot installations were implemented in 2012 providing very valuable feedback to the product development. It took another two years to finalize the range of components that form the complete system. Finally, in early 2015 Alfa started active marketing and sales activities in Finland.

6.2 Interview Results

The interviewee in Alfa was one of the cofounders, who has been the Business Director in the company since its foundation in 2009. Together with the interviewee, there was one other cofounder starting the business, who is the actual owner of the patent. The interviewee has strong academic history and her business intelligence and business knowledge are on a surprisingly high level. She possesses knowledge on business management, business consulting and engineering. The summary of the interview results is presented in the Table 8 at the end of this chapter and a more detailed answer on each interview question follows hereinafter.

6.2.1 Reasons to internationalize

According to the interviewee, the internationalization has been self-evident at the very beginning because staying in the home market was never seen as an option for the company due to many reasons. The most important factors that motivated Alfa to engage in internationalization are the uniqueness of their product, favorable regulations towards green energy, foreign demand, the possibility of customer portfolio enlargement and the increase in sales. As stated by the interviewee:

“Internationalization was an obvious path for us to consider from the very beginning, since Finnish market is very limited. Growth and prosperity of our business requires internationalization. Moreover, nowadays cleantech sector holds tremendous potential, the demand for energy efficient and green technologies is increasing

worldwide. New regulations and incentives are introduced towards green energy, which is good for us since our technology is addressing exactly this global challenge.”

The current tendency is that energy market is rapidly transforming towards the locally produced renewable energy. At the same time, market is looking for new business and service models that support the alternative ways of generating and distributing the energy. All this applies to the heat energy as well. Alfa's solutions are directly addressing this global challenge by providing means for the local generation of affordable clean and renewable energy. Consequently, Alfa's mission is to become one of the most visible drivers of that transformation.

Along with the increasing demand for the renewable energy, one of the most critical challenges for EU in particular and the world in general is the independence from fossil energy sources and external supply. Therefore, both EU and national level regulations create new market opportunities for Alfa. In general, those regulations systematically restrict the usage of fossil energy and thus driving the market towards the renewable sources of energy. Such regulations are considered to have a positive impact for Alfa's business.

6.2.2 Motivation to enter Russian market

One of the main reasons to enter Russian market was the background of the owners of the company. Therefore, initially there were no concerns regarding cultural adaptation, language barrier or bureaucracy and legislation systems in Russia, which are usually found challenging by foreign companies to deal with, especially at the early stages of market entry. Moreover, the CEO of the company had a good network and many valuable contacts in Russia already at the beginning of the Alfa's foundation.

“The Russian market entry was essential for us, due to the background of the CEO, his contacts and his market knowledge, so it was an obvious decision to start with a Russian market. Even though clean technologies in Russia are not currently as popular as in Europe, we got some important customers and partners there.”

Additionally, this decision was made due to the limited resources of Alfa at that time, so it was easier to work with a market that is familiar to them and which is located

geographically near them. Therefore, it is easy to travel and the transportation costs are low.

Moreover, the interviewee highlighted that even though Russian cleantech market is challenging and not well established, due to its vast territory, Russia has almost unlimited potential to develop renewable energy projects that they can exploit.

6.2.3 Russian market entry & network establishment

According to interviewee, networks played a central role in their internationalization process to Russia. At first glance, this market is not appealing at all for cleantech technologies, since Cleantech in Russia is not instituted and at the government level no one really is responsible for it, so there was no chance to be engaged in any support program like it is possible in Finland. Thus, the contacts of the founder in the Russian market were crucial for the initial deals.

“We have found our three main dealers in Russia through the Bauman Moscow State Technical University, which is focused on the development of Science and Engineering in Russia. The CEO of our company graduated from BMSTU and he was working there before moving to Finland”.

Therefore, most of the contacts came from the Bauman Moscow State Technical University (BMSTU), which is a leading engineering university of Russia. It conducts a great deal of R&D activities within the area of renewable energy. Therefore, it has its own extensive network of valuable contacts and partners in Russia.

Moreover, also investors played one of the crucial roles in supporting Alfa's internationalization to Russia. They have given substantial help in the form of market social capital. Thus, Alfa obtained valuable business contacts and several customers also through investors.

6.2.4 Partner selection

In general, Alfa works with any partners who would like to cooperate with them. However, when choosing the sales partners, it is important for Alfa to have complementary product and service portfolios with their partners, since they want to be important for their business. Also, when the partnership is formed, Alfa prefers the partner

to be in the driver's seat to make sure that the company is properly focused on the relationship and cooperation and that Alfa will have significance to their business. However, before any decision is made, they always invite representatives to their manufactory in order to get to know each other better, show the technology, how it works and so on.

“When we are contacted by any potential partner, no matter from which country, we are always open for negotiations. Usually, they find us through our website, social networks or through already existing networks. If we see that they are truly interested and place much value on our relationship, then we are always happy to cooperate. After negotiating over the phone or email, we invite them to our production facilities in order to meet face-to-face and have a business meeting to discuss possible opportunities of cooperation...Unfortunately, it is still quite hard to find real professionals, even though we give a fair opportunity for every interested potential partner to work with us, but in the end only the best ones stay.”

The main obstacle might be the fact that the Alfa's technology is innovative, so it is not an easy task to sell it. Training and time are needed. That is why some of the sales partners drop out already on the initial stages when they realize that they are not able to sell the product.

