

Lasse Torkkeli

THE INFLUENCE OF NETWORK COMPETENCE ON INTERNATIONALIZATION OF SMES

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ABSTRACT

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This study focuses on the relationship between organizational network competence and the internationalization process of small- and medium sized enterprises (SMEs). Over recent decades, the global business environment has become increasingly conducive to internationalization of small firms. A central facilitating factor in the process has been the emergence of networked business relationships between internationalizing firms. Research on SME internationalization has found that certain types of structures and dynamics of business networks allow SMEs access to the resources they need to enter foreign markets. This consequently means that their internationalization often becomes to depend on the networks they are embedded in. However, research so far has mostly ignored the possibility that the organizational ability to develop and manage business network relationships, network competence, may be a major underlying factor in determining how well SMEs can leverage their network relationships to enter foreign markets and consequently may determine in large part how successful their internationalization process turns out to be.

This study aims to respond to those gaps, by empirically examining how the development of network competence in internationalizing SMEs influences the internationalization outcomes that they can expect, and how such network competence is conceptualized and developed. Using a mixed methods approach, survey data collected from 298 Finnish SMEs across five industry sectors is first used to examine how levels of network competence are related to internationalization propensity of SMEs and their subsequent international performance, growth and profitability as internationally operating firms. In order to illustrate in more detail the ways in which network competence is conceptualized and how it develops during the internationalization process of an SME, qualitative data from internationally operating Finnish SMEs are used. Longitudinal interview data of an internationalizing Finnish SME is accompanied by data gathered through a series of semi-structured interviews of Finnish and Russian managers involved in mutual business relationship dyads. Structurally, this thesis examines the research issue as an article-based dissertation, consisting of five journal and conference publications. Three of these publications are based on the quantitative data, and the remaining two apply the qualitative interview data.

The results find several aspects where network competence has a positive influence on the success of internationalizing SMEs, how it develops and what it entails conceptually in this

context. Quantitatively, the level of network competence is found to have a positive relationship to various internationalization outcomes, including the propensity of SMEs to enter foreign markets and on their subsequent international performance, their growth and their profitability. Additionally, the positive relationship is divided between the relationship-specific and cross-relational dimension of network competence, in that the influence of the former is relevant for the propensity to internationalize, while the latter is for the growth and profitability of the already internationalized SMEs. Qualitatively, the results suggest, firstly, that the development process of network competence does not necessarily precede the start of the internationalization process, but may occur through a gradual learning process alongside it. And secondly, the results also imply that the conceptualization of network competence by Finnish managers of internationally operating Finnish SMEs is structurally distinct from that of their culturally distinct partner managers in Russia.

This study contributes to the literature on SME internationalization in several ways. Firstly, it introduces operationalized organizational competencies to the literature on internationalization of SMEs, which has so far mainly examined the influence of business networking on the internationalization process without having such an organizational viewpoint. Furthermore, this study provides a multi-level analysis of the determinants of successful SME internationalization, by examining various strategic and performance outcomes across the process. These results also contribute to the literature on organizational strategy of internationalizing SMEs, by clarifying how different dimensions of business networking may be optimal in different phases of the internationalization process. Conceptually, the results of this study contribute to the literature on competence development and SME internationalization, by illustrating how the development process of network competence may occur during internationalization process. Thus, they also contribute to the discussion on how SMEs are able to influence the dynamics and structures of their business networks over time. Finally, this study contributes to the literature on the role of culture in the internationalization process, by implying that the cultural background of the manager of the SME may determine whether business networking and network competence is seen as an organizational-level or an individual level capability.

The study also includes some additional contributions to the literature on dynamic capabilities in strategic management, and on that of strategic business networks. These include further clarifying the exact nature and tangibility of dynamic capabilities, and being one of the first studies to introduce constructs from both dynamic capabilities and business network literature to the field of international entrepreneurship. And finally, the study also has some contribution on the two streams of literature, in illustrating how both dyadic and network-level capabilities may be relevant, depending on the current strategic goals and market position of the firm.

Keywords: network competence, internationalization of SMEs, business networks, dynamic capabilities

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About four years ago, I found myself sitting in a room with two LUT Professors, discussing the possibility of my starting academic research on internationalizing firms. At the time, I had no background or previous studies in international marketing, had no teaching experience, and in general had no idea whatsoever of the requirements working in academia places on a person. And yet those two Professors could see then that I would be writing these words one day. So it is only right that my first thanks go to the two, my supervisors Professors Sami Saarenketo and Kaisu Puumalainen. Throughout, their encouragement has been valuable, their advice always relevant and to the point, and their attitude motivation-fostering.

Being as this is an article-based dissertation, my warmest gratitude belongs also to the co-authors of these articles, people who have had a positive input on the research process and have contributed to the end result: Sami, Kaisu, Olli Kuivalainen, Niina Nummela and Maria Ivanova. In addition, numerous people have been helpful in specific facets of making this dissertation happen. I would especially like to thank Kaisu for providing expert advice on quantitative methodology, Tera Johansson for providing the similar kind on qualitative methodology, and Joan Nordlund for her excellent work in helping to revise my “Finglish” up to the golden standard of a journal publication.

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	PART II: PUBLICATIONS	

List of publications

This thesis is based on the following papers. The rights have been granted by publishers to include the papers in dissertation.

- I. Torkkeli, L., Puumalainen, K., Saarenketo, S. & Kuivalainen, O. (2012): The effect of network competence and environmental hostility on the internationalization of SMEs, *Journal of International Entrepreneurship*, 10(1), 25-49.
- II. Torkkeli, L., Puumalainen, K., Saarenketo, S. & Kuivalainen, O. (2011) Relationship-specific and Cross-relational Network Competence in Internationalizing SMEs: Implications for Growth (This is a revised article from the paper presented in the proceedings of the 14th McGill International Entrepreneurship Conference, Odense, Denmark, Sep 16-18, 2011)
- III. Torkkeli, L. (forthcoming) Profitable SME Internationalization: The Influence of Relationship-specific and Cross-relational Network Competence (This is a revised article based on: "Growth and profitability of international SMEs: Influences of network competence, ownership characteristics and environmental turbulence" (Proceedings of the McGill conference 2012, Pavia, Italy, Sep 20-Sep 23, 2012). A further revised version of this paper is forthcoming in the *International Journal of Procurement Management*)
- IV. Torkkeli, L., Saarenketo, S. & Nummela, N. (2013) The Development of Network Competence in an Internationalized SME (This is a revised article from the paper presented in the proceedings of the AIB-UKI 2013 conference, Aston, UK, Mar 21 - Mar 23 2013)
- V. Torkkeli, L. & Ivanova, M. (2013) Organizational and Individual Network Competence in Context: an Intercultural Perspective (This is a revised article from the paper presented in the proceedings of the EMAC 2013 Conference, Istanbul, Turkey, Jun 4- Jun 7 2013)

Author's contribution

1. Formulated the research question and built the hypotheses together with co-authors. Did not take part in survey design and data collection during 2008, but took main responsibility in conducting the empirical analysis, with periodical comments from co-authors from the start in 2009. Took main responsibility in authoring the paper and revising it for the journal overall.

2. Formulated the research question and built the hypotheses together with co-authors. Did not take part in survey design and data collection during 2008, but took main responsibility in conducting the empirical analysis, with periodical comments from co-authors starting in 2009. Took main responsibility in authoring the paper and revising it overall.

3. Sole author. Did not take part in survey design and data collection during 2008, but built the hypotheses and authored the paper from start to finish.

4. Formulated the research question in 2012. Selected the case company and prepared the semi-structured interview on network competence together with co-authors in 2012-2013. Took part in conducting the series of interviews together with co-authors, conducting the interview in 2013. Took the main responsibility in authoring and revising the paper overall.

5. Formulated the research question in 2012. Conducted the Finnish interviews. Conducted the analysis and authored the paper with the co-author in 2012. Coordinated writing of the paper, taking the main responsibility in writing the introduction, analysis and conclusion sections. Was responsible for analyzing the Finnish side of the dyad in particular. Took the main responsibility in revising the paper 2012-2013.

PART I: OVERVIEW OF THE DISSERTATION

1 INTRODUCTION

1.1 Background and motivations for the study

Being able to develop and maintain business relationships with individuals and organizations is an integral part of doing business in today's globalized world. This was not always the case, however, as before the emergence of first studies on business networks, academic research still mainly regarded internationally operating firms as individual vertical organizations. This meant that whatever business relationships firms engaged in occurred mostly on the basis of make-or-buy transaction costs, an understanding based on Coase's (1937) and Williamson's (1979; 1983) seminal works.

On some level, the lack of studies incorporating business relationships to international business is understandable, since many developments conducive to business relationships, such as the increasingly global supply chains, and the emergence of new industry sectors where networking is vital, have only materialized over the last few decades. Today, firms face increasing pressure to be able to create and manage an increasingly complex set of business-based relationships with one's customers and other business partners.

This development was noticed in the early 1980s, and is captured in Håkansson and Snehota's (1989; 2006) claim that "*no business is an island*". Their research was part of the research group founded shortly before, one that became known as "*Industrial Marketing and Purchasing Group*" (IMP). The units of analysis in IMP research were grounded in the concepts of "*actors*" (i.e., firms), "*nodes*" (linkages between those firms) and "*networks*" (sets of inter-connected nodes) (Håkansson, 1982; Håkansson & Snehota, 1995). To this day, the IMP group concentrates on examining how firms embedded in networks of business relationships are leveraging their network relationships in order to remain competitive and survive.

Around the time that the IMP group was being conceptualized, first scientific models of the ways firms internationalize were also beginning to be published. They were concerned with finding out how domestic firms in general start exporting to other countries and, consequently, how those firms go on to become internationally operating entities. Two schools of thought formed around the internationalization discussion: those who considered increasing involvement to foreign markets to actualize through gradually increasing levels of commitment to *exporting* (Bilkey & Tesar, 1977; Cavusgil, 1980; Reid, 1981; Czinkota, 1982); and those who considered exporting to be only the first stage in a larger internationalization process, one that, eventually, would lead to more committed *modes of operation*, e.g., the establishment of foreign subsidiaries and production facilities (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977; 1990).

In hindsight, it is perhaps easy to point out the inevitability that the two streams of research would later find a common touch point; after all, if being embedded in business networks is interlinked with conducting competitive business domestically, one could assume that the same would hold outside the domestic borders, as well. Johansson and Mattsson (1987; 1988) were among the first to note this, claiming that it is the process of learning in one's

business network that acts as the driving force for a given firm to gradually increase its commitment to international markets. This idea is prevalent in the expressed as a central theme in the revised “*Uppsala model*” (i.e., the “*U-model*”) as well (see Johansson & Vahlne, 2003; 2009).

Considering the fact that the U-model has been among the most frequently cited models in international business research (Andersen, 1993) it is somewhat surprising that extant research has mostly ignored the possibility that organizational differences in being able to make use of the business network may have influence on determining how well firms do in their internationalization process. Indeed, being embedded in a business network may not be enough for a firm; it may also need some skill in navigating those business networks, some network-related insight (Mouzas et al., 2008), and analytical skill (Freytag & Ritter, 2005). The ability to develop networks has also been found to be important for overall internationalization strategy of firms (Loane & Bell, 2006) and to lead to sustainable competitive advantage (Dyer & Singh, 1998; Ziggers & Henseler, 2009). Pittaway et al. (2004) note that one of the main benefits firms get from networking is precisely the chance it offers them to obtain access to new markets.

The next step would be postulating that, if business networking can be leveraged to successful international business, the ability of the firm to develop and maintain their sets of business relationship within that network may have something to do with that success as well. The study of firm-specific abilities and the ways to develop and apply them originates from the literature of strategic management, where organizational abilities are discussed within the larger frame of organizational strategy. There, the emergence of industrial organization economics, most evident through Porter’s five forces analysis (Porter, 1979), has proposed the relevance of not only decisions made by firms as individual actors, but also that of the factors within the chosen industry environment.

This widening of paradigm has lead researchers later to define firms as collections of higher-level routines, and using these routines to excel in the marketplace (Nelson & Winter, 1982). The ways firm apply those routines are most often conceptualized as “*core competencies*” (Prahalad & Hamel, 1990) or “*dynamic capabilities*” (Teece et al., 1997; Eisenhardt & Martin, 2000), and have received increasing attention in strategic management literature (see e.g., the review by Furrer et al., 2007), as well as in research enveloping the IMP paradigm (see e.g., Äyväri & Möller, 2008; Pagano, 2009). However, the role that competencies and capabilities have in the internationalization process of firms is still mostly an understudied phenomenon.

Consequently, if one is to study the relationship between these network-related organizational abilities and the internationalization process of firms, a fitting context would be the internationalizing small- and medium-sized enterprises (SMEs) that originate from small, open economies. This is due to various reasons: Firstly, SME internationalization has traditionally been a part of the research stream on international entrepreneurship (IE), where the role of networks on successful operations both home and abroad has been found of particular importance. From the first seminal IE publications by McDougall (1989) and Oviatt & McDougall (1994), business networks have been highlighted as a main driver of SME internationalization and international growth, resulting in a multitude of studies looking at the linkage from various angles (Madsen & Servais, 1997; Holmlund & Kock,

1998; Chetty & Blankenburg-Holm, 2000; Knight & Cavusgil, 2004; Pittaway et al., 2004; Coviello, 2006; Kuivalainen et al., 2007; Ojala, 2009).

These studies have mostly been based on the idea that the main underlying reason for SMEs having to leverage business networks to internationalize is the realization that such small firms are often faced with size-related constraints, such as lack of marketing resources and other types of resources (Knight & Cavusgil, 2004), constraints they can overcome by making use of their business network partners (Coviello & Munro, 1995; 1997; Saarenketo et al., 2004; Loane & Bell, 2006; Sasi & Arenius, 2008). It is not such a surprising development, then, that reviews of international entrepreneurship literature (e.g., Coviello & McAuley, 1999; Peiris et al., 2012) find network resources of SMEs to be critical antecedents of their internationalization, and part of the ontology of the IE domain (Jones et al., 2011). Peiris et al. (2012) further find that network relationships help mainly by providing the necessary knowledge, information and expertise for SMEs to engage in the internationalization process, by providing opportunities for foreign market entry, and by providing increasing access to resources.

Moreover, while IE research is a global phenomenon in general (Jones & Nummela, 2008), many of the extant studies of the area have examined SMEs in small, open economies, e.g., Ireland (Bell 1995; Loane & Bell, 2006), New Zealand (Coviello & Munro, 1995; 1997), Norway, and Finland (Bell, 1995; Holmlund & Kock, 1998; Kuivalainen et al., 2007). These types of small open economies seem a fertile contextual ground for studying internationalization of SMEs, as the small domestic markets in these countries, combined with the increasingly higher knowledge-intensity of many of the internationalizing firms (Kuivalainen et al., 2007), may mean that SMEs from these types of markets are often more likely to have to seek growth through foreign operations than its more traditional counterparts originating from larger markets.

Thus, SME internationalization seems like a fitting context for studying the role of network competencies in the international business, as it offers an empirical setting where, according to extant research, that role should be highlighted and emphasized. It is somewhat surprising, then, that the research on network-related SME internationalization has so far only considered other issues, such as the structure and location of the network and the types of network partners an SME needs to succeed internationally. In the process, it has generally taken a static view of what the business networking process looks like from the outside of the firm. And yet, the view of the organizational capabilities that relate to forming those network relationships is mostly missing from the discussion.

The reason is not likely a lack potential concepts: A large number of network(ing) capabilities and competencies, often building on the work of IMP and Johanson & Mattsson's network approach have been suggested (e.g., Möller & Halinen, 1999; Ritter, 1999; Ritter et al., 2002; Johnson & Sohi, 2003; Mort & Weerawardena, 2006; Walter et al., 2006; Mitrega et al., 2012). Parallel to this development, a set of capabilities and competencies mostly related to managing individual business relationships have been identified in literature on strategic management (Sivadas & Dwyer, 2000; Lambe et al., 2002; Kale et al., 2002; Hoffmann, 2007; Heimeriks & Duysters, 2007; Schreiner et al., 2009). However, they have yet to be comprehensively applied in research on the internationalization of SMEs.

This is a gap in research, as in light of the studies on positive effects of business networks on internationalizing SMEs, possessing such competence might have some influence on the ways they leverage their networks to achieve their goal of becoming international. Additionally, most of the studies discussing these networking abilities do so at an abstract level or restrict themselves to the development of a scale only. Indeed, as Jones et al. find in their review of two decades of international entrepreneurship literature (2011), networking-related capabilities are often discussed in the field not as sets of organizational practices, but instead as the capabilities of founders of the firms to network individually. And finally, as Nummela (2011) notes, overall the amount of empirical studies concentrating on the role of networks in the SME internationalization context is still limited.

In sum, academic research literature on strategic management, international entrepreneurship and business networks has identified a set of organizational competencies, illustrated emerging sets of complex business relationships, and recognized new types of small firms that seek internationalization. These changes in the global business environment have led to the point where here, in the 21st century, firms are no longer considered as just individual, self-fulfilling units that prefer transactional arrangements (Walter et al., 2006). Instead, as the worldwide marketing environment is becoming increasingly turbulent and knowledge-intensive, and so the classic multidivisional organizations are giving way to networked ones, which increasingly consist of a number of specialized firms residing in cooperative relationships and in different kinds of business networks with each other. And yet, as seen above, there seems to be a gap in literature considering the influence that the organizational competence to develop and manage networks on can have on internationalizing firms in general, and for SMEs in particular.

1.2 Research questions and positioning of the study

The research gap that this study aims to respond to arises at the intersection of the research on SME internationalization, the research on business networking, and the research on dynamic capabilities. It therefore includes elements from both strategic management and industrial marketing (the IMP group), and is rooted in international entrepreneurship, a research field in the crossroads of international business and entrepreneurship, and one where the studies on SME internationalization in the context of small, open economies have mainly taken place. The theoretical positioning of the study is illustrated in figure 1.

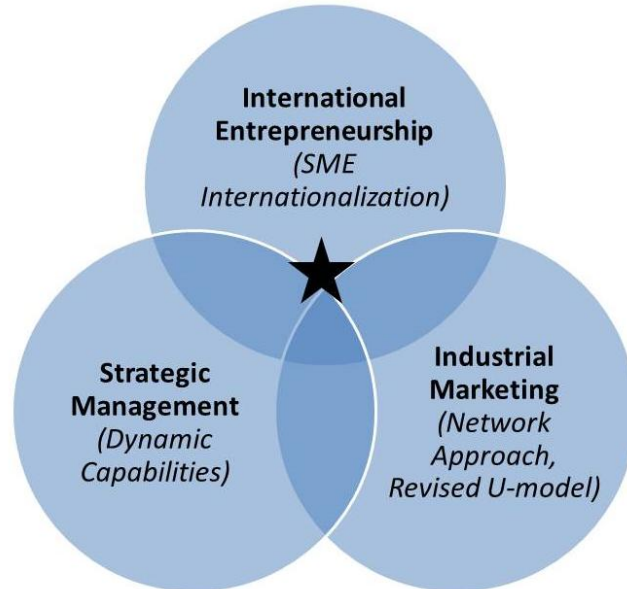


Figure 1. Positioning of the study.

As network competencies have been researched either at a very abstract levels, or through scale development only, and as the relevance of business networks on internationalization of SMEs is still to be holistically linked to those competencies, the aim of this study is to find out how network competence is manifested in internationalizing SMEs and what are its influences to the success, growth and profitability of internationalizing SMEs. The main research question is therefore:

- *What is the relevance of developing and possessing network competence for internationalizing SMEs?*

Measuring success in the context of internationalization can be conducted in various ways. Firstly, one can examine the relationship between network competence and the propensity of the SME to have become international. As the market selection and entry initiatives of SMEs tend to originate from opportunities created through business networks (Coviello & Munro, 1995), a relevant question to ask if possessing better network competence is tied with increased market entry possibilities. As a follow-up to entering the first foreign market, the SMEs may attempt to enter a second and a third one, in order internationalize extensively in both scale and scope. This is a logical way for internationalizing SMEs to leverage their networks further (Loane & Bell, 2006).

Finally, international success can also be measured by the level at which the strategic goals set to the process have been met. Therefore, it seems that there are various levels of success in international markets that the network competence of SMEs should be examined with, and consequently the first sub-question is:

- RQ1: *What is the relationship between the level of network competence of SMEs with their success in entering international markets?*

Another relevant question to ask in relation to network competence and the internationalization processes of SMEs is also how well they are able to grow by internationalizing. SMEs in knowledge-intensive high-technology industry sectors tend to aim for rapid and intensive internationalization (Rennie, 1993; Oviatt & McDougall, 1994; Kuivalainen et al., 2007), and yet a main force driving them is their often niche-oriented business model and the fact that they often originate from small domestic markets not big enough to support the SME long-term. What they seek by internationalizing is therefore increased growth (see e.g., Coviello & Munro, 1997; Gabrielsson & Kirpalani, 2004; Sasi & Arenius, 2008). However, the influence of network competence on the growth of SMEs is still to be determined. Therefore, the second sub-question is:

- RQ2: *What is the relationship of network competence with the growth of internationalizing SMEs?*

Subsequently, for an SME to call its internationalization process a success, in addition to starting operations in its first foreign markets and achieve further growth by increasing its scale and scope of operations to extend an increasing number of countries, it has to do so in a sustainable way to survive; to grow through expansion of international operations would not be a complete success if it comes with the price of plummeted profitability and accumulating financial losses. Lu and Beamish (2001), in their study of 164 internationalizing SMEs, find that foreign market entry is often linked with decreased profitability. However, they also find that the existence of business relationships may be a way to overcoming this tradeoff. Their 2006 study echoes the same sentiment, adding that engaging in increasingly intense international activity can also affect profitability of SMEs negatively. Other studies (Zahra et al., 2005; Kuivalainen et al., 2007) disagree, while Zhou et al. (2007) suggest that better profitability in internationalizing SMEs depends on successful managerial networking.

