

**The strength and empowerment of
weak network ties in international new
ventures**

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PhD Dissertation
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Weak ties in international venturing

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Abstract

Good relationship-creating skills or networking skills of entrepreneurs in small international ventures are vital. Small ventures have limited capital resources so they have to utilize various relationships that provide know-how.

The goal of this dissertation is to examine the relationships of international entrepreneurs in international new ventures (INVs). This study explores how they perceive and utilize relationships in their ventures, a subject which has been rarely studied in the international entrepreneurship literature.

This dissertation consists of four research papers which all relate to the issue of relationships of international entrepreneurs. All of these papers have been presented at international business conferences and are at different stages of publishing either in academic journals or as a book chapter. The underlying methodology is qualitative research employing a multiple case study approach, using extensive, open and semi-structured interviews, and panel and participation observation for data gathering. The focus in the interviews was on exploring the notions of relationship strength and the embeddedness of international entrepreneurs to a point of data saturation.

This study makes a number of contributions. First, the major contribution of this research lies in the identification and specification of the weak ties of the international entrepreneurs. Weak ties, often overlooked in the international entrepreneurship literature, play an important and growing role in the business ventures of the international entrepreneur as they provide opportunities and bridge gaps. Secondly, this research has identified that entrepreneurs actively use new online networking tools in their international ventures. These new tools enhance the management of a large number of relationships, particularly weak ties, which have similar characteristics to strong ties, which seem to protect entrepreneurs from opportunism. In particular, entrepreneurs with the largest networks of weak ties perceive weak ties as portfolios. Third, by observing the entrepreneur's context for creating relations, a rarely studied phenomenon in international entrepreneurship, this research enhances the understanding of different entrepreneurs and their strategies in international venturing. The methodology used to research the context for creating relations among different entrepreneurs can enhance further future studies on different international entrepreneurs. Finally, this research offers a model for conceptualizing and studying relationships of international entrepreneurs. In doing so, the research integrates both internal and external factors, such as the domestic market presence that affects the relationships of international entrepreneurs leading to different portfolios of relationships.

Abstract in Icelandic

Titill: Samskiptanet og hagnýting þeirra í alþjóðavæðingu fyrirtækja.

Bróðurpartur nýrra starfa í hagkerfinu verða til í litlum fyrirtækjum á borð við nýsköpunarfyrirtæki og þau gegna því afar mikilvægu hlutverki í verðmæta-sköpun. Nýsköpunarfyrirtæki hafa takmörkuð fjárráð og þeirra mikilvægustu auðlindir felast oft í kunnáttu frumkvöðlanna og tengslaneti þeirra. Nær öll nýsköpunarfyrirtæki nýta sér tengslanet frumkvöðlanna til þess að finna samstarfsaðila, hönnuði og framleiðendur, sölu- og markaðsaðila, sem hafa kunnáttu á tilteknum sviðum og eru í mörgum tilfellum reiðubúnir að deila áhættu.

Þegar nýsköpunarfyrirtæki hyggjast hefja útflutning eykst mikilvægi tengslaneta þar sem þekking frumkvöðlanna á starfsemi utan heimalandsins er oft takmörkuð. Um leið er algengara að frumkvöðlar hafi minna tengslanet utan síns heimalands.

Markmið þessarar rannsóknar er að skoða tengslanet frumkvöðla í alþjóðlegum nýsköpunarfyrirtækjum og hvernig þeir skapa og nýta sér tengslanet til framgangs starfsemi sinnar. Rannsóknir á því hvernig samskipti frumkvöðla í alþjóðlegum nýsköpunarfyrirtækjum myndast og hvernig þau eru notuð eru takmarkaðar. Þrátt fyrir að margar rannsóknir hafi verið gerðar á tengslanetum frumkvöðla, þá hafa þær aðallega snúist um sterk tengsl þessara einstaklinga við þá sem næst þeim standa, fjölskyldu, nánustu samstarfsmenn og vini. Í rannsóknnum mínum beini ég sjónum að því hvernig alþjóðlegir frumkvöðlar nýta sér tengsl, ekki síst veik tengsl, til framdráttar sínum hugmyndum og verkefnum. Sýnt hefur verið fram á að veik tengsl eru oft mun algengari í alþjóðlegri frumkvöðlastarfsemi. Þrátt fyrir það eru þess háttar samskipti lítt könnuð.

Rannsóknin samanstendur af fjórum sjálfstæðum rannsóknargreinum sem allar hafa verið ritrýndar á erlendum vettvangi. Þessar rannsóknir fjalla allar á einn eða annan hátt um tengslanet frumkvöðla og áhrif þeirra á starfsemi frumkvöðlafyrirtækjanna. Fræðilegan grunn þeirra er fyrst og fremst að finna í kenningunni um félagsleg net (social network theory) og kenningunni um alþjóðlega frumkvöðlastarfsemi (international entrepreneurship).

Þrátt fyrir að líta beri á greinarnar fjórar sem sjálfstæðar rannsóknir, þá mynda þær eina heild þegar kemur að framlagi þeirra til þeirra kenninga sem að framan greinir. Bent er á hvernig frumkvöðlar nýta sér veik tengsl í alþjóðlegum viðskiptum og hvernig þeir stjórna vaxandi hópi veikra tengsla, m.a. með nýrri samskiptatækni á vefnum. Í líkani, sem kynnt er, er hnykkt á mikilvægi þess að

skoða ólíkan bakgrunn frumkvöðla og hvaða áhrif hann hefur á myndun tengsla þeirra. Þá er einnig í líkaninu bent á að staða atvinnugreinar á heimamarkaði geti haft áhrif á hvernig einstaklingar byggja upp sitt tengslanet, bæði innanlands og utan. Í rannsóknunum er meðal annars gerður samanburður á íslenskum tæknifyrirtækjum sem bjuggu við lítinn heimamarkað (leikjafyrirtæki) og tæknifyrirtækjum sem bjuggu við öflugan heimamarkað (tæknifyrirtæki í íslenska sjávarklasannum). Sá samanburður leiðir í ljós að tæknifyrirtækin í tengslum við íslenska sjávarklasann njóta forskots í upphafi þar sem þau hafa áhugasama innlenda kaupendur að tækninni en þetta kann einnig að gera þau minna vakandi fyrir eflingu erlendra tengsla og draga þannig úr krafti þeirra í útrás. Leikjafyrirtækin bjuggu á hinn bóginn ekki við öflugan heimamarkað og þurftu því fyrst að efla tengslanet sitt erlendis. Fyrir vikið er alþjóðlegt tengslanet frumkvöðla í leikjageiranum stærra en frumkvöðla í sjávarklasnum sem getur gagnast þeim í útrásinni.

Tengslanet frumkvöðla í alþjóðlegum nýsköpunarfyrirtækjum er vannýtt auðlind sem má virkja betur en gert hefur verið og hagnýta með markvissari hætti. Þessi rannsókn bendir á hvernig frumkvöðlar í nýsköpunarfyrirtækjum hafa stjórnað sýnum tengslanetum og hvernig þau hafa nýst í alþjóðavæðingu fyrirtækja þeirra. Í því felst framlag þessarar rannsóknar til starfsemi alþjóðlegra nýsköpunarfyrirtækja.

Framlag þeirra rannsókna, sem kynntar eru hér, felst fyrst og fremst í því að skerpa á kenningunni um félagsleg net og styrkja undirstöður rannsókna- og fræðistarfa í tengslum við alþjóðlega frumkvöðlastarfsemi. Með því að benda á veik tengsl sem mikilvæga auðlind fyrir alþjóðlega frumkvöðla og benda á mikilvægi þess að skoða bakgrunn alþjóðlegra frumkvöðla og þeirra atvinnugreina sem þeir starfa í, leggur þessi rannsókn einnig fram skerf til kenningarinnar um alþjóðlega frumkvöðlastarfsemi.

Acknowledgements

I started this PhD journey in the beginning of the new century wanting to know how small and medium sized firms internationalize. From my previous writings and practical working experience with small and medium-sized firms (SMEs), it was evident that most SMEs faced major thresholds in their initial internationalization and they lacked in many cases legitimacy and a clear strategy. In two of my books, *Landnám* (2002) and *Straumhvörf* (2004), I mapped the successes and failures of internationalizing SMEs initiated in Iceland, and stressed the importance of a more strategic approach to internationalization.

In my previous writings and research, it seemed crucial for these internationalizing SMEs to emphasize cooperation both among themselves and with domestic and international partners offering complementary resources (Sigfusson, 2002, 2003, 2004). However, there were not many partnerships among Icelandic SMEs emphasizing exports or international ventures and successful internationalization of an SME seemed to be a matter of luck rather than a clever strategy. In 2002 I met with Professor Ingjaldur Hannibalsson, Head of Faculty at the Business School at the University of Iceland. Ingjaldur encouraged me to pursue a PhD degree in this field and he became my supervisor. I would like to express my sincere gratitude to Professor Ingjaldur Hannibalsson.

In my studies in 2002–2004, it soon became evident to me that research was lacking on the relationships of international entrepreneurs and how these relationships developed and worked. I still remember clearly my preliminary interviews with the participants in my PhD research. I carefully interviewed them about their relationships, particularly strong relationships, which gave me an in-depth view of their closest business relationships. Turning to the initial internationalization of their ventures, I asked them about how their internationalization had occurred and who were the most influential relationships. I thought strong ties would show up; they did so only partially. There seemed to be a very different set of relationships which they had used for their internationalization and these were not strong ties, but rather acquaintances or arms-length relationships. Knowing the limited studies done on weak ties, my research focus would be the role of weak ties in the ventures of the international entrepreneur in INVs.

In my literature search I came across journal articles that had been cited frequently in this field. One of the authors of these papers was Dr. Simon Harris, Head of Strategy & International Business at the University of Edinburgh Business School. Soon after I had made the initial contact with Simon, we began a fruitful research cooperation which has been extremely beneficial to my work. Simon became my adviser and a member of the doctoral committee. I wish to express my warm and sincere thanks to Simon. Simon's encouraging and personal guidance provided a good basis for the present dissertation and our mutual research and paper writing became a vital part of my learning process.

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I have followed the strategy of spinning off my research into papers, of which four are presented in this study, in order to receive feedback from members of the wider academic community. This has allowed me to progressively incorporate new ideas and improve my research. I have greatly benefited from my co-authors, Sylvie Chetty and Simon Harris, and from helpful comments by anonymous reviewers at various conferences and workshops in Europe and the US. I thank the participants at the SCANCOR workshop at Stanford University in April 2010, the participants at three seminars and conferences at the University of Iceland in 2009–2011, and the PhD students at a workshop at University of Edinburgh, March 2010, for comments and suggestions regarding my research papers. I am also grateful to the anonymous reviewers and participants at the European International Business Academy Annual Conference in Porto Portugal, December 2010, and at the same conference in Bucharest, 2011, at the Þjóðarspejillinn-conference at the University of Iceland in October 2010, at the Journal of World Business 2011 and International Business Review 2011 for valuable input regarding my research papers. The financial support of the Federation of Industry, ERASMUS and SCANCOR Stanford University, is gratefully acknowledged.

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1 Introduction

1.1 Introduction

The goal of this chapter is to introduce the origin, relevance and purpose of this PhD research, its research questions and propositions, and the researcher's positionality.

The rapid change in the global business environment has had a strong impact on the organizational forms, relationships, flow of resources, and various other aspects of international businesses. Scholars seek to capture the essence of the latest trends such as in organizational forms, “from the virtual or boundaryless organization to the shamrock or cellular form, from the intelligent enterprise and the project organization to the spaghetti organization and the hypermodern organization” (Roberts, 2010:926). In the quest for successful globalization of businesses, the concepts and models of international business theory continue to develop over time. New ideas in organizations are continuously in the making. The dynamic force of new ideas and concept building has been very fruitful within international business studies. Theories of internationalization emphasizing an incremental and linear trajectory during which firms progress from limited exploration of international markets through various stages of increasing commitment as they learn and gather resources (e.g., Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977) have been doomed “dead” (Cavusgil, 1994). But they have emerged again in different forms and with different theories from other disciplines. But the phenomenon of the “born-global” firm or other types of international new ventures (INV) in which firms commit to international markets soon after founding is frequently posited as a challenge to traditional stage models (e.g., Oviatt and McDougall, 1994; Knight and Cavusgil, 1996; Coviello, 2006) and may be seen as an alternative to and a variation on internationalization paths.

The same dynamic flow of ideas can also be seen in the debate about the role of personal relationships, or embeddedness, in the economic life of the firm. Schumpeter (1939) described these relations particularly in the context of interfirm networks. Bott (1955) used the concept of social networks in a systematic way when observing relationships in London families, developing the idea of close knit/loose knit networks, which has ever since been at the core of the network literature. Later, Granovetter (1973, 1985) introduced his theory on the spread of information in social networks. He emphasized that

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all business transactions take place in a social context and that therefore a full understanding of economic phenomena is not possible without consideration of this context. Scholars in different fields have debated whether the social relations in various networks and in the economic context are minimal (Peterson and Rajan, 1994) or whether they lead to various positive effects such as promoting economies of time (Uzzi, 1997). Whatever stand academics have taken regarding the economic impact of social relationships in business, “much of the activity involved in internationalization could be characterized as networking” (Welch and Welch, 1996: 13).

The “science of networks“ (Watts, 2007) has developed into a thriving field which has affected research and debates in business, entrepreneurship, organization, and management. In international business, the network literature, relationship networks and relationship ties, have been a viable platform for discussions and research in areas such as international entrepreneurship. International entrepreneurship (IE) literature stresses the importance of relationship networks and the role of international entrepreneurs in international new ventures (INVs) (Ellis, 2011). The underlying theme of IE is that cooperation and relationships in networks can have a significant influence on international entrepreneurship. Researchers have suggested that opportunity identification of international entrepreneurs is fundamentally affected by network structure (Ellis, 2011), that entrepreneurial firms with excellent relationship-creating skills are more likely to gain exporting success (Harris and Wheeler, 2005), and that the networking of entrepreneurial firms can develop relationships that result in sustained competitive advantage (Dyer and Sing, 1998). Also, when entrepreneurs in related lines of activity work well together, the speed of “take off” is higher (Grassby, 1995). Chetty and Campbell-Hunt (2003) argue that internationalization from a small-country base is both sudden and can destabilize the firm and create managerial challenges. They suggest that under these conditions internationalization through business networks is the only feasible way. Chetty and Campbell-Hunt (2003) suggest that a firm which is in the internationalizing phase and is based in a small country should focus on strengthening its business network.

This dynamic theoretical and empirical research environment within IE is a product of the fast-moving changes in global business where new ideas and methods are continuously in the making. International entrepreneurial firms have evolved with a newly changing environment. Entrepreneurs are in increasing numbers using new communication technology to create and strengthen relations, domestically and abroad. The balance sheet of their

ventures and their often limited tangible assets have not changed dramatically in the last century. The changes lie often in the intangible resources of the entrepreneurial team or the relationship network of the entrepreneur, resources which will not be found on the balance sheets of the ventures. But even though the business environment of international entrepreneurial firms has changed rapidly, these ventures seem to continue to lack a systematic approach to internationalization and they do not possess formal relationship strategies (Bell, Crick and Young, 2004).

This study focuses on intangible resources and how international entrepreneurs utilize these resources to create new ventures and strengthen relations in networks. An effective and more strategic use of networks of international entrepreneurs may open markets and relations that can increase economic well-being.

Wellman (2007) states that “each of us is the center of our own universe”, emphasizing the importance of personal relationships and networks and encouraging the exploration of the dynamic nature of relationships. Our understanding of how international entrepreneurs make personal relationships develop and work in their business activities, how they differ, and how they operate in different contexts and at different phases in the internationalization process remains limited (Slotte-Kock and Coviello, 2009; Ojala, 2009). This dissertation attempts to contribute to studies in this area by exploring the value for international entrepreneurs of personal relationships in the early internationalization of their ventures.

1.2 Philosophical point of departure

When a man desires ardently to know the truth, his first effort will be to imagine what the truth can be. He cannot prosecute his pursuit long without finding that imagination unbridled is sure to carry him off track. Yet, nevertheless, it remains true that there is, after all, nothing but imagination that can ever supply him an inkling of truth (Peirce, 1955: 43).