6.2.5 Role of the founder

Founders of Alfa acquired a significant amount of experience and knowledge before the establishment of this company. There is no doubt that one of the greatest determinant of Alfa's business's success are the entrepreneurs themselves. Naturally, the founders's knowledge and craftsmanship played an important role.

“Of course the role of the CEO is central in our company, he is a young scientist and he came to Finland with his own networks, ties and contacts in Russia.”

Furthermore, the interviewee highlighted that the personality of the entrepreneur is also very important. If the founders did not believe in the success of their business and they were not persistent in the beginning of the establishment of the company, they would

definitely fail. Since there was so much pressure in the beginning with many challenges to deal with.

“There is no doubt that not everyone can cope with these situations. Founding and growing a cleantech company with an innovative product is probably one of the hardest things anyone could ever do. It requires tons of hard work and motivation”.

It was a long and tough process with many technical analyses, financial and marketing plans, and business plans in general.

“We went through a big amount of negotiations with banks, venture capitalists and other organizations that assist start-ups and entrepreneurs and who analyzed Alfa’s business’s potential and profitability.”

6.2.6 Problems while establishing networks

In general, Alfa did not face any particular problems when establishing network relationships. For example, in Finland the company is supported by TEKES, which constitutes an extensive and very valuable informational platform. Moreover, Alfa is supported by numerous governmental support mechanisms and other institutional organizations, including the Ministry, Cleantech, Josek and several other regional representatives. They always stay in touch with Alfa and regularly invite to different events where the company has an opportunity to broaden its network and find new partners.

In case of Russia, one interesting point here is the perception of Finnish brands. Finland is recognized for its successful work in technology, research, and higher education. Finnish products are known for their reliability, efficiency and environmental friendliness.

“When people know that we are from Finland and that we offer them a technology that was developed and manufactured in Finland, we are taken very seriously and they are very interested in meeting us. Finland is considered as a country of high technology and has a very good reputation”.

Therefore, Finland is seen as a good example to follow in terms of preserving clean nature and as a source for reliable environmentally friendly solutions.

6.2.7 Factors affecting network establishment and internationalization

The interviewee explained, that Alfa's innovative technology is a unique breakthrough in R&D. It is a fully green technology that is efficient both in warm and cold climate conditions and which has no analogues in the world. This goes completely in line with numerous governmental policies concerning the adoption of cleaner technologies, energy efficiency and renewable energy.

“At the moment there is a wide variety of programs aimed at reducing gas emissions into the atmosphere (in Europe). We have a completely green technology that is effective in the Nordic countries, which has no equal in the whole world, that is our advantage”.

The main obstacle for Alfa is that they are first in the market with such kind of technology. Usually, people are careful with innovations, they are not willing to take risks. Therefore, under conditions of risk aversions and information uncertainty, the majority of customers will want to see the proven track record of success before deciding to make a purchase.

“People do not take such products immediately for granted, most of the times they are not in a hurry to adopt the innovations, since it might be risky. Usually, first they want to see the references and evaluate the product. Our technology has been certified and tested, we have all the necessary paper documentations that it is better than others”.

Therefore, all Alfa's certifications and other documentation demonstrate that their product is better than other possible offerings, which is supporting the acceptance of their technology. Moreover, when people know that Alfa is supported by EU Research and Innovation programme Horizon 2020 or TEKES, it positively influences the perception of the company and the image of their products, since this type of support is available only for the companies that are the very best in research and innovation.

However, since Alfa is still a young company with not a long history, still more successful projects are needed that will serve as a prove of the efficiency of their technical solution.

6.2.8 Comparison of cleantech markets in Russia and in Sweden

When the interviewee was asked about the difference between cleantech market in Russia and Sweden, she replied they are totally different.

“Sweden’s and Russian cleantech markets are as different as night and day. At the moment, Russia is highly dependent on gas, it is very cheap there, therefore renewable energy sources are not yet perceived that seriously as in Europe. Sweden as well as Finland is characterized by rapid adoption of new cleantech technologies and there is a demand for it. Also, one of the main obstacles in the Russian market is a lack of the State support, since they are focused on some other priorities. In Finland, we operate with an aid of Finnish government and EU, they support such technologies and are highly interested in the growth promotion of such companies as Alfa, therefore we receive grants for our operations and this is extremely important for us.”

Currently, Russia is the world's largest energy producer and exporter, therefore, it has only few incentives to develop renewable energy sources. Moreover, low domestic energy prices, weak economic incentives and the lack of a requisite legal structure are obstacles for the development of cleantech sector in Russia. Another important factor mentioned by the interviewee is a low level of government support and almost complete lack of understanding of the role that renewables could play. The level of ecologically friendly behavior in Russia is quite low and renewable energy technologies are not yet perceived by people to be part of their everyday lives.

However, during last years, in bigger cities there were some improvements in attitudes towards green values. The only obstacle might be the fact that at the moment such technologies are quite expensive, especially for private sector, in comparison with, for example, Finland or Sweden. Buyers in Russia are very much price sensitive, however they are very open and when the benefits of the products in the long term are explained, they can purchase the product even if it is expensive.

Nevertheless, with an economy based on oil and gas, the Government of Russia spends only little of their funding on the development of clean technologies and there are few incentives to invest in alternative sources of energy.

Completely different situation is in Sweden with its high level cleantech expertise and knowledge. It is very similar to Finland. Sweden demonstrates leadership in terms of environmental action and sustainable development. Basically, this is due to coordinated, long-term measures introduced by both public and private actors and their high involvement. Technologies that help to reduce emissions and efficiently utilize natural resources are highly appreciated and widely used there.