However, the extant studies mostly take the view of personal networking in the context, and have little in the way of networking-related organizational competencies included. Therefore, there is both a gap for examining the influence of network competence on the profitability of internationalizing SMEs, as well as a valid reason to include profitability as one of the factors comprising a successful internationalization of SMEs. Thus, a third sub-question for this study is:

- RQ3: *What is the relationship of network competence with the profitability of internationalizing SMEs?*

In addition to examining the relationship between network competence and its outcomes on the performance, growth and profitability of internationalizing SMEs, a relevant question to ask in the context of network competence and the internationalization process is how the development of network competence is manifested across time. The dynamics of network change have been examined in longitudinally in the academic literature on business networks (e.g., Freytag & Ritter, 2005; Ford & Redwood, 2005; Abrahamsen et al., 2012). However, those studies have mainly examined the evolving structures and composition of those networks, and neglected the potential influence of dynamic capabilities in that context. They have also been mostly related to specific types of networks, based on industrial buyer-supplier relationships.

Less research on longitudinal network dynamics is available on the context of SME internationalization research, and what little is available (Boojihawon, 2007; Coviello, 2006) also forgoes the dynamic capabilities aspect. Thus, it comes as no surprise that so far, no attempts have been made to find out whether SMEs develop network competence before or after entering foreign markets. As the ability of firms to develop and manage their business networks can vary, it is important to consider not only what sorts of relationships exist between levels of network competence and international success, but also the point at which internationalizing firms develop their network competence. This timing is essential particularly for internationalizing SMEs, as the development of business network relationships requires committing not only time, but also personnel and other resources, neither of which a small firm can afford to waste. As insufficient resources are one of the main factors preventing their internationalization in the first place (Knight & Cavusgil, 2004), it is also strategically crucial to locate the stage of the internationalization process where network competence is and should be developed. This may imply that the influence of network competence on the internationalization of SMEs may extend from outcome measures to the development process itself. Therefore, the fourth sub-question is:

- RQ4: *How does the development of network competence occur in an internationalizing SME?*

An additional aspect into examining the impact of network competence on internationally operating SMEs is the role of culture in determining how business networking and the concept of network competence are understood in different cultural contexts. Some studies indicate that the nature of business networking and business networks is understood differently in emerging and developing markets. In particular, developing institutional and business environments that characterize many emerging markets tend to mean that the business networking process in those markets is more individualized and occurs through personal relationships rather than the organizational level (e.g., Lee & Tsang, 2001; Luo, 2003). To develop and maintain their business networks in both developed and emerging economies, internationalizing SMEs therefore may have to account for that, lest they face situations where lack of personal individual relationships will hinder the development of network relationships (Barkema & Vermeulen, 1997).

Therefore, especially when considering business networking that spans boundaries between developed and emerging economies, it is crucial to understand the concept of developing business networks from both the organizational and the individual units of

analysis. This is equally relevant for its implications on the development of network competence, as it is supported by the strategic goals of the firm (Ritter & Gemünden 2004), implying that different types of network competence may be developed as a result. This is to say that either organizational-level or individual-level network competence may be the most relevant for internationalizing SMEs, depending on which markets they intend to enter and operate in, and thus develop their business relationships in. Therefore, the fifth and final sub-question addressed in this study is:

- RQ5: *How does the cultural background of managers influence the understanding on network competence among internationalized SMEs?*

In summary, the overall goal of this study is to examine how network competence of internationalizing SMEs is related to their level of success and financial outcomes, while also illustrating the development and cultural understanding of network competence in the SME context. The research questions and their accompanying publications are summarized in table 1.

Table 1. Outline of the research questions and the corresponding publications.

Main Research question:	
What is the relevance of developing and possessing network competence for internationalizing SMEs?	
Publication 1: The effect of network competence and environmental hostility on the internationalization of SMEs	Sub-question 1: <i>What is the relationship between the level of network competence of SMEs with their success in entering international markets?</i>
Publication 2: Relationship-specific and Cross-relational Network Competence in Internationalizing SMEs: Implications for Growth	Sub-question 2: <i>What is the relationship of network competence with the growth of internationalizing SMEs?</i>
Publication 3: Profitable SME Internationalization: The Influence of Relationship-specific and Cross-relational Network Competence	Sub-question 3: <i>What is the relationship of network competence with the profitability of internationalizing SMEs?</i>
Publication 4: The development of network competence in an internationalized SME	Sub-question 4: <i>How does the development of network competence occur in an internationalizing SME?</i>
Publication 5: Organizational and Individual Network Competence in Context: an Intercultural Perspective	Sub-question 5: <i>How does the cultural background of managers influence the understanding on network competence among internationalized SMEs?</i>

By finding answers to these research questions, the study would firstly contribute by linking operationalized network competence directly to internationalization and growth of SMEs. It can also contribute by explaining how SMEs can develop this network competence, and by illustrating what dimensions of network competence are most relevant, depending on the organizational objectives and the cultural context. It should also provide further information as to the antecedents of SME internationalization, bridging the strategic management discussions on competency and SME internationalization research on networks. Methodologically, a reliable and valid measure for network competence would enable better quantitative analysis of internationalization of firms in relation to networks and competencies in the future.

1.3 Definitions of the key concepts and delimitations of the study

In order to provide a clear picture of the concepts examined in this study, definitions of the main terms applied in this study now follow.

1.3.1 Internationalization

The term “internationalization” has several de facto definition in research contexts, but at its basic level, it can be defined as a firm’s process of increasing its foreign operations (Johanson & Vahlne, 1977), or as an outward movement in international operations of a firm or a group of firms (Welch & Luostarinen, 1988). Mainly, theoretical models of internationalization see the internationalization phenomenon as either a step-wise, gradually intensifying learning process (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977; 2003; 2009), where the process involving incremental creation of personal relationships with foreign customers, i.e. building a basis for trust (Johanson & Mattsson, 1988; Alajoutsijärvi et al., 2000), or as a reaction to industry and market pressure (Rennie, 1993; Oviatt & McDougall, 1994; Madsen & Servais, 1997).

1.3.2 Small and medium sized enterprises (SMEs)

The term SMEs is used to characterize companies termed “small” or “medium” through different size measures, e.g. through the amount of employees in a firm and/or the amount of yearly turnover generated. The thresholds for these categories vary between countries, as do the sizes of economic sectors between them. The Organisation for Economic Co-operation and Development (OECD) terms them as “*non-subsidiary, independent firms which employ fewer than a given number of employees*” (OECD, 2008). This number can vary depending on the source; The European Commission has, for example, stated that a medium-sized firm is one that lists less than 250 employees and whose yearly turnover or yearly balance sheet total is less than 50 million euro’s and less than 43 million euro’s,

respectively. A small firm then is one which has less than 50 employees and whose yearly turnover or balance sheet total is under 10 million euros (European Commission, 2003). However, earlier drafts of the definition included firms with up to 500 employees as SMEs, and the employee size requirement has also been ignored in some contexts (e.g., for accounting). Furthermore, countries (e.g., Canada and USA) still adhere to the definition of SME as a firm with up to 500 employees (Industry Canada, 2004, p.7; OECD, 2008). Thus, the definition of what constitutes an “SME” has both been altered over time and still remains non-trivial.

1.3.3 Business relationship

A business relationship is defined as a “*mutually oriented interaction between two reciprocally committed parties*” and characterized by interdependence, commitment and mutual orientation of the participants (Håkansson & Snehota, 1995, p.25). As such, it is a relationship based on the objectives of the firm, instead of existing for individual purposes. Inter-firm relationships are processes where firms develop strong and extensive ties with each other, with the aim of achieving mutual success (Anderson & Narus, 1991).

Thus, in business literature, those business-oriented relationships are usually referred to as partnerships, and the outcome of two firms creating a two-way relationship between each other is referred to as a “*dyad*” (Håkansson, 1982; Håkansson & Snehota, 1989; Anderson et al., 1994). One way to think of the individual relationship is to consider it an ongoing, long-term collaboration between two firms, characterized by risk-sharing with mutual adaptation and development (Ellram & Hendrick, 1995). A relationship such as this gives both firms some influence over the other (Anderson & Narus, 1990). Mutual interaction between the parties in the relationship is determined through the parties involved, the elements and processes through which the interaction takes place, the atmosphere between the participants, and the underlying environment (Håkansson, 1982).

Business relationships can be argued to be conceptually separate from those involving firms and consumers. This is because business markets research has a strategic focus that usually goes beyond the first transaction, whereas consumer markets are defined by single transactions with many small and powerless buyers. Thus, relationships in the B2B context need to be more stable, due to fewer more powerful and active buyers (Håkansson & Snehota, 1995). Thus, business relationship in this context is defined as a long-term arrangement between two companies, albeit the form that the relationship takes (e.g., a buyer-supplier relationship, a joint venture or an R&D agreement) may vary.

1.3.4 Business network

At its simplest, a business network can be thought of as “*two or more organizations involved in long-term relationships*” (Thorelli, 1986, p.37). While one-to-one partnerships have been proved to be an effective business strategy in many cases, whatever occurs in a certain business relationship is not independent of what is happening in other business

relationships, i.e. *“bonds in a relationship are but a portion of a wider web of actors”* (Håkansson & Snehota, 1995, p.33).

Indeed, the dyadic relationships that a given firm develops with other companies tend to turn into larger, connected networks of business relationships (Anderson et al., 1994; Turnbull et al., 1996). This is due to the fact that, while individual relationships are dyads, the existence of secondary functions to them results in them also being parts of networks (Anderson et al., 1994). Therefore, firms are recognized to be embedded in these business networks, which are defined as a set of (two or more) connected business relationships, and where exchanges in individual relations are contingent upon exchanges and non-exchanges in others (Cook & Emerson, 1978). Consequently, the actors engaged in the relationship form a structure of actor bonds, activity links and resource ties where additional third parties are also integrated (Håkansson & Snehota, 1995).

The business network is linked back to the dyadic view due to it being seen as an enabler for new relationships, through offering knowledge of trustworthiness and abilities of potential new partners (Gulati, 1995). The network is characterized by cross-linked individual relationships (Bengtsson & Kock, 2000) with one's suppliers, customers, technological and other kinds of partners, and even with one's competitors (Anderson et al., 1994).

1.3.5 Competence

During the 1990s, the existence of firm-specific competences, the core areas separating firms from their competition through organizational abilities was noted, and they were defined as *“core competencies”*, the phenomenon of collective learning in an organization (Prahalad & Hamel, 1990). Competencies have been defined as *“complex bundles of skills and accumulated knowledge, exercised through organizational processes which enable firms to coordinate activities and make use of their assets”* (Day 1994, p.38). As such, to possess organizational competence is to have the ability to both acquire the skills relevant to the organization, as well as to be able to apply them in a coherent manner. Mascharenas et al. (1998) add that core competencies are those competencies that are inimitable by competitors. A notable caveat is that an organizational competence is not a stable resource, but can instead be built up or eroded through time, due to various internal and external phenomena, such as breakthroughs in technology and changes in the marketplace (Anderson & Tushman 1991).

The term “competence” is semantically close to the term “capability”. Precisely, an organizational capability is *“a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type”* Winter (2000, p.983). Considering this definition renders the term much of the same characteristics as that of competence, including the application of the phenomenon through routines, it does not perhaps come as a surprise that in research literature, the two are casually used interchangeably (Bogner et al., 1999; Ritter, 2006; Zerbini et al., 2007). However, while the two share the underlying theoretical basis through being based on the dynamic capability view (Teece & Pisano, 1994; Teece et al., 1997; Eisenhardt and Martin, 2000;

Winter, 2003), in order to enhance clarity, a distinction is made in this study to refer to network *competence*, as the extant constructs of network capabilities, while being based on the same theoretical underpinning, still contain alternate conceptualizations, dimensions and items.

1.3.6 Network competence

Clarifying the definition of “network competence” applied in this study is of the essence, since in extant research, many of the network competencies are essentially “*used to refer to the same phenomenon*” (Äyväri & Möller, 2008, p. 2). Therefore, network competence is here defined as the ability of firms to develop and manage relations with key partners, such as suppliers, customers and other organizations, and to deal effectively with the interactions among these relations (Gemünden et al., 1996; Ritter, 1999; Ritter et al., 2002).

Thus, while it applies across different *types* of partnerships and interactions, it is linked with *business* relationships and networks between two organizations in particular. Semantically, of course, the “customer” might in some cases be the consumer, but network competence is built on the four levels of network management (Möller & Halinen, 1999) and the levels of analysis suggested by Ritter and Gemünden (2003), both of which suggest an organizational-level competence for business-to-business relationships. Additionally, the term “*key partner*” implies a long-term strategic partnership which is, often lacking in consumer transactions.

There has been some discussion on whether firms can “*manage*” their business network at all, or whether they can only hope to cope with them, i.e., manage *in* their business network (e.g., Ford et al., 2002; Wilkinson & Young, 2002; Ford & Håkansson, 2006). However, Thorelli (1986) has disputed this claim, noting that without conscious coordinative effort, i.e., network management, networks tend to disintegrate over time due to entropy. Furthermore, Ritter and Gemünden (2003) note that, by possessing network competence, it is possible for firms embedded in business networks to intensively involve others to their own operations, and they are thus able to manage networks to the extent of their competence.

The conceptualization of network competence adapted for this study encompasses the business relationship abilities of a firm, and divides them into two categories: task execution activities and their qualifications, with the former further divided in relationship-specific and cross-relational tasks (Ritter, 1999; Ritter et al., 2002). The qualifications dimension of network competence concentrates on people dealing with relationships, and also relies on specialist and social qualifications (Ritter, 1999; Ritter et al., 2002). This means, firstly, that network competence as a construct encompasses the abilities of firms to develop and maintain both dyadic partnerships (relationship-specific tasks) and networks of partnerships (cross-relational tasks). The network competence construct “*NetComp*” includes 93 items across these two main dimensions (Ritter et al., 2002). The measure is composed of sets of 7-point Likert-scale items across the seven task execution and two qualification sub-dimensions (figure 2).

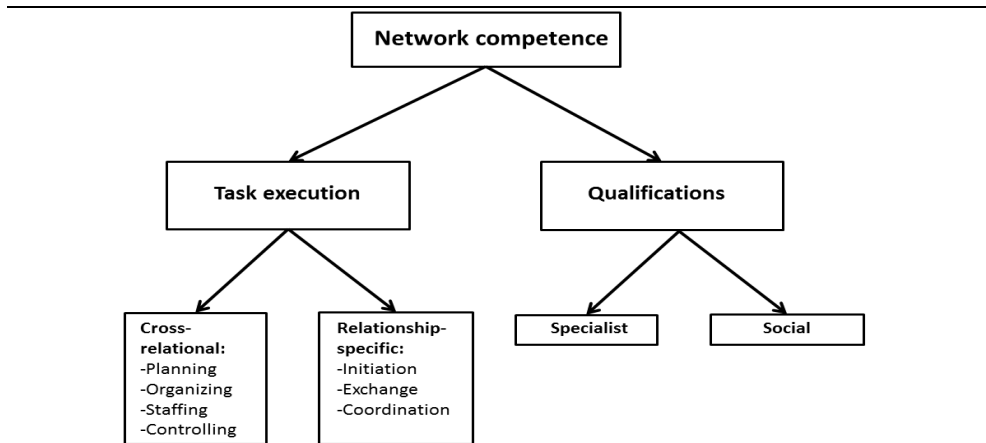


Figure 2. The network competence construct (adapted from Ritter, 1999).

Some examples of what makes for the network competence of an organization include: how systematically it evaluates the way their each individual business relationship helps them with other business relationships in the network; how systematically it evaluates the way those individual collaborations fit together to maximize the usefulness of the business network to the firm as a whole; and how systematically it compares those business partners in terms of their knowledge.

Network competence was developed as a response to a lack of studies dealing with management issues at the level of the firm, and in order to provide an insight into how network-related organizational capabilities could be operationalized (see Ritter et al., 2002, p. 120). In particular, the traditional four levels of management prevalent in the network perspective (see Möller & Halinen, 1999) did not account for these two possibilities. In their 2002 article, Ritter et al. found positive correlation of network competence to the extent of technological interweavement and innovation success, but did not account for international and domestic respondents in their analysis. Further applications have been limited to examining the effect of network competence on the innovation performance of firms in general (Chiu, 2008; Ritter & Gemünden, 2003; 2004), but not on internationalization or SMEs in particular.

It is also notable that, since network competence is conceptualized as a core competence (Ritter et al., 2002), its unit of analysis remains the organization; while the qualifications dimension refers to the skills of the individual people involved in the networked business relationships, those qualifications refer back to the set strategic goals of the organization, and are therefore still part of the organizational dimension. This distinction is line with other general conceptualizations of organizations and networks that suggest additional inter-unit and interpersonal levels for the organizational level of analysis (e.g. Brass et al., 2004).

One limitation of network competence is that the original scale (Ritter et al., 2002) is in need of further reliability and validity analysis. The 2002 study, while developing the scale with respondents across multiple cultures, mostly argued for the reliability and validity of the formed scale based on Cronbach's alpha values for each sub-scale only. The

application of the formed NetComp scale has also since been limited to the context of innovation performance (Ritter et al., 2002; Human & Naudé, 2008; Chiu, 2008), and the study by Human and Naudé, in particular, could not verify the validity of the scale despite its attempt to do so. Thus, a fully reliable and valid scale for network competence is yet to be replicated in academic research.

Another potential delimitation refers to the possibility that the structure of network competence in the SME context may be different from that in the context of larger multinational enterprises (MNEs). This possibility is supported by Ghauri (1992), who applies the network approach to explain how the network structures of firms are developed as they turn into trans-nationals. One notion from this article is that the influence and structure of networks (and thus by implication, network competence) may differ between internationalizing SMEs, and larger MNCs. Therefore, the reliability and validity of the scale should first be established for the context of SMEs, where the resulting construct is potentially different from its original context.

1.4 Outline of the study

This thesis consists of two parts. Part 1 provides an overview of the study, and is divided into five sections: Section 2 discusses the theoretical background of the study phenomena, including theories of internationalization, organizational competencies and the history of network-based research on SME internationalization. Section 3 describes the selection of research methodologies and the data collection process. Section 4 discusses the empirical results and contribution of each individual article. The first part of this thesis is concluded with section 5, where the publications are summarized, their theoretical and managerial implications discussed together with limitations with the study and suggestions for further research. Part 2 of this thesis consists of the five research articles addressing the research questions.

2 THEORETICAL BACKGROUND

The aim of this section is to provide an overall view of the theoretical background relevant to this study. The topics in this section are mainly divided in two: illustrating how business networks have been examined over time in different fields of business studies, i.e., 1) the traditional models of internationalization based on theories of international business on the one hand, and 2) the emergence of international new ventures based on theories of international entrepreneurship on the other hand. Following that discussion, the theoretical background behind organizational core competencies in general, and the available constructs related to business networks in particular are discussed. The section concludes with a summary of the extant research relating to these areas, and the resulting framework of the study.

2.1 Business networks and the internationalization process

2.1.1 Traditional export and internationalization models

The research on internationalization in general has its basis in the field of international business, which has historically been mostly related to foreign direct investment (FDI) decisions among larger firms. Their networks have often been understood to incorporate subsidiaries, soon-to-be acquired firms and other phenomena mostly constrained to the context of larger companies (Rugman & Verbeke, 2001). Still, business historians have widened their studies to consider networks alliances and other inter-firm linkages over time. Aharoni's (1966), Hymer's (1960; 1970) and Vernon's (e.g., 1979) work were mostly geared towards why specific industries illustrated higher levels of FDI than others. Aharoni did see the FDI decision process influenced by intra-firm and inter-firm social processes, and so was among the first to pave way for the later research connecting business relationships to successfully conducting business across domestic borders. At the time, there existed some amount of theory on international business, but in mostly non-codified, unsystematic and fragmented forms (Buckley, 2011).

Vernon's work, in turn, was among the first to see internationalization of firms developing as stages, although the composition of those stages was in his model restricted to product development. His work was carried on by the innovation-related export models, or the "*I-models*" (Bilkey & Tesar, 1977; Cavusgil, 1980; Reid, 1981; Czinkota, 1982). They were based on the idea that, as firms started exporting, they would follow a predictable pattern of gradually intensifying levels of exports. However, based on these models, the impact of firm size in explaining those export activities did not seem clear at the time (Bilkey, 1978). This was because the number of changing variables explaining the level of the activities, such as various management and firm characteristics, was large (Cavusgil & Nevin, 1981).

Instead, scholars studying business with these export models just assumed that small firms export less of their sales than larger ones, due to their limited resources, as they lack resources to explore export possibilities (Burpitt & Rondinelli, 1998), due to them lacking economies of scale, and due to them having more risk-averse managers (Bonaccorsi, 1992). Furthermore, the research available on internationalization of firms at the time

related more to the question of whether firms should internalize cross-border transactions than to anything directly network-related.

The various stages offered by the different export models resulted in no common model for the various empirical findings on the export behavior of firms. Instead, much of the research into initiation of exports activities focused on the so-called “*change-agents*”, which could be both external (e.g. industrial associations, government agencies and other firms) and internal (i.e. members of the top management of firms). The role of management was seen as championing the idea of entering exporting, and management was also seen to be linked with creating competitive advantage. However, these advantages through managerial advantage were not directly tied to organizational routines or anything that would reasonably be called a substitute for what later were identified as competencies. Some firm-level mechanics (international orientation of the firm) and industry environment (adverse conditions in the domestic market) were also seen as playing a role.

In other words, then, some firms were being pushed into exporting by an external change agent (e.g., a foreign customer), others simply were taking advantage of any arising export opportunities without predetermined objectives, while a third group of firms were those trying to initiate exporting deliberately. Bilkey (1978) studied this phenomena and found export marketing behavior of firms to be explainable by four groups of internal determinants: expectations of management on firm growth, level of commitment to export marketing (e.g. market planning, policy toward exports), differential firm advantages and the level of managerial aspirations. In contrast, export activities were hindered if the top management was not determined to seek new markets.