This research was approached from two philosophical schools of thought, the analytic approach (Niiniluoto, 1997) and the post-positivist paradigm (Reichardt and Rallis, 1994). The analytic approach is not based only on criteria derived exclusively from the exact sciences. Human beings are seen as actors and they are studied from a social perspective. Human perception is therefore seen as critical to understanding and interpreting. The analytic approach emphasizes understanding and interpreting the context,

Researcher's positionality

and the conceptual model for interpreting is derived from earlier theory and research. The researcher therefore both discovers and constructs knowledge.

Social science researchers are concerned whether their qualitative approach to studying problems have presented usable knowledge or solutions to problems facing societies (Fischer, 1998). Is the research usable and will the mix of qualitative and quantitative methods and ideas stick (Seale, 1999)? The post-positivist approach used in this dissertation is that there is a belief that researchers cannot prove a theory, but can make a stronger case by eliminating alternative explanations and that by doing so, are left with a reasoned conclusion based on scientific data. But if one cannot prove a theory with research, is the research usable? To answer that, we need to address the question of what might constitute "usable knowledge" (Lindblom and Cohen, 1979) that does not end up gathering dust in the file cabinet (Fischer, 1998)?

Francis Bacon identified "science" as a distinct and critical mode of inquiry leading to the production of knowledge. In social practices, people are using situational knowledge (adapted to current circumstances) governing their action. But such knowledge is not pure situational as recurrent elements in knowledge are used. In order to manage social practices, knowledge is habitualised and institutionalized (Berger & Luckmann, 1967) and it is transferred from one situation to another. Individual experiences are used recurrently as norms and guiding principles. Knowledge can be improved in a conscious way and it can be criticized, modified and justified when open to social discourse.

All growth of knowledge consists in the improvement of existing knowledge which is changed in the hope of approaching nearer to the truth (Popper, 1979: 71).

This openness is a way to make knowledge in social practices still more usable, and so the notion of knowledge in social practices is by definition *usable knowledge* (Schön, 1983).

1.3 Researcher's positionality

The quest for a scientific grounding for social research has been a pervasive theme of modern scholarship (Demettrion, 2005). This search for an exacting methodology marked the 20th century's efforts in the positivist mode (Polkinghorne, 1983). The epistemology of both the analytic approach (Niiniluoto, 1997) and the post-positivist paradigm (Reichardt and Rallis,

1994) is rooted in the belief that the theories, hypotheses, and background of the researcher can strongly influence what is observed.

In this dissertation, the methods and research approaches used can be framed within a post-positivist qualitative orientation. One of the most common forms of post-positivism is the philosophy of critical realism, which emphasizes that there is a reality independent of our thinking that science can study. Creswell (2007) notes that individuals with prior quantitative research training tend to use post-positivism as they emphasize empirical data collection, cause and effects, and priori theories. This is not to say that post-positivists do not follow the qualitative guidelines of grounded theory, but rather that they believe in rigorous qualitative data collection and analysis and emphasize the importance of triangulation. This belief system is also pragmatic in a sense, utilizing necessary data, qualitative or quantitative, to build the case (Eisenhardt, 1989) but emphasizing that good qualitative research is like a crystal, with various facets representing the aims, needs, and desires of various stakeholders, including participants, the academy, society, lay public, policy makers, and the researcher (Ellingson, 2008). Good structuring of the research and analysis so that the conclusions are made of rich data and reveal essences which allow the reader to understand situations (Wolcott, 1990) should limit the risk of poor research so vividly described by Eisenhardt (1989):

... people are notoriously poor processors of information. They leap to conclusions based on limited data, they are overly influenced by the vividness or by more elite respondents, they ignore basic statistical properties or they sometimes inadvertently drop disconfirming evidence (Eisenhardt, 1989: 540).

Scientific accounts are always produced by researchers with different ideational frameworks, social, educational and career training, research and experience, their values and beliefs, as Greene (2007) defines as mental models. The goal of the research is to understand how these varying cognitive elements interact and become perceived as knowledge. Toward this end, post-positivism's reconstruction of the scientific process is founded on a "coherence" theory of reality that emphasizes the finite and temporally bounded character of knowledge (Brown, 1977).

The post-positivist belief system understands that there are no real and separate objects of inquiry independent of the researcher, that the vocabularies and concepts used to know and represent them are socially constructed, and that reality does exist but it can only be known within the researcher's human limitations (Mertens, 1998). In the fine-grained, post-positivist research approach in

Researcher's positionality

qualitative research, the researcher identifies the social elements which affect research and emphasizes that the research is an account of reality rather than reality itself.

Even with a conceptualization for quality in hand, we should not kid ourselves into thinking that we actually attend to their edicts at every turn. Grasping too strongly to any list of rules—and treating them as commandments rather than human made ideas—is an act of delusion, suffering, and pain (Tracy, 2010: 849).

Even though the methodological principles of a post-positivist social science cannot be firmly fixed, such research does not lack rigor. The adoption of a multimethodological approach represents logical steps and multiple perspectives rather than a single reality (Creswell, 2007), which opens the door to a more subtle and complex form of rigor. Instead of narrowly concentrating on the rules of research design and statistics, the post-positivist framework involves the exercise of a multimethodological range of criteria that are both qualitative and quantitative. The interpretive judgments characteristic of every phase of scientific investigation, as well as the cumulative weighing of evidence, are too various to be captured by the rules governing inductive or deductive logic (Collins, 1985).

Researchers cannot isolate themselves from their mental model which Greene (2007) describes as “a set of assumptions, understandings, predispositions, and values and beliefs with which all social inquirers approach their work” (p. 12). These models are shaped by the background of the researcher and his/her personal beliefs and values. For Greene, mental models “thus subsume philosophical paradigms, as well as substantive theories, disciplinary perspectives, and a whole host of more personalized experiences, values and ways of knowing” (p.13). The models exist even before the researcher formalizes his/her theoretical approach to a project.

Practical or not, sticky or not, knowledge can be improved upon, and if the researcher is true to his/her critical mode of inquiry and belief system, it will eventually lead to the production of knowledge.

If scientific knowledge enables us to estimate more accurately the worth of things as signs, we can afford to exchange a loss of theoretical certitude for a gain in practical judgment. For if we can judge events for indications of other events, we can prepare in all cases for the coming of what is anticipated. In some cases, we can forestall a happening; desiring one event to happen rather than another, we can intentionally set about institution of those changes

which our best knowledge tells us to be connected with that which we are after (Dewey, 1929/1988: 170).

1.4 Theoretical and empirical goal

This study has both a theoretical and an empirical goal. The theoretical goal is to make a general contribution to international entrepreneurship theory (IE), a field “which is in desperate need of further theory development” (Keupp and Gassmann, 2009: 600) as “there lacks a general understanding of IE from a holistic perspective” (Kraus, 2011: 1020). This study also contributes to social network theory by emphasizing embeddedness and social relationships, the core elements in social network theory.

This research was also partly grounded in the Resource Based View (RBV). The RBV has assisted IE in specifying the nature of resources required to overcome the liability of foreignness and has highlighted the importance of firm resources as a factor influencing IE (Zahra and George, 2006).

Scholars have viewed IE as being at the intersection between international business theories and entrepreneurship theory. Both the research fields of international business and entrepreneurship have been active in the network debate, but international business theories have not thoroughly researched the international aspect of networks of entrepreneurs (Keupp and Gassmann, 2009). By focusing on international entrepreneurs and their social networks in their internationalization, this research intends to extend IE theory as well as current social networks literature in relation to business activities. Further collaboration between IE and social network theory could lead to positive synergies; social network theory would gain, for instance, from IE studies on location of ties (or geographical setting of ties), while IE would benefit from the long-standing theory building and research tradition in social network theory.

The empirical goal is to map the relationships of international entrepreneurs in international new ventures (INVs), to show how they utilize relationships in their ventures, and to assist international entrepreneurs in developing a network approach regarding their internationalization. Ojala (2009) concludes that if SMEs passively follow their networks to foreign markets they end up in markets where market potential is low. Ojala’s findings also indicate that managers should actively develop their network relationships to achieve market entry. Adler and Kwon (2002) mention that “it would seem useful to management to map the social capital ties that are relevant to the various tasks the organization faces” (p. 35–36). A model of personal networks of international entrepreneurs can be a step towards a

Theoretical and empirical goal

fuller understanding of the role of personal relationships in internationalization of new ventures. Such models can hopefully assist in mapping more complex structures of networks. This is, however, a challenging objective as research has suggested that it is likelier that entrepreneurs develop relationships that they happen to have, rather than set clear objectives and plans to develop them (Coviello and McAuley, 1999).

The goal of this dissertation is to examine the relationships of international entrepreneurs in INVs. The research questions aim to provide important elements to further develop a model of entrepreneurs and their international relationship networks. The research questions are the following:

How do international entrepreneurs develop relationships and make them work, and how do they value these relationships (Paper 1)?

What is the context of constructing relationships in international entrepreneurship? Is there a difference in the mindset of international entrepreneurs and how does this affect their use of online social network sites to develop business relationships (Paper 2)?

Does the domestic market affect the strength and location of the entrepreneur's relationships and the activeness of the entrepreneur in forming these relationships (Paper 3)?

Paper 4 makes three propositions which together suggest that cyberspace may lead to a paradigm shift in the relationship formation of international entrepreneurs and the use of weak and strong relationships by entrepreneurs.

International entrepreneurs are defined as individuals or a group of individuals who seek to operate their business in multiple countries. Networks are defined thoroughly in chapter three. The entrepreneurs' use of networks means his/her utilization of relationships that either directly or indirectly link together parties in a business venture.

From a practical standpoint, the mission of this research is to assist international entrepreneurs in developing a model regarding their relationships in networks and to systematically apply a relationship network strategy in their activities. Future research might then focus on more strategic questions on the management of personal networks. Can these personal networks of international entrepreneurs become more in line with strategic networks of firms that have enhanced market performance (Bonner, Kim and Cavusgil, 2005)? But to answer this question, the analysis and modeling of the embeddedness of relationships of international entrepreneurs needs to be in place. Halinen and Tornroos (1998) suggest a number of questions which their framework of embeddedness in business networks could assist practitioners in. In line with Halinen and Tornroos, the empirical goal of this research is to assist international entrepreneurs in

developing a network approach regarding their internationalization. Similarly, the results from this study may assist entrepreneurs in addressing questions such as how can we better use these relations to improve our business, how do we approach a weakness or a strength in our domestic market, and in what relations should we invest?

The question of best practice, which is related to the success of the international entrepreneur and how this success may be determined by the entrepreneur's creation and use of his/her network, will be addressed in the research. However, the main task in this research is to explore the characteristics of the relationships of international entrepreneurs in INVs, particularly their use of weak ties, which have not been analyzed thoroughly in IE studies. A well-crafted analysis opens up further research opportunities to compare different networks of international entrepreneurs and their successes.

1.5 Significance of the study

Recent studies on international entrepreneurship (including the INV and born-global literature) have focused on networks and small and medium-sized firms which have aggressively expanded abroad. There is no question that network relationships offer helpful new insights and that they require to be incorporated into models or frameworks of small venture internationalization. Hite (2003) argues that a classification framework for relational embeddedness in emerging firms has not been developed even though such a framework may have critical strategic implications for the successful emergence of the firm. Hite continues by suggesting a typology for relational embeddedness in emerging entrepreneurial firms. These firms are, however, all bound within their national borders so there is a missing link regarding the embedded relations networks with regards to the activities of international entrepreneurs.

Various studies have explored business networks of small ventures, both informal networks and formal ones. A significant number of business studies also addresses the effects of personal relationships in business internationalization. These studies can be traced back to the early days of the Uppsala school where researchers noticed the following:

Thus, to the extent that they are separate, the exposure to attention-evoking factors may flow more directly from the personal characteristics and experience of the decision-maker rather than from the background characteristics of the firm. (Wiedersheim-Paul, Olson and Welch, 1978: 48).

Significance of the study

The focus in most studies on international ventures, however, is on the firm and personal relationships are mentioned but not studied in detail. Sasi and Arenius (2008) mention that their case companies relied on the idiosyncratic and personal relationships of their founders to acquire resources and to increase both domestic and international networks. Komulainen, Mainela, and Tahtinen (2006) show how the internationalization of a venture centred around two key people in the company whose social relationships were significant driving forces in internationalization. Zain and Ng (2006) suggested that their studied firms relied heavily on the business network of the CEO. Harris and Wheeler (2005) concluded that personal friendship influenced the internationalization of one of their studied firms. Bell et al. (2004) showed how pre-existing personal contacts gained from a prior employment led directly to internationalization. Finally Gemser, Brand and Sorge (2004) and Ellis (2000) described how personal relations and mutual friendship led to new business opportunities.

Observing research in this area, one is left with a fairly unclear picture of the relationships of international entrepreneurs and their effects with respect to the internationalization of their ventures. These relationships are often only mentioned as a very important part of the internationalization but are not studied any further. The present study is intended to fill empirical gaps where others have laid the theoretical ground, to present a model of the international entrepreneur's relationships, and to find new perspectives in studies on international entrepreneurs and their relationship networks.

This dissertation has important implications for entrepreneurs in SMEs which have a global reach. By understanding relationships in networks and how entrepreneurs utilize them in their internationalization, entrepreneurs should be able to consider and manage their own networks more effectively as they internationalize. This research has also important implications for policy makers interested in enhancing exports and globalization of domestic industries. SMEs have been shown to have a significant impact on economic activity, employment, innovation, and wealth creation in many countries (Acs, Morck, Shaver, and Yeung, 1997; Katsikeas, Bell, and Morgan, 1998). Moreover, improving the international contributions of the small business sector is widely regarded as an increasingly important policy priority and the focus of public policy support in many countries (Crick, 1997). Given the urgent need for more exports to stimulate growth, there is an urgency for policymakers to promote internationally driven, private-sector entrepreneurship as a means to spur innovation, exports, economic growth, and employment.

1.6 Relevance to Iceland

Iceland's recent economic crisis, which began with the fall of the Icelandic banking system in October of 2008, resulted in an economic downturn and unemployment. The increased public and private debt and the crashing of the Icelandic krona has led many to conclude that the next 5–10 years will be a challenge for Iceland if the country wants to keep up with the living standards of its neighboring countries. One of the most important elements of the rise of the Icelandic economy will be the strengthening of the country's international business relations.

As Chetty and Campbell-Hunt (2003) suggest, the internationalization of small ventures from relatively small countries creates managerial challenges, a suggestion which probably explains the interest shown in the internationalization of new ventures in small economies such as those in Scandinavian countries. "Whereas for smaller European countries, the home market is often not sufficient enough, so that internationalization is a quasi-obvious decision, larger home markets such as Germany, Great Britain or even more so the US, it is very often not necessary because of not yet exhausted local customer bases." (Kraus, 2011:1036). Therefore the size of the economy plays an important role in the decision whether to internationalize or not.

Iceland is a very small economy whose main exports are based on its abundant natural resources, i.e. fish and fishery-related products and hydro and geothermal power. As its exports are mainly based on natural resources, its imports are final goods. Smaller economies have obviously fewer opportunities to trade within their borders and have therefore difficulties in taking advantage of scale economies. Smaller economies also suffer from the lack of size, as international trade literature suggests that trade within a country seems to be much more intensive than trade between countries. There seems to be a "home bias" in trade, which was first recorded by McCallum (1995) who found that trade between two bordering Canadian provinces was twenty times greater than trade between a bordering Canadian province and US state.

There are many theoretical and empirical arguments suggesting that more internationalization and foreign trade in Iceland would lead to a faster economic growth and a higher standard of living. Breedon and Pétursson (2004) suggest that closer cooperation between Iceland and other European countries could increase Icelandic trade with other European countries. The authors also conclude that their empirical findings suggest that the increased trade intensity could boost per capita income by about 4%, which could be spread over two to

Definition of terms

three decades. The characteristics of Icelandic trade mentioned above seem to be important variables determining the relatively low share of trade in Iceland's GDP in the last 10–20 years. In comparison, many small European countries' imports of intermediate goods play an important role in their international trade. These countries import intermediate goods and export them as processed goods. This is not the case with Iceland.