<i>Reasons to internationalize</i>	<ul style="list-style-type: none"> • Product uniqueness • Favorable regulations towards green energy • Foreign demand • Possibility of customer portfolio enlargement • Increase in sales
<i>Motivation to enter Russian market</i>	<ul style="list-style-type: none"> • Background of the founders • Market knowledge • Existing network ties & valuable contacts • Limited resources • Market potential
<i>Russian market entry</i>	<ul style="list-style-type: none"> • Network model of internationalization • Exceptional role of personal networks
<i>Partner selection criteria</i>	<ul style="list-style-type: none"> • Complementary product and service portfolios • Partner's commitment • Professionalism
<i>Role of the founder</i>	<ul style="list-style-type: none"> • Central role • Greatest determinant of business's success • Driver for internationalization
<i>Factors affecting networks' establishment</i>	<ul style="list-style-type: none"> • Perception of Finnish brands ⇒ good reputation • Supported by EU Research and Innovation programme, TEKES and others ⇒ positive influence on the image of the products • Certifications and other documentation demonstrate reliability <p>but:</p> <ul style="list-style-type: none"> • First in the market with such kind of technology ⇒ people are careful with innovations
<i>Cleantech market in Russia</i>	<ul style="list-style-type: none"> • Little state budget spending on the development of clean technologies • Low level of government support • Quite low level of ecologically friendly behavior • Clean technologies are quite expensive <p>but:</p> <ul style="list-style-type: none"> • Some improvements in attitudes towards green values in bigger cities
<i>Cleantech market in Sweden</i>	<ul style="list-style-type: none"> • High level cleantech expertise and knowledge • Sweden demonstrates leadership in terms of environmental action and sustainable development. • Coordinated, long-term measures introduced by both public and private actors and their high involvement • Highly appreciated and widely used technologies that help to reduce emissions and efficiently utilize natural resources are there

Table 8. Summary of the interview results

7 DISCUSSION & CONCLUSION

The previous chapter focused on presenting the data and findings of the study. In this chapter, those results are discussed, evaluated and compared with the earlier research and literature. Thus, based on empirical findings, the researcher discusses insights on internationalization of the case firm. Moreover, this chapter will present concise answers to the research questions, and this discussion will take place in the theoretical implications. The managerial implications will include findings that business managers can learn and utilize in similar kind of internationalization processes that the case firm had gone through. Limitations and recommendations for future research are also outlined in the end of the chapter.

7.1 Internationalization and Networks

In this case study, the author has examined the internationalization process of a Finnish cleantech SME to the Russian market. According to the Networking theory in the literature, firms' internationalization is a natural development from network relationships with foreign companies and individuals (Johanson and Mattson, 1988). When comparing case company's internationalization process, it can be clearly seen that it is based on the Network model of internationalization, since network relationships played a vital role for their success in the Russian market.

Some of the main motives for internationalization mentioned by the case company were related to their product uniqueness, limited domestic market, favorable regulations towards sustainable products, managerial interest and networks. These results seem to be in agreement with Oviatt and McDougall (1995) which suggest that the motives behind internationalization of SMEs are associated with the specific industries, products, networks, domestic environments and the mindset of the founders.

Business, social and institutional relationships within networks may have effect on SMEs internationalization. Business relationships play a dominant role in the internationalization process of the companies (Blankenburg Holm et al., 1999). Moreover, the earlier researches have demonstrated that the role of business networks is especially significant when entering a foreign market, where there is a lack of governmental policies, organizations or unions which would support the

internationalization of the company (Chen and Chen, 1998). According to the interview, institutional relationships are very important as they may serve as a determinant of a specific market entry and play a crucial role in eliminating uncertainties. These results confirm findings from previous studies by Jansson (2007) and North (1990). However, in case of Russia, institutional relationships did not play much role in the internationalization process of the case company, since currently only little state budget money are allocated for the development of cleantech sector and there are few incentives to invest in alternative sources of energy, so this type of support was not available.

Additionally, interview responses suggest that informal ties were also crucial since they had a direct effect on partnership establishment. Therefore, through social ties, the case company was able to identify opportunities in the Russian market and gain knowledge as stated by Sharma and Blomstermo (2003) which had a positive effect on its internationalization (Ghauri et al., 2008). This evaluation also shows that Alfa agrees with Aidis et al. (2008) who state that having the right contacts in the Russian market is a crucial determinant to develop a company further in this market. Finally, the above-mentioned role of networks was also investigated by several other authors who state that business and social networks are both valuable means that support exchange of the information and survival within the Russian market (Michailova and Worm, 2003).

As was discussed by Ellis (2000), founders of the company usually have many existing long-term personal contacts in foreign markets related to the industry they operate in, so they are able to utilize those networks to enhance the pace of their company's internationalization. Personal networks are extremely important in Russia. Empirical data reveals that social contacts were beneficial to Alfa also in a sense that the information provided by them was free, which suited well the initially resource scarce of the company. Moreover, there were benefits to be gained from former university colleagues of the Alfa's CEO who were helping informally. These findings are in line with Puffer and McCarthy (1995), who point out that Russians like to develop close, long-standing personal relationships and connections which can be used for personal gain. The interview also accentuates the main idea highlighted in the study of Chetty and Blankenburg (2000) who state that the role of entrepreneurs in this type of internationalization is much more significant, since they identify and create the business opportunities and engage in social networks that provide necessary assistance for firms.