Reid (1983) studied export expansion decisions, and came to the conclusion that managerial variables are the main explanatory factor of export entry behavior (instead of commitment to exporting in itself). Only technological advantages, technical and administrative personnel and unsolicited orders were linked to the intention to export to new markets, its extent and performance derived from them. Overall, exporting firms tended to have better management than non-exporters (Bilkey, 1978).

However, even managerial attitudes identified in studies have varied and the term was not used consistently (Eshghi, 1992). In later review, Andersson et al. (2004) saw export decisions as being influenced by variations in firm resources, managerial characteristics, planning procedures and market opportunities. However, Leonidou, Katsikeas and Piercy (1996) have argued that only certain managerial characteristics are relevantly important in influencing exporting, and that these mainly have to do with subjective perceptions of risks, costs, and profits resulting from exporting to foreign. Their argument is that these perceptions shape the decisions on *initiating* export activities, in particular.

Therefore it seems that both the theories on export decisions, as well as their antecedents, have been quite dispersed in literature. Still, the lack of consensus does not indicate that exporting as a phenomenon could be ignored. On the contrary, firms often have no choice but to seek initiation of export activities, as such are vital in spreading business risks, improving standards (tehnological, quality and service) within the firm, as well as in generation of revenues and further growth (Leonidou 2004). Overall, though, as Zou and Stan’s 1998 review concludes, examining the influence of organizational factors on export performance has provided mixed results.

Parallel to the export models, the “*eclectic*” paradigm by Dunning (1980 and 1988; see also Buckley & Casson, 1976 and 1979), while maintaining the focus on larger multinationals, conceptualized different locational, ownership and internalization advantages behind the decisions of firms to internationalize. The relevance of the eclectic paradigm to the context of internationalizing SMEs of the 21st century business environment can be debated, however, as the decisions relating to these three types of advantages apply mostly to larger conglomerates that are able to make decisions requiring large-scale financial investments (e.g., whether to acquire a foreign firm, or to make other substantial FDI-related investments). The main link to the influence of business relationship comes from the admission by Buckley and Casson (1979) that businesses were starting to face increasing complexity in their international environment, a development partly caused by increasing numbers and forms of inter-firm linkages.

Where smaller firms were incorporated into IB studies, be it in relation to exporting, the intensity of exporting activities or the overall success of international activities of firms, the results were mixed. Calof (1993) noted that comparisons between these smaller firms and traditionally studied larger international businesses were thus made difficult. Still, the perception in IB research remained that overall, large domestic firms were more probable to turn international than SMEs.

The first models directly related to internationalization in the SME context were developed during the same time period during late 1970s and became known as the “*Uppsala*” model, or the “*U-model*” (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977; 1990). The empirical context for the U-model was based on a set of small Swedish manufacturing firms, the internationalization process of which the U-model illustrated.

While similarly conceptualizing the internationalization process as a series of gradually intensifying foreign commitment decisions (stages), it differs from the I-model in that it widened the view from exporting to explicitly consider other modes of foreign operation. In the U-model, these stages were conceptualized as 1) no regular export activities, 2) export via agents, 3) establishment of an overseas sales subsidiary, and 4) overseas production/manufacturing units (Johanson & Wiedersheim-Paul, 1975). Central in the U-model was the concept of “*psychic distance*”, which determines that the internationalizing firms tend to select those foreign markets that they have the most market and cultural knowledge of. In practice, this would tend to make them enter the geographically closest markets first, followed by gradual expansion to geographically, culturally and economically distant ones while gradually intensifying their operation modes in the foreign markets already entered. Hallen and Wiedersheim-Paul (1979) illustrate psychic distance and how it depends on the type of the organizations participating in international markets in a buyer-seller context.

While Johanson and Wiedersheim-Paul (and later Johanson and Vahlne in their 1977 and 1990 articles) did not place an overt emphasis on the context being on SMEs, the fact remains that their studies were based on Swedish SMEs located in manufacturing industries. However, the U-model has been criticized in various ways. Buckley (1989; see also Hennart, 2001) examined FDI in the context of SMEs, and criticizes the traditional models that smaller firms especially tend to often forgo some of the stages of increasing international commitment. He also recognized some of the internal and external resource constraints attributed to hinder smaller firms in their foreign entry decisions, and suggested information acquisition as the solution. O’Grady and Lane (1996) also provide some

criticism of the psychic distance concept, finding that close markets may actually be more difficult to internationalize to, due to existing prejudices and false confidence on the level of knowledge that a firm may possess on those markets. Osarenkhoe (2009) further provided examples of SMEs forgoing some of the stages and using non-sequential internationalization strategy instead. Finally, a yet another critique with the original U-model is that, even as it modeled psychic distance towards a given foreign market being overcome through gradual learning of that market, it fails to describe the vehicle of that knowledge accumulation (Andersen, 1993).

The network approach to internationalization (Johanson & Mattsson, 1987; 1988) provided this vehicle. It was based on the concepts of the IMP group (Håkansson, 1982; Håkansson & Snehota, 1995; Ford & Håkansson, 2006), where industrial markets are conceptualized as networks of business relationships between interconnected firms. Inherent in this approach is the idea that internationalization of firms occurs in the context the firm establishing and developing positions in those business networks. Johanson and Mattsson subsequently make a distinction between “*micro*” positions (position related to a given firm in the network) and “*macro*” positions (the relation of the firm to the whole network). Consequently, the resources controlled by the firms in the network (termed “*market assets*”) can be made use of by the firm, and leveraged to establishment of business relationships with additional firms in other business networks, some of which are located in foreign markets (Johanson & Mattsson, 1988).

While the network approach to internationalization was conceptualized in the context of industrial networks, that is to say, through buyer-supplier relationships, its influence on modeling SME internationalization in particular has been significant. This is due to the fact that it has been incorporated to the revised U-model (Johanson & Vahlne, 2003; 2009) as the missing vehicle of learning from foreign markets. Johanson and Vahlne (2009) argue that in the 21st century, internationalizing firms tend to face less of the liability of foreignness through psychic distance, and more of the liability of outsidership in relation to being part of business networks they need to enter foreign markets. This is to say that the revised U-model considers the business network as the source of foreign market information and, as the original U-model was established in the SME context, this new revision argues that it is the ability of an SME to be able to embed itself in proper business networks that causes its internationalization. This change in the underlying theoretical basis consequently has strategic implications for the SMEs aiming to operate internationally; it implies that, in order for SMEs to successfully operate in international markets, they should concentrate more on their ability to function in business relationships, instead of conducting their strategic analysis at the national or at the market levels.

The network approach and the revised U-model have also been received later critiques. Chetty and Blankenburg-Holm (2000) examine the former in the context of internationalizing SMEs in New Zealand, and point out that it both ignores the importance of decision-maker and firm characteristics in the process, and that it does not address how the network relationships actually help firms overcome the challenges they face when the internationalize.

A lesser known parallel level of internationalization is provided by Luostarinen (1979), and refined later by Welch & Luostarinen (1988). They (along with Buckley et al. (1992) are increasingly linking the internationalization process of firms to the level of capacity in the organization, actualized through the structure of the organization and the skills of the

personnel. Although they do not address business networks as part of the determinants of that capacity, they do go as far as to state that communication networks have an important role in helping or hindering internationalization efforts among firms in general, and see the development and establishment of network relationships as a longitudinal and evolving process. Welch and Luostarinen (1988) see the role of business networks as reducing the risks and uncertainties that firms face, and thus point towards incorporating the environmental factors to internationalization models, factors that the network approach and the revised U-model lack. This is an important development, as industry characteristics do matter in the internationalization process (Buckley et al., 1992).

In sum, the traditional models of internationalization, based on early international business and business networks studies do have some contact points with explaining how SME internationalize. Smaller firms tend to base their exporting decisions on their inter-firm linkages (Bonaccorsi, 1992), and as they start foreign operations, they develop increasing knowledge not only of the process itself, but also from networks of institutional arrangements, knowledge that helps them increase their organizational capabilities simultaneously (Clark et al., 1997). As Brewer and Young (2001) point out, networks of coalitions may end up influencing global trade disputes as well, and therefore being competent in creating and managing network relationships with businesses and other organizations is relevant not only to SMEs, but all sizes of internationally operating firms.

The well-established models of internationalization have linked the internationalization process of firms with the way they learn through their business networks in general and, as the revised U-model is based on the SME context, with internationalization of smaller firms in particular. However, the extant studies have mostly ignored two developments: firstly, they have not addressed the possibility that the ability of SMEs to develop and manage their interlinked sets of business relationships – their business network – may vary depending on how competent they are to execute such activities.

And secondly, the development of new high-knowledge intensive industry sectors and increasingly globalizing business world has led to the emergence of rapidly internationalizing SMEs that have been found to leapfrog some of the “*stages*” that the established models have established (e.g., Bell, 1995; Osarenkhoe, 2009). Furthermore, their success in doing so has been repeatedly linked to their business networks, which enable them to control the necessary resources to internationalize more rapidly and intensely than the traditional models would suggest. These firms have been termed by various names, but will be here referred to as “*international new ventures*” (INVs), as per Oviatt and McDougall (1994; 2005).

2.1.2 International new venture theory

The critique on the traditional internationalization models arose partly due to the fact that international new ventures were found to typically internationalize more rapidly and intensely, across culturally and geographically distant markets as well as the closer ones. All this seemed to fly in the face of the traditional “*stages*” models and other models of international entry of SMEs available at the time. These firms were first defined as “international new ventures” (INVs), or “*a business organization that, from inception, seeks to derive significant competitive advantages from the use of resources and the sale of*

outputs in multiple countries” (Oviatt & McDougall, 1994, p.49), but a multitude of alternative definitions for these firms have since been proposed. These include, among others, “*born globals*” (Rennie, 1993; Madsen & Servais, 1997), “*early and late internationals*” (Aspelund & Moen, 2005), “*global start-ups*” (Oviatt & McDougall, 1994), “*micromultinationals*” (Dimitratos et al., 2003), and “*international entrepreneurs*” (Jones & Coviello, 2006). However, these terms tend to add complexity around the phenomenon, and some of them have no de facto definitions; born globals, in particular, have been defined through various numerical definitions (see Gabriellsson et al., 2008). Furthermore, some scholars have found that, in the context on internationalizing SMEs, there are firms that do not start as born globals but become one later on in their existence (“*born-again globals*”, see Bell et al., 2001 and 2003) or are “*gradual globals*” (Moen & Servais, 2002). Therefore, for the sake of clarity, the rapidly internationalizing SMEs studied in IE are referred to here as “*INVs*”.

The new stream of research emerging in the intersection of the classical internationalization models, entrepreneurship, and studying internationalization of these new types of firms provided a fresh view of examining SME internationalization in general. And, as the founding of INVs was realized to often be personalized on the individual entrepreneur and that person’s ability to make use of business and social relationships, it has also brought an entrepreneurial aspect to this stream. Therefore, the theory of international new ventures is also referred to as “*international entrepreneurship*” (IE), and defined as “*the discovery, enactment, evaluation, and exploitation of opportunities – across national borders – to create future goods and services*” (Oviatt & McDougall, 2005, p.540), or the “*identification and exploitation of opportunities for international exchange*” (Ellis, 2011, p.99). It should be noted, though, that like the INV concept, the IE concept also lacks a common definition (Zucchella & Scabini, 2007).

IE as a process is something an increasing numbers of firms, and knowledge-intensive SMEs especially, find relevant due to their organizational characteristics and the surrounding environment. This is due to the increasingly global market environment, due to decreasing transaction costs, development of new ICT technologies and the resulting easier knowledge creation and access. The arising industry sectors such as the software industry are often characterized by less of the traditional manufacturing, and more oriented towards innovation and innovative end-products. As Boter and Holmquist (1996) point out, such developments require closer contact with people and organizations within the industry, especially those competent with the relevant technological core, highlighting the importance of developing business partnerships and networks within the other actors operating in the industry.

The role of business networks as enablers of SME internationalization has a long history in IE. Already in 1995, Bell highlights the importance of networks for internationalization of the firms in his empirical data. Madsen and Servais (1997) then suggest that hybrid structures (e.g., business networks) are even more important for INVs than for other small firms aiming to internationalize. The choice of markets for SMEs is also shaped by the networks they are embedded in (Moen et al., 2004). Coviello and Munro (1995) take a case-based approach into examining how the network structures in small firms enable them to increase their international commitment, and conclude that SME internationalization is a network-driven process. Karagozoglou and Lindell (1998) also note the importance of international business relationships for smaller firms in gaining access to foreign markets and being able to take advantage of the related opportunities.

Sharma and Blomstermo (2003) further add networks as a parallel explanatory factor to INV internationalization. Their result is that the knowledge that an INV needs to successfully internationalize is specifically supplied by their network ties, as operating in international networks leads to learning advantages compared to less networked firms. Additionally, Zahra et al. (2003) find technological networks to predict the speed of sales internationalization among small US firms. These studies indicate that business networks of SMEs have a central role in their internationalization efforts.

Firms in knowledge-intensive industry sectors, such as in software industry, are in the heart of IE research, and it is these industries in particular that often provide both the opportunities and the necessity for rapid internationalization (Jones, 1999, Sharma & Blomstermo, 2003; Freeman et al., 2006). Especially in knowledge-intensive industry sectors, networking is an integral enabler of market entry, consisting of both individualized networks of managers and the organizational network the firm is embedded in (Äijö et al., 2005). The entrepreneurs of rapidly internationalizing SMEs also use networks to successfully implement their internationalization and growth strategies (Andersson & Wictor, 2003).

According to Zucchella and Scabini (2007), additional drivers of IE include business-specific (born-global phenomenon and the existence of new global niches, growing niche orientation and increasing knowledge-intensive industries), location-specific (clusters, districts and local networking), networking attitude (the role of international networking and partnerships with global customers), as well as entrepreneur-specific ones (the changing role of the entrepreneur and key features in IE in general). The research in IE therefore contains elements of several research traditions, including from international business, entrepreneurship, and strategic management.

IE as a field has been criticized for a lack of common frameworks, definitions and conceptualizations that would help in stabilizing the field and in bringing it more into the mainstream of economics and business studies. This latter criticism is echoed in the later study of Keupp and Gassman (2009), who come to a similar conclusion in their review of the extant IE research. However, this is partly an overgeneralization: the lack of established frameworks within IE was already being assessed by Zucchella and Scabini (2007), as well as Mathews and Zander (2007), who presented a framework for explaining the dynamics of international entrepreneurship. Such frameworks have been conceptualized also by others, including Dimitratos and Plakoyiannaki (2003). They see the IE culture as consisting of a “*puzzle*” of entrepreneurial characteristics (such as risk-taking and innovative propensities), and one of their “*pieces of the puzzle*” is “*international networking orientation*”.

Additionally, some scholars (most notably Rugman & Hodgetts, 2001; Rugman, 2003; Rugman & Collison, 2004) have criticized the whole INV phenomenon, claiming that most “*born globals*” do not truly internationalize on a global scale, but just on a regional one. In the context this study and for examining internationalizing SMEs, however, such semantics are not critical to assess separately. Conversely, in this study the view is on the internationalization process as a whole, starting from entering the first foreign market, and network competence as a concept does not distinguish between born globals and other types of internationalizing SMEs.

Be as it may, studies on international entrepreneurship have widened to cover a large array of topics and theoretical underpinnings. Some of the other highlighted topics besides business networks include governmental and social policies needed to support entrepreneurs (Wright et al., 2006), management teams (Loane et al., 2007), personal relationships of entrepreneurs themselves (Harris & Wheeler, 2005), and a multitude of other phenomena (See the review of Jones et al., 2011).

Still, linking business networks to INVs and internationalization of SMEs has been a constant topic in IE. Coviello and Munro (1995) already found that it is the network contacts of an SME that provides it with the opportunities to enter foreign markets. Business networks also speed up the internationalization process of these types of firms (Oviatt & McDougall, 2005), and new ways of communication such as the Internet further facilitate the development of network relationships (Poon & Jevons, 1997; Prashantham, 2005). This “*network-building*” is a central element behind the propensity of SMEs to internationalize, as well as behind their international performance (Lu & Beamish, 2001; Rasmussen & Madsen, 2001).

In sum, the recent emergence of new knowledge-intensive, rapidly internationalizing firms in novel industry sectors (such as the software industry) helped direct the research interests of the early IE community, and has later lead into a wide-ranging compilation of studies that incorporate ideas, frameworks and theories across multiple disciplines. This has led to new understanding of internationalization as a phenomenon. As Rialp et al. (2005), Keupp and Gassman (2009) and Jones et al. (2011) all note in their reviews of IE research, the field is still a developing one. Rialp et al. conclude that intangible firm resources, such as social capital, combine to form organizational competencies for internationalizing small firms. These competences then, together with environmental factors, determine the overall international strategy of rapidly internationalizing SMEs.

While far from complete, this picture provides a promising avenue for further conceptualizing the process of SMEs developing network competence, using it to build business networks, and then leverage those networks into internationalization strategy and, consequently, successful internationalization. Thus, it seems that the extant research on IE has found extensive linkages between the internationalization process of SMEs and their business networks.

However, while business networks have been linked to SME internationalization in IE literature in various ways, organizational network competence has mainly not. This literature review continues by examining the theoretical background of organizational core competencies, such as network competence is. The concept of core competence is based on the concepts from strategic management literature, beginning with the resource-based view and extended by the dynamic capabilities view.

2.2 Views of organizational resources, competencies and capabilities

2.2.1 Resource-based view of the firm

The resource-based view (RBV) of the firm has its basis on the resource-dependency approach (Pfeffer & Salancik, 2003), which claims that firms are dependent on each other's resources, and that they can have the ability to proactively manage those resources. The RBV re-asserts the view of firms as bundles of resources (Penrose, 1959; Wernerfelt, 1984; Barney, 1986; 1991; Barney et al., 2011) which are valuable, rare, inimitable and non-substitutionable (VRIN) and thus provide a basis for competitive advantage (Barney, 1991; Peteraf, 1993). Firms therefore aim to create and develop a resource base which consists of physical, conceptual and human resources.

According to the RBV, firms can then leverage that resource base to achieve sustainable competitive advantage, since different resource configurations offer different competitive advantages in relation to one's competitors (Barney 1991). Consequently, the firm can continue to succeed through finding the optimal balance between resource development and resource exploitation (Wernerfelt, 1984).

Lavie (2006) extends the RBV view to include the resources gained from business networks, i.e. the network resources of interconnected firms. This view is based on the work of Gulati (1999) and Gulati et al. (2000), who emphasize network resources as enablers of strategic opportunities, performance and overall competitiveness of firms, leading to "*strategic networks*". Access to these kinds of networks may lead to realigning the entire global strategy of the firm (Solberg & Durrieu, 2006), and result to sustainable competitive advantage (Gulati et al., 2000).

However, a major criticism aimed towards RBV is that it takes a static view of the VRIN resources: they are considered stable once acquired although, as Dierickx and Cool (1989) point out, organizational resources tend to be unstable and vulnerable to erosion. RBV can therefore be criticized for seeing specific resources controlled by a firm to lead to sustainable competitive advantage, while simultaneously ignoring organizational differences to develop and maintain those resources. The claim that organizational resources, such as innovative ways of manufacturing and the expertise of employees can erode, implies that they are in fact dynamic in nature. As such, they can be argued to be in need of strategic development and maintenance through strategic intent; they are managed through application organizational routines that can be conceptualized as dynamic capabilities (Teece & Pisano, 1994).

2.2.2 Dynamic capabilities

Dynamic capabilities are "*the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments*" (Teece, Pisano & Shuen 1997, p.516). Eisenhardt and Martin (2000, p.1107) provide an alternative definition: "*the firm's processes that use resources, specifically the processes to integrate, reconfigure, gain and release resources, to match and even create market change*". Finally, Helfat et al. (2009, p.1) define dynamic capabilities as "*the capacity of an*

organisation to purposely create, extend and modify its resource base". Barreto (2010) finds a multitude of additional definitions to these three and goes on to criticize the fact for creating unneeded confusion around the concept. However, summing up the three definitions above, overall dynamic capabilities can be conceptualized as the abilities of firms to create and shape their resources and their resource base.

Behind the concept is the idea that, as the environment around it is in constant change, the firm itself also has to renew its competencies and resource base by recognizing these changes and proactively utilizing the opportunities opening with it in order to maintain competitive edge (Helfat et al., 2009). Therefore, dynamic capabilities are a source of competitive advantage in a changing market environment. They are embedded in the organizational routines, and their creation occurs through organizational learning (Zollo & Winter, 2002). Their characteristics arise from the fact that they are processes used to respond to market changes, being therefore repetitive and firm-specific.

Dynamic capabilities create value by allowing the firm to conduct activities with strategic aim; activities that depend on the needs of the environment (Helfat et al., 2009), implying that, as the market environment of the firm changes, so does the value of its dynamic capabilities. This is to say that dynamic capabilities do not automatically determine an improved performance for the firms (Eishenhardt & Martin, 2000; Zahra et al., 2006; Ambrosini & Bowman, 2009), but that organizational and managerial expertise is needed to "*orchestrate*" them towards optimal strategic goals of the firm (Teece, 2007).

From the start, dynamic capabilities have been criticized for being vague (Williamson, 1999) and unobservable (Williamson, 1999; Kraatz & Zajac, 2001). Helfat et al. (2009) have suggested measurement of dynamic capabilities through "*technical*" and "*evolutionary*" fitness, but these two terms refer mostly to per-unit costs of organizational functions and the fit of the firm to the market environment. Thus, they have so far offered little in the way of measurement precision.