Previous research on exports from Iceland has mainly been in an area which could be categorized as exports led by external impediments (e.g., trade barriers and currency). Iceland's heavy reliance on natural resources as the main source of exports (Gudmundsson et al., 2000), its geographical distance (Gudmundsson et al., 2000), and its currency independence (Breedon and Pétursson, 2004) from neighboring countries are variables which have been suggested as possible explanations for the relatively low trade ratio of GDP in Iceland. When the economy blossomed in 2004–2007, there was limited interest in the subject of exports and the low trade ratio. The focus was more on the sudden expansion of Icelandic investments abroad and various cultural aspects of the “success of Iceland”, rather than on the lack of diversification in trade, which is nevertheless a very important factor in determining the competitiveness of the economy. A lack of diverse exports, particularly in knowledge-intensive industries, may have a very negative effect on the economic well-being of Icelanders compared with their European counterparts.

The importance of trade and internationalization for the small economy should encourage Icelandic entrepreneurs and policymakers to address the issue of relationship networks and the value of international embeddedness in much more depth. This research contributes therefore to the debate in Iceland about how to increase trade and international business between Iceland and other nations. As nearly all firms in Iceland are defined as SMEs and as SMEs have to rely more on intangible assets such as relationship networks in their ventures, this research can contribute significantly to the Icelandic business sector and to policy making in the country.

1.7 Definition of terms

The meaning and conceptualization of key concepts is discussed here. The following definitions are provided to ensure uniformity and understanding of terms used throughout the study. Some of the research papers may have different perspectives on some of the terms used; in such cases, they are described further in each paper. The researcher developed all definitions not accompanied by a citation.

Born global. Firms that internationalize early and rapidly (Knight and Cavusgil, 1996; Madsen and Servais, 1997).

Business network. Business takes place in a network setting, where different business actors are linked to each other through direct and indirect business relationships (Chetty and Holm, 2000).

Cyberspace. The electronic medium of computer networks in which online communication takes place.

Embeddedness. The degree to which individuals are enmeshed in the social network (Granovetter, 1985).

Internationalization. The process of increasing involvement in international operations (Welch and Luostarinen, 1988).

International entrepreneurs. Individuals or a group of individuals that seek to operate their business in the form of exporting or otherwise in multiple countries. In paper 2, the abbreviation for international entrepreneurs is IE, but in the rest of the dissertation IE is defined as International entrepreneurship.

International Entrepreneurship (IE). International Entrepreneurship is the discovery, enactment, evaluation, and exploitation of opportunities across national borders to create future goods and services. It follows, therefore, that the scholarly field of international entrepreneurship examines and compares across national borders how, by whom, and with what effects those opportunities are acted upon (Oviatt and McDougall, 2005).

International New Ventures (INV). A business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries. The distinguishing feature of these start-ups is that their origins are international (Oviatt and McDougall, 1994). Paper 3 in this dissertation uses the term “born global” to reflect on these small internationalizing firms. In this dissertation, the terms “born global” and “International New Ventures” (INV) are therefore both used to describe small international ventures that internationalize early and rapidly (Knight and Cavusgil, 1996; Madsen and Servais, 1997).

Network. Interconnected relationships between different agents (Chetty and Agndal, 2007). Casson and Della Giusta (2007) define a set of “elements” that are connected to each other as a “network”. The “members” of the network are the elements and the connection is created by some kind of “relationship” between the elements.

Relationship. Dyadic relationships between two agents, particularly through social relationships. In this dissertation a relationship is sometimes

Definition of terms

referred to as a “tie”. Relationship networks include individuals who are linked through interactions that consist mainly of social exchanges, though information and business exchanges can also occur (Björkman and Kock, 1995). Relationship networks are often referred to as social networks. In this dissertation, relationship networks, social networks, and personal networks all refer to mainly social exchanges of individuals.

Resource Based Value (RBV) states that the basis for a competitive advantage of a firm lies primarily in the application of the bundle of valuable resources at the firm’s disposal (Wernerfelt, 1984; Barney, 1991).

Social capital. The goodwill available to individuals or groups. Its source lies in the structure and content of the actor’s social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor (Adler and Kwon, 2002).

Social network theory focuses on personal relationships and suggests that all business transactions take place in a social context (Granovetter, 1985). Social network theory is sometimes referred to as “network theory” in this dissertation.

Weak and strong ties. A “tie” is used in this dissertation to refer to a relationship. The strength of the tie is a combination of the amount of time, the emotional intensity, the intimacy, and the reciprocal services that characterize the tie. Strong ties have high levels of social relationship or personal interaction with high frequency. Weak ties, on the other hand, are non-redundant ties which are not as heavily based on personal interaction among members of the network but may provide strategic advantage in terms of resource availability (Granovetter, 1973). Weak and strong ties are sometimes referred to as weak and strong relationships.

1.7.1 Abbreviations

BG Born global

BG IE Born global international entrepreneur

BN Business network perspective

EN Entrepreneurial network perspective

ENT Entrepreneurship theory

GT Grounded theory

IB International business theory

ICT Information Communication Technology

IE International entrepreneurship (In paper 3, IE is an abbreviation for International entrepreneur)

INV International new venture

MNC Multinational corporations

NGO Non-Governmental Organization

RBV Resource based view

SME Small and medium-sized enterprises

SC Social capital

SN Social network perspective

TNC Transnational Corporation

1.8 Organization of the remainder of the dissertation

Chapter 1 presents the introduction, statement of the problem, research topics, significance of the study, and definition of terms. Chapter 2 sets the current study in a historical perspective regarding the internationalization of the entrepreneur in the small venture. This chapter shows how different theories have affected IE. Chapter 3 reviews social network theory and gives a comprehensive view of networks and their utilization in the study of INV and IE. Chapter 4 reviews the theoretical foundations and empirical work regarding IE theory (IE). It is argued that scholars in international entrepreneurship should sharpen IE research perspectives using network theory. This chapter attempts to do just that. The chapter presents the gaps and research questions addressed in the research papers in the following chapter. Chapter 5 describes the gaps and research questions. Chapter 6 presents a review of the overall methodology in this research. Chapter 7 contains four research papers which all are linked to the topic of the dissertation. These four papers address different issues related to the relationships of international entrepreneurs. These papers have been submitted, reviewed, accepted, and presented at recognized international conferences of business scholars and are at different stages of publishing in academic business journals and as a book chapter.

Chapter 8 presents this study's contribution to theory and empirical research in the field of social network theory and international entrepreneurship. This chapter ties the research papers together and introduces the research project's contribution to theory, as well as presenting a model of relations of international entrepreneurs in INVs. The mix of weak and strong ties, but especially weak ties, are often overlooked in the IE literature. This study emphasizes how weak ties play an important and

Organization of the remainder of the dissertation

growing role in the ventures of the international entrepreneur in the INV as they provide opportunities and bridge gaps.

The summary and conclusion at the very end binds the stories together and emphasizes the dissertation's contribution to the field of international entrepreneurship. Chapter 9 discusses the managerial implications of this study and limitations. Chapter 10 introduces some further avenues of future research in the area of international entrepreneurship and relationship networks of entrepreneurs. Chapter 11 concludes this study with some final remarks.

Through the process of writing, revising, and tailoring the papers for presentation at academic conferences and publication in different academic journals, each of the research papers in chapter 7 has partly taken its independent path; even though the theoretical framework remains similar, the perspectives reflected in different reviews have affected the papers and their story. There is obviously some overlap, which makes reading this dissertation different from the reading experience of classical dissertations. That said, the separate papers, reviewed by various anonymous reviewers and distinguished advisers, all have an interesting story to tell. This dissertation will show how these different papers are linked together, creating a common ground and significantly contributing to network theory and international entrepreneurship.

2 A concise history of international entrepreneurship

The purpose of this chapter is to provide a concise history of international business studies (IB) with a particular focus on the internationalization of the entrepreneur and the entrepreneurial venture. This chapter sets current study in a historical perspective and shows how different theories have affected the study of the internationalization of the small firm/entrepreneur. In this abbreviated version, the stage models of internationalization are reviewed, followed by a review of some of the more recent studies on internationalization of SMEs such as born globals and International New Ventures (INV), and international entrepreneurship (IE). This review reveals a more recent focus on networks and relationship resources in various forms that have permeated research in the area of IE.

2.1 The quantum leap

In the 1950s and the 1960s international foreign direct investment took a “quantum leap forward” (Sharma, 1992: 4), leading to more interest in the business actors themselves rather than issues such as trade flows which had dominated IB research. The issue of the international firm began to attract the attention of academics and policy makers (Roberts and Fuller, 2010). Ever since the 1960s, scholars in management theory have developed a range of conceptual approaches to explain the internationalization of firms (Glückler, 2006). The phenomenon of multinational corporations (MNC), which were dominating international investments in the 1960s, stimulated a critical strand of research. MNCs invested and operated their industries in various countries. It was obvious that the leading theorists in international business would begin to describe the MNCs and their strategy. At the same time, researchers began to conduct longitudinal studies on firms’ internationalization processes, one of which was Aharoni’s (1966) pioneering study on foreign investment decision processes. Aharoni examined the various factors that influence the decision-making process in foreign investments and adopted a behavioral approach to identify the reasons behind these investments and the decisions behind them. Ahroni characterized the foreign investment decision as a complex social process influenced by social relationships both within and outside the firm. According to Ahroni, the first foreign investment decision is a drastic step into the unknown and an innovation and development of a new dimension. This period in the lifetime of the firm does not come with a manual with

The Uppsala initiative

standard procedures so learning by doing means that the firm benefits from its experience in the field but can also be hurt significantly due to lack of knowledge and experience. This new dimension challenged the firm to shift the focus to a specific investment in a particular country not to a general decision to expand abroad. Ahroni's decision-making model was the pathway for further studies in the field of internationalization of the firm, studies which were based on the same principles of internationalization in processes.

In the 1970s, new Information Communication Technology (ICT) resulted in an adoption of a complex international division of labor. New technology changed business and business strategy, and small businesses began to internationalize in larger numbers, paving the way for a new field of study in international business: the small international firm. The ground was laid for a new field of study on the internationalization of the small firm, the so called *Uppsala-model* that was developed in the 70s by, among others, Johanson and Wiedersheim-Paul (1975) and Johanson and Vahlne (1977).

2.2 The Uppsala initiative

Johanson and Wiedersheim-Paul (1975) explored a specific form of internationalizing of four Swedish firms as they progressed through a distinct and rigid pattern of steps. These firms had started their international operations when they were comparatively small and "gradually develop[ed] their operations abroad" (p.305).

this gradual internationalization, rather than large, spectacular foreign investments, is the characteristics of the internationalization process of most Swedish firms (Johanson and Wiedersheim-Paul, 1975: 305)

This research marked the basis of the Uppsala Model of the internationalization process (Buckley and Ghauri, 2004). The seminal article in this tradition was by Johanson and Vahlne (1977), who stressed that the firm's internationalization was a gradual process embodying an increased commitment to a foreign market. An important part of the behavioral approach is the organizational knowledge in the internationalization process (Clercq, Sapienza and Crijns, 2005) where the internationalization is a sequence of steps; the firm learns by doing and acquires step by step experience and knowledge about external markets through the gradual commitment of resources.

The Uppsala model is based on the behavioral approach to theory (Andersson, 2000) and has its origins in organizational theory. The Uppsala

Model separates objective knowledge from experiential knowledge acquired through personal experience. Experiential knowledge can explain two patterns in the internationalization process. First, the firm's level of engagement within a country follows an establishment chain which ranges from no regular export activities to offshore manufacturing. At each step the firm gradually gains market experience. Secondly, the firm enters new markets sequentially where there are greater differences in factors such as language and culture, factors which can be expansion thresholds as they hinder the flow of information between the market and the firm. The firm can overcome these thresholds with increasing experiential knowledge of similar markets (Steen and Liech, 2007). The role of information acquisition in the incremental progression of the firm along the internationalization path is crucial in the Uppsala model (Leonidou and Katsikeas, 1996). According to the Uppsala model, lack of knowledge about foreign markets and operations is the main obstacle to internationalization. Knowledge can mainly be developed through experience from operations in different markets; knowledge is also developed gradually (Johanson and Vahlne, 2003).

The linear stages in the behavioral approach are not necessarily the same in terms of the number of stages, but these stages are incremental. A common underlying assumption of the Uppsala model is that firms are well established in the domestic market prior to developing international strategies. Firms gradually become involved in exporting and other forms of international business. As they do so, they commit greater resources to the foreign markets and target countries that are "psychically" distant (Johanson and Vahlne, 1977). This framework received much support in international business studies. However, the Uppsala model was criticized for being unable to correctly explain the internationalization process. Criticisms of the gradual process were already made in the early days of the Uppsala model discussions (e.g. Buckley et al., 1979). The quality of the model was also questioned in relation to internationalizing service firms (Chadee and Mattsson, 1998; Knight, 1999), especially at the early stage of internationalization. Johanson and Vahlne (2006) defended the Uppsala model and concluded that it was misunderstood. Even though they did observe an empirical phenomenon (i.e., firms began exporting and in stages developed further into fully fledged international corporations), that was just the impetus to construct the Uppsala model. The authors stressed that the Uppsala model's importance lies in learning and commitment building and step-by-step continuous knowledge development of firms as they increase their foreign market activities (Johanson and Vahlne, 2006). This is

The social network, business, and entrepreneurship

supported by studies which view internationalization as a learning process on external markets through the gradual commitment of resources and learning by doing (Seifert and Machado-da-Silva, 2007).

2.3 The social network, business, and entrepreneurship

The move towards international production, efficient communication, and deregulation in the 1970s and 1980s further paved the way for small and medium-sized firms (SMEs) to participate in global business at the side of MNCs. These trends in internationalization along with scholarly groundwork such as the Uppsala school encouraged researchers to focus on smaller firms and their characteristics in internationalization. As mentioned previously, the internationalization process was dominated by models advocating the internationalization of firms that occurs in an incremental, step-by-step process (Sasi, 2008). As internationalizing small firms gained momentum and research in the area of international ventures grew, a stream of new models focusing on networks and internationalization were to follow.

The social network approach, which had emerged as a critique of the strictly structural approach and was seen to offer a deeper understanding of human behavior (Boissevan and Mitchell, 1973), influenced business scholars. Even though the concept of a network in organizational research can be traced back to the 1930s (Nohria, 1992), it is in the late eighties that research on networks first emerged as an important field of study in the field of entrepreneurship (Aldrich and Zimmer, 1986) and business internationalization (Johanson and Mattsson, 1988). Business scholars moved away from viewing the entrepreneur as an atomistic, undersocialized and isolated economic actor to realizing that the entrepreneur was embedded in networks (Hoang and Antoncic, 2003). Aldrich and Zimmer (1986) argued that the entrepreneur is embedded in a social network that plays a critical role in the process of entrepreneurship and Jarillo (1989) described networking as a “system by which entrepreneurs can tap resources that are external to them, i.e. that they do not control” (p.133). Johanson and Mattsson (1988) also emphasized that a firm needs resources from other firms in order to internationalize and a firm does that by participating in networks.

In the eighties, the scholarly debate on networks in internationalization and entrepreneurship took flight. Network theory, entrepreneurship, and business internationalization had been debated in very different fields of sociology and business. Scholars began to question the widely held belief that entrepreneurs were isolated from other social phenomena (Hoang and Antoncic, 2003) and that business internationalization was necessarily a

gradual process (Johanson and Mattsson, 1988). There was time for the “appropriability” of social structure, as Coleman argued (1988:108). Coleman’s appropriability referred to legitimizing a common conceptual strategy of much of what had been studied under concepts ranging from trust and culture to informal organization and interfirm networks. There had to be a dynamic scholarly debate ahead.