As can be also clearly seen from the empirical research, the interview results correspond with the notion that even distant or indirect relationships can influence internationalization to Russia and affect international business network of a company, providing with new opportunities (Mattsson and Salmi, 2013). Therefore, the idea that in order to achieve anything in Russia “one needs friends or friends of friends” is supported by the Alfa’s founder.

According to Ellis (2000), the knowledge that the founders possess from their previous operations within international markets has a significant positive influence on the survival of companies, helping to overcome market uncertainty and giving rise to the SMEs capabilities to have a better performance in the foreign markets the founders have experience within. This was evident in Alfa as they decided to enter the market where they had previous experience in from their background.

This also supports the results of Jansson and Sandberg (2008), who state that relationships are important for successful international entry. Moreover, as stated by Ellis (2011), more experienced entrepreneurs, such as the founder of Alfa, rely on social ties more often than less experienced entrepreneurs. That is to say, existing network relationships and market experience of the founders appeared to be crucial for the case company, and were cited as important factors that enabled them to be able to identify opportunities abroad for their technology, even though the general market indicators were not that preferable. Therefore, in line with the findings of Slotte-Kock and Coviello (2010), the case company was found to have relied almost solely on the different types of network relations as their source of internationalization. Thus, network relationships played a vital role for the success of Alfa in the Russian market.

Moreover, the assumption that cleantech companies with a well-established network ties have a competitive advantage in the Russian market is supported. These results go completely in line with the theory of Barnes et al. (1997) as well Michailova and Worm (2003) who state that social networks are extraordinary important in the Russian market, helping to provide necessary information, support and achieve accelerated market entry.

As was discussed in the literature review section, the limited financial capabilities are one of the main obstacles amongst SMEs. Alfa dealt with financial constraints by seeking financial support from governmental organizations as TEKES, Finnvera and other

funding programs which provide small innovative companies with financial aid. Moreover, the founders were initially sacrificing their own salaries in order to fund their company until venture capital was acquired. Consequently, another source of new information for Alfa were investors, as they provided the company with new network connections. Since venture capitalists have provided financing to the company, they are logically active in finding new market opportunities for the company.

As for the partner selection criteria, according to the theory of internationalization, good reputation of the partner is an important selection criterion. However, the interview responses indicated that reputation appeared to be not a decisive factor for business relationship inception. Interviewee stated that the decision of partnership establishment is made on the basis of potential partners' product portfolio and their activeness, interest and commitments towards possible cooperation, which supports the Heide's (1994) statement that relationship initiation is a selective process. Potential partners are evaluated on the subject of their performance, reliability and professionalism as was suggested by Mat et al. (2009) and supported by interviewed respondent.

7.2 Cleantech

As can be seen from the results, cleantech firms have high level of technology and innovative products and services. In Finland, cleantech companies are among the most attractive investment categories. Therefore, Finnish cleantech SMEs can get support and a substantial funding for their operations from TEKES, ELY-keskus, Finnvera, VTT and others. The findings also show that environmental regulations along with the increasing demand for the renewable energy support sustainable behavior and the development of cleantech industry. An extension of these supporting regulations and policies globally opens up market opportunities to facilitate internationalization of Finnish cleantech SMEs. Hence, in agreement with the findings on cleantech (CleanTech Latvia, 2016; Kotiranta et al., 2015).

The interview results regarding comparison of cleantech markets in Russia and in Sweden seem to be in agreement with Cleantech Group (2014) which suggests that Sweden's commitment to cleantech is very strong, since eco-innovation is a key element in Sweden's national environmental policy and is part of the long-term national target for green structural change. Therefore, this market is very attractive for cleantech companies

due to the fact that it has one of the most favorable business environments in the world for cleantech and supportive infrastructure. However, even though Sweden is good at early stage of cleantech development, there is a challenge in increasing commercialization rates.

On the other hand, Russia is far behind the competition according to Global Cleantech Innovation Index, mostly due to high focus on its conventional energy supply. Nevertheless, Russia shows increasing support structures for sustainable innovation in terms of ambitious renewable energy objectives being set and cleantech being prioritised in key national innovation incubators respectively. Therefore, the company managed to enter Russian cleantech market quite successfully, proving that there is a positive trend towards adoption of cleantech technologies and that attitude change toward environmental issues is already happening.

These trends imply that the world will continue to promote and adopt cleaner sources of energy. Though, some countries around the world have managed to go above the targets that are mandated by international law to integrate clean energy sources into their portfolios, while some of the countries are still below those targets.

7.3 Knowledge Transfer

With the understanding from Autio et al. (2000) and Johanson and Vahlne (2003) that knowledge is the most important resource for the internationalization process of a company, successful knowledge transfer could contribute for effective new market entry. Therefore, knowledge transfer is especially important for the case company due to the lack of networking experience in a target market.

Networking experience and knowledge acquired as a consequence of operation in the Russian market is important and useful for the case company in the development of a new market entry process to Sweden. According to Eriksson et al. (1997), this type of experience refers to operational, describing organization and development of international business activities that can be transferred from one foreign market to another relatively easily. Additionally, as was stated by Sharma and Blomstermo (2003), this knowledge also refers to general internationalization knowledge that is claimed to be

applicable across all markets since it is based on the overall experience of the company entering foreign markets.

Moreover, this knowledge can be characterized as a tacit knowledge, since it is not captured in documents in words and images and it refers to the knowledge in the minds of Alfa's founders, who were the initiators of previous market entry. Therefore, as stated by Grassler and Glinnikov (2008), they are one of the most valuable sources of data and experience, being the ones who obtain the capabilities to execute the knowledge. In particular, the knowledge acquired as a result of market entry to Russia refers to the most suitable types of network relationships, partner selection criteria and some possible internal and external factors that might affect network establishment and internationalization and that have to be taken into consideration by the company.