Recently, dynamic capabilities have increasingly been linked to internationalization of SMEs. For example, Prange and Vedrier (2011) suggest "*dynamic internationalization capabilities*" that firms have to consider if they aim to maximize the outcome of their internationalization efforts. Aramand and Valliere (2012) note that entrepreneurial firms in particular need dynamic capabilities to build further "*entrepreneurial capabilities*" in an iterative process. Sapienza et al. (2006), in turn, discuss "*resource fungibility*" and suggest that it contributes in capability development in rapidly internationalizing smaller firms. Mort and Weerawardena (2006) go even further with the idea, conceptualizing a "*networking capability*", and arguing that this dynamic capability is what characterizes IE in particular. However, even when Zahra et al. (2006) suggested the possibility of dynamic capabilities leading to some specific, substantive capabilities that could overcome these criticisms, most of these studies remain at an abstract contextual level, and therefore, retain many of the criticisms extended towards the conceptualization of dynamic capabilities.

This study takes the view that core competencies, such as network competence, are a manifestation of the dynamic capabilities framework, the set of substantive capabilities most conducive to the firm's fundamental business. This is line with the structure expressed by Teece et al. (1997) and Zahra et al. (2006). The theoretical relationship between core competencies and the RBV is similar to that between the dynamic capabilities view and the RBV, in that competencies, unlike the static resources that RBV

is based on, do not deteriorate when shared, but instead grow (Prahalad & Hamel, 1990). However, complicating the definition is that, in extant research literature, the two terms (competence and capability) are often used interchangeably (Bogner et al., 1999; Ritter, 2006; Zerbini et al., 2007). This in turn contributes to making the analytical process of assessing the level of capabilities and competencies challenging, which is problematic due to the fact that the firm should be able to constantly analyze its level of capabilities and skills in order to succeed (Äijö et al., 2005). Operationalizable constructs contribute to making the assessment increasingly concrete. Therefore, if one is to examine which network-related abilities of firms are most relevant in the context of SME internationalization, a review of both network-related competencies and capabilities and their constructs is called for.

2.3 Review of network competencies and capabilities

This sub-chapter presents a review of the main extant business relationship-related competencies and capabilities, in order to provide the basis for applying one that is relevant to the empirical context of this study. Even a quick glance at relationship- and network-related capabilities and competencies is enough to convince one that there exists a need for explicating on them (see e.g., Pagano, 2009). On first sight, the definitions for many of them seem somewhat interchangeable, and the same term might have different alternative definitions, proposed by different authors in different paradigms (Äyväre & Möller, 2008). Moreover, only few have garnered little if any consequent research focus, and only several offer any concrete, measurable empirical constructs.

As a response to the criticism extended to dynamic capabilities in extant research for lacking in concreteness, this review is limited to those capabilities and competencies that include a measurable construct. This is to say that the capabilities and competencies related to business network development lacking in operationalized constructs, such as the “*orchestration capability*” of networks (Dhanaraj & Parkhe, 2006, Ritala et al., 2009), non-measurable “*networking capabilities*” (e.g., Möller & Törrönen, 2003; Mort & Weerawardena, 2006) or similar dyadic relationship capabilities (Lorenzoni & Lipparini, 1999; Blomqvist & Levy, 2006; Aramand & Valliere, 2012) are not included. This is in line with Winter’s (2000, p. 981) claim that “*whether an organization has a certain capability is often a matter of degree*”.

Network competence has received numerous conceptualizations (see for example Möller & Halinen, 1999), the latter of which sees network competence as a construct in a small-firm context, encompassing a multitude of individual and firm-level capabilities. As a measurable quantitative construct, network competence (Gemünden et al., 1996; Ritter, 1999; Ritter et al., 2002) is the ability of firms to control, make use of and develop both dyadic business relationships in a network and the network overall. In this sense, the concept applies both to customers, suppliers and other organizations, and the interaction occurring with them. Antecedents to network competence are availability of resources, network orientation of the human resources policy, integration of inter-organizational communication, and the general openness of corporate culture in the firm (Ritter, 1999).

This network competence includes organizational task execution activities, as well as the qualifications of the individual people in the organization being involved with other network actors. The former are consequently divided into cross-relational activities used to manage in the network level, and relationship-specific activities of the dyad-level. The cross-relational task execution activities include planning, organizing and controlling of the cross-relational activities. Dyadic activities then further consist of those related to initiation of new relationships, those aiming to maximize exchange outcomes in the relationship, and those relating to coordination of the relationship. Including the dyadic-level view to the overall construct contributes to make the construct increasingly holistic; after all, in addition to firms developing their own business networks, they also need to develop dyadic relationships to firms embedded in other networks. This is because firms in different networks should also have bonds with each other, in order to bridge the two (Fletcher, 2008).

The concept of network competence is based on the industrial marketing paradigm. Notably, it does not specifically include personal psychological constructs such as trust and commitment. However, as a construct, network competence encompasses both the dyadic and network levels of business network development, as well as individual qualifications of the people involved in those relationships, both specialist-type (e.g. legal and technological knowledge) and social-type (e.g. the ability to get along with individuals on the other side of the relationship).

Additionally, initiation of new relationships and seeking out new network actors is recognized as an integral part of the competence, highlighting the need to not only maintain the existing relationships, but also to actively try and develop new ones. There have been a few attempts to replicate the original study in different cultural context (cf. Human, 2007; Human & Naudé, 2008), but these studies did not find a reliable and valid corresponding measure. Contextually, better network competence has been found to lead to better innovation performance (e.g. Chiu, 2008), but the context of SME internationalization, or internationalization in general, has been neglected. A main reason for this may be the massive number of items and dimensions in the original construct (93 and 13, respectively), utilization of which can be expected to lead to respondent fatigue (Ritter et al., 2002).

Network capability is defined as a higher-order capability firms use to develop and maintain inter-organizational relationships and access resources controlled by their partners. It consists of abilities concerning coordination, relationship skills, market knowledge and internal communication (Walter et al. 2006). Therefore it heavily emphasizes abilities on the network-level, instead of focusing on the individual dyad. The concept of network capability has been tied to the theory of dynamic capabilities. In particular, Mort and Weerawardena conceptualized network capability as the ability of firms to develop routines to act in networks they are embedded in, routines which lead to creation of new resource configurations and in improved ability to control them.

As might be expected, network competence and network capability seem to reside close to each other semantically. This is further emphasized by the fact that network competence and network capability have been found to correlate strongly with each other (Human & Naudé, 2008). The main difference comes from thinking the former as the ability of the

firm to *develop and maintain* relationships with external partners, while the latter is ability to *initiate, maintain and make use of* relationship to external partners. However, the network competence construct does already include the sub-dimension of relationship initiation.

Some alternative network capability constructs have been proposed by Mort and Weerawardena (2006), and Ziggers and Henseler (2009). However, the former discuss it at a very abstract level, without offering any potentially operationalizable dimensions, therefore echoing the criticism on dynamic capabilities research as unobservable and vague (Williamson, 1999; Kraatz & Zajac, 2001). The one exception to this is the “*networking capability*”, operationalized by Mitrega et al. (2012). They develop a scale consisting of 17 items relating to different phases of business relationships. In spite of its name, however, this construct includes capabilities relating to selection, development and ending of dyadic business relationships, and thus forgoes the cross-relational level.

The “*inter-firm network capability*” offered by Ziggers and Henseler (2009), then, is one of the few quantified network-related dynamic capabilities, and they go on to establish a link with it and firm performance. However, they do it with two notable caveats: firstly, they do not consider it in the context of internationalization. And secondly, their construct is limited to the context of buyer-supplier relationships, as evidenced by the dimensions of their network capability (the structure of the supply network, supplier base reduction and the long-term orientation prevalent in those types of relationships). Therefore, among the various suggested network capabilities, the construct by Walter et al. seems to present an optimal fit to the SME internationalization context. Curiously, then, their construct seems to be mostly missing the network-level element inherent in network competence: They apply a dimension of the dyadic level of the network competence by Ritter et al. (2002; the coordination dimension), some items from its individual qualifications dimension, and include some on interfunctional communication within the firm. However, network capability, as constructed by Walter et al., lacks the crucial elements of network-level management.

Co-operative competence is defined as the property of the relationship with among organizational entities that consists of trust, communication, and coordination (Sivadas & Dwyer, 2000). It is therefore the ability of partners in a relationship to trust each other, communicate effectively and coordinate self and the partner within the frames of the relationship. It relies on the idea of absorptive capacity (Cohen & Levinthal, 1990), and posits that a successful sharing of knowledge increases the performance-related outcomes of a relationship dyad. Antecedents to co-operative competence are formalized administration, mutual dependence and institutional support for the co-operation, and they result in increased trust, communication and coordination between the partners, giving rise to this competence.

Co-operative competence resides on the dyadic level and has little or no bearing to network level. In contrast, emphasizing the role of trust and communication in business relationship competencies seems to be heavily based on issues presented in the knowledge-based view (Kogut & Zander, 1992; Nonaka & Takeuchi, 1995; Grant, 1996). Additionally, co-operative competence emphasizes the accumulating trust in existing relationships and the

resulting positive outcome to its performance, implicitly ignoring the abilities needed for creation and planning of new relationships.

Alliance competence is, like alliance-related competencies and capabilities in general, founded upon the idea that there exist a certain number of strategically critical special business relationships for a given firm, they take a mainly dyadic viewpoint. Alliance competence is the organizational ability to find, develop and manage alliance-type relationships Lambe et al. (2002). "Alliance" is understood as any voluntary co-operative contract between firms, one which includes exchange, knowledge and resource sharing or common development, and one for which the partners may invest capital, technology or firm-specific assets (Gulati, 1995). It can take various forms of wide-range cooperation, individual contracts or non-informal agreements (Contractor & Lorange, 2002), and results in joining of resources in ways not possible for the individual alliance partners otherwise (Schreiner et al., 2009). They are often termed "*strategic*" alliances, based on the amount of time horizon they cover (Spekman et al., 1998). Furthermore, Spekman et al. (ibid.) also see alliance activities as leading to organizationally improved ability to absorb learning benefits, i.e. to increase in the amount of learning firms can absorb from previous alliances for future ones. Joint alliance competence is seen as the competence formed mutually within the dyad, arising from organizational compatibility and further increasing the chances for a successful relationship (ibid.; Spekman et al., 1999).

Alliance capability is the relationship-specific ability, arising from alliance-specific activities, to learn from alliances. It consists of systems used to capture, codify and communicate lessons learned from managing the alliance, and analyzing the results. Through this learning process, the ability of the firm to function in alliances is seen to improve, and consequently the capability to perform in subsequent alliances is seen to increase through added know-how (Anand & Khanna, 2000; Dyer et al., 2001; Kale et al., 2002).

However, there seems to be no consensus as to what this kind of capability actually consists of and how it should be operationalized (Kale et al., 2002; Pagano, 2009; Schreiner et al., 2009). One indirect attempt to measure it is the study of Heimeriks and Duysters (2007), who operationalize alliance capability as a set of organizational learning mechanisms. However, their view is through a series of single-item dummy variables mostly related to managerial titles and incentives. Consequently, this operationalization only accounts for the dyadic dimension and does it at a somewhat abstract level.

Other related constructs are partly overlapping and simultaneously non-aligning: Sluyts et al. (2011) provide a scale adapted from Kale and Singh (2007), which in turn is a study with constructs revised from Kale et al. 2002 study. Schreiner et al. (2009) recognize alliance capability research as including two streams: one to research how it develops in firms, and another to research what it actually consists of (as per Gulati, 1998).

Based on all these conceptualizations, the overall picture of the capability is therefore dyadic. It differs from alliance competence through understanding of what results in optimal performance in alliance activities. Where alliance capability emphasizes firm-

specific learning through internal knowledge acquisition and application, alliance competence sees the relationships developing more through joint learning and shared resource based between participants. Alliance capability also considers the creation process of new alliances. Alliance competence, on the other hand, while being future-oriented in assuming the existence of learning ability for future alliances, assumes the creation of them as given, i.e. an organic ad-hoc process.

Alliance portfolio capability is the ability of the firm to maintain and develop all the alliances of the firm as a whole (Hoffmann 2005; 2007; Kale & Singh, 2009). It aims to bring the network level to the dyadic alliance capability concept, but has mainly concentrated on pointing out a set of organizational functions which can be used as feedback-loops for increasing alliance capability at the level of the entire alliance portfolio (Hoffmann, 2005). Hoffmann in 2007 conceptualizes alliance portfolio capability as the ability to create alliances which do not compete with each other, as being able to consider the compatibility of the whole portfolio when choosing new alliance partners, as controlling the alliances in the portfolio through different mechanisms, and as ensuring activities and exchange of knowledge across the portfolio.

However, the analysis still remains at a somewhat abstract level, and neither the alliance capability nor alliance portfolio capability account for both the dyadic and the network level of capability development on their own, and they are too conceptually distinct from each other to stand for a unified capability construct applicable to both the dyadic and network contexts.

Partnering competence is the ability of firms to build and maintain high-level, productive inter-organizational relationships (Johnson & Sohi, 2003). In a large framework, it has been defined as the ability of solution providers to build alliances and partnerships with suppliers and consultants, in order to provide integrated solutions and as a result, improve their activities (Windahl et al., 2004). Developing partnering competence means creating relationship-specific data storages and utilizing them to control existing dyadic relationships and seek new ones (Johnson & Sohi, 2003). In other words, the concept applies data storages as a tool for learning and enabling knowledge diffusion and its shared interpretation. Emphasizing the learning process and data management brings it conceptually somewhat close to alliance capability, and it is likewise based partly on the theory of the knowledge-based view of the firm (Kogut & Zander, 1992; Nonaka & Takeuchi, 1995; Grant, 1996).

Relationship management capability is defined by Jarratt (2008, p.1111; see also Jarratt, 2004) as *“infrastructure i.e the relationship management system and processes; relationship memory; relationship experience; learning capturing both generative and adaptive learning; and behavior that provides evidence of a cooperative culture and flexibility in relationship development and management, and the implementation of new relationship management knowledge (relationship collaboration, relationship flexibility and relationship innovation”*. Thus, it is a multi-dimensional construct based mainly on the

idea that experiences from dyadic business relationships tend to result in firms learning to conduct increasingly efficient business relationships in future, partly by fostering improved intra-firm communication based on those experiences. Structurally, relationship management capability is a multi-dimensional set of items across six related dimensions. However, those dimensions mainly deal with the dyadic level only, forgoing the possibility that relationship management within a business network may be structured differently.

Comparing all of the constructs discussed above, the presented organizational dyadic and network-related capabilities and competencies seem to vary in both what they incorporate as concepts, and how established they are in the academic literature. Differing research paradigms seem to manifest themselves mainly through the area in which the competence/capability is applied. For example, network competence and capability, as defined in the IMP group paradigm, emphasize their effect on innovation performance through being able to cope in one's networks. On the contrary, business related competencies and capabilities remaining in the strategic management literature include exchange at the dyadic level and include mainly psychological-level constructs.

Examined together, the different foundations of strategic management and IMP approach ensure that we are currently left with a wide spectrum of partly overlapping capabilities and competencies that have their own theoretical underpinnings, originate from different schools of thought and have their own path-dependent histories of subsequent application in research. A summary of the concepts and their operationalized measures can be seen in table 2.

In sum, it seems that the most relevant construct of business relationship –related capabilities and competencies for the context of this study is network competence (Ritter, 1999; Ritter et al., 2002). This is due to various factors. Firstly, it provides a holistic view of a construct for developing and maintaining business relationship, as it includes the levels of the network, the dyad, and the individual. These three dimensions have been suggested as foundations in order to obtain a comprehensive view of how firms manage their business relationships (Äyväri & Möller, 2008).

Secondly, it provides a multi-dimensional scale for capturing the level of the separate capabilities needed to assess competence in each dimension. At the individual employee and managerial level, they include both specialist and social qualifications. The dyadic (relationship-specific) level includes assessments for both initiating and maintaining new network relationships, and the network (cross-relational) level provides the dimensions needed to assess the development and coordination of the business network as a whole. This is crucial, as coordination both within network relationships, as well as between them is an important managerial issue (Wilkinson & Young, 2002).

And thirdly, each level can be assessed separately, indicating that the levels most closely related to organizational long-term strategy (the task execution activities) can be applied in the context of SME internationalization through their dimensions, as suggested by the extant literature on dynamic capabilities. Therefore, network competence is argued to present a fitting construct for examining the internationalization process of SMEs in this study.

Table 2. Comparison of the examined capabilities and competencies.

Concept	Definition	Source	Theory	Network level	Dyadic level	Individual level	Operationalization
Network competence (<i>Ritter et al., 2002</i>)	The ability of a firm to develop and manage relations with key suppliers, customers and other organizations and to deal effectively with the interactions among these relations	staff, organizational routine and policies	Industrial marketing	X	X	X	93 items in 2 dimensions, 3 sub-dimensions and 7 sub-sub-dimensions
(dynamic) Network capability (<i>Walter et al., 2006</i>)	the ability of a firm to develop and utilize inter-organizational relationships and to gain access to resources held by other actors	relationship-specific resource configurations and their management	Industrial marketing		X	X	19 items in 4 dimensions
Networking capability (<i>Mitrega et al., 2012</i>)	Organizational ability oriented towards managing business relationships along their development stages.	the level of involvement in relationship management process	Industrial marketing		X	X	17 items in 6 dimensions
Co-operative competence (<i>Sivadas & Dwyer, 2000</i>)	A property of the relationship among organizational entities, consisting of trust, communication, and coordination	staff, administrative mechanisms	strategic management		X		16 items in 3 dimensions (trust, communication, coordination)
Alliance competence (<i>Lambe et al., 2002</i>)	the ability to learn in relationships	the level of joint effort in relationships	strategic management		X		3 item composite measure
Alliance capability (<i>Kale et al., 2002; Heimeriks & Duijsters, 2007</i>)	The level at which the firm is able to capture, share, and disseminate the alliance management know-how associated with prior experience.	VRIN-type resources and application of learning benefits	strategic management		X		30 dummy variables in 4 dimensions
Alliance capability (<i>Kale et al., 2002; Schreiner et al., 2009</i>)	The level at which the firm is able to capture, share, and disseminate the alliance management know-how associated with prior experience.	VRIN-type resources and application of learning benefits	strategic management		X		20 items in 4 dimensions
Alliance portfolio capability (<i>Hoffmann, 2007</i>)	The ability of the firm to maintain and develop all the alliances of the firm as a whole	VRIN-type resources and application of learning benefits	strategic management	X			-
Partnering competence (<i>Johnson & Sohi, 2003</i>)	The ability of firms to build and maintain high-level, productive inter-organizational relationships	systems to capture lesson in relationships	Industrial marketing		X		34 items in 7 dimensions
Relationship management capability (<i>Jarratt, 2008</i>)	The infrastructure (i.e the relationship management system and processes, relationship memory and experience, and learning).	learning in, behavior of, and infrastructure of relationships	strategic management		X		27 items in 5 dimensions

2.4 Summary of the extant literature and the framework of the study

In sum, there is ample evidence in literature on IE and international business on the importance of business networks as enablers of successful internationalization among SMEs. Simultaneously, a research tradition on dynamic capabilities related to the ability of firms to develop and maintain their business networks is available, one that originates from strategic management literature, and has later crossed over to the IMP research tradition in the form of network competencies.

Other types of capabilities and competencies have long been recognized to exist related to export activities of SMEs, their internationalization and their international performance. Knight (2001) finds a relationship between international performance of SMEs and their strategic competencies, without business networks in the analysis. In their study of practices and processes associated with export capability in SME context, Doole et al. (2006) find the “*export capability*” of SMEs, including their characteristics, competencies and export strategies, to determine their level of export performance. Mudambi and Zahra (2007), in turn, link organizational competences to beneficial outcomes for INVs, but they conceptualize those under “*technological competence*”, not a network-related one.

SMEs that have already internationalized can expect continued success and growth as long as they possess the internal organizational abilities needed to support their international operations (Knight & Cavusgil, 2004). Networks of exchange relationships may contribute to the development of the necessary competencies (Awuah, 2007), but the link between these two studies has not been made. SMEs can therefore be seen as “*network seekers*”, driven not by the need to own foreign assets, but by the need to control them (Dimitratos et al., 2003), which may call for the development of network competence.

Network utilization for successful INV internationalization is also supported by Gabrielsson and Kirpalani (2004), and this is notable since firms may differ in their ability to utilize their business networks optimally. The role of core competencies such as network competence should thus be examined, as they can be critical success factors for small firms aiming to internationalize. Finally, Saarenketo et al. (2004) find that technological capabilities are a significant force in explaining internationalization of SMEs. They also include business relationships and organizational competencies, but separately; the former as an integrator and transfer of different knowledge-bases and the latter as channeling the knowledge base of the firm to its internationalization strategy.

Research on SMEs in the international entrepreneurship literature seems to ignore the competency aspects of SMEs managing in their business networks, and instead concentrates mainly on topics such as network structures, locations of the partners within those networks, and the types of networks that SMEs need in order to internationalize. According to Zucchella and Scabini (2007), internationalizing small firms are able to dynamically reconfigure their capabilities, making it possible for them to adapt to international markets.

Yet the research on these in IE has thus far been almost non-existing. Therefore, as seen in the review of literature above, linking organizational competencies to internationalization of SMEs seems to have a potential for making a contribution for both the fields of international business and international entrepreneurship on the one hand, and on the

research on dynamic capabilities on the other hand. The resulting framework for the study can be seen in figure 3.