2.4 The Network theory of internationalization

The network theory of internationalization first presented by Johanson and Mattsson (1988) emphasized that internationalization of firms takes place in a business network setting and that the entrepreneur cannot be viewed as an isolated phenomenon. A few years earlier, entrepreneurship scholars had recognized that networks play a catalytic role in organizational emergence (Birley, 1985) and Aldrich and Zimmer (1986) proposed a perspective that viewed entrepreneurship as embedded in social networks. Even though Johanson and Mattsson introduced the concept of networks, Uppsala scholars had much earlier stressed “the importance of contact patterns that allow an efficient exchange of information, creating possibilities for ‘contagion transmission’ of ideas from other firms, in different stages of expansion. These contacts are likely to change the attitudes and mental maps of decision-makers” (Wiedersheim-Paul, Olson and Welch, 1978:56)

Johanson and Mattsson’s contribution was their emphasis that the firm needs resources from other firms in order to internationalize and the firm does so by participating in networks. The main distinguishing factor between the Uppsala model and the network theory of internationalization is first and foremost that the network theory does not assume that internationalization takes place as a gradual process. The network model emphasizes relationships (Johanson and Vahlne, 2003) and that as the firm internationalizes the complexity and strength of relationships between firms in the business network increases. To begin with, the internationalizing firm forms relationships with other firms in countries that are new to the firm (international extension). Secondly, the firm increases its commitment in an already established foreign network (penetration). Thirdly, the firm internationalizes by integrating its position in networks in various countries (integration). In the network theory of internationalization (Johanson and Mattsson, 1988), firms invest in strengthening and monitoring their positions in international networks. Small firms gain access to resources through established long-term relationships. Such relationships take time and effort to establish and they slowly create increased trust and commitment.

The rise of International entrepreneurship

Axelsson and Johanson (1992) emphasized three critical important issues regarding networks with respect to internationalization:

- A firm can never be merely an observer of a network; it must be an active member.
- Resources are invested in these relationships. Participation in networks is therefore an investment and a process of continuous resource commitment.
- Participation in networks is of strategic importance, and business opportunities are created.

Johanson and Mattsson (1988) viewed the network as a tool for the firm to access important resources—not only the internal resources which the resource-based view (RBV) had emphasized, but also the leveraged resources from other network actors (Jarillo, 1989; Elfring and Hulsink, 2007). Thus, international network theory complemented the RBV of the firm, because network theory emphasized external relationships while the RBV emphasized internally accumulated resources (Lee, Lee and Pennings, 2001). Johanson and Vahlne (2003) acknowledged that their own model of internationalization processes, the Uppsala model, did “not capture important phenomena in the modern internationalization business world” (p.83). As a consequence, they developed a revised internationalization-network model based on an experiential, learning–commitment interplay (Johanson and Vahlne, 2003) and further emphasizing the business environment “as a web of relationships, a network, rather than as a neoclassical market with many independent suppliers and customers” (Johanson and Vahlne, 2009:1411). In their revised model, they added trust building and knowledge creation (as knowledge is developed through relationships). While the received view in internationalization is that there is only one way to cross borders and enter a new market, Johanson and Vahlne’s (1988) network view sees such entries as multiple—there are several portals to enter a market. As the stages in the internationalization of business gradually evolved according to the stage models, network theory emphasized that networks are created slowly with increased trust and commitment between firms.

2.5 The rise of International entrepreneurship

In the late 1980s and the 1990s, technological developments combined with neoliberal policies and increased globalization of the world economy led to a growing number of small firms that did not follow the traditional stages of the Uppsala model (McDougall, Shane, and Oviatt, 1994). Morrow (1988) highlighted technological and cultural changes that paved the way for

new ventures' accessing foreign markets, and became the first to use the term "international entrepreneurship" in an academic article. Soon after that, McDougall (1989) compared domestic and international new ventures in an empirical study which Coviello, McDougall and Oviatt (2011) suggest to mark the origin of IE. Business consultants at the *McKinsey* consulting firm in Australia noted a new phenomenon of small firms expanding rapidly abroad which they coined the "born global" firm (Rennie, 1993). This phenomenon was first explored in scholarly papers by Cavusgil (1994) and by Oviatt and McDougall (1994) who presented their different versions of small international firms that did not fit the traditional model. Cavusgil (1994) stated in his first scholarly article on born global firms:

There is emerging in Australia a new breed of exporting companies, which contribute substantially to the nation's export capital. The emergence of these exporters though not unique to the Australian economy, reflects 2 fundamental phenomena of the 1990s: 1. Small is beautiful. 2. Gradual internationalization is dead (Cavusgil, 1994: 18).

Oviatt and McDougall researched global firms seeking to derive competitive advantage from the use of resources and the sale of outputs in multiple countries from inception. Oviatt and McDougall's empirical and theoretical work in this field established the more formal study of small global firms which they named "International New Ventures" (INV) (Oviatt and McDougall, 1994, 1995, 1997), work which was later to become the basis for academic study in international entrepreneurship (IE). The purpose of their work was to formulate a theory of international new ventures through the combination of existing theory on primarily entrepreneurship and a large number of case studies. Their definition of an INV was:

a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries. The distinguishing feature of these start-ups is that their origins are international, as demonstrated by observable and significant commitments of resources (e.g., material, people, financing, time) in more than one nation (Oviatt and McDougall, 1994: 49).

Oviatt and McDougall's (1994) article is considered the starting point of international entrepreneurship (IE) research (Autio, 2005). Their article criticized the gradual models of internationalization for being unable to explain why some firms internationalize their activities early on and expand

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their international activities rapidly thereafter. In the years after the publishing of Oviatt and McDougall's paper, a series of papers were published on similar concepts such as instant exporters (McAuley, 1999) and micro multinationals (Dimitratos, Johnson, Slow and Young, 2003).

Firms which had jumped over some classical stages in the Uppsala model had been the focus of attention in several research projects prior to the birth of the concept of born globals and INVs. The term used in a similar perspective prior to born global or INVs was "leapfrogging" (Hedlund and Kverneland, 1985). During the 1980s several studies described case studies of firms which were international from the start. Ganitsky (1989) called these firms "innate exporters" as a contradiction to "adoptive exporters". The innate exporters were suggested to be more flexible and to have a larger degree of international outlook in their management.

Knight and Cavusgil (1996) and Madsen and Servais (1997) continued to systematically study the trends behind the development of new international ventures, the born globals. Madsen and Servais (1997) argued that the stage model is applicable when observing the internationalization of small firms. They assume that the uncertainty regarding the new markets abroad which the stage model addresses can be reduced if the founder has knowledge of the export markets. In this way, the firm can leapfrog to markets far away and the learning processes for a particular firm need not be gradual. Madsen and Servais (1997) also observed the importance of the entrepreneur and his network in the born global debate:

...when studying a Born Global firm, the time perspective should be extended beyond its birth. Probably, many of its "genes" have roots back to firms and networks in which its founder(s) and top managers gained industry experience. Basically, in many instances it may be doubtful whether a Born Global can be considered a new company. In a legal sense the company may be new, but were its skills and capabilities not often born and matured prior to its legal birth? (Madsen and Servais, 1997: 573)

Madsen and Servais (1997) assumed that the differences between traditional exporters and the born globals lie in the background of the founder:

However, the founder characteristics and the market conditions are different which is the reason why the manifestation of the internationalization processes of Born Globals must be deviating from the "rings in the water" model found to be a valid description

of internationalization processes of firms in many empirical studies (Madsen and Servais, 1997: 570).

The manager's and the founder's personal experience, personal relationships (personal networks), and personal knowledge were being recognized as crucial for the INV. Oviatt and McDougall (2005) recognized how they did not focus on the connection between entrepreneurship and international business theory (IB) in their pioneering work and the previous definition of international entrepreneurship. Their suggested revised definition of IE emphasized the opportunity-seeking element of IE:

International Entrepreneurship is the discovery, enactment, evaluation, and exploitation of opportunities—across national borders—to create future goods and services. It follows, therefore, that the scholarly field of international entrepreneurship examines and compares—across national borders—how, by whom, and with what effects those opportunities are acted upon (Oviatt and McDougall, 2005: 7).

This new definition puts the lens more on the entrepreneur as entrepreneurial opportunities are recognized by individuals, not firms (Aldrich and Zimmer, 1986; Shane, 2003). As Ellis (2011) noted, opportunity recognition is central to entrepreneurship and it is influenced by the relationships of the entrepreneur (Komulainen et al., 2006; Sharma and Blomstermo, 2003).

2.6 The way forward

Entrepreneurship with an international dimension continues to be probably best depicted by Aharoni's (1966) description of the foreign activity as a drastic step into the unknown and as a complex social process, influenced by social relationships in various networks. It would be simplistic to conclude that even though international new ventures or born globals are being studied thoroughly in current IE research, and with a different focus than the traditional stage models (i.e., the gradual internationalization) (Johanson and Vahlne, 2003), the stage models are not applicable. Cavusgil's (1994) announcement of the death of gradual internationalization was not justified as the classical models of internationalization were still applied quite fruitfully in the 1990s and beyond. Coviello and Munro (1997) observed that participation in networks can affect the stage process of internationalization and that the gradual models were still a valuable theoretical tool. However, the emphasis on relationship networks of international entrepreneurs, whether developing in stages or not, remains crucial

The way forward

and suggests the need for network-based models on internationalization (Forsgren, 2002). As the network theory has progressed in the international entrepreneurship literature, different approaches and perspectives have appeared in network research which have affected IE research. At the same time, scholars have placed different demands on future IE research. McDougall and Oviatt (2000) call for compelling theoretical constructs and Kiss and Danis (2008) urge for a stronger theoretical foundation of IE, while Coviello and Jones (2004) emphasize clearer methodological direction. Theoretical and empirical work have to go hand in hand, especially considering that there is no such thing as theory-free description (Schneider, 2010). IE needs more descriptive work that is inspired by rigorous theory. This is not always the case with entrepreneurship research, as Jack, Moulton, Anderson and Dodd (2010) suggest that many studies of entrepreneurial networking lack clarity and some “simply avoid the problem of unit of analysis” (Jack et al., 2010: 317).

Slotte-Kock and Coviello (2010) address this lack of clarity in entrepreneurship research and present an important way forward for researchers in entrepreneurship, emphasizing the different perspectives of network research. They define two research perspectives in entrepreneurship. The business network perspective (BN) (Håkansson and Snehota, 1995) examines the broader network where neither a hierarchy nor a single actor is in charge of organizing the network and recognizes that existing relationships can change their content and strength. The social network perspective (SN) considers networks to have a clear membership but tends to be interested in the wider ties and their various characteristics. These different perspectives have been influential in emerging network and entrepreneurship research and not least in INV research. They reflect very different views on issues regarding networks such as who is the driver of change, the context or the entrepreneur (Aldrich and Zimmer, 1986), what the nature of relationships in the network is (Hoang and Antoncic, 2003), and if it is the network itself which is the most important or individual dyads.

Understanding different research network perspectives in IE and the structure of networks and networking in relation to entrepreneurship is valuable for the development of IE theory. By utilizing research and theory development in social networks, using different research perspectives in line with Slotte-Kock and Coviello (2010), and bringing into the debate a valuable input of empirical work in international entrepreneurship, IE theory will strengthen.

Lord Ernest Rutherford’s famous remark that “All science is either physics or stamp collecting” (Birks, 1962) is an important reminder for such an emerging field as IE to develop theory and empirical work in a collective and

rigorous way. IE is moving far beyond stamp collecting but there is work to be done. As Jones, Coviello and Tang (2011) suggest, exploring the current domain of IE:

As a result, we argue that due to the multi-disciplinary and multi-theoretical nature of IE, the continuance of debate and theorizing is appropriate and healthy. Furthermore, the process of thematically mapping, organizing and assessing the intellectual territory of the domain identifies rich theoretical potential rather than theoretical paucity. Indeed, one might argue that because IE is based on complex phenomena, it is perhaps unlikely that theories unique to IE will be produced. Instead, it will continue to develop theory that spans the domains of international business and entrepreneurship, as well as beyond (p.9)

This chapter has described how research in international business developed with globalization and changes in technology and economic policy. These global economic and technological changes paved the way for a much greater variety of international business activity, both regarding the size of internationalizing firms and the pace of their globalization. Small firms became much more active in internationalization, but they had to use various resources outside of their reign as they did not have them in-house. It is through relationships in networks that entrepreneurs can convert limited resources into a “rich environment” (Jack, 2005). The focus on relationships in various networks, from different network perspectives, was a sensible step for globalizing small ventures; relationships in networks therefore continue to be at the core in the literature on INVs and born globals. We now turn to an in-depth observation of networks and relationships—an area which has an important theoretical focus in this dissertation—and attempt to build further bridges between IE and social network theory.

3 Social network theory and relationships in international entrepreneurship

A very important point of departure in the research papers are the personal *relationship networks* which individual entrepreneurs in small ventures often base their activities on. Each research paper in this dissertation presents a literature review and the theoretical background. The review in the papers will not be repeated here. But as the common theme in all the papers is relationship networks and as the link between relationship networks and IE remain poorly investigated (Kiss and Danis, 2008), there is a need to capture in more depth the structure of networks and relationships and how they relate to IE. This is the task of this and the following chapter.

Entrepreneurs do not practice their venture in isolation, so links to market agents, from investors, potential customers and competitors to government have to be considered (Lundvall, 1992). Networks and networking are particularly important in the study of new ventures, as they become crucial for boundary crossing and mixing of old and new knowledge, drawing on Schumpeter's emphasis on new combinations of old and new. Breaking away from the existing dominant design may lead to new and heterogeneous sources of knowledge, which may yield a potential for novel combinations to emerge (Schumpeter, 1939).

... we may express the same thing by saying that innovation combines factors in a new way, or that it consists in carrying out New Combinations (Schumpeter, 1939: 62).

“Rather than staying trapped by their past, networked entrepreneurs may engage in 'mindful deviation' and in so doing create new innovative pathways” (Jack et al, 2010: 8). This dynamic process of networking, where international entrepreneurs use their personal networks to seek information about foreign market opportunities, has also been seen to be important in their venturing abroad (Ellis, 2011; Manolova, Manev and Gyoshev, 2010). Thus awareness of the foreign market opportunities is obtained by entrepreneurs through their social or interpersonal ties (Loane and Bell, 2006). Michailova and Wilson (2008) argue that “insights from the socialization tactics literature ... theorize how the context, content and social aspects of a foreign sojourn offer different opportunities for the acquisition of experiential knowledge to support the internationalization of small firms” (p.243). Ellis (2011) argues that as “the

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entrepreneur has some direct or indirect connection with potential exchange partner abroad—via family, friends or acquaintances—opportunity recognition possibilities will exist” (p. 102).

Granovetter (1973) introduced a theory on the spread of information in social networks. He emphasized that all business transactions take place in a social context and therefore a full understanding of economic phenomena is not possible without consideration of this context. A social network can be defined as the actual set of links of all kinds amongst a set of individuals and these links have implications for the individuals wider than the exchange itself (Mitchell, 1973). Social network theory has its roots in both sociology and anthropology (Tichy, Tushman and Fombrun, 1979). Bott (1955) was the first to use the concept of social networks in a systematic way when observing relationships in London families. Bott began to develop the idea of close knit/loose knit networks, which has ever since been at the core of the network literature. Even though the social network literature spans close to a century of research (beginning with the theory of social exchange with Frazer, 1919, and Malinkowski, 1922), business and entrepreneurship research has a much shorter history in the field of networks (as described in the previous chapter).

The different meaning of the words *network* and *networking* describe well the importance of carefully crafting relationship research. By looking solely at the ties that form the network, one is presented with a holistic view of the network, but this view does not necessarily tell a lot. Observing the networking that occurs within the network, interaction between and among the ties can be more informative on particular relationships at a particular point in time, but this picture does not present the whole picture either. Taking a picture of a football match would give a holistic view of the dyads in the football match but not the relationships. Taking a closer look at a particular player and the players around him can give an idea about the active ties at the moment the picture is taken, but they may have changed in a second. Granovetter (1985) noted that social ties are activated according to need, and are hence not fixed. Networks can therefore be seen as a bundle of dynamic relationships.

There is little consensus in business research regarding various aspects of networks (Casson, 1997; Slotte-Kock and Coviello, 2009). Scholars in international business (Håkansson and Johanson, 1985; Johanson and Vahlne, 2003; Coviello, 2006) and entrepreneurship (Hoang and Antoncic, 2003; Hite and Hesterly, 2001; Slotte-Kock and Coviello, 2009) have contributed to the directions for future inquiry and processes in these fields. Slotte-Kock and Coviello’s (2009) timely paper on network processes and

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entrepreneurship research indicated the importance of identifying different research perspectives on networks and entrepreneurship.