Argote and Ingram (2000) claim that in order for the knowledge transfer to be successful, the knowledge gained from one context must be compatible with the new context. As seen in this study, a clear distinction emerged between cleantech market in Russia and in Sweden. Therefore, the knowledge transfer might be quite problematic and the amount of knowledge that it is possible to transfer is limited. The main reason for that is one of the characteristics of knowledge transfer – knowledge specificity, which was described by Zander and Kogut (1995) as a degree to which knowledge is dependent or not on many different contexts of use. In case of Alfa, knowledge is highly dependent on the context, therefore it cannot be easily adapted and utilized in a context of the new country. As Johanson and Wieresheim-Paul (1975) suggest, even though some countries are geographically close, the psychic distance between them still can be high. The results proved that although physical distance between Russia and Sweden is low, the psychic distance is quite high. This difference can be seen in cultural dimensions, as well as in political and economic systems and the difference in mentality and mindset. These findings also provide further support for prior research by Simonin (1999) about the impact of cultural distance on successful knowledge transfer that can raise barriers for transferability of knowledge-based assets.

Russian cleantech market is not well developed yet. Therefore, it is not that easy to engage in networks and find business partners in this sector, especially without market knowledge and some personal contacts. However, it could be suggested that the future

of cleantech market in Russia is quite promising, since some political incentives were introduced by the Russian government related to energy efficiency, renewables and waste management, which are supporting cleantech development and in recent years interest in sustainable green technologies has increased among people living in big cities.

Cleantech market in Sweden, in contrast, is very dynamic and experiences fast growth. Sweden has a long history of environmental thinking and currently it is one of the global leaders in the cleantech sector (Eco-Innovation Observatory, 2015), being is an ideal base for launching new products and technologies. Therefore, Sweden has one of the most attractive business environments for cleantech SMEs with its highly supportive and competent infrastructure of industrial know-how and education. Thus, it might be assumed that entering Swedish market might be even easier due to high demand and the rapid adoption of cleantech technologies there and due to Alfa's current expertise on network building and relationship development.

However, Alfa's market entry strategy might differ from the one used to enter Russian cleantech market, due to the fact they the company does not have any personal contacts there yet. Therefore, the focus should be kept on institutional relationships, including governmental agencies and industrial associations, since they help international companies to gain access to the market, providing with the information, guidance, solutions and network required to enter cleantech market in Sweden. This argument is supported by the evidence gathered in a study by May and Stewart (2014), who claim that firms in the West can easily access information and knowledge, while there is an embedded resistance to knowledge sharing in Russia. Moreover, as was noted by Michailova and Worm (2003), social networks are less important for Western countries due to the considerable high level of trust in official institutions, so there is no need to rely as much on personal contacts as in Russia.

As Evers and O'Gorman (2011) point out, networks with institutional relationships play a crucial role in eliminating uncertainties, assisting international companies in terms of knowledge building and identifying opportunities in their early stages of internationalization.

7.4 Theoretical Implications

Theoretical implications of this study derive from aligning theoretical constructs with practical findings of the empirical research. Theoretical part of the current research covers a considerable amount of notions on internationalization of SMEs and importance of networks during internationalization as well as knowledge transfer, not to mention the peculiarities of operational environment within cleantech sector in the selected countries. Hence, the theoretical contributions were focused around strengthening existing Networking theory, as well as utilizing knowledge transfer perspective to help explain internationalization of SMEs from cleantech sector.

Overall, the study aims to understand the cleantech phenomenon in general, as well as in Russia and in Sweden in particular and the internationalization of the Finnish cleantech SME. The combination of chosen theories and literature used in this research provided a holistic view on the research topic, giving direction to answering the research questions.

In the introduction chapter, the aim of the research was defined as to understand to what extent the company might utilize network knowledge and experience gained from previous market entry to facilitate new market entry. To accomplish the aim of the research, the main research question was defined as follows:

“How can Finnish Cleantech SME utilize networking knowledge acquired from previous internationalization process to Russia to facilitate internationalization process to Sweden?”

In order to answer the research question, two supportive sub-questions were formulated. Even though, these sub-questions may seem to focus on the empirical part of the research, they have provided a significant help to put theoretical framework into a structured logic. Moreover, the sub-questions served as a basis for interview questions and allowed to analyze gathered data in relation to the objective of the research. The first sub-question deals with the network establishment in the Russian cleantech market:

1) *“How can a cleantech SME establish networks when entering Russia?”*

Networks, their importance and theoretical expectations fall in line during the current research. Network establishment process both according to theory (Hollensen, 2008) and

practice appears to be a combination of proactive and reactive actions taken by the companies, since there are no concrete guidelines that new entrants can steadily follow. It became apparent from the literature review and empirical research that both business and social networks played an important role in the internationalization process of the cleantech SME to Russia. However, the latter ones appeared to be even more crucial. One of the reasons that was pointed out by May and Stewart (2014) is due to the hostility to the market knowledge sharing in some Russian companies that comes from the Soviet times when knowledge and information flows were disrupted by the values and behaviors accepted at those times. This resistance to knowledge and information sharing was explained by Michailova and Husted (2003) in terms of high levels of uncertainty regarding how the receiver will use the shared knowledge; cultural biases to accept and comply with a strong hierarchy and high power distance; and the fear of negative consequences of knowledge sharing. In light of these findings, as well as empirical findings, it is possible to argue that it is more difficult to locate new information in Russia than in Western countries. That is why Russian firms need to rely heavily on personal networks to gain access to relevant information and knowledge. This also explains why business activities and transactions in Russia are usually based on long-term relationships rather than formal procedures and codes of conduct.