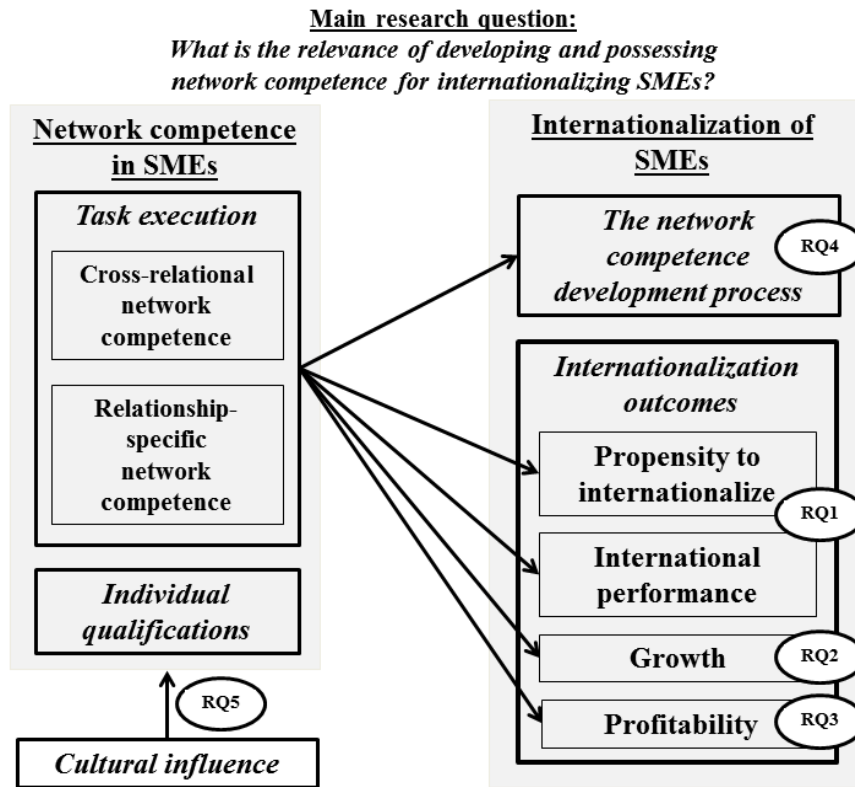


Figure 3. The framework for the study.

3 RESEARCH METHODOLOGY

This section describes the overall research methodology used in the study, as well as those used in the individual papers. The applied research methodology includes both quantitative and qualitative methods. The overall research design used in the study is illustrated in figure 4.

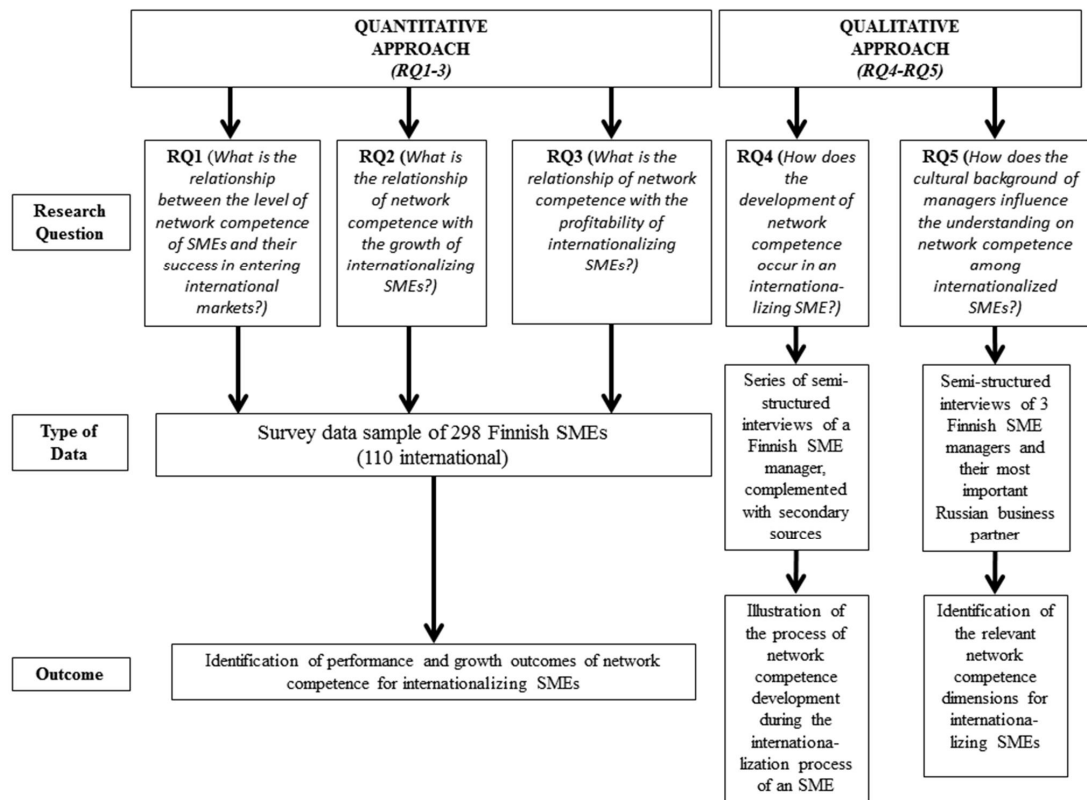


Figure 4. Research design of the study.

3.1 Methodological approach

As seen in figure 4 above, this study is constructed to include both qualitative and quantitative methods. The guiding principle in choosing the appropriate method for each research question is determined by the nature of the question. As seen above, research questions 1-3 contain examinations into the nature of relationships between established constructs, e.g., an applied scale of network competence from the 2002 study by Ritter et al. The needed performance, growth and profitability measures to examine these questions are easily obtained from either financial balance sheets of the respective firms, or through a survey questionnaire. Seeing as these research questions include comparing such

performance measures in an attempt to find statistical relationships between them and levels of network competence, quantitative approach was deemed the most optimal avenue of research. Using quantitative methods includes application of deductive reasoning through forming of hypotheses and consequently testing for their support.

In contrast, examining the process of network competence development in internationalizing SMEs (RQ4), as well as the question as to how the cultural background on the managers and the business culture where their SMEs originate from affects the conceptualization of network competence (RQ5), they both relate to the goal of aiming to understand a phenomenon or a process at a deeper level. This nature of the respective research questions makes qualitative methods more applicable for these two, since the relevant question for examining the phenomenon is “*how?*” (Yin, 2009). The methods and data used with each research question are summed up for each publication in table 3.

Table 3. Summary of the research methods used in this study.

	Publication 1:	Publication 2:	Publication 3:	Publication 4:	Publication 5:
	The effect of network competence and environmental hostility on the internationalization of SMEs	Relationship-specific and Cross-relational Network Competence in Internationalizing SMEs: Implications for Growth	Profitable SME Internationalization: The Influence of Relationship-specific and Cross-relational Network Competence	The development of network competence in an internationalized SME	Organizational and Individual Network Competence in Context: an Intercultural Perspective
Research question	RQ1	RQ2	RQ3 + RQ1	RQ4	RQ5
Method	Quantitative <i>(regression analyses and confirmatory factor analysis)</i>			Qualitative <i>(longitudinal single-case study)</i>	Qualitative <i>(multiple case study)</i>
Data	Survey data of 298 Finnish SMEs (2008)			Interview data from series of interviews, additional secondary data (2001-2013)	Interview data from 6 SME managers (2012)

As indicated by table 3 above, the inclusion of both qualitative and quantitative research questions and articles combines to make this dissertation as a whole study applying mixed methods, i.e., “*the combination of diverse research methods*” (Hurmerinta-Peltomäki & Nummela, 2006, p.441). The two approaches may support each other, as quantitative methodology can be used for analysis of measured relationships between network competence with financial and geographical outcomes of the internationalization process,

while qualitative methodology can be used to deepen the understanding of the phenomenon of network competence development during the process. This unison of positivist and constructivist research paradigms comprises to present what Tashakori and Teddlie (2002) describe as a third methodological movement, and Greene (2008) defines it as a distinctive methodology which uniquely enables embracing both of the two traditions simultaneously.

Another benefit from using a mixed methods approach is that its application emphasizes the overall problem and the research questions that are guiding the study (Creswell & Clark, 2007), overcoming the “*paradigm wars*” that have sometimes plagued the quantitative versus qualitative methodology by offering methodological pluralism (Johnson & Onwuegbuzie, 2004). Creswell and Clark further note (2007, p.282) that a mixed approach generally provides a “*better understanding of research problems than either approach alone*”.

This specific research context further provides for the possibility of additional contribution through these methodological choices. Firstly, compared to single method studies, as an approach mixed methods have been underrepresented in research on international business, and thus provide potential for IB research (Hurmerinta-Peltomäki & Nummela, 2006). Studying SME internationalization also fits situations where new ways of looking at a phenomenon is called for, and international entrepreneurship, combining the traditional fields of international business and entrepreneurship, provides a promising avenue for mixed methodology (Hohenthal, 2006). Coviello and Jones (2004) have also previously noted the need for such research design to enrich the field of IE methodologically. Similarly, in strategic management literature, from which the dynamic capabilities theory originates from, mixed methods studies have been applied widely across different empirical contexts, and may in general offer more value to research in the field (Molina-Azorin, 2012).

In further detail, this study provides a mixed methodology approach by applying quantitative analysis on quantitative data, and qualitative analysis on qualitative data, an approach that has, as noted by Hurmerinta-Peltomäki and Nummela (2006), been used repeatedly before in mixed method studies. Furthermore, they find that this type of approach, where both types of data and analysis are present, provides an often deeper, broader and more illustrative description of the phenomenon under research. The application of mixed methods relate in this study to what Hurmerinta-Peltomäki and Nummela refer to as “*knowledge creation*” phase, providing illustrative, increasingly detailed and explanatory knowledge for better integration and interpretation in answering the research questions.

3.2 Data collection and analysis

3.2.1 Quantitative survey for internationalizing Finnish SMEs (RQ1-3)

The empirical data used in the quantitative part of the research (RQ1-3) were collected through a web survey between February 2008 and July 2008 by a group of researchers in Lappeenranta University of Technology. The selection of SMEs was done through the Amadeus database and restricted to Finnish firms with 10-500 employees and was conducted according to the search criteria outlined in figure 5. These criteria were selected due to several factors. Firstly, as mentioned there exists some ambiguity in defining what constitutes an SME (see section 1.3.2) and the group of researchers collecting the data aimed for maximizing the generalizability of the potential research results across different definitions and contexts. Secondly, still taking into account the ambiguity of definitions, the researchers wanted to ensure a properly sized sample by including firms between 10-500 employees, as a properly representative and sufficiently sized cross-sectional sample of firms across distinct industry sectors was sought, one that would include both traditional manufacturing industries (SMEs from metal, food and furniture industries) and also from more service-oriented knowledge-intensive fields (SMEs from software industry and knowledge-intensive business services). As seen in figure 5, the data were then gathered across five industry sectors in all:

- Metal industry
- Food industry
- Furniture industry
- Software industry
- Knowledge intensive business services (KIBS)

<i>Size (number of employees)</i>	10-500
<i>Industry (according to NACE-coding, rev. 1.1) In total 1147 firms (industry based distribution in parenthesis)</i>	<i>Software industry (247)</i> <i>7221. Publishing of software</i> <i>7222. Other software consultancy and supply</i> <i>Metal industry (325)</i> <i>29. Manufacture of machinery and equipment</i> <i>Furniture industry (107)</i> <i>361. Manufacture of furniture</i> <i>Food industry (209)</i> <i>15. Manufacture of food products and beverages</i> <i>Knowledge intensive business services (259)</i> <i>7411. Legal activities</i> <i>7412. Accounting, book-keeping and auditing activities, tax consultancy</i> <i>7413. Market research and public opinion polling</i> <i>7414. Business and management consultancy activities</i> <i>744. Advertising</i>
<i>Geographic location</i>	<i>Finland</i>

Figure 5. Search criteria for the sample and number of cases by industry (Falck, 2008).

The first part of the survey included items not directly related to internationalization measures, and was presented similarly to all respondents. The second part of the survey then included additional statements on internationalization strategies and activities, and was presented only to those SMEs with international activities. The items in this latter part included general questions on the timing, scope and scale of the internationalization process of the respondent, as well as a set of subjective managerial assessments of success factors, measured through 7-point Likert-scale items.

Statements related to network competence were adapted from the original scale, and included 26 items in all. The adaptation was deemed necessary due to the exhaustive nature of the 93-item original scale (see Ritter et al., 2002), and was conducted also in response to the call for a shortened scale by Ritter et al. (2002). Due to the large number of items in the original NetComp scale, a shortened set of items were selected in order to avoid respondent fatigue, as the overall survey included various sections and item sets related to internationalization, business environment factors, strategic orientations and assessments on corporate strategy, among other things. The selection of items was based on a three-stage process: in the first stage, the researchers in charge of conducting the survey went through the original NetComp scale (Ritter et al., 2002), selecting a set of items encompassing both relationship-specific and cross-relational dimensions of network competence. The selection was based on the assessed likelihood of the individual items being of relevance to the to the Finnish SME context, and to account for both internationally and domestically operating firms. In the second stage, the items, along with the rest of the survey, were back-translated with the help of a professional language-checkers in order to ensure linguistic accuracy. All the items in the survey were back-translated, by first developing the questionnaire in English, then translating it to Finnish and back in English, in order to ensure that their meaning in the Finnish survey would accompany their English origins. Some items in the survey were negatively worded in order to avoid agreement bias.

Finally, the entire survey including the network competence items was piloted with three managing directors from firms within the selected industry sectors, and then offered to the 1147 SMEs derived from the database search. Those parts of the survey questionnaire relevant to the purposes of this study can be seen in appendix 1.

Functional equivalence of the network competence measures between the original construct (Ritter et al., 2002) and its Finnish adaptation was assumed through item wordings, as most of the network competence items do not inquire upon psychological factors of individuals, but rather organizational practices, as in “*We monitor the extent to which relationships with our partners work to our advantage*” (i.e., the existence of a specific organizational practice). This was considered to limit the extent of cultural sensitivity when it comes to respondents in the Finnish context answering to survey items developed in the UK and Danish settings (ibid.).

Furthermore, item means and confirmatory factor analysis in this case tend to indicate construct equivalence, as indicated by Douglas and Nijssen (2003). As the network competence construct has the same latent task execution variables and structure in both the present research and the original one, and the interpretation of items relates strongly to

organizational practices as mentioned, sufficient equivalence can be argued for the network competence scale in general, even though it mostly assumes an 'etic' mindset.

For individual items, the response styles proposed by Baumgartner and Steenkamp (2001) have some cultural relevance, as far as midpoint responding. The survey data exhibits surprisingly small standard deviations between the individual network competence scale items, indicating perhaps a cultural tendency to avoid extremes (i.e., "*the extreme response style*", see Baumgartner and Steenkamp 2001). However, the suggested acquiescence and disacquiescence response styles of managers (i.e. 'yea-saying' and 'nay-saying' patterns) were sought to be neutralized in the web survey through placing of negatively worded items. Noncontingent responding is also potentially a problem according to the Baumgartner and Steenkamp study, but in this case the network competence items were measured through a common 7-point Likert scale, and placed in the middle part of the survey, along similarly measured items. Therefore, the likelihood of a problem relating to noncontingent responding was considered in this case somewhat small. Moreover, the means and standard deviations between survey items were found to be theoretically relevant and sufficiently similar with each other, so that most of the potential issues suggested by Baumgartner and Steenkamp were not found to be insurmountable problems as far as applying network competence in this context goes.

As the result of the database search and removing non-fitting SMEs (e.g., those that had increased their number of employees above the limit of 500 since the last Amadeus database update), 1147 firms were left in the results to be contacted (see figure 5 for the distribution between industry sectors). An online survey was prepared by Webropol. The reason for conducting the data collection by this means was related to the ease of responding: Firstly, doing so would enable responses regardless of the physical location of the respondent. And secondly, as the survey included numerous additional items beyond the variables mentioned before (e.g., strategic orientations and questions on the type and education of employees within the firm), responding online was considered as a way of minimizing potential respondent fatigue. A printed questionnaire was offered as an alternative, but was not requested by any of the respondents.

The prospective respondents were first contacted via phone, and if they agreed to participate, the link to the correspondent online survey was consequently sent to them via e-mail. During the phone call, the respondents were asked if their firm operated in international markets or not, and the link to the corresponding survey version (domestic or international) was then sent to them via e-mail. A month later, those who had not responded by then were sent four additional reminder e-mails one week apart.

298 responses were received, for a response rate of 26%. The response rates varied across industries, from 16% (metal industry) to 31% (furniture industry). The respondent firms were roughly evenly matched between domestic (179, 60%) and international (119 40%) SMEs. The respondent firms were on average 18 years old, with SMEs in software industry the youngest (13 years on average). The average turnover of respondent firms was 5.7 million euros, ranging between 3.3 million in KIBS to 6.2 million in food industry firms. The average number of employees per firm was 40, ranging from 33 (furniture industry) to 43 (food industry), implying that whether the limitation by employee size in the data collection phase was 250 or 500 turned out to be, in hindsight, not crucial for achieving a properly sized cross-sectional sample of firms. Financial indicators in the data were later incorporated into the data from the Amadeus database and updated regularly, so

that the final data includes balance sheet information from the respondent firms from 2004 to 2010.

The respondent contacts were determined by contacting the person in the firm deemed to have the most knowledge on the items, many of which contained constructs related to management of organizational strategy and assessment of strategic goals. This meant that managing directors and owners, marketing managers and other corresponding leading management were sought as respondents, and the most relevant person was decided together with the firm contact during the first phone call.

Consequently, the survey questionnaire offered a three-choice item from which respondents could choose from when identifying themselves: “*managing director*”, “*owner*”, and “*other key person*”. Among the obtained responses, most were managing directors (191) or owners (59), with 40 identifying themselves as “*other key person*”. As the wide range of managerial positions employed by the responses could theoretically have some implications to the responses as well, one-way ANOVA tests were run on the responses to find out if the responses in key variables were influenced by the type of respondent. The items tested were the subjectively assessed Likert-scale items relevant to this study, and included:

- Relationship-specific network competence
- Cross-relational network competence
- Overall network competence
- Environmental hostility
- Subjective international performance

None of the above indicated statistically significant differences at the 0.05 risk level, and therefore the position of the respondent were not deemed critical for the results obtained from the whole dataset.

Moreover, one could ask if network competence is linked to increased number and type of business relationships in SMEs, as that provides an indication as to whether higher levels of network competence overall are correlated to the amount of specific type of business relationships that the firm engages in. Higher levels of network competence linked to higher amounts of business relationships may indicate, for example, that possessing better network competence allows SMEs to more easily develop new relationships in their business network, or that a network competence development process is occurring based on the existing ones. The type of business relationships could give an indication on whether network competence is equally beneficial in forming of all kinds of relationships, or if it is particularly useful in certain types.

For this purpose, the descriptives and intercorrelations of the underlying relationship-specific and cross-relational scales of network competence, as well as the overall network competence measure, are listed in table 4 with the items relating to business relationships (termed as “*partnerships*” in the survey). The network competence measures are as established in Torkkeli et al. (2012, figure 2), due to the fact that the aforementioned study is the only extant paper where the network competence scale is established with its reliability and validity comprehensively accounted for. A confirmatory factor analysis with

LISREL 8.50 software, according to guidelines of Jöreskog and Sörbom (1996), was conducted, and PRELIS 2.50 was used to calculate the covariance matrix for the factor analysis. As a result, a multi-dimensional measure of network competence was gained, including 15 on the 7 task execution dimensions (see Torkkeli et al., 2012, appendix A).

As seen in table 4, overall there exists a substantial overlap between higher levels of network competence and larger amounts of different types of business relationships. More than half (19) of the 36 correlations between network competence and partnership types were both positive and statistically significant. This implies that possessing both relationship-specific and cross-relational network competence is positively related to developing new business relationships with other firms, be they SMEs or larger firms and located in either domestic or foreign markets. The two main exceptions to these correlations were that, firstly, the positive correlation between the amount of domestic partnerships to cross-relational network competence was non-significant, and secondly, that the amount of subcontractor, supplier and parallel firm relationships to network competence overall, indicate no statistically significant correlations either.

The former exception implies that the SMEs seem to possess more cross-relational competence as their scale and scope of internationalization grows, as it is linked to increasingly higher numbers of foreign business relationships independent of the size of the partner firms in question. One possibility for the lack of significant correlation between cross-relational network competence and the number of domestic business partnerships may arise simply from the fact that, as Finland is a small economy, SMEs may not learn as much on the network level as on the level of individual business relationships, resulting in less development in cross-relational competence and more at the relationships-specific level. In domestic markets, the total number of business partners relevant for competence development may also be too small to become competent cross-relationally. As most of the numbers of specific types of business relationships are still positively correlated with both relationship-specific and cross-relational network competence, however, one implication is that in domestic business networks, being competent at the network level of relationship development is linked with more specialized domestic partnerships than the overall number of domestic partnerships in general.

Secondly, and more notably, the amounts of subcontractor/supplier partnerships, and parallel firm partnerships did not correlate with higher levels of network competence statistically significantly. This can imply two things: either the SMEs were not able to develop higher levels of network competence from these types of business relationships, or (more likely) in these types of relationships, SMEs can benefit more from focusing their relationship activities to the *most optimal* potential partners, as the quality of the business partners may take precedence over their quantity. Conversely, in less intensive relationship types (e.g., retailing and distribution, and to a lesser extent, product development), developing a smaller amount of optimal business relationships may be of less importance than achieving sufficient volume in partners.