It is important for international entrepreneurship researchers to view different perspectives in network research to strengthen the IE field. This chapter presents a review of the personal relationship literature of networks. Also, the network concept and various forms of networks that have been introduced in business/entrepreneurship literature are introduced. This chapter continues by observing some of the most important concepts in the social network literature such as social capital, embeddedness, weak and strong ties, as well as introducing other concepts of relationships related to this research. Finally, the chapter turns to positioning a network research in international entrepreneurship.

3.1 Networks and their components

A network is a very general concept that needs to be defined further. Casson (1997) states that the failure, so far, to develop an adequate typology of networks is one of the major obstacles to further advance in the field. Casson and Della Giusta (2007) suggest that a set of “elements” that are connected to each other form a “network”. The “members” of the network are the elements and the connection is created by some kind of “relationship” between the elements. Every pair of members is connected, either “directly” or “indirectly”; indirect connections are affected through other members of the network. In a local business network, for example, the elements may be business owners who live in the area. The relationship is that they are in regular contact with each other. Even though each member does not necessarily know every other member personally, every member knows some other member who knows some other member, and so on. In principle, every member can be put in touch with every other member using the resources of the network (Casson and Della Giusta, 2007).

Hoang and Antoncic (2003) summarize three components of networks in their review of the literature on networks and entrepreneurship:

- The *content* of the relationships relates to relationships that are viewed as the media through which actors gain access to various resources held by other actors. A key benefit of networks for the entrepreneur is the access to information and advice. The authors also stress that relationships can also have reputational or signaling content.

Networks and their components

- The *governance* of these relationships relates to the coordination of the network exchange. Trust is an important element of network governance.
- And network *structure*, which is defined as the pattern of direct and indirect ties between actors.

The authors mention three measures to uncover patterns that can be used to characterize the different positions of entrepreneurs or their ventures in the network. The first is size, defined as the number of direct links between a focal actor and other actors. The second is centrality, which is the ability to access (or control) resources through indirect and direct links. The authors also mention diversity where they refer to information and ties that lie outside of the immediate cluster of contacts.

Håkansson and Ford (2002) state that in its most abstract form, a “network is a structure where a number of nodes are related to each other by specific threads” (p.133). To follow up on Håkansson and Ford’s (2002) definition on networks, a business network would consist of nodes and threads. The nodes are the business units in a complex business market and the threads are the manufacturing and service companies and the relationships between them (Håkansson and Ford, 2002). The threads are the various relationships, embeddedness and ties, between two firms which are influenced by their relationships with other firms and these “outside” relationships can affect how the two firms behave towards each other.

Various phrases and buzzwords have sprung forth in business literature which include those related to “networks” such as “strategic networks”, “knowledge networks”, “customer networks”, and “supplier networks”. Also, “industrial networks” and “business networks” have been commonly used to describe networks with different characteristics in business. Various network approaches have been identified in the literature on industrial networks. These networks include the “technological network” (Håkansson, 1987), the “regional network” (Dicken, 1992), and the business network (Håkansson and Johanson, 1985). Fletcher and Barrett (2001) add the “institutional network”, the “market network”, the “infrastructural network”, and the “social network” to the list of industrial networks, while Lechner and Dowling (2003) observe firms in clusters and define “reputational networks” and “co-opetition networks”. A classification of different types of networks would be beneficial to the research.

3.2 Typology of networks

The network—the sets of “elements” connected to each other—is shaped differently across functions, industries, space and time (Casson, 1997). The individual has relationships with other individuals and these relationships are all set in an environment which has affected these relations. The country, family and friends, the industry, the individual’s professional associations or contracts may have laid the ground for the relationships and patterns of ties. Different economic development can also affect relationships in networks (Ellis, 2011). Just as relationships change, so do networks. Figure 3.1 illustrates different networks and can shed light on the different types of networks and their relevance to business research. This dissertation is particularly interested in linking business and entrepreneurship studies to the network concept and therefore research from both business and entrepreneurship scholars is used to describe further each part.

3.2.1 Physical or social nature of networks

First, networks can be either of a *physical* nature or *social* nature. In a social network, the elements are generally people—either single individuals or social units which communicate. In a physical network, by contrast, the elements are generally natural features, e.g., buildings or equipment linked by channels (Haggett and Chorley, 1969). Physical networks that have a significant economic impact include various infrastructures, such as roads and electricity gridlines, and communication infrastructure, such as telecommunication and the Internet. In business terms, the physical network consists of flows of goods and services, while the social network consists of flows of various business enquiries, orders, online relationship requests, etc. Even though there is a clear separation between physical networks, comprising physical capital, and social networks, comprising an “invisible infrastructure” of trust and relationship, the two go hand in hand. A trading network is physical, but the networks of communication that set up the trades are social (Casson, 1997). Recently, networks which are related to the Internet have been gaining a foothold. These are for instance Twitter, LinkedIn and Facebook, but these networks already play a significant role in network activities of individuals and organizations. These networks will be addressed in this study. Physical networks and social networks can therefore be interlinked and are continuously developing.

3.2.2 Personal or organizational networks

Secondly, networks can be of *personal* or *egocentric* character (Lechner and Dowling, 2003) or of *organizational* (*sociocentric*) character, i.e., more connected with a collective group or an organization. Organizational networks or extended networks are focused on collectives and thus comprise interconnected personal networks (Dubuni and Aldrich, 1991). The personal network and the larger organizational network should be viewed as networks which interplay dynamically (Lechner and Dowling, 2003). The egocentric networks of entrepreneurs are embedded in sociocentric networks (such as regional networks); thus, egocentric networks draw from sociocentric networks but also contribute to the development of larger sociocentric networks (Johannisson 1998, Lechner and Dowling 2003).

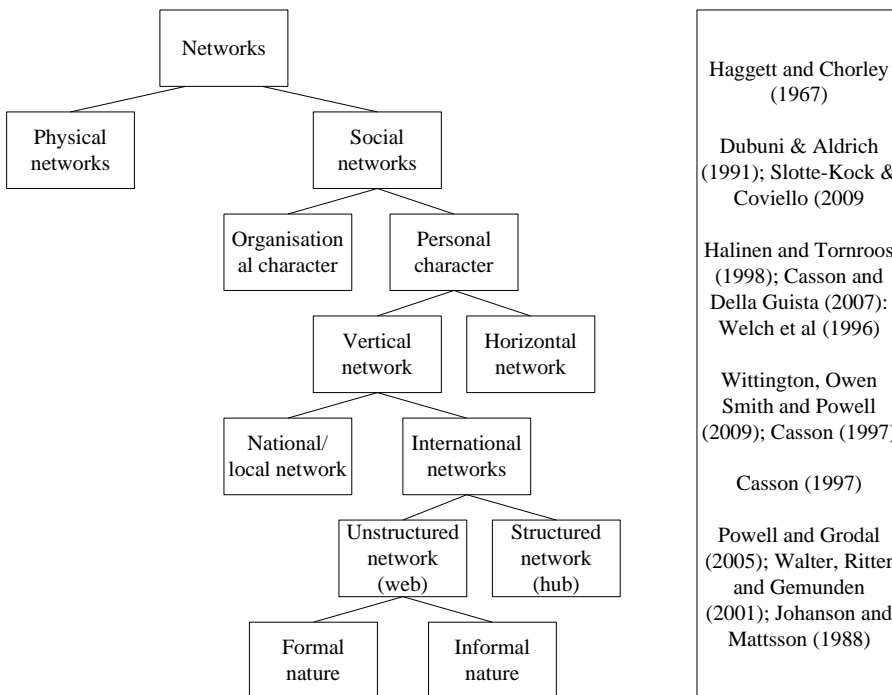


Figure 3.1. This figure describes networks and follows the direction this study takes in the analysis of personal networks of international entrepreneurs. At the right side are research papers that have contributed to the analysis of different parts of networks.

Hite and Hesterly (2001) argue that the definition of terms such as business networks lacks consensus among business scholars. It is not always

clear what is the unit of analysis, whether scholars are focusing on personal networks of individual entrepreneurs or business and social networks (Jack et al., 2010). Slotte-Kock and Coviello (2009) emphasize the importance of defining different perspectives in network research on the grounds of different unit of analysis. Even though the focus in this dissertation is on the personal network, international entrepreneurs do not necessarily make a clear distinction between individuals in their networks and organizations, supporting Johannisson's (1998) argument about the important interplay of these networks.

3.2.3 Vertical or horizontal networks

Entrepreneurship researchers have observed the structure of networks and how open they are in terms of relationships, market stages, etc. The third character of networks that needs to be identified is therefore the *vertical* and the *horizontal* network. Business or industrial networks include vertical networks (e.g., distribution channels and subcontracting arrangements) and horizontal networks (e.g., joint action groups such as export marketing cooperatives) (Welch et al., 1996; Halinen and Tornroos, 1998). The vertical network emphasizes flows of information between people at different stages of the market, while the horizontal network emphasizes people at similar stages or people who are doing similar jobs. The latter network may promote collusion and lead to monopsony power by networks in the market.

Halinen and Tornroos (1998) define the vertical and the horizontal relations as not only regarding the business setting and what they call the "channel structure" (from supplier to customer) but also the geographical setting (from local to international). The vertical network is an obvious choice when observing international networks of weak and strong ties, but the horizontal network may be valuable when observing the "community of practice" (Wenger, 1998), which is known mostly among high-tech groups that are engaged in a related practice, but not necessarily working together.

3.2.4 Structured networks or unstructured networks

Similar to the vertical and horizontal network is the Hub and Web where the Web is the unstructured network and the Hub is the structured network (Casson and Della Giusta, 2007). In these two different types of networks, members are represented by circles and the connections between them by lines. Every Web member is directly connected to all other members, while in the Hub there is a central member who is directly connected to everyone else and other people are only indirectly connected through him. The assumption follows that the Web involves "symmetrical" relationships between people of equal status, while the

Typology of networks

Hub involves an “asymmetrical” relationship of influence or authority. The Hub-Entrepreneur represents an individual who looks upon the network as his/her hub. The entrepreneur is the focal actor and other actors work directly with him/her. On the other hand, the links between the other actors are not clear or well defined. The hierarchy in this network is perceived as being minimal. The Web-Entrepreneur represents an individual who participates in a network in which all the actors are directly connected to each other and the hierarchy in the network is minimal. See Figures 3.2 and 3.3 for the types of embeddedness in networks.

Halinen and Tornroos (1998) name a similar embeddedness as the Hub and a research perspective on network embeddedness as the “actor-network embeddedness”. They add to the embeddedness a dyad-network embeddedness and micro-macronet embeddedness. These network embeddednesses add a core dyad as part of a wider industrial network (the dyad) or several focal actors (the micro-macronet). Greve and Salaff (2003) mention how networks have several useful properties for entrepreneurs. One of these properties is positioning: “Entrepreneurs position themselves within a social network to shorten the path to knowledgeable others to get what they need” (p. 3). Anderson, Blankenburg-Holm and Johanson (2006) suggest

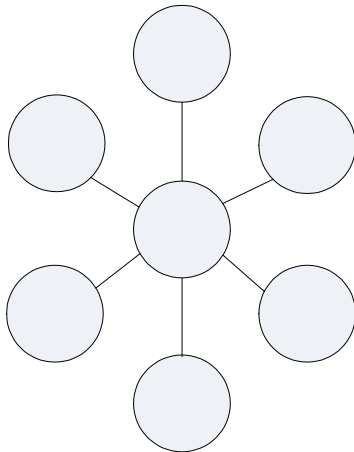


Figure 3.3. The Hub Entrepreneur

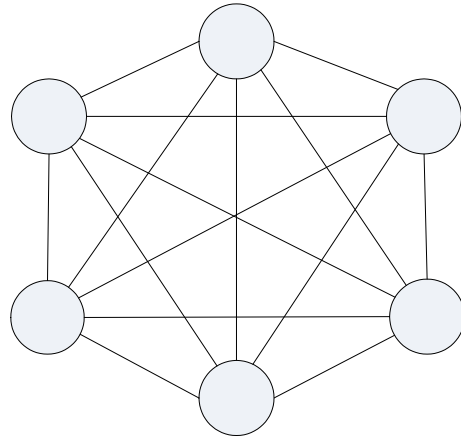


Figure 3.2. The Web Entrepreneur

that, particularly in open networks, which have similar characteristics as Casson and Della Giusta’s (2007) Web, it is relatively easy for the “Hub” firm to keep the benefits within its boundaries and not share them with others in the network.

Both the vertical/horizontal and the structured/unstructured network in business and entrepreneurship studies are addressing the openness/closeness

of the network which has been an important part of social network research (Burt 1992; Coleman, 1990). The open network structure is non-redundant where people are motivated by self-interest. A relationship is non-redundant if it is the only path between two actors. The open network promotes the flow of new knowledge, as it is less likely that a firm will receive the same knowledge from other counterparts. The closed network builds on the notion that firms in the network coordinate their efforts and actions. The closed network does not give the network participants as much new knowledge. The redundant relationships result in a resolution to collective action problems (Kogut, 2000). Uzzi (1997) argues that there is a risk of becoming locked-in in the closed network. Entrepreneurs can be involved in too many interconnected relationships, leading to less flow of new knowledge into the network (Anderson et al., 2006).

3.2.5 National or international networks

Fourthly, networks can be of a geographic character. In this study, the primary, but not the only focus, will be on *international* networks, i.e. networks which cross national borders. The international network, which is a network within a country, is the opposite to the *local* network, which is a network based in small regions within a country. Whittington, Owen Smith and Powell (2009) suggest that the effects that networks exert on organizations must be considered in light of the physical proximity of partners. The global level is the most appropriate level at which to study the role of networks in international trade and capital movements (Casson and Della Giusta, 2007). One should keep in mind that these networks can complement each other and members of a national network can also be members of international networks (Casson, 1997). Various local and national networks may play an important role in the creation of personal networks of international entrepreneurs.

3.2.6 Formal or informal networks

The fifth character of networks is their *formal* or *informal* nature. This character lies close to the vertical and horizontal character of networks previously described, but there are important differences. Powell and Grodal (2005) suggest a point of contrast between networks as “networks formed intentionally across a market interface to accomplish a task and emergent networks that grow out of ongoing relationships” (p. 62). Formal networks would for instance be networks between suppliers and sellers and developers of the same product or networks related to MNCs. Informal networks can be loosely connected individuals in various high-tech firms who can be said to manage their “invisible” network by wondering around. While the vertical and horizontal networks are perceived as formal and

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visible, similar to the formal network structure, the informal networks explicitly address “invisible” ties between individuals, as aspect which is an important part of this research. When discussing social networks, the embeddedness issue becomes very relevant in relation to informal or formal networks and will be discussed further later in this chapter. This study does not make a clear distinction between informal or formal networks especially regarding embeddedness. However, a related concept of weak and strong ties will be reviewed. Formal structures have all the character of strong ties, but informal networks will mostly be weak ties. Later in this chapter a further description of weak and strong ties are given, but network embeddedness will be observed in relation to weak and strong embeddedness of ties.

This chapter now turns to analyzing the most common concepts used to describe or evaluate relationships or embeddedness within networks.

3.3 Relationships in networks

Relationships have been found to be an important element for the founding and growth of entrepreneurial firms (Hite and Hesterly, 2001): they improve access to market knowledge (Arenius, 2005), and they mitigate the liability of foreignness through the learning process of the business relationship (Johanson and Vahlne, 2003). Drawing from the resource-based perspective (Wernerfelt, 1984), relationships are intangible resources which are difficult to replicate (Lavie, 2006).

Relationship networks can have a very different character and take a variety of forms (Wasserman and Faust, 1994). Some relationship networks may only be a group of people attending a party or visiting a web. In these networks, contacts are made but their individual importance can be insignificant. As these events or visits become more frequent, their combined effect can be significant. Many relationship networks tend to have a longer lifetime than party time. Families, for example, persist through the recruitment of spouses and the production (or adoption) of children. Persistence is usually associated with high levels of commitment between members (Granovetter, 1985). Persistence and reputation are also interlinked. Lechner and Dowling (2003) study IT entrepreneurs and their networks and conclude that “gaining reputation seems to be the key to creating future options for relations“ (p. 12). They suggest reputational networks create future options for relational ties: the better the reputation the greater are the long-term opportunities and relationship building of the entrepreneurs.