As indicated in Table 4 (p.27), social networks are vital for the survival in the Russian market, while in Western countries there is no need to rely that much on personal contacts due to the high level of trust in official institutions and their support. In fact, the evidence from the empirical part confirm these earlier findings. It can be especially noted that the role of a founder and founder's personal network are claimed to be of great importance in theory (Ellis, 2000), and this was conformed in practice by the interviewed company, since most of their network contacts came from personal contacts of the founder. Therefore, findings imply that individual business networking in Russia is extremely important, since network ties of the founders provided the SME with informal contacts that were beneficial in facilitating speedy access to market information, providing insights into target market opportunities that would otherwise been difficult to identify and enabling to engage in networks and finding partners and customers. Thus, in line with Michailova and Worm (2003) who state that in the Russian market social networks are vital and are often a matter of survival.

Even though, the importance of energy and environmental efficiency is increasing rapidly worldwide, the development of cleantech market in Russia does not seem to be a priority for the State yet, confirming the results by Cleantech Group (2014). Moreover, the existing state policy does not provide necessary support to promote innovation development as was obvious from the interview results. Therefore, it is not possible to rely solely on institutional actors, such as governmental agencies or industrial associations, since this cluster is not well developed yet, so it is not easy to gain access to market information and networks. However, one of the best sources of networking partners in this particular sector that was identified during current research are prominent higher education and research institutions in Russia that are experienced in development and implementation of innovation-related projects, such as Skolkovo Innovation Center or Moscow State Technical University (BMSTU). At the moment, these types of research centers and research universities are the only best options, especially for the companies without personal contacts, since they conduct a great deal of R&D activities within the area of clean technologies and have their own extensive network of contacts and partners in Russia within this sector.

Consequently, Cleantech SMEs that strive to enter Russian market and expand their networks have to focus on Moscow first with its universities and innovation centers that are a source of useful networks, serving as the gate to the cleantech market in Russia.

The second sub-question was formulated as follows:

2) *“What kind of networking knowledge is transferable to Swedish context?”*

The current research emphasizes the importance of previous networking experience and knowledge acquired by the case company as a result of the market entry to Russia. According to the literature reviewed for this study as well as the empirical findings, cleantech markets in Russia and Sweden differ very much. Therefore, stressing the notion that high knowledge dependency on the context affects its transferability (Zander and Kogut, 1995), the amount of knowledge that can be transferred is limited. Moreover, the study aligns with the psychic distance concept, meaning that specific market knowledge is not easily transferable due to various factors associated with culture, political and economic systems, as well as difference in mentality and mindset. However, there is still some useful knowledge that can be utilized by the company in a context of Sweden.

First of all, due to the fact that the founders of the company do not have social contacts in Sweden at the moment, institutional and business relationships in a target market can be considered. As was apparent from the empirical findings, institutional relationships are very important as they may serve as a determinant of a specific market entry and play a crucial role in eliminating uncertainties. This outcome is consistent with the findings of Evers and O’Gorman (2011); Jansson, (2007); North, (1990), who underlined their importance, as institutional actors can support companies in terms of knowledge access and business opportunities’ identification abroad. Even though, this type of network relationships was not crucial in the Russian market, it might be highly beneficial in Sweden due to its pro-active, highlighted within national environmental policy approach towards environmental performance. Sweden is seen as a leader in terms of environmental action and sustainable development (OECD, 2014). Various organizations, unions and governmental policies exist there, which support the internationalization of the firm.

In terms of business relationships, as stated previously in the theoretical section, Sweden’s cleantech sector is comprised of a large proportion of high-impact cleantech start-ups (Smith, 2015). Therefore, a potential for many close and collaborative relationships exists there, particularly in the long-term, since more and more cleantech companies are being established. Consequently, with a growing population of cleantech firms in Sweden, the opportunities for synergies are increasing. Moreover, the fact that the case company is supported by EU Research and Innovation programme Horizon 2020, Finnish TEKES and several other well-known organizations is believed to be very important in the eyes of investors, partners and customers.

As for the partner selection criteria, the case company can keep the same strategy as it has in the Russian market, focusing on those potential partners who are active and committed towards possible cooperation and have complimentary product portfolio. Moreover, potential partners have to be evaluated on the subject of their professionalism and performance as was suggested by Mat et al. (2009) and evident from the empirical research.

Finally, answering the main research question, the results of the current research imply that there is only a limited amount of network knowledge and experience that can be

utilized by the case company from previous market entry to Russia as it is quite hard to compare these two markets due to the fact that they differ quite significantly. It is important to keep in mind that Sweden is one of the most successful countries when it comes to development and implementation of clean technologies. Tight collaboration between private companies and the public sector implies that cleantech sector is highly supported by the government and local authorities not only by integrating sustainable solutions into urban and energy planning, but also by imposing strict requirements against environmental pollution. Moreover, it is possible to get financial assistance from the Swedish government for cleantech innovation.