Table 4. Descriptives and intercorrelations of network competence and business relationships¹.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 domestic SMEs	1														
2 domestic LSEs	0.63**	1													
3 foreign SMEs	0.44**	0.52**	1												
4 Foreign LSEs	0.26**	0.37**	0.66**	1											
5 domestic retailer/ representative	0.40**	0.35**	0.24**	0.15	1										
6 domestic product/ technology development	0.34**	0.38**	0.36**	0.36**	0.29**	1									
7 domestic subcontractor/ supplier	0.65**	0.38**	0.47**	0.30**	0.25**	0.23**	1								
8 domestic parallel firm	0.26**	0.31**	0.03	0.09	0.14	0.27**	0.19*	1							
9 foreign retailer/ representative	0.43**	0.31*	0.65**	0.50**	0.24	0.15	0.18	0.08	1						
10 foreign product/ technology development	0.35**	0.32*	0.64**	0.40**	0.08	0.41**	0.08	0.11	0.43**	1					
11 foreign subcontractor/ supplier	0.47**	0.45**	0.47**	0.59**	0.06	0.33*	0.55**	0.14	0.19	0.31*	1				
12 foreign parallel firm	0.30*	0.40**	0.64**	0.49**	-0.07	0.23	0.20	0.22	0.26	0.30*	0.27	1			
13 CRR	0.07	0.13	0.15*	0.21**	0.18*	0.22*	0.08	0.16	0.28*	0.21	-0.01	-0.05	1		
14 RSS	0.16*	0.17*	0.29**	0.30**	0.18*	0.17*	0.13	0.06	0.38**	0.07	0.21	0.21	0.74**	1	
15 Overall	0.13*	0.17*	0.25**	0.27**	0.21**	0.22**	0.12	0.10	0.38**	0.20	0.11	0.07	0.93**	0.93**	1
Mean	37.17	5.07	12.32	3.32	25.47	2.86	10.34	2.81	11.21	2.00	10.38	5.85	4.16	4.47	4.31
Std. Dev.	142.92	8.67	35.69	9.20	112.13	3.26	15.11	4.82	28.08	3.11	38.41	19.78	1.30	1.41	1.31

¹ The Spearman intercorrelations with all sample firms included. SME = small- or medium-sized enterprise, LSE = large-scale enterprise (i.e., non-SME), RSS = relationship-specific network competence, CRR = cross-relational network competence, overall = overall network competence, including both the RSS and CRR dimensions.

However, these correlation results should not be taken as a sign that network competence were not beneficial when SMEs are involved in the more intensive partnership types; the correlation in table 4 merely indicates that the *number* of those relationships is not significantly correlated to higher levels of network competence. This, then, may instead imply that SMEs possessing higher levels of network competence are also able to distinguish and develop critical business relationships and focus in developing beneficial, long-term collaboration in areas where they are most needed. And, as network competence is the core competence of the firm to develop business networks most beneficial to its own goals, for some SMEs this may mean higher amounts of business relationships, and for others, recognizing the most optimal and focusing on them. In sum, while table 4 does indicate that SMEs with higher levels of network competence tend to also have slightly more business relationships and thus, by extension, larger business networks overall, the relationship may be a complex one.

3.2.2 Case selection and data collection for the qualitative study on RQ4

For the study examining the development of network competence in an internationalizing SME over time (Torkkeli, Saarenketo & Nummela, 2013), the primary empirical data was collected through a series of semi-structured interviews with the managers of an internationally operating Finnish SME, Blancco Ltd. Qualitative approach was deemed the most appropriate for this study, as the aim was to illustrate the longitudinal process of network competence development in an internationalizing SME. This is because qualitative methods are especially suitable for these types of research questions (Yin, 2009), and the application through case studies (Eisenhardt, 1989; Woodside & Wilson, 2003) in particular. Case study is defined, following Woodside and Wilson (2003, p. 493) as “*inquiry focusing on describing, understanding, predicting, and/or controlling the individual (i.e., process, animal, person, household, organization, groups, industry, culture or nationality)*”. Case studies provide a useful and widely applied method in research relating to business networks (Dubois & Gadde, 2002).

As the aim of this study is to illustrate the process of network competence development during another process (SME internationalization), case study methodology was applied for Torkkeli, Saarenketo and Nummela (2013). As Woodside and Wilson (2003) further note, one of the core criticisms extended towards examining study phenomena from the quantitative side only is the threat of failure to collect the detail that is needed for sufficiently deep understanding of the mechanics and reasons behind the examined processes. Thus, case study is used to examine this part of the research question, by examining an internationalizing SME.

This research sub-question was therefore approached with a longitudinal single-case study concentrating on Blancco, a software firm originating from Joensuu, Finland. Founded by university students in 1997, the firm is in business of selling and distributing their developed data erasure software to other organizations. The sales of its first product, Blancco Data Cleaner, commenced in 2000, and consequently Blancco internationalized rapidly. In 2001 the foreign share of turnover by the firm exceeded 40% already. Internationalizing was in Blancco’s case deemed necessary for long-term survival, as its

domestic markets were small due to both the small size of the overall Finnish economic area, as well as due to the firm occupying a specific niche in knowledge-intensive industry sector.

The characteristics of the firm and its rapid internationalization make Blancco an INV, and it fits the definition of SME for this study, as the latest balance sheet information indicates a turnover of 4.7 million Euros and 48 employees. The firm has a business network comprising of international offices and partners in 17 countries globally (i.e., in Europe, North America, South America, Asia and Australia). Therefore, it was considered a fitting case to study the phenomenon of network competence development in SME internationalization.

The primary data used in this study was obtained by a series of interviews with the key managers of Blancco, starting from 2001. The overall longitudinal data includes 6 interviews conducted between 2001 and 2013, and the key person interviewed in most has been Kim Väisänen, one of the founders and presently the main owner and CEO of Blancco. This most recent interview was conducted in Finnish on January 21, 2013 at Blancco premises in Helsinki, with the items for network competence translated from the adapted scale and the interview transcribed back in English post-interview. The schema for the semi-structured interview can be seen in appendix 2.

3.2.3 Case selection and data collection for the qualitative study on RQ5

For the second qualitative research paper included in this thesis, “*Organizational and Individual Network Competence in Context: an Intercultural Perspective*” (Torkkeli & Ivanova, 2013), a qualitative approach for examining intercultural dyadic business relationships was deemed the most relevant one. This was because the aim was to illustrate how network competence is conceptualized across cultures within the context of internationally operating SMEs, with the empirical goal of achieving deeper understanding into the research phenomena, including an exploratory view of the topic. These goals have been argued to be particularly suitable for qualitative methods (Yin, 2009). In order to reach an in-depth understanding of manager’s perspectives, a sensemaking approach was applied in this study, as it is particularly useful for this purpose (Woodside & Wilson, 2003). Sensemaking was applied here as the basic mechanism of managers ascribing cultural meaning to their interpretations within the interview setting.

Extant research has noted various differences in how the understanding of business networking and competence development vary between emerging and developed market environments. Russia provides an illustrative example of the former, due to its distinct business relationship culture (Michailova & Worm, 2003). Choosing Finland as the dyadic counterpart in cross-cultural business relationships is also fitting, considering that most of the of literature on business networks in the context of internationally operating SMEs has found business networking to be particularly relevant for firms originating from similar small, open economies (e.g., Bell, 1995; Coviello & Munro, 1995 and 1997; Coviello, 2006; Loane & Bell, 2006).

The dyadic setting was chosen due to the fact that studying the entire multi-cultural business network from the point of view of the cultural backgrounds of the individuals and their respective business cultures would have been complicated in practical terms. Embracing the whole network at an empirical level would be difficult, as it may consist of a wide range of both organizational and individual actors, and thus delimiting the examination to individual dyads in the network provides a more focused view of the phenomenon.

The data collection was conducted by first contacting three Finnish SMEs with experience in conducting business with Russian firms were contacted by phone. The managing directors of the three respective SMEs were then interviewed face-to-face in July 2012 by semi-structured interviews. The interview included questions on what they considered their most relevant Russian business partner, and the subsequent three interviews of the Russian partner managers were then conducted in Russian in St. Petersburg area during August 2012. In order to capture the cultural context as accurately and as fine-grained as possible, the Finnish managers were interviewed in Finnish by the researcher with Finnish cultural background, while the Russian managers were interviewed in Russian by the researcher with Russian cultural background (see Torkkeli & Ivanova, 2013).

Both the organizational and individual dimensions of network competence were inquired upon during the interviews, and for the latter, a set of questions adapted from the individual qualifications sub-scale of the original network competence scale (Ritter et al., 2002) were adapted. The questions were open-ended and the interviews were conducted by conversations rather than following a specified protocol strictly. The individual qualifications of network competence were inquired upon from the partner's point of view, in order to avoid the self-reporting biases. This type of indirect questioning is seen as a way to avoid social desirability bias in self-reported data (Fisher, 1993; King & Bruner, 2000), and responds to the call for assessing network competence from an outside perspective (Ritter & Gemünden, 2003).

The interviews were subsequently transcribed and analysed through the method of "*theoretical reading*" of interviews which is based on applying extensive and theoretical reflection on the data (Kvale & Brinkmann, 2009). Theoretical reading was applied in order to decipher the cultural differences in the sensemaking of business networking among the respondents with their varying cultural backgrounds. The data collection and analysis phase was divided among the researchers following the suggestion by Lincoln & Guba (1985), that the credibility of deciphering cultural specifics from and in interviews is increased through prolonged engagement of the researcher(s) on the culture of the investigated subject. In practice, each side of the dyad was interviewed and assessed first by the researcher whose cultural background corresponded to that of the interviewee. The translated and annotated data were then analysed together by the researchers in order to focus the analysis to the cultural similarities and differences within the data.

4 REVIEW OF THE RESULTS

This section summarizes the objectives, the results of the publications and the main contributions for the individual research papers included in this study. In the following page, table 5 summarizes the aims and methodologies of each research paper, while also providing a concise summary of the main results and contributions provided by each article. The main research question “*What is the relevance of developing and possessing network competence for internationalizing SMEs?*” was divided into five sub-questions, each of which has been dealt with corresponding individual publications. The relationship between levels of network competence and the internationalization outcomes of the SMEs have been conducted with a quantitative methodology on a survey data of ca. 300 Finnish firms across five industries. The “how” questions, related to illustrating the competence development process and to application of a culture-based view of sensemaking to network competence development, have been assessed with qualitative methodology.

The common theoretical point of departure and the underlying research aim in each individual paper has been to examine a specific aspect of network competence in the empirical context of internationalizing Finnish SMEs. The three quantitative papers first illustrate that network competence “*matters*” – it is an observable dynamic capability which can presents a reliable and valid scale for the development and management of business relationships in a business network, and it has various outcome implications for internationalizing SMEs. The aim of these three articles is therefore to present a holistic view of the relationship between network competence and performance outcomes of SMEs in international markets. To achieve this, the outcome variables in the three studies vary from internationalization propensity to international performance (comprising of both objective and subjective assessments), from longitudinal growth of international SMEs to their profitability.

The two qualitative papers then continue to widen the timing and culture-related viewpoint towards network competence -led internationalization process. Their aim to ensure a more comprehensive look into understanding the conceptualization of network competence and its manifestation through developing organizational practices in parallel to the internationalization process. Following table 5, the objectives, results and contributions of each article are then dealt with separately.

Table 5. Summary of the main objectives, results and contributions of each publication.

	Main objective	Method	Main findings	Main contribution
Publication 1: <i>The effect of network competence and environmental hostility on the internationalization of SMEs</i>	To examine the relationship of network competence to internationalization propensity and international performance of SMEs.	Quantitative, based on survey data of 298 Finnish SMEs	Network competence has a positive relationship with internationalization propensity and international performance of SMEs. Lower environmental hostility has a similar effect, but does not moderate the network competence – internationalization relationship.	By constructing a valid and reliable scale of network competence and linking it to outcomes of internationalizing SMEs, introduces an added level of analysis (measurable network competencies) to the literature on IB and IE. Illustrates the importance of networking dynamic capabilities in performance outcomes of internationalizing SMEs. One of the first studies to examine the relationship between networks and SME internationalization through quantified, measurable constructs.
Publication 2: <i>Relationship-specific and Cross-relational Network Competence in Internationalizing SMEs: Implications for Growth</i>	To examine the relationship between network competence and growth of internationalizing SMEs.	Quantitative, based on survey data of 298 Finnish SMEs	Cross-relational network competence has a positive relationship with growth of international SMEs. For domestic SMEs, the result is non-significant. Relationship-specific network competence does not have a significant effect on the growth of either international or domestic SMEs.	To international entrepreneurship literature, extending studies of international growth of SMEs, by indicating that the development of network competence is most important for those SMEs aiming for international growth. To literature on dynamic capabilities and IB, by introducing relationship-specific and cross relational network competence in the SME internationalization context. Indicates that growth-seeking internationalizing SMEs should develop network-level instead of dyadic-level network competence.
Publication 3: <i>Profitable SME Internationalization: The Influence of Relationship-specific and Cross-relational Network Competence</i>	To examine the relationship between network competence and 1) profitability of internationalizing SMEs, 2) internationalization propensity of SMEs	Quantitative, based on survey data of 298 Finnish SMEs	Relationship-specific network competence has a positive relationship with internationalization propensity of SMEs, but no similar relationship with cross-relational network competence. Cross-relational network competence has a positive relationship with profitability of international SMEs, but no similar relationship with relationship-specific dimension.	To the literature on determinants of SME internationalization, by indicating that domestic SMEs aiming to become international should prioritize dyadic business relationships competence instead of the cross-relational one. To the literature on long-term survival of internationalizing SMEs, by indicating that long-term profitability calls for prioritizing cross-relational instead of dyadic-level network competence. Extends the studies on SME internationalization, by implying that their internationalization strategy may determine if they should concentrate on dyadic or network-level network competence. To the research on internationalization and strategic management of SMEs, by implying that different dimensions of network competence can be more important during different phases of the internationalization process of SMEs.

Table 5. (continued)

	Main objective	Method	Main findings	Main contribution
Publication 4: <i>The development of network competence in an internationalized SME</i>	<p>To shed light on the development process of network competence in an internationalizing SME.</p> <p>To examine the point where network competence is developed during foreign market expansion of an SME.</p>	<p>Longitudinal single-case study</p>	<p>The development of network competence does not necessarily precede the start or early phases of the internationalization process of SMEs.</p> <p>Implies that the timing of network competence development during internationalization may be linked to the industry and market characteristics.</p> <p>The development of network competence in the case firm coincides with increased organizational and financial success, and with increased control of network relationships.</p>	<p>The paper is one of the first studies presenting a longitudinal view of the development of network-related dynamic capabilities.</p> <p>One of the first studies examining business network-related dynamic capabilities in the context of SME internationalization.</p> <p>Implies that the ability of SMEs to leverage their business networks may only develop during later stages of their foreign market expansion.</p> <p>Adds to the understanding of the ways firms develop dynamic capabilities.</p>
Publication 5: <i>Organizational and Individual Network Competence in Context: an Intercultural Perspective</i>	<p>To illustrate the influence of culture on the understanding of network competence among internationally operating SME managers.</p>	<p>Multiple case study</p>	<p>The understanding of network competence depends on the cultural background of the manager.</p> <p>Managers originating from an emerging market (Russia) conceptualize network competence through the individual dimension, while managers from a developed market (Finland) conceptualize it through the organizational dimension.</p>	<p>One of the first studies on SME internationalization with a cultural view to competence development.</p> <p>Points toward the necessity to think of business networking in emerging markets as a distinct phenomenon.</p> <p>Applies a rarely used dyadic interview methodology to study cross-cultural business networking.</p> <p>Implies that the structure and operationalization of network-related dynamic capabilities may be determined by the cultural context of the SME manager and the underlying business culture.</p>

4.1 Publication 1: The effect of network competence and environmental hostility on the internationalization of SMEs

Background and objective:

The first publication addresses the first sub-question on the relationship between the level of network competence of SMEs and their success in entering international markets. The goal is to examine how the overall network competence in internationalizing SMEs is linked to both their propensity to enter a first foreign market and their subsequent performance internationally. With the latter, the publication takes a holistic view, examining the scale, the scope and the strategic success of the SMEs internationally.

We also incorporate environmental hostility into the analysis, with the goal of illustrating whether the relationship between network competence and the level of success internationally is strengthened in particularly hostile technological, market and regulatory environments. This is because there have been contrary claims in extant research as to whether that is the case or not: The internationalization-related business network theories (e.g., Johansson & Mattsson, 1988; Johanson & Vahlne 2003; 2009) have claimed that the business network does not incorporate an external environment, while many studies on SME internationalization (Zahra & Garvis, 2000; Zahra et al., 2000; Kuivalainen et al., 2004; Shaw & Darroch, 2004; Lee & Cavusgil, 2006; Matanda & Freeman, 2009) have claimed the contrary.

Results and contribution:

The results, conducted through a binary and linear regression analyses, find that network competence has a statistically significant positive relationship with both the propensity of SMEs to internationalize and their subsequent international performance. Higher levels of environmental hostility have no impact on the likelihood of the SME being international or not, but does have a negative effect on their international performance. There are no significant moderation effects between network competence and environmental hostility, implying that the positive relationship between the former and the internationalization measures remains stable regardless of the environment.

This latter result contributes to the discussion on whether the influence of business networks on SME internationalization is determined by the external market, competitive and regulatory environment. The result finding no moderation is in line with Shaw and Darroch (2004), as well as Zahra et al. (2000), finding that the effect of perceived environmental hostility on the internationalization process occurs at a general level.

Overall, the article contributes both to SME internationalization literature and to that of dynamic capabilities. Regarding the former, the paper is one of the few to examine the relationship between networks and internationalization through quantified constructs. The results therefore contribute both especially to the discussion on the role of business networks in the context of internationalizing SMEs (Oviatt & McDougall, 1994; Bell,

1995; Coviello & Munro, 1995; 1997; Madsen & Servais, 1997; Coviello, 2006). As such, its contribution is also pointing out that, while different types of network structures and dynamics have an impact for internationalizing SMEs, a view into differing organizational competencies to develop and manage those networks may help in determining why some firms are able to internationalize by leveraging them, while others are not. Therefore, the publication also contributes to bring an added level of analysis to the literature on international SMEs and international entrepreneurship in general.

Methodologically, the paper is also the first linking quantifiable business networks related competencies to quantified performance outcomes among internationalizing SMEs, supporting the notion that general factors in inter-firm relations can have a positive effect on performance outside domestic borders (e.g., Ling-Yee & Ogunmokun, 2001). Through confirmatory factor analysis, the article establishes a 15-item network competence scale, including both dyadic and network-level dimensions. The paper therefore also contributes to the literature on international business and international entrepreneurship, by providing a first look at how such a scale can be applied in the context of SME internationalization.

4.2 Publication 2: Relationship-specific and Cross-relational Network Competence in Internationalizing SMEs: Implications for Growth

Background and objective:

This second publication has a two-fold purpose. The first aim is to examine the relationship between network competence and growth of internationalizing SMEs. Extant research on internationalizing SMEs has found that business networks that the firms are embedded in influence not only their likelihood of initiating foreign market connections, but also enhance their growth (Lu & Beamish, 2001 and 2006; Zhou et al., 2007). However, the possibility of network competence having an effect on their growth has so far not been assessed. Consequently, the paper aims to shed light on whether being embedded in business networks and possessing higher levels of network competence have a different impact for internationalizing SMEs than domestic ones.

The second objective is to further examine the composition of network competence in context of SME internationalization. As the network competence construct includes both the dyadic (relationship-specific) and the network-level (cross-relational) dimensions, it is conceivable that the two have different impacts on the growth of internationalizing SMEs.

Results and contribution:

The analysis is conducted through a series of regression analyses examining how the two dimensions of network competence explain the growth of international and domestic

SMEs. Growth is measured both by increase in sales 2004-2010, as well as growth in assets during the same time period. The two aspects of growth contribute to provide further evidence of the robustness of the results which find that, firstly, higher levels of network competence do not explain the growth of domestic SMEs through the time period. And secondly, higher levels of cross-relational (but not relationship-specific) network competence are positively related to the growth of internationally operating SMEs during the time period.

These results contribute to highlight various aspects of growth for internationalizing SMEs. Firstly, they are in line with the notion that being embedded in business networks helps SMEs to achieve growth by internationalizing (e.g. Coviello & Munro, 1997; Gabrielsson & Kirpalani, 2004; Sasi & Arenius, 2008). However, these results extend the extant studies by indicating that the existence of the business network is not enough; in order to achieve growth, SMEs aiming for international markets need also organizational network competence to develop and manage them. The study therefore further contributes to the literature on SME internationalization and growth, and is especially relevant for international entrepreneurship, since INVs by nature seek rapid growth through international operations.

The results also indicate that to achieve higher growth, it is more important for internationalizing SME to try and to develop and manage their business network through network-level activities of planning, organizing, controlling and staffing, rather than to concentrate on initiating, coordinating and facilitating exchange of knowledge and goods between singular business relationships within the network. This may be due to the changing dynamics of business networks, as over time, the range of those networks may increase and the firm gain a position better suited for cross-relational activities, as suggested by Coviello (2006).

In this sense, the results therefore imply that network-level competencies may be more important for the growth of international SMEs than the dyadic ones. By implying this, the paper further contributes to the strategic management literature on dynamic capabilities. As seen in the review of competencies in section 2, dynamic capabilities and competencies have mostly been conceptualized and operationalized at the dyadic level. Therefore, in response to studies linking the internationalization process of firms to their strategic alliances, the results here provide an alternative viewpoint, by emphasizing that the cross-relational network level competence has a significant impact as well. As Coviello (2006) points out, when international new ventures evolve and grow, the range of their network tends to increase and the network density decrease, leading the firm to assume and increasingly central position within the network, thus emphasizing the cross-relational aspects of developing and maintaining the network.

In sum, this article is among the first to distinguish between dyadic and network-level competencies in the context of SME internationalization. Thus, the results of this study contribute not only to the discussion of network-driven internationalization of SMEs and their subsequent growth, but also to the discussion around how to conceptualize those networks and the related organizational competencies.

4.3 Publication 3: Profitable SME Internationalization: The Influence of Relationship-specific and Cross-relational Network Competence

Background and objective:

The aim of this article is to examine the relationship between network competence and profitability of internationalizing SMEs. The previous two publications had examined the relationship between network competence with the propensity of SMEs to enter foreign markets, as well as their scale and scope of expanding their business through foreign operations. However, one dimension of corporate success that was yet to be examined was the level of profitability and how it is linked to the levels of network competence exhibited by internationalizing SMEs.