The relationship network of an individual includes individuals who are linked through interactions that consist mainly of social exchanges, though information and business exchanges can also occur (Björkman and Kock,

1995). If social capital is the goodwill available to individuals which lies in the structure and content of the individual's social relations, then the relationship network is the highway that makes the information, influence, and solidarity available to the individual.

The concepts of social capital, embeddedness, and ties are widely used to describe relationships in networks, their origin and strength. This chapter continues by reviewing these concepts, and related themes, in more depth.

3.3.1 Social capital

Field (2003) states that the central thesis of social capital theory is that "relationships matter". These relationships are knitted together in social networks that are a valuable asset enabling people to commit themselves to each other. Network relationships generate social capital (Arenius, 2002; Autio, 2005). A sense of belonging and the concrete experience of social networks (and the relationships of trust and tolerance that can be involved) can, it is argued, bring great benefits to people (Powell and Grodal, 2005).

Business actors require resources such as capital, skills, and labor to start or expand their business activities. Some of these resources they hold themselves, but they access other resources by utilizing contacts which help them to get things done. Social capital is the outcome of successful contacts and is the key component of entrepreneurial networks (Burt, 1992). The concept of social capital has gained popularity in fields such as sociology, political science, organization and business studies, economic geography, and economics. In various business and organization studies, the concept of social capital has been influential (Adler and Kwon, 2002). These are studies for instance on career success of individuals, individuals finding jobs, resource exchange and supplier relations (for overview see Adler and Kwon, 2002). In studies on groups and strategic alliances, social capital has also gained momentum. Evans (1996) shows improved performance of functionally diverse groups by utilizing a social capital approach and Koka and Prescott (2002) take a social capital perspective when analyzing strategic alliances. Social capital is also an important determinant of entrepreneurial orientation, resource acquisition, and growth (Manev, Gyoshev, and Manolova, 2005), and is important for the conduct (Zhao and Aram, 1995) and survival (Watson, 2007) of the entrepreneur's firm. Comparing internationalized and non-internationalized small and medium-sized companies, social capital of entrepreneurs has been found to be a differentiating factor (Ruzzier, Antoncic and Konecnik 2006). Also, social capital has been found to be an important and directing factor of the international strategy and transformation of the firm (Harris and Wheeler, 2005).

Relationships in networks

Halpern (2005) argues that the popularity of the concept “social capital” lies in its duality, having both the economic feel and the importance of social. Halpern defines the concept of social capital broadly and suggests that “any social structure—short of a fully formal institution—that facilitates cooperation and trust between people can be viewed as ‘a form of social capital’” (p. 292). Social capital has its skeptics and supporters among researchers, partly for the same reason. The term can explain a broad range of outcomes due to its multiplicity of definitions. At the same time, the multiplicity of this popular concept in the literature means that the exact meaning of social capital is far from clear (Huber, 2008).

Multiple definitions make the concept vague, however, and it is therefore important to define more precisely what social capital means. Adler and Kwon (2002) distinguish conceptually between three dimensions of social relations: (a) market relations in which products and services are exchanged for money or bartered; (b) hierarchical relations in which obedience to authority is exchanged for material and spiritual security; and (c) social relations in which favors and gifts are exchanged. The social relations part is the one which, according to Adler and Kwon, constitute the “dimension of social structure underlying social capital” (p. 18), which is either an internal or external dimension or a dimension which is neutral to both. The external dimension focuses on social capital that ties together a focal actor to other actors. An example of a definition of social capital with an external dimension is Belleveau, O’Reilly and Wade’s (1996): “...an individual’s personal network and elite institutional affiliations.” (p. 1572). The internal dimension focuses on social capital as a resource within a collectivity. An example of an internal definition of social capital can be found in Putnam’s *Bowling Alone*:

Whereas physical capital refers to physical objects and human capital refers to the properties of individuals, social capital refers to connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called “civic virtue.” The difference is that “social capital” calls attention to the fact that civic virtue is most powerful when embedded in a sense network of reciprocal social relations. A society of many virtuous but isolated individuals is not necessarily rich in social capital (Putnam, 2000: 19).

The neutral dimension stresses that internal or external views are not mutually exclusive. An entrepreneur will be influenced by his/her external

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and internal dimensions. An example of both dimensions would be Maurer and Eber (2006), who define social capital as an asset “available to individual or collective actors that draws on these actors’ positions in a social network and/or the content of these actors’ social relations” (p.262). Similarly, Adler and Kwon (2002) emphasize the availability of social relations when defining social capital:

Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor’s social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor (p. 23).

This definition is neutral regarding internal or external dimensions and lays weight on the entrepreneur’s (actors) social relations, both from structural and content viewpoint.

There is an emerging body of literature on a contemporary phenomenon that is underresearched in international entrepreneurship but has important implications for entrepreneurs because of the ease and low cost of developing networks. This stream of research relates to using online social network sites and their impact on social capital formation (Ellison, Steinfield & Lampe, 2007, 2011; Papacharissi & Mendelson, 2008). Ellison et al. (2011) emphasise that the online network “serves as a social lubricant, encouraging individuals to convert latent to weak ties and enabling them to broadcast requests for support or information” (p. 1).

There is still an overhanging feeling of some sort that social capital is necessarily a good thing. Halpern (2009) reminds of a possible significant downside. Groups and organizations with high social capital have the means (and sometimes the motive) to work to exclude and subordinate others. Hansen (1998) shows that project teams with strong ties with other units often took longer to complete their tasks than those with weaker ties. Ahuja (1998) also points out that if an individual has many relationships, i.e., a large sum of social capital, the direct contacts will be so many that they will be less dependent on the individual. These downsides are important to keep in mind in the development of the entrepreneur’s relationship network model. We now turn to tracing further the roots of social network research and introduce the concepts of embeddedness and ties.

3.3.2 Embeddedness and ties

Ever since Bott (1955) presented the idea of close knit/loose knit networks, the issue of embeddedness and ties has been at the core of social network

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research. Research in social networks have mainly been concerned with personal relations and has analyzed three factors specifically. First, the analysis focuses on the types of people in the network (are they friends, kin, etc.); secondly, it focuses on what kinds of resources flow through the networks; and finally, it focuses on the embeddedness of these relationships (do they contain strong or weak ties?). This chapter has already discussed the components and types of networks and the agents within them. This chapter has also described networks, how they generate social capital, and how they are built on nodes that are somehow tied together. It is these ties—the embeddedness of relationships—which this chapter will continue elaborating.

Embeddedness is the degree to which individuals are enmeshed in a social network (Granovetter, 1985). This idea of embeddedness is the foundation of the role of networks in the activities of individuals and organizations. Economic relations between individuals or firms are embedded in social networks and these social networks consist of various ties. Granovetter (1973) suggests that the strength of the tie is a “combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services that characterize the tie” (p.1361). These ties are either weak or strong. Strong network ties have high levels of social relationship or personal interaction with high frequency (Granovetter, 1982). The strong network ties means that members are motivated to be of assistance and protect actors in insecure positions (Hite and Hesterly, 2001). Weak ties, on the other hand, are not as heavily based on personal interaction among members of the network but may provide strategic advantage in terms of resource availability (Granovetter, 1973). Aldrich, Elam and Reese (1996) label network ties as “friends, acquaintances and strangers”, reflecting strong, weak or market ties. The embeddedness, or level of strong and weak ties in social networks, can enhance the ability of entrepreneurs to spot opportunities (Ardichvilli, Page and Wentling, 2003) and acquire resources (Batjargal, 2003). But at different stages of the business development, there may be different demand for the mix of weak and strong ties. Obstfeld (2005) identifies the “the idea problem” versus “the action problem”. A network of relationships based on strong ties has greater capacity to implement innovative ideas, but has inherently lower capacity to generate them. The network that is more based on weak ties is rich in structural holes (i.e., greater bridging ties), and has greater capacity to generate new ideas, but lower capacity to implement them. “The tradeoff, therefore, is that the potential for novelty is lost by strong ties, and the

potential for integrating novel knowledge is lost by weak ties” (Tiwana, 2007: 251-252).

Krackhardt (1992) views the weak ties as “local bridges” to parts of the network which would otherwise be disconnected (1992). Powell et al. (1996) argue that beneath formal ties there often lies a sea of informal ties. Burt (1992) suggests that weak ties offer opportunities. Actors who have multiple weak or non-redundant relationships to other actors who are not connected to each other have a strong brokerage position called “structural holes”. Such actors have a more powerful position than others do because they control the knowledge flows and can earn credit from bridging these holes (Kogut 2000). The structural holes in networks create a competitive advantage for those individuals whose networks span these holes.

Similar to social capital, the definition of tie strength is not ambiguous. Different studies have used different definitions, making comparisons difficult and the results mixed. The lack of consensus on how to define the strength of ties is understandable, as measuring strength of personal relationships cannot be a subjective matter. However, the task of defining weak and strong ties and the issue of embeddedness and social ties are crucial in IE (Ellis, 2011). Vahlne, Ivarsson and Johanson (2011) describe embeddedness as a

... web of relationships with various other parties within its environment, including customers, suppliers, governmental authorities and so on. As time goes on and the number of mutual experiences grows, the parties adjust to one another and the degree of their interdependence increases. As a firm’s web of direct and indirect relationships is its source of information about changes in the environment and how it becomes aware of opportunities or possibilities for joint development, the focal firm cannot afford to disregard how any action it might take will affect the parties on the other side of the relationship, or even how they might impact parties with which it does not itself have a relationship but with which one of its partners does. In short, what happens, happens in relationships. Embeddedness is a two-edged sword, constraining and enabling (p.3).

With regards to entrepreneurs, the question is what “drives entrepreneurs to establish and deepen some relationships and not others, and how do they manage their mix of weak and strong ties?” (Elfring and Hulsink, 2007: 1850). And are strong ties more important than weak ties? Kim and Aldrich (2005) studied the tendency to form ties to similar entrepreneurs supporting the view of the importance of strong ties. Hansen (1999) shows that weak

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ties are a source of opportunities, particularly if the knowledge is of a codified type. Ruef (2002) found that individuals positioned in heterogeneous networks, comprising both strong and weak ties, are more likely to be regarded by their peers as innovative in comparison to entrepreneurs in more homogeneous networks. Rowley, Behrens and Krackhardt (2000) suggest that developing innovative solutions requires a high proportion of weak ties and a network which is both diverse and rich in structural holes. Hite and Hesterly (2001) argue that the entrepreneur's personal network evolves through time. To begin with, a network is identity-based and dominated by strong ties but then develops into an intentionally managed network that is rich in weak ties. Jenssen and Koenig (2002) argue that in the process of new venture creation the entrepreneur's personal friendship ties are crucial for the initial firm growth. Therefore, a focus on strong and more embedded ties can be more important in the start-up and early growth stage than in later stages (Starr and MacMillan 1990). But international entrepreneurs are faced with the challenge of creating spatially distant relations that are in many instances based on arms-length relationships. These relations are difficult to develop into strong relationships as neighbors are more likely to become friends (Festinger, Schachter, and Back, 1950). Whatever the role weak or strong ties play in the life of the emerging entrepreneurial firm, the appropriate use of personal relationships can transform the entrepreneur's personal network into an effective tool for achieving a good firm performance (Bratkovic, Antoncic and Ruzzier, 2009) and are essential in the internationalization of the small firm (Manolova, Manev and Gyoshev, 2010).

Although social network researchers have extensively observed contexts of personal relations (Fisher, 1977; Grossetti, 2005), there is a lack of a thorough analysis of personal relationships of international entrepreneurs in SMEs. Halinen and Tornroos (1998) observe cases of Finnish firms and their internationalization and summarize a number of short case studies of relations leading to internationalization (Halinen, 1997; Andersen, Anderson, Halinen, and Havila, 1994; Tornroos and Nieminen, 1994; Tornroos and Moller, 1993). Part of their study is based on cases where the firms are internationalizing and using their international network. Halinen and Tornroos do not make a clear distinction between individuals and firms in their analysis of business networks, so their relationship analysis is partly based on personal network ties of individuals in the firms and partly by the organizational network ties. Figure 3.4 describes the six types of embeddedness Halinen and Tornroos (1998) suggest.

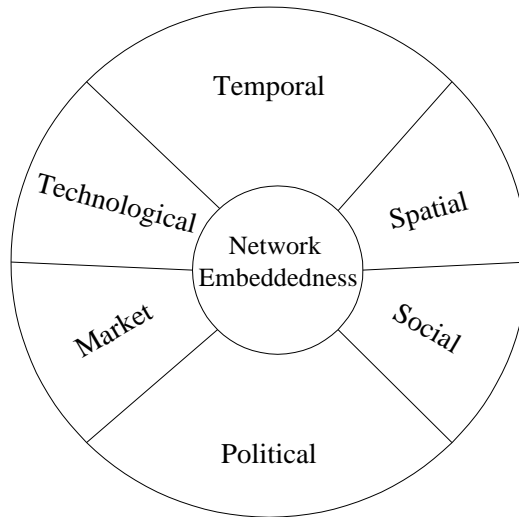


Figure 3.4. Halinen and Tornroos' six types of network embeddedness

Temporal embeddedness. Business networks, firms, dyads and nets evolve through time. Halinen and Tornroos use an example of an advertising agency and a consumer product company to illustrate temporal embeddedness. Personal relationships that had been developing over the years were used as a resource in selecting an advertising agency.

Spatial embeddedness. Business activities are located and organized “on the ground”. Space and geography in business networks have an important role. Halinen and Tornroos use an example of a Finnish food company entering Estonia. Due to the short cultural and geographical distance between the countries, their brand gained a strong foothold on the Estonian market.

Social embeddedness. Business networks are embedded in various social networks through individuals working in business. Halinen and Tornroos highlight how personal contacts of an individual employee in relations between consumer product company and advertising agency had a strong influence on the initiation of new relationship.

Political embeddedness. Political processes can be seen as an important explanation of network evolution (Melin, 1989). Halinen and Tornroos suggest that in the case of a Finnish paper mill entering the Estonian market, the political embeddedness was evident in the building up of political, financial and personal contacts in a new market.

Market embeddedness. Each actor is embedded in a specific market defined in terms of the business he/she is in, his/her products, clients, etc. Actors are connected with their business partners and in some cases with their competitors.

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Technological embeddedness. Business exchange is embedded in various technological systems (Håkansson, 1989). Halinen and Tornroos use an example of a Finnish paper producer that entered Estonia by acquiring a paper company in Estonia. The technological embeddedness was seen as the adaptation to local technological standards and local infrastructure.

Hite (2003) studied personal networks of entrepreneurs in emerging high-tech firms. Her study does not focus on the international aspect of the networks of these international entrepreneurs, but her work has been influential in the entrepreneurship and INV research (Slotte-Kock and Coviello, 2010). Hite identified 300 dyadic network ties in her interviews with entrepreneurs; her data analysis focused on the relationally embedded ties but left out the non-embedded ties. Hite does not use the term weak or strong ties but the terms embedded and non-embedded ties to describe the strength of relations in the social network. Ties were identified as embedded if they either influenced expectations, communication, decision making, and provision of service before the term of the exchange was clarified, or were built on verbal agreements, handshake agreements, and assumed agreements.

Ellis (2000) studied highly internationalized manufacturing firms and developed a framework for relationships of entrepreneurs in which he classified them as either planned networking, business-social or non-business social in relation to marketing and export activities (Figure 3.5). Harris and Wheeler (2005) base their analysis on Ellis (2000) network origins when observing relationships of three successful entrepreneurs.