As can be seen from the current study, in Sweden, public authorities, higher education and research institutions, private entrepreneurs, and venture capitalists have reached a broad consensus on the importance and necessity of cleantech for sustainable economic growth and on the facilitation of rapid expansion and development of the sector in the future. Sweden has also committed to relying 100% on clean energy by 2040 (Business Insider Nordic, 2016). In case of successful goal achievement, it would be the first country in the world with such high performance. Considering the exceptional track record that Sweden has already established as an innovator, the country is well-placed to benefit from cleantech.

As a result, whereas managers from developed countries with a high level of commitment towards environmental sustainability and green technologies such as Sweden or Finland are expected to concentrate mostly on business and institutional networking, their Russian counterparts may tend to concentrate more on the personal networking, which can be seen as a driver of rapid internationalization to Russia.

Overall, despite differences between Swedish and Russian cleantech markets, and a much larger role of personal networking in the Russian market, the study has demonstrated that still some networking knowledge and experience acquired by the case company during the Russian market entry can be utilized to facilitate internationalization process to Sweden.

7.5 Revised Theoretical Framework

Based on the evidence from the results presented and discussed above, the original theoretical framework (in Figure 1) has been revised as illustrated in Figure 7 and discussed further below.

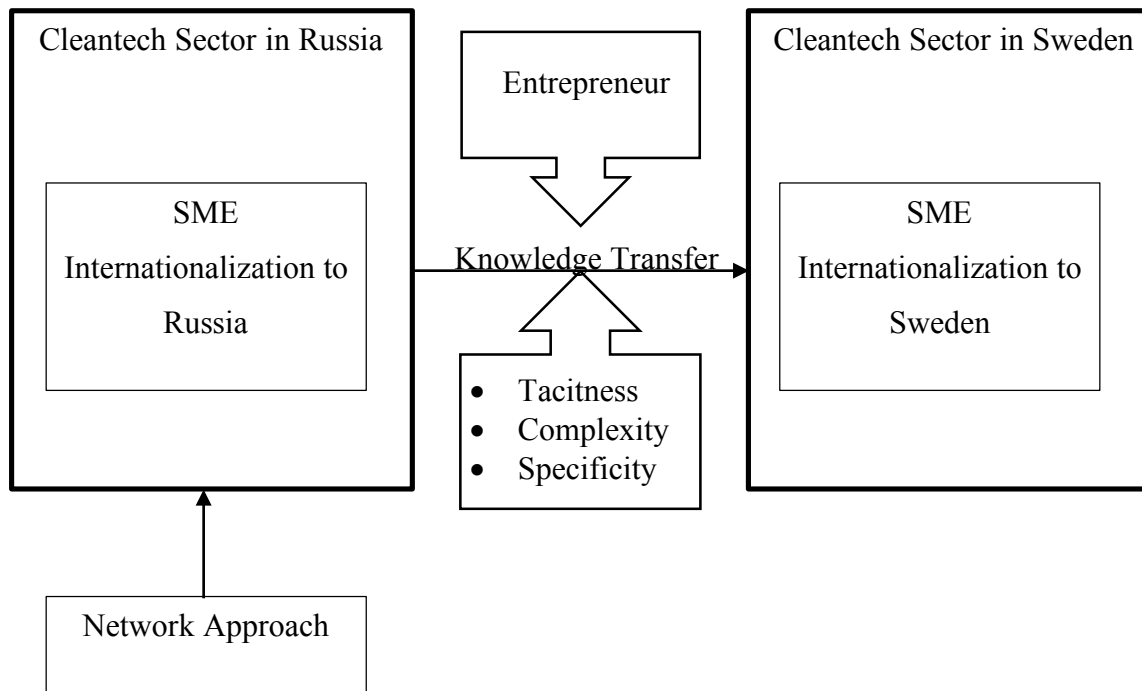


Figure 7. Revised Theoretical Framework

The revised theoretical framework provides a more holistic understanding of the key factors which facilitate or inhibit knowledge transfer success from Russia to Sweden. As shown in Figure 7, the framework suggests that cleantech sector in Russia and in Sweden are two unique environments with different forces affecting internationalization of companies within those environments, therefore they are separated.

Moreover, the revised framework suggests that the success of knowledge transfer is affected by three factors, which were highlighted in the empirical study. First of all, the knowledge tacitness and complexity have a negative impact on knowledge transfer success due to the fact that they are less transferable and require more time and cognitive effort to be transferred. Secondly, knowledge specificity can hinder knowledge transfer and create limitations since high knowledge dependency on the context affect the ease of adaptation and utilization of that knowledge in a new context.

Additionally, the role of the entrepreneur is crucial. The knowledge transfer is practically impossible without the entrepreneur who possess a variety of different motivations, networks, resources; identifies and creates the business opportunities and runs the business.

7.6 Managerial Implications

Overall, several implications emphasized by this research should be considered by the managers of cleantech SMEs. First, the existing network ties, knowledge and experience of the founders should be utilized to their full potential as it appeared to be one of the main determinants of enabling rapid internationalization of SMEs. Moreover, the managers should first consider the markets for internationalization that they are familiar with and have existing contacts in should be considered first, and then to new markets once they form additional contacts through new network relationships. Also, the results suggest that managers entering Russian market need to focus on the development of personal relationships when aiming to develop business networks, since interpersonal interaction and networking is extremely important in Russia.

Furthermore, the results highlight that cleantech SMEs should be aware of possible initial difficulties in finding partners and customers due to a new technology uniqueness and innovativeness, lack of references and resource constraints. Therefore, engagement in direct sales might be considered first to get the additional sources of reference for future business. Also, investors were identified to provide the cleantech SME with relevant contacts from their own networks that in turn provided valuable information regarding business opportunities abroad.