This is a crucial notion particularly since extant studies on internationalizing SMEs have not found conclusive results as to how internationalization affects the long-term profitability of SMEs; Lu and Beamish (2001; 2006) have found negative relationships, while others (Qian & Li, 2003; Zahra et al., 2005; Kuivalainen et al., 2007) have found positive ones. Zhou et al. (2007) have suggested that managerial networking may be a determinant of what the outcome of internationalization is to the level of subsequent profitability. The main objective of this paper is therefore to examine if network competence influences the profitability of internationalizing SMEs.

A secondary objective of this paper is to expand the results of publication 1, by examining if the propensity of internationalization among SMEs is linked with a specific *dimension* of network competence (i.e., the cross-relational or the relationship-specific type): As the cross-relational dimension was found to be more relevant than the relationship-specific dimension for the growth of internationalized SMEs, it may be possible that a similar relationship could be seen in their internationalization propensity as well.

Results and contribution:

The results of this paper find that the level of network competence among SMEs is positively related to both their propensity to enter their first foreign market, and to their profitability once they have done so. However, the type of network competence most relevant is found to be different in each case: The propensity to internationalize is explained by higher levels of relationship-specific network competence, while cross-relational network competence has no statistically significant effect on the propensity. For continued profitability, measured by the overall sum of profits over six years (2004-2010), the relationship is the opposite: Higher levels of cross-relational network competence are positively related to higher levels of profitability, whereas the relationship-specific network competence shows no statistically significant effects.

The implication from these results is that SMEs aiming to internationalize successfully should prioritize developing either the dyadic-level or the network-level network competence, depending on where they are in the process: Domestic SMEs should concentrate first on developing individual network relationships to be able to enter their first foreign market, and once they are operating across their domestic borders, they should shift their focus increasingly towards to managing their business network as a whole, in order to ensure they remain profitable and, over time, become more so.

The results of this research paper contribute to the discussion on the internationalization outcomes of SMEs and their long-term survivability. Studies examining long-term profitability of internationalizing SMEs, which there are few, have claimed contrasting results on the impact of entering the first foreign markets on the profitability of SMEs. The results of this paper contribute to this discussion by implying that higher levels of network competence can be a major explanatory factor in why some SMEs do profit and others don't. Thus, they confirm and extend the study by Zhou et al. (2007), which implies that business networks may be a major determining factor of what the relationship of internationalization to subsequent profitability of SMEs turns out to be. Furthermore, this paper contributes by finding that it is not the existence of business relationships or the networking process itself, but the organizational network competence that will lead to more positive profitability among internationalizing SMEs.

Another contribution of this paper is to the literature on individual business relationships and networks on business strategy, by implying that competence in one or both may be needed, depending on the context of the firm strategy. In the internationalization context, the study contributes by indicating that the former is more important in the beginning phases, while the latter supersedes it once the SME has been operating internationally for some amount of time. Therefore, an added contribution of this paper is to the long-term strategic management of SMEs and particularly their optimal strategy towards business network development.

4.4 Publication 4: The development of network competence in an internationalized SME

Background and objective:

This study aims to find out which is the case, by examining how network competence of a rapidly internationalizing Finnish SME has developed over time during their internationalization process. Constructed as a longitudinal case study based on a series of semi-structured interviews between 2001 and 2013, the goal is to shed light into the development process of network competence in an internationalizing SME.

The case firm is a Finnish INV Blancco Inc., which provides a theoretically fitting context for identifying the timing and form of organizational processes used to develop higher

levels of network competence over the internationalization period of the firm, from 1999 to 2013. Another objective of the paper is to increase the understanding of how the development of business networking occurs at a concrete level, an aspect that could do with more attention in the IE context (Slotte-Kock & Coviello, 2010).

Results and contribution:

The results illustrate a distinct pattern in the competence development process of the case firm. In particular, they imply that the development of network competence does not necessarily precede the start of the internationalization process. This can be interpreted to be partly due to the nature of the firm, as an INV with small domestic markets may not have either the time to develop that competence (due to having to internationalize rapidly), or they may not have the possibility of assigning the resources necessary to develop network competence (due to the strain that aggressive internationalization efforts put on their finances).

In the case company, however, there is an identifiable relationship between network competence and the internationalization process. In particular, the lack of effort in developing network competence in the early stages of the internationalization process coincides with difficulties in controlling the business partner network, and with increased financial difficulties in the firm.

Consequently, concentrating on creating organizational practices conducive to network competence development leads the firm to develop both cross-relational and relationship-specific network competence. This development, in turn, coincides with their increased willingness and ability to control their business network, as well as increased financial success and growth. Thus, the notion by Varis et al. (2005) that internationalizing small firms should be able to make use of business relationships to succeed is extended, by implying the ways they can develop the necessary competence to do so.

The results of this article contribute both to the discussion on SME internationalization literature, as well as the literature on dynamic capabilities in strategic management. It is one of the first studies illustrating the network competence development process longitudinally, and (in addition to Weerawardena et al., 2007), one of the first to examine business network-related dynamic capabilities in the context of SME internationalization.

Furthermore, the results contribute to the understanding of the dynamics of business network development in the internationalization context. In particular, they imply that, due to the characteristics of their industry and small domestic markets, some SMEs may not have the possibility to develop high levels of network competence before they enter their first foreign markets. This notion further contributes to the understanding of the ways firms leverage their business networks to operate internationally.

4.5 Publication 5: Organizational and Individual Network Competence in Context: an Intercultural Perspective

Background and objective:

The aim of this article is to assess the impact that the originating culture of the managers of internationally operating SMEs has on their conceptualization of network competence. The extant view of business networking in academia is based on the view of the Western developed countries, and implies a set of strategic issues that can be resolved through networking between organizations (see e.g., Thorelli, 1986).

However, there is some evidence in the extant literature on business relationships that individuals and firms engage in developing and managing their business networks differently, based on whether they originate from developed or emerging markets. In particular, the cultural background of the managers may have an impact on the internationalization process of the SMEs they manage (Zuchella & Scabini, 2007). However, those studies have mainly neglected to account for two things: the individual social qualifications that the managers need in order to manage their business networks, and the differences in what network competence is understood to comprise of as a result. This paper aims to respond to that gap, by examining how the conceptualization and understanding of business networking and network competence comes to be determined partly by the cultural background of the managers and the business culture their firms originate from.

The empirical part of the paper is based on semi-structured interviews with three Finnish and three Russian managers engaged in mutual dyadic business relationships. By choosing the context of cross-cultural Finnish-Russian business relationships, the study adheres to the suggestions by Salmi (2000), as well as Jansson and Sandberg (2008), who suggest this empirical context as particularly fitting on studying the impact of culture in business relationships.

Results and contribution:

The results are interpreted to imply several consequences for internationally operating SMEs. Firstly, the results point towards the understanding of business networking and network competence depending on the cultural background of the managers dealing with the business networks. These results are in line with Luo et al. (2011), as well as Dixon et al. (2010), who suggest that the market and socio-cultural environment may lead to differences in forming capabilities in emerging market contexts, and they extend that notion by illustrating how specific capabilities are conceptualized through the cultural environment. This can imply that specific cross-cultural competencies (Caligiuri & Tarique, 2012) are needed, and according to this study, that may extend to those related to business networking.

The results of this study further imply that managers originating from Russia conceptualize business networking mainly at the level of the relationships between individuals, and consequently emphasize the importance of individual qualifications dimension of network competence in developing business relationships with Finnish firms. Conversely, the Finnish managers of the internationally operating SMEs conceptualize business networking in line with the prevalent academic research. This view adheres to the idea of business networking as a part of long-term organizational strategy instead of individual relationship-building and, consequently, implies that in the context of internationally operating Finnish SMEs, it is mainly the task execution dimension of network competence that is conceptualized and developed. The results thus align with the notion that the resources that internationalizing SMEs use to internationalize may be individualized (Westhead et al., 2001), and they also extend this view from the resource-based view to that of dynamic capabilities.

This paper contributes to the literature on dynamic capabilities, as few conceptualizations of business network-related capabilities and competencies have considered the possibility that their structure and operationalization may be determined by the cultural context where they are studied. A further contribution is also made to the literature on SME internationalization, where the cultural nature of business networking and network competence has received scant attention before this study (see e.g., the reviews by Jones et al., 2011; Peiris et al., 2012). The article contributes by pointing additional challenges to internationally operating SMEs in case they fail to account for the effect of cultural differences on the understanding of what business networking entails.

In line with Holmlund and Kock (1998), the results imply that in internationalization of SMEs, both business and social relationships may have a substantial influence on the end result. However, this study extends that view by further illustrating that cultural expectations may in part determine which kind is more closely aligned with the culturally based conceptualization of business networking and network competence.

Additionally, the paper contributes methodologically, by applying an inter-cultural approach based on the individual sensemaking of managers engaged in cross-relational business relationship dyads; the extant studies taking this approach have mainly done so from only side of the dyad. As Zaltman (1997) has argued, the nature of thought and behavior of the individual subjects of study should be included research design whenever possible. Finally, by asking the respondents evaluate not only their own, but also the network competence of their business relationship partner, the study responds to the call by Ritter et al. (2002) for assessing network competence from the business partner's point of view.

5 DISCUSSION AND CONCLUSIONS

This section presents a summary of the research, by re-introducing the research question and then summarizing the answer provided to it by the overall results of the study. The theoretical contribution of the study is discussed first, after which some managerial implications are discussed. Finally, the section concludes with discussion on the limitations of the study and suggestions for further research avenues.

5.1 Answering the research question

The main research question formulated in section 1 of this study was based on the research gaps identified in research literature on SME internationalization, and was: “*What is the relevance of developing and possessing network competence for internationalizing SMEs?*” The combined results of the publications 1-5 together contribute to answer the question from two points of view: by clarifying the nature and magnitude of performance and financial outcomes that possessing network competence has for internationalizing SMEs, and by providing a view of how network competence is manifested and conceptualized during the internationalization process among Finnish SMEs.

Overall, the results of the five publications included in this study contribute to answer the research question by illustrating how higher levels of relationship-specific and cross-relational network competence are significantly linked to improved success for SMEs during their internationalization process. In particular, this means that the positive linkage extends beyond the initial decision to enter the first foreign market, to further geographical and financial growth, as well as to higher profitability and to the level of strategic success of the internationalization process. As such, an argument is made based on the results that the level of network competence of SMEs is an essential predictor of how well they are able to internationalize.

Secondly, the results imply that network competence is a substantial phenomenon that is manifested and developed in the SME context in parallel to the progress of increasing international engagement of the firm. As such, its development can be observed and linked to the dynamics of organizational strategy during the process. And thirdly, network competence is relevant for internationalizing SMEs across different cultures: This study makes the argument that it is the organizational dimension, through strategic management of developing and managing the business networks and relationships therein that is relevant for SMEs originating from small open economies such as Finland.

Conversely, a culturally distinct business culture, such as Russia, may determine whether business networking is seen from this organizational view, or if the local managerial understanding is related to personal relationships in the individual unit of analysis. Providing the dimensions and structures for both kinds of cultural contexts contributes to make network competence a more holistic concept in the context of SME internationalization, compared to the many other dynamic capabilities related to business networks and relationships. In sum, then, the development, understanding and measurement of network competence is relevant for internationalizing SMEs in various

levels related to organizational strategy, financial goals, the degree of internationalization that they are able to achieve, to their level of control over their business relationships extending to international markets, and to the cultural contexts in which they aim to conduct their foreign operations.

5.2 Theoretical contribution

Overall, this study contributes in several ways to the literature on SME internationalization, dynamic capabilities and on strategic network management. Firstly, it contributes to introduce operationalized organizational competencies to the literature on networks in internationalization of SMEs, which has until recently lacked the dynamic capability viewpoint. As Ruzzier et al. plainly note in their review of SME internationalization studies (2006, p. 486), “*past research offers few examples of resource-based or capabilities-based studies of small firms’ internationalization*”. Peiris et al. (2012) still find a similar situation, noting that the understanding on the impact of dynamic capabilities in the internationalization process is still in its infancy. Therefore, the results of this study add to the lacking knowledge of organizational capabilities in SME internationalization, that have so far mostly concerned capabilities such as financial (Kuivalainen et al., 2010) and other non-network types (Mudambi & Zahra, 2007; Evers, 2011).

Research on the phenomenon of SME internationalization so far has also mainly examined business networks without having this internal organizational capability viewpoint (Coviello & Munro, 1995 and 1997; Zacharakis, 1997; Holmlund & Kock, 1998; Varis et al., 2005; Coviello, 2006; Coviello & Cox, 2006; Wakkee, 2006; Al-Laham & Soutairis, 2008; Sasi & Arenius, 2008), have considered partnership strategies in a specific industry (Bell, 1995; Ruokonen et al., 2006; Al-Laham & Soutairis, 2008; Kontinen & Ojala, 2011; Vasilchenko & Morrish, 2011), or have discussed network-related dynamic capabilities at an abstract conceptual level (Mort & Weerawardena, 2006; Weerawardena et al., 2007; Aramand & Valliere, 2012). The implication of network competence development in this context is that in addition to strategizing for the structure of the business network, SMEs can develop related organizational dynamic capabilities that allow them beneficial outcomes during their internationalization process, largely independent on the type and structural considerations of the business network.

Secondly, this study contributes to the literature on organizational strategy of internationalizing SMEs, by clarifying how different dimensions of business networking may be optimal in different phases of the internationalization process. By indicating that both individual network relationships and management at the network level have an influence on corporate success, the results bridge discussions over two paradigms: the network paradigm (Håkansson, 1982; Håkansson & Snehota, 1989; Möller & Halinen, 1999) and the literature on strategic alliances and strategic networks (Gulati, 1998; Jarillo, 1998; Gulati et al., 2000). This study contributes by extending these views in the context of internationalizing SMEs, and does by incorporating the dynamic capabilities view, which Gulati et al. (2000) note a contributing factor in research on corporate strategy.

Thirdly, the results overall contribute by further clarifying the exact nature and tangibility of dynamic capabilities, and by being one of the first studies to introduce constructs from both dynamic capabilities and business network literature to the field of international entrepreneurship. By linking tangible dynamic capabilities directly to financial and strategic outcomes, such as profitability (Torkkeli, forthcoming), growth (Torkkeli et al., 2011), international performance and the propensity of firms to internationalize (Torkkeli et al., 2012), they contribute to respond to earlier criticisms of conceptualizations of dynamic capabilities as unobservable and vague. They also respond by presenting a reliable and valid scale for network competence in an SME context (Torkkeli et al., 2012), and attest to its relevance for internationalizing SMEs, by pointing out specific beneficial outcomes for possessing higher levels of such competence. The overall results further contribute by increasing the understanding of how and when dynamic capabilities develop during the internationalization process (Torkkeli, Saarenketo & Nummela, 2013), and how they can be understood and conceptualized differently across cultures, depending on the cultural background of the manager (Torkkeli & Ivanova, 2013).

Overall, this study also responds to the earlier call by Ritter and Gemünden (2003) to extend the application of network competence to the context of internationalizing firms. In doing so, it takes a somewhat holistic view by examining both the outcomes of internationalizing SMEs possessing network competence, as well as that competence development process itself, and further applies a cultural lens to the context of business networking in internationally operating SMEs. Specific contributions from the quantitative and qualitative parts of the study are elaborated in more detail next, as the different methodologies bring their own viewpoints and results to their corresponding research questions.

5.2.1 Contribution of the quantitative part of the thesis

The part of the study including the examination into the relationships between levels of network competence and internationalization outcomes of SMEs contributes in various ways to SME internationalization and strategic management literatures. First, this study is the first of its kind to consider the difference between the relationship-specific and cross-relational networking activities on internationalizing SMEs, and also among the first to conceptualize the two as operationalized competencies. Thus, it provides further evidence of the tangibility and measurability of dynamic capabilities and provides a shortened network competence measure with comprehensive reliability and validity assessments. The results of the quantitative part of this study therefore provide further evidence for measurability of organizational competencies, which has proven an issue in earlier research (Jarratt, 2008).

Second, the notion that one dimension may be more indicative to the propensity of SMEs to internationalize and another on the growth and profitability of internationalized ones brings an added dynamic to the discussion of how SMEs should conduct their strategy in international markets. It does so by indicating that the strategic goals and the present market positions of SMEs determine whether they should prioritize individual business relationships over their strategic business network. As such, it extends the studies on

strategies of international SMEs, including Knight (2001), Chetty and Campbell-Hunt (2004), and Singh et al. (2008), as well as studies on strategic networks in other contexts (Möller & Svahn, 2003; Möller & Rajala, 2007; Partanen & Möller, 2012; Ecklinger-Frick et al., 2012). Additionally, it also responds to calls for examining the influence of network competence on outcomes that firms may experience both in general (Wilkinson & Young, 2002), and when internationalizing in particular (Ritter & Gemünden, 2003).

5.2.2 Contribution of the qualitative part of the thesis

The qualitative part of the thesis contributes to highlight and illustrate various aspects related to dynamic capabilities and business network studies. First, while there are a significant amount of studies examining the development of dynamic capabilities longitudinally (Wang & Ahmed, 2007), the few studies in the context of internationalization have mainly taken a conceptual view (Mort & Weerawardena, 2006; Sapienza et al., 2006; Prange & Verdier, 2011). Therefore, this study contributes both to the literature on development of dynamic capabilities by examining the process in the context of international business and for internationalizing SMEs in particular, and it contributes by presenting the network competence development process at the concrete level of organizational practices, highlighting the dimensions of both relationship-specific and cross-relational network competence in an internationalizing small firm.

Secondly, by implying that business networking and, by extension, the composition of network competence may vary depending on the cultural background of the individual managers and the business culture their internationalized SME operates in, this study extends the extant studies on business networking in cultural contexts (Williams, Han & Qualls, 1998; Luo, 2002; Möller & Svahn, 2004), that have mainly considered culture as a supplementary variable, such as Hofstede's indices (Hofstede, 1980) or have limited the view on the developed world (e.g., Coviello & Munro, 1995; 1997; Bell, 1995; Loane & Bell, 2006). Those studies have also mostly forgone the notion of business networking in a strategic sense being partly dependent on cultural factors. Thus, the results of this study contribute by introducing the sensemaking aspect to studying the role of culture in phenomena that have been found to be essential for internationalizing small firms, in this case the phenomenon of business networking. Subsequently, a further contribution is to the prevalent academic view of business networks: As business networks have so far been conceptualized as dyadic business relationships between organizations, comprising self-organizing systems (Ritter et al., 2004), this study contributes by suggesting that this view may be limited to Western developed markets, and business networking among international SMEs may be conceptualized differently in emerging markets.

And thirdly, arguing for the aforementioned possibility provides an added methodological contribution to the studies on business networks (Johanson & Mattsson, 1985), and by extension, may provide a challenge to some of the business network related foundations of the network approach (Johanson & Mattsson, 1988) and the revised U-model (Johanson & Vahlne, 2003; 2009). While those models have received much critique over time (e.g., Hedlund & Kverneland, 1985; Andersen, 1993; Bell, 1995; Crick & Jones, 2000), the present study contributes further by conducting problematizing within the business

network and dynamic capabilities context, in line with Alvesson and Sandberg's (2011) suggestions. The methodological approach of taking the individual manager as the unit of analysis and examining dyads from the both points of view is furthermore an approach that has not received much application in the context of business studies.

5.3 Managerial implications

The results of this study can be summed up from the point of view of business practitioners by highlighting various implications. The first implication is that it is essential for long-term success of SMEs to have an understanding of what network competence is, how it is manifested, and whether relationship-specific or cross-relational network competence should be developed if they aim to internationalize in the near future or are currently engaged with the process. As Street and Cameron (2007, p.239) conclude in their review of alliance and network research among small firms, *"In order to thrive, small businesses are often advised to develop relationships with external organizations that have the potential to assist business development, survival and growth"*. Following Ritter et al. (2002) and Torkkeli et al. (2012), the network competence arising from this study can be defined as the level of organizational ability to develop and manage business relationships within business networks, and the ability to control the output of those networks so as to benefit the organization strategically and financially. The results of this study are highlighting that, whether the firm aims to expand the scale and scope of their international operations, maximize growth or enhance their profitability, they cannot escape the fact that building and then leveraging the ability to develop and manage business network relationships with their customers, suppliers and other network actors is called for.

These are notable contributions, as few studies so far have examined the role of related organizational competencies in the increasingly globalized world, where managers of small firms are faced with increased pressure to internationalize their company in rapid fashion. Furthermore, understanding the mechanisms of how small firms originating from different networking cultures and industry sectors develop their ability to form those relationships are can provide essential tools for managers that seek to internationalize their small firm successfully and profitably. The results of this study suggest that some of the fundamental mechanisms of conducting international business, such as business networking, may have different meanings to managers originating from different cultures. Particularly Torkkeli and Ivanova (2013) finds that the underlying way of engaging in a business relationship may be different for managers originating from "western" cultures than to those from emerging economies; while the former tend to see business networking as an organizational strategy, the latter view it as trust-building between individual managers. If being competent in developing and managing business networks does indeed lead to beneficial outcomes for internationalizing firms (as suggested by Torkkeli et al., 2011; Torkkeli et al., 2012; Torkkeli, forthcoming), it is essential that firms engage in the relationship development process at the appropriate level.

Secondly, as business networking has been found to be an essential enabler of internationalization among SMEs in particular, in light of this study, more individualized relationships should be developed if the SME targets an emerging foreign market such as

Russia, and managers should keep in mind that the cultural background of individuals may come to determine the ways they make sense of the interaction process (Ivanova & Torkkeli, forthcoming), and thus by extension, of the ways business relationships and networks are developed. Conceptualizing business networking in light of the cultural background of the managers thus implies that when it comes to business networking and dynamic capabilities of the organization, the local business culture and the cultural background of the individuals also matter.

Thirdly, the results of this study imply that managers should make their decisions on developing network competence carefully and in line with the desired strategic outcomes of their firm. This is to say that, when assigning resources to developing the organizational practices that contribute to improving the organizational network competence of their firm, managers should emphasize either the relationship-specific or the cross-relational, or the individual level, depending on when, where and how they aim to internationalize. Such calculated decision-making is needed, lest the internationalizing SME of the manager finds itself in a mutual bind where the firm needs access to resources only available through their business network, but has not assigned resources to developing the relevant type and level of network competence to achieve their particular strategic goals.