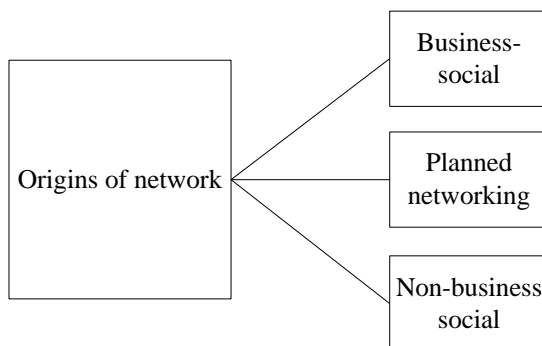


Figure 3.5. Ellis' (2000) Network origins

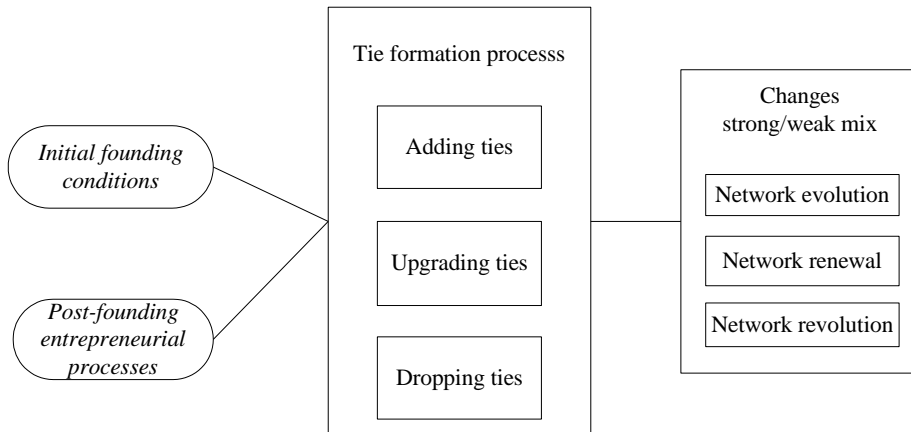


Figure 3.6. Elfring and Hulsink’s conceptual model of antecedents of tie-formation processes and effects of the mix of weak and strong ties

Elfring and Hulsink (2007) explore ways in which founding entrepreneurs in the IT sector in the Netherlands search and select their ties to adapt the mix of weak and strong ties to their venture changing requirements over time. Their findings spell out three distinctive patterns of network development: (1) network evolution, where the network develops from strong ties towards a network in which there is a growing share of weak ties; (2) network renewal, where weak and strong ties are both important in the emergence stage.; and (3) network revolution, where there are large numbers of weak ties in the emergence phase (Figure 3.6).

The context of relations of entrepreneurs and their categorization presented by Halinen and Tornroos (1998), Hite (2003) and Ellis (2000) are a valuable input for embeddedness research.

3.4 Context for creating personal relations

The previous section has observed the context of relations, but the context of creating relations is mostly overlooked in the IE literature. This context is of significant value when studying personal networks of international entrepreneurs and can assist in evaluating how opportunities are identified in international entrepreneurship, an issue which is underexplored in IE literature (Ellis, 2011). We want to know how international entrepreneurs obtain valuable relations in the international market. The primacy of opportunity recognition in entrepreneurship is well established in the entrepreneurship literature (Aldrich and Zimmer, 1986; Ellis, 2011) and understanding the context for creating relations can enhance further studies in this field.

Fischer (1982) argues that

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most adults encounter people through their families, at work, in the neighborhood, in organizations, or through introduction by friends or relatives; they continue to know some people met in earlier settings, such as school or the army; only rarely do chance meetings, in a bar, at an auction, or such become anything other than brief encounters (p. 52).

There can be significant value in observing the international entrepreneur in this light, as it may shed light on different strategies regarding relationships which are often at physically distant places and in surroundings which the entrepreneur is often not familiar with. It may also strengthen research in the area of how to define different entrepreneurs in INVs. Researchers have been interested in observing different characteristics of entrepreneurs and the context of creating relations can be a valuable tool for that purpose.

Grossetti (2005) suggests three types of situations or contexts for creating relations. The first is an involvement in a collective form (which Grossetti names “circle”) in which certain relations may last longer than the collective form that made its initial construction possible (Figure 3.7). An example of this may be a group of individual entrepreneurs who are working together on a task which then may become obsolete. Certain relations in the group may last longer.

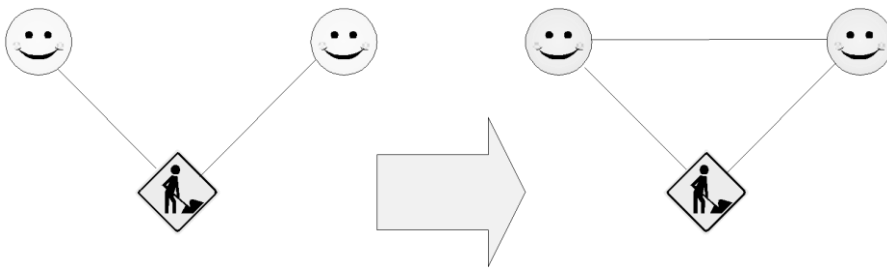


Figure 3.7. Relations last longer than relations in a collective group.

The second type of situation is where relations are created around a common cause (Figure 3.8). Two entrepreneurs can take part in a large project in which they are separately working on different parts of the project. These individuals do not necessarily look at these relations as a collective form, but these common concerns may then lead to a relationship and a structured collective entity. Another example would be school mates.

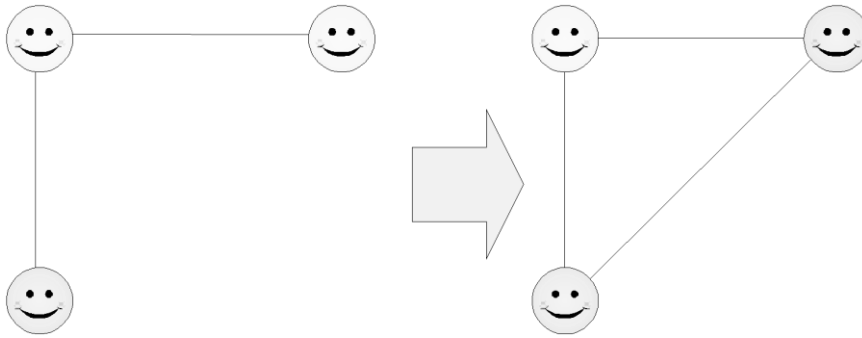


Figure 3.8. Relations derived from other relations.

The last type that Grossetti identifies are relations derived from other relations (Figure 3.9). “Certain people are introduced to us by friends either directly or during recreational or purely social activities (evenings out, suppers, etc.)” (Grossetti, 2005: 233). Two entrepreneurs are introduced by a mutual friend or business associate. Through this introduction a new relationship develops.

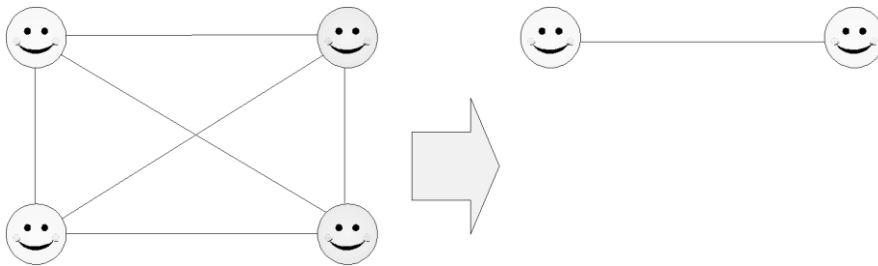


Figure 3.9. Relations constructed around a common cause.

3.5 Identity in personal relationship networks

Bonner, Kim and Cavusgil (2005) suggest a framework for a firm’s strategic network identity (Figure 3.10). They suggest the concept of the firm’s network identity, which is the degree to which the firm perceives itself to be a partner of choice for other firms. The firm perceives itself as a partner with quality network connections (Anderson et al., 1994). The firm’s strategic network identity consists of the calculated and consolidated assessment of its set of existing and past relationships across partners over time. Strategic network identity also embraces the value of the firm’s alliance network. A firm with a strong network identity can access particularly important partners or mix partners in a valuable network of alliance partners (Anderson et al., 1994). Endowed with such an advantage, the firm becomes highly sought after, affording it the ability to select those partners that complement its own business strategy well.

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Halinen and Tornroos (1998) define a representational role of the business actor—the firm or individuals—as the assets, knowledge, information, experience, and credibility which the actor brings with it to the network. The representational role comes close to the concept of network identity (e.g. Anderson et al., 1994). Current literature on strategic use of networks is mainly focused on the strategic networks of firms.

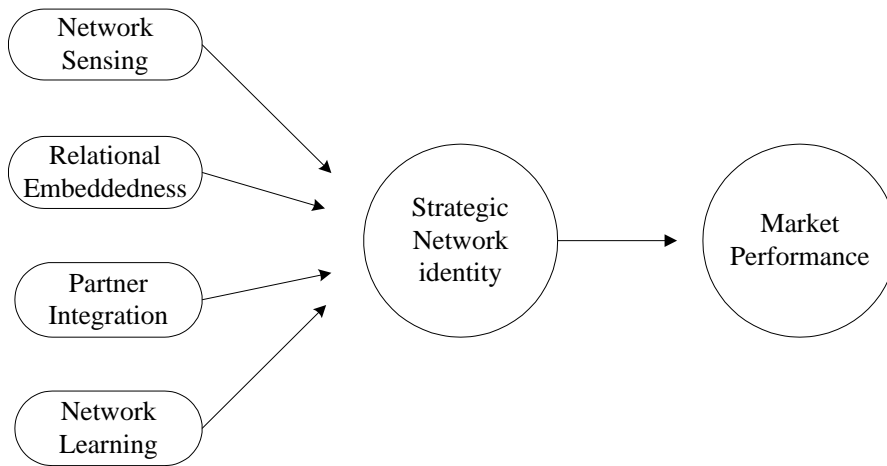


Figure 3.10. Strategic network identity conceptual framework according to Bonner, Kim and Cavusgil (2005).

3.6 Positioning a network research perspective within IE

Since the early 1990s, networking has become a recognized factor in the entrepreneurial process and a significant theme in entrepreneurship research (Jack et al, 2008, 2010), as it has improved understanding of the factors affecting the entrepreneurial firm's internationalization (Ellis, 2011). But it is acknowledged that network research is not unproblematic (Coviello, 2005). Networking research, particularly in a dynamic global business, can be seen to be problematic if researchers are concerned about developing a fuller appreciation and understanding of both network structure and process. By concentrating on the study of one aspect, the other aspect is thrown into shadow. Jack et al. (2010) argue that a network can exist as a *sui generis* entity, something above and different from the members of the network. The question is whether networks are best understood by looking at the ties that form the structure of networks, by exploring the interactions between the ties or the motors which explain the process.

Slotte Kock and Coviello (2009) suggest an extension to network research in entrepreneurship that focuses on process as an important part of the network

development analysis. “Network change occurs over space and time for the new venture” (Slotte Kock and Coviello, 2009: 51). Reviewing the entrepreneurship literature regarding process, they find different perspectives regarding the impact of networks and processes and how they can be applied to entrepreneurship research. The first is the social network perspective (SN), which emphasizes that to understand social life one needs to understand group composition (Simmel, 1955). The second is the business network perspective (BN) (Håkansson and Snehota, 1995), which “emphasizes dynamic, individual and interconnected exchange relationships within systems that contain interdependencies of both a complementary and a substitutive nature” (Johanson and Mattsson, 1994: 325).

The BN perspective focuses on how relationships change, why change occurs, and its impact on the wider network, while the SN perspective particularly assesses how deleting or adding ties affect network structure. Slotte-Kock and Coviello (2009) suggest that SN analysis views process as a logic to explain causation leading to a one-eyed, structural perspective that is different from the business network perspective. The BN research accounts for both actors in a dyad and studies how and why relationships change over time. According to the BN, the dyad changes as a results of (1) actors learning about how to utilize new combinations of resources; (2) the contrasting perceptions of actors in relationships; and (3) actors continually looking for opportunities to improve their position towards important partners (Håkansson and Snehota, 1995). Slotte-Kock and Coviello (2010) emphasize that BN research takes the position that the network structure is never stable. That is, “it is a structure with inherent dynamic features, characterized by a continuous organizing process” (Håkansson and Snehota, 1995: 271). Even if network patterns appear static, the BN perspective recognizes that existing relationships can change their content and strength.

As this dissertation observes partly new communication technology and its effects on the networking of international entrepreneurs, the BN perspective can be useful because it argues that “exogenous influences such as economic conditions or technological advancement will be transformed into or combined with endogenous factors such as confrontation between actors” (Slotte Kock and Coviello, 2010: 44). Thus, changes originate in the dyad (Halinen, Salmi, and Havila, 1999) in a manner that can be positive or negative (Ritter, 1999). But to look at the changes in the network caused by changes in one part of the network, scholars have emphasized that technological changes, such as web-based communication technology, can affect networks (Lewis, Kaufman, Gonzalez, Wimmer and Christakis, 2008) and the networking capabilities of the entrepreneurs. The BN approach also argues that networks are multiplex adaptive systems (Ritter, Wilkinson, and

Positioning a network research perspective within IE

Johnston, 2004) in which neither a hierarchy nor a single central actor is in charge of organizing the network. Thus, change is also endogenous to the network. This is reflected in Freytag and Ritter's (2005) statement that it is not a question of managing *a* network but managing *in* networks; it is therefore "more appropriate to talk about networking, influencing and interacting, i.e., processes instead of outcomes" (p. 664). At the most macrolevel, the BN perspective argues that exogenous influences such as economic conditions or technological advancement will be transformed into or combined with endogenous factors such as confrontation between actors. Thus, any change in one part of the network will produce change throughout the whole network, so that the network structure is never stable. Even if network patterns appear static, the BN perspective recognizes that existing relationships can change their content and strength. BN research also regards the network as being comprised of different types of relationships which may be positive or negative and include both cooperation and competition. BN research acknowledges the concept of "sleeping ties," referring to existing but dormant relationships that can be reactivated (Johanson and Mattsson, 1992). Slotte-Kock and Coviello's (2009) review of different network perspectives lays the ground for a better understanding of network research in entrepreneurship. Slotte-Kock and Coviello's (2009) effort to identify different network research perspectives leads them to conclude that a combination of the two network perspectives in entrepreneurship research can be beneficial to the field. They suggest combining the dyad and the network as the unit of analysis, emphasize the importance of process, and challenge entrepreneurship researchers to "explain not only the effect of networks but how and why they form and may be managed over time" (p. 50).

This chapter has reviewed network theory and various aspects of networks as they may relate to relationships of international entrepreneurs. The extensive empirical research and theory development in networks is a valuable source for researchers in international entrepreneurship. The next chapter discusses IE theory and the interaction between IE theory and network theory and lays further foundation for the chapter following, which identifies gaps in the literature and presents the research questions in the research papers in chapter 7.

4 International entrepreneurship—opportunity for further development

This chapter describes the interaction between IE theory and network theory. The chapter also lays out the opportunities for IE to enhance the theoretical work in relationship networks with an international perspective. International entrepreneurship theory (IE) emphasizes the dynamic and chaotic aspects of early internationalization where skills, experience, and relationship networks play a dominant role (Keupp and Gassmann, 2009; McDougall, Shane, and Oviatt, 1994; Sapienza, Autio, George, and Zahra, 2006) and recognizes the pivotal role of entrepreneurs and their ventures in the exploitation of opportunities in international exchange (Oviatt and McDougall, 2005a; Ellis, 2011). The importance of relationships has been the essence of IE literature in which relationship networks have been shown to be important facilitators of the international activities of small ventures (Oviatt and McDougall, 2005a; Chetty and Agndal, 2008; Harris and Wheeler, 2005), in the acquisition of resources (Jarillo, 1989), and in accelerating new venture internationalization (Holmlund and Kock, 1998) where new ideas are being spawned (Ellis, 2011). The RBV has deepened the understanding of relationships as resources; consequently, RBV is seen as a major contributor to IE theory, as intangible resources—the relationships—are some of the most important assets of the resource-poor INV. The RBV has paved the way for IE in specifying the nature of the resources required to overcome the liability of foreignness (Lee, Lee and Pennings, 2001).

Though new ideas keep being introduced in IE studies, the underlying theme continues to be the development of internationalization of entrepreneurs or small ventures with a strong base in networks and network relationships (Coviello, 2006). But there is a lack of research in IE regarding the social mechanisms involved, and there is a great need to substantiate how entrepreneurs perceive and use their networks. A hindrance in the further development of IE is the basic concepts behind IE: the “entrepreneur” and “network” are somewhat nebulous concepts (Casson, 1997) and research in this area lacks coherence (Hoang and Antoncic, 2003; Slotte-Kock and Coviello, 2009), a lack which is evident from the need for clarity regarding what is the unit of analysis in IE research (Jack et al., 2010). There does not seem to exist a universal definition of IE, that is, a general understanding of IE from a holistic perspective and IE needs to define itself (Kraus, 2011).