Another managerial implication of the results lies in conforming the importance of being active and having a presence in various social media platforms and regularly updating web pages, which proved to be beneficial to the case company in relation to forming new network contacts and attracting new partners and customers. This implies that managers have to utilize all possible mediums of contact building and be active in order to generate more exposure for their respective company.

Gaining access to financing, other than personal may prove to be initially problematic for SMEs. Thus, managers should consider governmental support agencies to acquire funds.

Case company is a perfect example of this since they were able to get financing and other expert services from Finnvera, TEKES, VTT, ELY-keskus and even EU Horizon 2020. Additionally, venture capital is another viable source of financing for a SME, which also was utilized by the case company.

7.7 Conclusion

Small and medium enterprises have been drawing a lot of scholarly attention by playing a crucial role in almost all economies in the world and by being increasingly active in international markets during the last decade. SMEs rapidly expand their operations to international markets and researchers have been using different theories to explain the internationalization of SMEs. The topic area of current study brings Network model of internationalization which implies that the company rather internationalizes by establishing relationships with partners in foreign networks. It was chosen since it is more consistent with modern business models and can better describe the internationalization process of SMEs. Usually, the internationalization of SMEs is more risky due to the lack of resources and constrained financial budgets. Therefore, the existing network ties might be utilized in order to gain significant advantages: choosing a target market, gaining information and knowledge, reducing uncertainty.

The current research is especially focusing on a cleantech sector, which has attracted growing interest of academia, technologists, governments, business and investors in the last decade; which has in turn resulted in increasing size of cleantech market and, respectively, the amount of cleantech companies, especially startups. Cleantech addresses problems of environmental pollution caused by conventional sources of energy. Moreover, it promotes economically effective and environmentally friendly solutions. Thus, cleantech is a promising market of the future that is worth studying.

The aim of this study was to understand how can the Finnish SME in the cleantech sector make use of its previous networking knowledge gained from internationalization process to the Russian market to facilitate new internationalization process to Sweden. The findings of this study made contributions to existing theories and research regarding SMEs' internationalization with a special focus on the networking theory. Moreover, knowledge transfer was introduced as a way to accelerate internationalization.

Additionally, the study aimed to bring more knowledge about cleantech sector in general and cleantech in Russia and in Sweden in particular. Hence, the theoretical contributions were focused around strengthening existing SME internationalization theory while utilizing a network perspective to help explain internationalization of Finnish SME from a cleantech sector.

On the basis of the findings, given the fact that cleantech markets in Russia and Sweden differ quite significantly, the amount of networking knowledge that can be transferred is limited. In Russia, network contacts that were facilitating speedy access to market information and providing insights into target market opportunities mostly came from personal contacts of the founder, implying that personal networking in Russia is extremely important for enabling engagement in new networks and finding partners and customers. On the other hand, in Sweden, due to the absence of social contacts and because of the fact that social networks are less important there, the focus should be kept on institutional relationships that appeared to be not that crucial in the Russian market and on business relationships since Sweden's cleantech sector is comprised of a large proportion of high-impact cleantech start-ups.

Moreover, some other knowledge that is useful for the case company refers to partner selection criteria and some possible internal and external factors that might affect network establishment and internationalization and that have to be taken into consideration by the case company.

7.8 Limitations and Future Research

Even though this research provides novel insights and draws valuable conclusions with regard to Finnish SME internationalization and possible network knowledge transfer in a cleantech sector, it naturally has some limitations that are worth mentioning as they open up new paths for future research.

Current thesis research was implemented in an accurate manner to present the most sufficient and realistic results. Theoretical part was based on the analysis of previous research, prominent theories and universal models, revolving around the studied phenomenon, which contributed to the overall study outcomes. Despite the fact that the selection of studied materials related to the research area was rather extensive, it cannot

possibly account to overall amount of existing research works. The most relevant publications are believed to serve as a basis of the current research, even though such selection might have implied certain limitations to the study.

Theoretical background of the current thesis research also served as a basis for empirical data collection. Based on own perception and understanding of the reviewed literature, researcher predefined themes for interview discussion. This may also put some limitations for further analysis of the phenomenon, as it is dependent on individual perception.

Moreover, the research context is quite specific. The sample in this study is restricted to one specific type of company (SME), two countries (i.e. Russia and Sweden) and one sector (i.e. cleantech sector); consequently, the findings can not be easily interpreted outside the context, as they are of no relevance to other sectors and other countries. Therefore, future research conducted in different national environments may bring additional interesting and complementary results. Furthermore, larger samples are required in order to claim generalizability of the study results.

Lastly, the current research was rather exploratory in nature and the findings were mostly inducted from the empirical evidence derived from a single case study. Therefore, deductive research might be carried out, using several cases and quantitative research methods, in order to increase the validity of some of the results.

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APPENDIX

Interview Guide

The following interview guide takes in consideration all relevant aspects of the investigation.

1. Basic Information

- a) Company name; Foundation; Number of employees;
- b) Interviewee name; Position; Education and Experience;

2. Interview Questions

- What was the initial reason to internationalize?
- What was the motivation to enter Russian market?
- How did you enter Russian market?
- How did you establish networks in Russian market?
- How did you identify whether the partner is suitable or not?
- Did you encounter any particular problems while establishing networks?
- What was the role of the owner/entrepreneur?
- What do you think are your strengths and weaknesses that might affect network establishment and internationalization?
- How would you access cleantech market in Russia vs cleantech market in Sweden?

Any other issues...