Additionally, if the firm is an INV, they are then also faced with a simultaneous need to commit resources to enable rapid foreign expansion. Thus, when it comes to developing network competence, internationalizing SMEs may have to *hit the ground running*, as evidenced by the longitudinal development of network competence in the internationalizing Finnish INV in this study. At the same time, however, they should keep in mind that, as the aforementioned case study implied, the development of network competence may coincide with increasingly focused internationalization strategy, increasing financial success and increasing control of one's business relationships. All this implies that a strategic balancing act may be required from the managers of SMEs across the internationalization process. However, in light of the results of this study, long-term benefits for possessing higher levels of network competence, in terms of strategic and financial success internationally, seem various and significant. This in turn implies that these firms should develop their network competence as soon as it is financially feasible.

And fourthly, when the relationship-specific and cross-relational dimensions of network competence are examined in further detail, managers of domestic SMEs aiming for internationalization should be encouraged to actively seek new business partners and to facilitate the exchange of both general and confidential information in formed relationships. This constitutes the relationship-specific network competence (Ritter et al., 2002; Torkkeli et al., 2012) and, according to the results of this study, is linked with the increased likelihood that an SME has managed to enter their first foreign market.

At this point, the SME should subsequently start conceptualizing the question as to how to manage a larger business network (Möller & Halinen, 1999) or one consisting of specific types of network partners (Möller & Svahn, 2003; Möller et al., 2005; Möller & Rajala, 2007). Then, as they are already engaged in foreign operations, the results suggest that strategic focus should then switch towards comparing how individual network partners compare with each other, assigning responsibility for each network relationships, initiating meetings where the firms of the business network convene together, and starting to assess and compare the efforts that are put in use towards activities related to the network

relationships. These actions in turn constitute the cross-relational dimension of network competence of the firm (Ritter et al., 2002; Torkkeli et al., 2012), which is positively linked to international performance (Torkkeli et al., 2012), growth of internationally operating SMEs (Torkkeli et al., 2011) and increased profitability among those SMEs (Torkkeli, forthcoming). Seeing from the point of view of an SME aiming to internationalize successfully and profitably, both of the two dimensions are needed in order for an SME's internationalization strategy to be optimally successful from start to later stages.

Finally, managers should assess the network competence development process depending on the market environment and the industry sector their firm operates in. In some industries, particularly in those where SMEs tend to be niche-oriented and in need of rapid internationalization, developing network competence before engaging in internationalization may not be feasible (Torkkeli, Saarenketo & Nummela, 2013). Managers of these types of SMEs may have to resort to learning-by-doing, a process that may eventually lead to developing network competence, but one that may also endanger the ability of the firm to internationalize profitably and in a way that retains its ability to control its business relationships (ibid.). Therefore, as to the question on when internationalizing SMEs with limited resources should develop their network competence, the results of this study overall respond with *"as soon as possible"*.

5.4 Limitations and suggestions for further research

This study naturally contains various limitations. The first among these relates to the cultural context, and is that it constrains the examination of the relevance of network competence in SME internationalization to a specific small-country context. Particularly the results of the qualitative part of the study may not be widely generalizable to other cultural and national contexts. The applicability of the context of Finnish SMEs has been based on the idea that much of the extant research on SME internationalization has been conducted in similar small, open economies (e.g., Bell, 1995; Coviello & Munro, 1995 and 1997; Sharma & Blomstermo, 2003; Coviello, 2006; Loane & Bell, 2006; Ojala, 2009), because these small markets typically provide a rich data of firms that are seeking to internationalize in order to achieve larger market potentials. Similarly, SMEs originating from small open economies such as Finland have often been found to be especially illustrative of the business networking phenomena, as they typically rely on business network resources to overcome their small size, their small domestic market, and often being INVs, their niche-orientation and knowledge-intensive nature.

However, as the cultural environment has been found in this study to partly determine how SMEs and their managers go about business networking and conceptualizing network competence, one relevant venue of further attention could be widening this cultural context towards more dominant business cultures. These could include both the so-called developed countries (e.g., The United States, The United Kingdom, France), as well as those emerging markets which are increasingly relevant in the global scale and contain unique cultural traditions related to business networking (Russia and China).

A second contextual limitation includes the organizational context: Both the conceptualization, operationalization and the development process of network competence in the internationalization context have here been conducted on the SME context. It is possible that the network competence construct in large multinationals (MNEs) is structurally different, may develop differently, and may have different performance outcomes in that context. This may be due to, for example, that in MNEs, the units embedded in business networks tend to be their subsidiaries, thus making the business networking in that context complex and conceptually distinct (Mudambi & Swift, 2011). Thus, their network competence may be more oriented towards their subsidiaries, since they most likely do not suffer from lack of resources that SMEs commonly do. Thus, the influence of network competence in internationally operating large firms may be dissimilar to the context of this study.

The cross-sectional nature of the quantitative survey does provide some grounds for generalizing the results over different types of industries and SMEs, and an argument can be made based on the quantitative results that network competence acts as an integrative concept bridging both the INV and the traditional SME internationalization research. However, the static nature of the survey does provide a possibility for a follow-up study, which could extend the study of network competence on internationalization outcomes by also examining how the levels of the former change over time in a larger sample. A larger sample across a more wide range of industry sectors could also allow for additional methodological choices with the possibility of examining the relationship between network competence and internationalization outcomes with more complex sets of relationships (e.g., structural equation modeling).

Yet another potential future research avenue could deal with the ethical considerations of network competence: As developing network competence may enable firms to develop the kinds of network relationships that benefit themselves the most, they may gain such a prominent position in the network that they will be able and willing to pressure their less powerful network partners. The entire business network may also be undesirable from the public point of view, as Thorelli (1986) points out, providing examples such as illegal co-competition and exploitation of the workforce of network partners. Thus, examining network competence in context of corporate social responsibility (either domestically or internationally) could provide some insights on the corporate ends that it is applied to. Similarly, the context of non-governmental organizations or social entrepreneurship might provide additional illustrations as to the influence of network competence on financial and growth-related success outcomes.

Additionally, some earlier questions related to the development of network competence and its manifestation in firms are still to be responded to. Ritter and Gemünden (2003) for example, wonder what the relative levels of network competence between cooperating firms imply for their partnership activities. They point out that, as levels of network competence can vary, firms could look for either partners with lower, similar or higher levels of network competence. How these different pairings affect the outcomes from network relationships should still be examined in detail.

The limitations of the qualitative part of the study naturally relate to the question as to how generalizable they are across different research contexts. While the study provides some evidence of the possibility that individual and business culture among internationally

operating SMEs may determine the ways they conceptualize business networking, it does assume the position that Finland and Russia provide a particularly fitting empirical context for doing so. However, as Woodside and Wilson (2003) note, the objective of case study research is to probe the mental models behind theory, not to try and achieve generalizations across populations. Furthermore, seeing as the managerial and entrepreneurial culture in Russia overall is highly distinct (Lee & Peterson, 2001; Puffer & McCarthy, 2011), extending the view relating to conceptualization of dynamic capabilities such as network competence to other culturally distinct business environments (e.g., China; see Luo, 2001) could be fruitful.

One further research avenue could be examining how network competence influences the internationalization process of firms in relation to the firm's position in the business network. Especially when SMEs from developed markets aim to internationalize via emerging ones, network structures beyond the type of partners (e.g., the strength of network ties and the overall type of the network; see Thorelli, 1986; Hilmersson & Jansson, 2012) may have an effect on the relationship between network competence and internationalization outcomes.

Finally, future research could also examine how the development process of network competence in internationalizing SMEs comes to depend on their industry sector, as well as other characteristics of the firm such as its originating country and its controlling party (e.g., if the firm is a family-owned SME or not). While the present study contributes to illustrate the longitudinal development process in one Finnish software firm, it is likely that the different requirements to internationalize placed on SMEs by the nature of their industry and products has an effect on the timing of their business networking in relation to their process of increasing international commitment. As software SMEs in particular tend to internationalize rapidly and via non-traditional patterns (see e.g., Bell, 1995; Coviello & Munro, 1997; Ruokonen et al., 2006), additional insight beyond this study is still called for in order to fully explain the longitudinal network competence development process in internationalizing SMEs.

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Appendix 1: Selected Questionnaire Item Sets

Organizational network competence (task execution, adapted from Ritter et al., 2002)²: To what extent do you agree with the following statements (1=not at all, 7=to a great extent).

	1	2	3	4	5	6	7
We share the same goals with our exchange partners ³	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We evaluate the way our relationship with each partner depends on our relations with other partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We evaluate the way our relationship with each partner interferes with our relations with other partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We evaluate the way our relationship with each partner helps our relations with other partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We evaluate the way each of our partners contributes to success of our firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We evaluate the way the results of collaboration with each of our partners fit together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We evaluate the way our collaboration with our partners contributes to achieving our firm's strategic objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We compare our partners in terms of their knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We compare our partners in terms of	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

²In comparison to the original scale, the word "technical" from survey items referring to "technical partners" was removed from survey items, in order to reduce ambiguity and examine potential further generalizability across relationship types.

³ Several items from Ritter et al. (2002) regarding ways of discussing shared requirements and objectives with partners were here presented in a single item, in order to achieve a more concise expression of the intended meaning. The main item adapted was: *"We decide how much we will adapt to the requirements of each technical partner"*, with the others closely related to facilitate goal-sharing: *"Those in our firm involved in relationships with our technical partners discuss the requirements of each of our technical partners; Those in our firm involved in relationships with our technical partners discuss the objectives for the relationship with each of our technical partners"*

their productivity							
We allocate financial resources to each relationship with our partners (e.g. travel budgets)	o	o	o	o	o	o	o
We establish objectives for relationships with each partner	o	o	o	o	o	o	o
We initiate meetings and discussions among those in our firm involved in relationships with our partners	o	o	o	o	o	o	o
We assign people to each relationship with our partners	o	o	o	o	o	o	o
We coordinate the activities involved in different relationships with our partners	o	o	o	o	o	o	o
We assess how much effort our people put into relationships with partners	o	o	o	o	o	o	o
We monitor the extent to which relationships with our partners work to our advantage	o	o	o	o	o	o	o
We monitor differences between expected and actual performance in relationships with our partners	o	o	o	o	o	o	o
We search actively for new potential partners ⁴	o	o	o	o	o	o	o
We visit potential partners in order to get to know them	o	o	o	o	o	o	o
We exchange general information with our partners	o	o	o	o	o	o	o

⁴ Several items regarding ways of searching for partners were combined to form this item, in order to express the items on partner searching in a more concise manner. This item is thus adapted to express the meaning of the following NetComp items (see Ritter et al., 2002): “We maintain contact with potential technical partners”; “We inform potential technical partners about our technical knowledge”; “We use existing technical partners as a source of information about potential technical partners”; “We use organizations, apart from our existing technical partners, to identify potential technical partners (e.g., chambers of commerce, consultants, industry associations, government organizations)”; “We visit industrial fairs and exhibitions to identify potential technical partners”; “We look at company advertisements in specialized technical journals to identify potential technical partners”; “We search for research reports to identify potential technical partners”.

We exchange confidential information with our partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our people discuss social and personal matters with people from our partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We inform others in our firm about the requirements of our partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We put people from our partners in contact with key people in our firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We put people in our firms in contact with key people from our partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We initiate personal contacts between people in our firm and our partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Internationalization:

1. We have had international activities since year _____
2. What was the first country you had international activity in? _____
3. In how many countries, in addition to Finland, does your company operate/have clients?
_____ countries
4. How large a proportion of your turnover comes from foreign markets today? _____%
5. How many percent of the turnover comes from each of the following areas at the moment?
6. Turnover 3 years after internationalization: _____€
7. Thinking back, three years after internationalization, how many percent of the turnover came from each of the following areas?

Finland	_____ % of the turnover
Europe (excluding Finland)	_____ % of the turnover
North-America	_____ % of the turnover
South and Central America	_____ % of the turnover
Australia, New Zealand and other Oceania	_____ % of the turnover
Asia	_____ % of the turnover
Middle East	_____ % of the turnover
Africa	_____ % of the turnover

total 100%

Subjective international performance:

8. What is your opinion as to the following statements with respect to your firm's productivity of internationalization? (1=completely disagree, 7=completely agree)

	1	2	3	4	5	6	7
Generally speaking, we are satisfied with our success in the international markets	o	o	o	o	o	o	o
We have achieved the turnover objectives we set for internationalization	o	o	o	o	o	o	o
We have achieved the market share objectives we set for internationalization	o	o	o	o	o	o	o
Internationalization has had a positive effect on our company's profitability	o	o	o	o	o	o	o
Internationalization has had a positive effect on our company's image	o	o	o	o	o	o	o
Internationalization has had a positive effect on the development of our company's expertise	o	o	o	o	o	o	o
The investments we have made in internationalization have paid themselves back well	o	o	o	o	o	o	o

Environmental hostility:

1. Please, evaluate the past development and future prospects within a few year's time. What is your opinion of the following statements? (1=disagree completely, 7= agree completely)

	1	2	3	4	5	6	7
Our operational environment changes slowly	o	o	o	o	o	o	o
In our field of business the life cycle of products (goods and services) is typically long	o	o	o	o	o	o	o
In our field one cannot succeed, if one is not able to launch new products continuously	o	o	o	o	o	o	o
In our field of business customers' Preferences are quite stable	o	o	o	o	o	o	o
The ability to operate quickly is crucial for	o	o	o	o	o	o	o

success in our field of business							
Technological development offers remarkable possibilities in our field of business	o	o	o	o	o	o	o
Technological development is rapid in our field of business	o	o	o	o	o	o	o
Access to channels of distribution is difficult	o	o	o	o	o	o	o
Access to capital is difficult	o	o	o	o	o	o	o
Access to skilled labor is difficult	o	o	o	o	o	o	o
Bankruptcy among companies in the industry is high	o	o	o	o	o	o	o
Products become obsolete quickly	o	o	o	o	o	o	o
Demand for industry products is declining	o	o	o	o	o	o	o

2. Please indicate how well the following statements describe your business (1=not at all, 7=to a great extent)

	1	2	3	4	5	6	7
Our firm must often change its marketing practices to keep up with the market	o	o	o	o	o	o	o
Our firm must often change its marketing practices to keep up with the competitors	o	o	o	o	o	o	o

Appendix 2: Interview Schema for Publication 4

Interview guide
A. Background questions
1. What do you consider the most important success factors for your firm?
2. How would you describe your vision on business networking in the Finnish context?
3. How would you describe your vision on business networking in the international context?
4. Could you describe your partnership activities with your technical and other business partners globally? For example the type of partners (technical/sales etc.) you have at the moment and where they are located?
5. Has the type or the amount of partners changed recently, and do you concentrate more on dealing with individual partners on their own or do you consider all the partners as one whole network?
B. Network competence
1. How does your firm evaluate the way your relationship with each partner helps your relations with other partners? Could you also tell when has the evaluation developed towards increasingly systematic ways and how it has happened?
2. How well does your firm compare our partners in terms of their technical knowledge? Could you also tell when has the comparing developed towards increasingly systematic ways and how it has happened?
3. How well would you say that your firm shares the same goals with your partners? How and at which point of internationalization have the goals developed to become more aligned?
4. How much does your firm initiate meetings and discussions among those in your firm involved in relationships with your partners? Could you also tell when and how has this developed and become more systematic in your firm?
5. How closely does your firm assign people to each relationship with your partners, do you? Has this developed towards more systematic practices and if so, at which point did it develop?

6. Does your firm assess how much effort your people put into relationships with partners? How has the assessment developed over time, and at when did the development occur?
7. Does your firm coordinate the activities involved in different relationships with your partners? (for example, meetings, negotiations, etc.) Is it done systematically and how has that coordination developed over time?
8. How does your firm monitor the extent to which relationships with our partners work to your advantage? Is it done in a systematic way? How has this developed over time?
9. How actively does your firm search for new partners right now? Do you, for example, go and visit potential partners in order to get to know them? How has this developed over time?
10. How much does your firm exchange confidential information with your partners? How has this developed over time?
11. How do you inform others in your firm about the requirements of your partners? How has this developed over time?
12. How does your firm ensure, that people in your firm stay in contact with key people from your partners and vice versa? How has this developed over time?

Appendix 3: Interview Schema for Publication 5

INTERVIEW GUIDE	
A. Could you please tell me a little about yourself?	
2.	Educational background, prior work experience before getting into the company?
3.	How did you get started in this profession and in particular, in this company?
4.	What is your current position in this company? How long have you held this position?
5.	What are your major responsibilities?
6.	What do you particularly enjoy about your work?
7.	What are some of the challenges you face?
8.	What is essential for you in business?
B. Could you please describe your company and its business?	
1.	Which business processes are considered as key in your company?
2.	From your point of view what are the main principles of doing business in Russia/Finland? What are the main principles of doing business in your company?
3.	What is of ultimate significance for your company, from your point of view? What are the key issues for success?
4.	How do you communicate within the company? How could you describe the atmosphere within the company (e.g. a day from the work within the company)?

5. Could you please tell me a little about formal and informal meetings within the company. How often do they happen? Where? What issues are raised there?
C. Understanding of business concepts/terms
1. How would you in your own words describe your vision of business relationships in a Russian context (if you were dealing on the Russian market/with Russian partners)? What analogies would you use, how would describe/imagine it?
2. Using the same way of explaining as before, how would you describe your vision of business interaction in a Russian context?
3. Using the same way of explaining as before, how would you describe your vision of (business) networking in a Russian context?
4. Using the same way of explaining as before, how would you describe your vision of management/entrepreneurship in a Russian context?
5. How would you in your own words describe your vision of business relationships in a Finnish context (if you were dealing on the Finnish market/with Finnish partners)? What analogies would you use, how would describe/imagine it?
6. Using the same way of explaining as before, how would you describe your vision of business interaction in a Finnish context?
7. Using the same way of explaining as before, how would you describe your vision of (business) networking in a Finnish context?
8. Using the same way of explaining as before, how would you describe your vision of management/entrepreneurship in a Finnish context?
9. What do you think Finnish managers expect from business relationships in Russia? Could you give some analogies or a picture of that? / Could you describe that in simple words, using analogies and some pictorial descriptions?
10. From your point of view, are these expectations usually met?
D. Individual qualifications (Ritter, Wilkinson & Johnston, 2002)
1. Based on your experience with your Finnish/Russian partner, how would you characterize their ability to deal with you?
2. How would you characterize their ability to communicate their needs to you?

3. How do you see their ability to handle negotiations with you?
4. How would you assess their ability to sense potential conflicts arising with you?
5. How would you assess their ability to find constructive solutions to conflicts with you?
6. How would you assess their ability to put themselves in your position?
7. How would you assess their ability to understand your behavior?
8. Is there something else you would like to tell about that you think is important for a Finnish/Russian manager getting into business relationships with Russian/Finnish firms?

Appendix 4: The Final Network Competence Items⁵

Relationship-specific network competence:

Initiation subscale:

- We search actively for new partners.
- We visit potential partners in order to get to know them.

Exchange subscale:

- We exchange confidential information with our partners.
- We inform others in our firm about the requirements of our partners.

Coordination subscale:

- We put people from our partners in contact with key people in our firm.
- We put people in our firms in contact with key people from our partners.

Cross-relational network competence:

Planning subscale:

- We evaluate the way our relationship with each partner helps our relations with other partners.
- We evaluate the way the results of collaboration with each of our partners fit together.
- We compare our partners in terms of their technical knowledge.

Organizing subscale:

- We share the same goals with our partners.
- We initiate meetings and discussions among those in our firm involved in relationships with our partners.

Staffing subscale:

- We assign people to each relationship with our partners.
- We coordinate the activities involved in different relationships with our partners.

⁵ Items and the construct structure adapted from Ritter et al. (2002) to form the 25-item survey scale seen in appendix 1, ratified through reliability and validity analysis to the 15-item scale presented here. For further details on the final construct, see Torkkeli et al., 2012.

Controlling subscale:

- We assess how much effort our people put into relationships with partners.
- We monitor the extent to which relationships with our partners work to our advantage.

PART II: PUBLICATIONS

ACTA UNIVERSITATIS LAPPEENRANTAENSIS

494. RANTALAINEN, TUOMAS. Simulation of structural stress history based on dynamic analysis. 2012. Diss.
495. SALMIMIES, RIINA. Acidic dissolution of iron oxides and regeneration of a ceramic filter medium. 2012. Diss.
496. VAUTERIN, JOHANNA JULIA. The demand for global student talent: Capitalizing on the value of university-industry collaboration. 2012. Diss.
497. RILLA, MARKO. Design of salient pole PM synchronous machines for a vehicle traction application. 2012. Diss.
498. FEDOROVA, ELENA. Interdependence of emerging Eastern European stock markets. 2012. Diss.
499. SHAH, SRUJAL. Analysis and validation of space averaged drag model for numerical simulations of gas-solid flows in fluidized beds. 2012. Diss.
500. WANG, YONGBO. Novel methods for error modeling and parameter identification of redundant hybrid serial-parallel robot. 2012. Diss.
501. MAXIMOV, ALEXANDER. Theoretical analysis and numerical simulation of spectral radiative properties of combustion gases in oxy/air-fired combustion systems. 2012. Diss.
502. KUTVONEN, ANTERO. Strategic external deployment of intellectual assets. 2012. Diss.
503. VÄISÄNEN, VESA. Performance and scalability of isolated DC-DC converter topologies in low voltage, high current applications. 2012. Diss.
504. IKONEN, MIKA. Power cycling lifetime estimation of IGBT power modules based on chip temperature modeling. 2012. Diss.
505. LEIVO, TIMO. Pricing anomalies in the Finnish stock market. 2012. Diss.
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