International entrepreneurship theory as an intersection?

4.1 International entrepreneurship theory as an intersection?

Scholars in IE have argued that IE theory is based on classical international business theory (IB) and classical entrepreneurship theory (ENT) (Keupp and Gassmann, 2009; Dimitratos and Jones, 2005). This view is also stressed by Oviatt and McDougall (2005b), who urge for further bridging between IB and ENT. Even though researchers have viewed IE as being at the intersection between these two important research fields (Keupp and Gassmann, 2009; Kraus, 2011), IE observes often very different aspects and circumstances than both IB and ENT.

Similar to IB, IE focuses on international exchange. The difference between IB and IE lies in the actor: while IE theory focuses on the international entrepreneur and the small venture, IB observes internationalization from the MNC or TNC perspective, with particular attention being given to domestic government policy and its effects on the development of these firms. So while IB focuses on large firms and how domestic factors influence the activities and location of these firms, IE emphasizes the “*discovery, enactment, evaluation, and exploitation of opportunities*” (Oviatt and McDougall, 2007:7) in international entrepreneurship, realizing that opportunities are recognized by individuals (Aldrich and Zimmer, 1986). The “pursuit of entrepreneurial opportunity barely figures” in IB (Ellis, 2011). The lack of resources of a new venture is also recognized in IE and this scarcity requires relatively greater use of relationship resources (intangible resources) of the new venture (Harris and Wheeler, 2005) than more established firms. The difference lies also in the speed of internationalization, where the small venture is opportunity-driven and jumps over the incremental stages of business internationalization (Johanson and Vahlne, 1977).

Comparing ENT and IE, the most significant difference lies in the international dimension of IE. Entrepreneurial networking studies have called for research with broader geographical locations (Hite, 2003), but such studies are rare. Here, we have both ENT and IE recognizing the opportunity-seeking behavior of the entrepreneur, established in both fields (Aldrich and Zimmer, 1986; Ellis, 2011), but the geographical or location effect leads to significant changes in the process of entrepreneurship within these two fields. The international entrepreneur faces a chaotic environment in international venturing where intangible assets—such as the relationship networks of the entrepreneur—are very important (Keupp and Gassmann, 2009; McDougall, Shane, and Oviatt, 1994). The distance from markets and

relationships requires a different relationship network strategy, as internationalization requires a broader focus on other networks (Fletcher, 2001) and often more focus on weak ties (Duque, Shrum, Barriga, and Henriquez, 2009) in which the ties tend to be long and to connect socially distant locations (Centola and Macy, 2007).

Of course IE, ENT and IB are relatives, but the importance and complexity of relationships in the IE compared with IB and ENT calls for a substantial shift to the theoretical approach in which social network theory plays a vital role.

4.2 Social network theory and IE

The challenge for scholars in international entrepreneurship studies is to sharpen research perspectives and integrate various models to explain the development of many small international ventures in the somewhat chaotic environment of small global entrepreneurs (Jones et al., 2011). There is an urge to reconcile different approaches and ideas in the field of international ventures. What would be needed is an incorporation of network theory, emphasizing relationship networks, into IE research and theory. In such a theory development, new developments should “grow organically from the theory rather than being added in a piecemeal and arbitrary fashion” (Buckley, 1990:663).

Despite increasing interest in international entrepreneurship and social networks among international entrepreneurship scholars, the relationship between INVs and social networks remains poorly investigated (Kiss and Danis, 2008). The entrepreneur’s or founder’s personal network influences the search for opportunities abroad. The founder’s personal ties—his/her personal network—allows access to foreign markets and generates benefits that are important in the learning process of the internationalization (Zhou et al., 2007). Adding the international element to the study of personal networks of international entrepreneurs is of obvious and unique importance to the study of IE. In international entrepreneurship, weak ties can be very important as their length opens possible doors to new markets (Centola and Macy, 2007).

Given the emphasis IE lays on the opportunity-seeking international entrepreneur and the importance of intangible relationship resources in international venturing, the theoretical and empirical tools developed within social network research seem very suitable for IE research. Social network theory focuses on personal relationships and suggests that all business transactions take place in a social context (Granovetter, 1985). Social network theory has become a much-debated issue in both entrepreneurship and business internationalization and has assisted in linking the two areas of

Social network theory and IE

studies. This was a needed link as IB research had primarily focused on large firms and entrepreneurship research had focused on “local enterprises” and “local entrepreneurs”. Even though extensive literature is available on social networks and entrepreneurship, the question of whether and how personal networks have been used in new venture internationalization has rarely been researched by IE scholars; most studies have focused on social networks and entrepreneurship within a given country (Kiss and Danis, 2008). This gives IE an opportunity to develop further a unique field which uses the deep theoretical roots of network theory to explore the opportunity-seeking entrepreneur who uses relationship resources, as theorized in the RBV, in a turbulent international environment.

The theory of effectuation may be an important way forward for IE, as it focuses on the entrepreneur’s ability to create opportunities in a turbulent environment and with limited resources. The effectuation process in entrepreneurship “does not imply any one single strategic universe for the firm. Instead, the process of effectuation allows the entrepreneur to create one or more several possible effects irrespective of the generalized end goal with which she started“ (Sarasvathy, 2001:247). Different from more traditional business studies that define the market as a universe of all possible customers, Sarasvathy (2001) sees the effectuator as defining the market as “a community of people, willing and able to commit enough resources to sustain the particular enterprise” (p.242).

The next chapter turns to identifying gaps in IE, introduces research questions and propositions in the research papers, and shows how this research may strengthen the IE.

5 Gaps, research questions and propositions

The chapter now turns to describing further the gaps and research questions. This study responds to an increasing recognition in international entrepreneurship research of the importance of relationships of international entrepreneurs in the internationalization process. Conceptualizing relationships of international entrepreneurs can prove productive and can deepen knowledge on the formation and maintenance of the international entrepreneur's network, and the entrepreneur's external environment and background, affecting his/her approach or utilization of the network.

There is a gap in the literature with regards to observing personal relationships of international entrepreneurs in INVs and their functions and use in the activities of the international entrepreneur. The papers presented in chapter 7 all observe the entrepreneur and his/her personal relationships. Johanson and Vahlne (2003) state that successful entrepreneurship is based on the entrepreneur's existing network. Whether the entrepreneur enters a foreign market depends on the relationships of the entrepreneur. Entrepreneurs utilize advice networks (Krackhardt, 1990) that open doors to information in the environment in which they operate. McGrath, Vance, and Gray (2003) emphasize the advice sharing between entrepreneurs which depends on the trust level between the entrepreneurs in intense networking, a level which is frequently based on shared past experiences and repeated interactions. Domestic advice networks also provide strong mechanisms such as criticism or disapproval that can lower transaction costs (Mesquita and Lazzarini, 2008). Welch and Luostarinen (1993) suggest that the individual with whom the entrepreneur has a relationship can offer linkages to networks which they are a part of in other countries. Personal relationships of young entrepreneurs have been found to open the doors for new foreign market opportunities and build further market knowledge (Harris and Wheeler, 2005). In particular, knowledge of foreign market opportunities is commonly acquired via existing personal networks rather than collected through systematic market search (Ellis, 2000). This existing personal network can be more influential—even though it is a domestic one—than an international network. Holmlund and Kock (1998) in their study of the internationalization of Finnish SMEs observed that domestic social networks influencing internationalization were ranked higher than networks abroad. And yet the theories which have been under review in previous chapters have been criticized for not including or thoroughly

Relationships as resources

analyzing entrepreneurs and their role in the early stages of an internationalization process, in many cases the important and somewhat chaotic stages. Keupp and Gassmann (2009) conclude that at early stages of an internationalization, the role of the entrepreneur and the entrepreneurial team has not been considered in international business frameworks (Keupp and Gassmann, 2009). They also conclude that entrepreneurship studies do not fill the gap regarding international entrepreneurship as the majority of such studies excludes the international context. Sasi and Arenius (2008) note that Johanson and Mattsson's (1988) network theory of internationalization fails to address the importance of the decision maker and neglects the entrepreneur and his social networks.

In the next section, a description follows on how the four research papers have developed somewhat "naturally" as a part of this research. This is followed by an identification of the gaps in existing IE research and the research questions in the papers that aim to address these gaps.

5.1 Relationships as resources

To prepare for the interviews for this PhD research, preliminary interviews were conducted in the fall of 2009 with international software entrepreneurs (as described in the next chapter on methodology). The interviews were conducted to get a better understanding on how to approach the research topic with the international entrepreneurs. Following guidelines of inductive research, the interviews were as descriptive as possible until certain phenomena emerged from the data (Creswell, 2007). Eisenhardt (1989) recommends starting data analysis by first sifting through all the data. By doing this, the researcher can discard irrelevant information and combine the most important information. Understanding patterns was the main concern in the preliminary data analysis, which was followed by phenomenological analysis and analysis based on grounded theory. These exercises became a valuable part of the data analysis. Using this grounded approach which has been used in other studies (see, for example, Anderson et al., 2007; Jack et al., 2008) provided a way to "undertake empirical research which is informed by prior theoretical understanding, but which is not so determined or constrained by this understanding that the potential for making novel insights is foregone" (Finch, 2002: 57).

One theme which emerged was the importance of the relationship network of the international entrepreneur. The software entrepreneurs did not possess many tangible assets and their description of their business development relied much more on intangible resources, such as relationships with other software entrepreneurs, current and former colleagues, family,

suppliers, investors, customers and former classmates, all of whom were mentioned as an important part of the relationship network of the entrepreneurs. Network relationships clearly qualify for three of the four criteria that discriminate strategic resource value under Barney's (1991) encapsulation of the resource-based view (RBV): rarity, imperfect imitability, and non-substitutability. Network research, international marketing research and international entrepreneurship research all indicate that relationships qualify for the fourth—value—but little is known, from a firm or entrepreneur perspective, as to what represents value, nor how that which represents value does so (Lavie, 2006). Paper 1 discusses that gap from the perspective of the entrepreneur and addresses the following research question:

How do international entrepreneurs make relationships develop and work, how do they value these relationships?

5.2 The focus on new communication technology and the ventures of the international entrepreneur

Researchers have recognized how electronic communication plays a vital part in bridging emotionally distant and geographically diverse actors (Kavanaugh et al. 2005; Wellman, 2001). As the research on relationships as resources developed, there were other important aspects of the relationships that appeared in the interviews and the initial analysis which could be explored further. The research concentrated on relationships of international entrepreneurs and the open interviews strongly indicated that the software entrepreneurs relied heavily on new social web technology. This led to further research, participant observation and second interviews with the participating entrepreneurs regarding their social web networks in cyberspace, resulting in paper 2.

Relatively little research in entrepreneurship provides a link between multiple network levels. Of interest here for example is understanding how new communication technology impacts relationships and networks and how technological change may impact relationships. Paper 2 addresses how new communication technology affects the personal network and particularly the networking of the international entrepreneur. This paper examines international entrepreneurs and their network of relationships with an emphasis on new social networking tools on the Web. It is important to observe the most recent trends in online relationships with regards to international entrepreneurship. The reason is that internationalization requires more weak relationships as a foreign contact is not as likely to be or

The focus on the effect of exogenous factors on the ventures of the international entrepreneur

develop into a strong relationship as a domestic contact (Duque, Shrum, Barriga, and Henriquez, 2009). This research, based on the entrepreneurship perspective and focusing on the individual entrepreneur and his/her network of relationships, applies the SN perspective to consider how the sea of ties, often represented by new web social technology, changes the network or networking. The research uses both Grossetti's (2005) three types of constructing relationships and Freeman and Cavusgil's (2007) conceptual framework of the entrepreneur's perception towards internationalization. The effects of the Internet on the relationship formation of international entrepreneurs has not been researched in IE studies. Are large relationship networks on the Internet—often numbering hundreds of relationships—a usable tool in venturing.? As they have become much larger, do they have a particular role in the venturing of the entrepreneur? Paper 2 discusses that gap from the perspective of the international entrepreneur and addresses the following research questions:

Using Grossetti's (2005) three types of constructing relationships, the first question is what is the context of constructing relationships in international entrepreneurship? Using Freeman and Cavusgil's (2007) four types of mindsets, the second research question is whether there is a difference in the mindset of international entrepreneurs and how this affects their use of online social network sites to develop business relationships?

5.3 The focus on the effect of exogenous factors on the ventures of the international entrepreneur

As the research progressed, there seemed to be a difference between the relationships of the entrepreneurs, which could be explained by the strength of the domestic market. The literature on strength of relationships gives very mixed results of relationships formation of international entrepreneurs at initial stages of their ventures (Kontinen and Ojala, 2010). This turned the research towards exploring the issue of domestic presence, which is the issue raised in paper 3.

The paper on domestic market effects on INVs (Paper 3) addresses an issue in network research which has mostly been observed from the firm's perspective. There remain limited studies regarding the role of exogenous factors on the development of the international entrepreneur in the international new venture (INV) (Zahra and George, 2002). Studies have researched the role of inter-personal and inter-organizational relations in the development of "industrial districts" (Chetty and Agndal, 2008) and the

impact of alternative operationalization of “industry structure“ on ventures (Robinson and McDougall, 2001). Powell, White, Koput, and Owen-Smith (2005) observe industrial districts and industrial relations from a different angle by researching how ties shaped the network structure in the biotech industry. However, this field remains underexplored in international entrepreneurship. This research contributes to the IE literature by observing the personal relationships of international entrepreneurs and how they are affected by environmental factors such as the domestic market. This research continues to emphasize the importance of the entrepreneur (the entrepreneurship perspective), but realizes that the international entrepreneur should not be viewed as an isolated actor unaffected by external factors.

The research question in paper 3 addresses the gap in IE literature regarding domestic industry influence on the development of relationships of international entrepreneurs and asks:

Does the domestic market affect the strength and location of the entrepreneur’s relationships and the activeness of the entrepreneur in forming these relationships?

5.4 Forming trust and managing weak ties

The fourth paper presented in this dissertation is the most recent one. The paper develops further aspects regarding the development of weak ties in international business and presents research propositions on the role of cyberspace in relationship building in international entrepreneurship. These propositions together suggest that cyberspace may lead to a paradigm shift in relationship formation of international entrepreneurs.

The new relationship tools in cyberspace assist entrepreneurs to visualize their portfolios in the context of an entire network and not as a series of single relationships (Ozcan and Eisenhardt, 2009). The first proposition suggests that cyberspace provides new tools for relationship building that opens further the opportunity for individuals to have relationships, strong and particularly weak ties, with a large group of people. The first proposition is as follows:

International entrepreneurs who actively use cyberspace will have more relationships in managed relationship portfolios.

The second proposition suggests that most INV relationships are relatively new (Morse et al, 2007), and because trust may not have had time to develop, so they will be weak. Researchers have suggested that swift or

Forming trust and managing weak ties

fast trust is being developed, particularly among software entrepreneurs, where actors have neither a shared history nor a shadow of the future (Jarvenpaa, 1998; Blomqvist, 2005). Barney and Hansen (1994) distinguish weak trust, i.e., when partners have no significant vulnerabilities to exploit; semi-strong trust, when partners have contractual safeguards to protect them from opportunistic behavior; and strong trust, when formal safeguards are unnecessary because the parties are confident that their vulnerabilities will not be exploited (Currall and Inkpen, 2002; Dyer and Chuh, 2000). The second proposition is therefore:

International entrepreneurs who actively use cyberspace will have more semi-strong relationships in their relationship portfolios.

The new international entrepreneurs in cyberspace seem to rely on a variety of ties in their venturing. These ties may include anonymous crowd communities in cyber space (Roberts 2010), which the entrepreneurs use as large portfolios of weak relationships (Ozcan and Eisenhardt, 2009) to obtain ideas and opportunities. Roberts (2010) sees these crowds as a wide global community of international entrepreneurs within which ideas can be broadcast and within which there is a certain basic level of virtual embeddedness that will come into play only when a response is provoked. The third proposition is therefore the following:

International entrepreneurs who actively use cyberspace will show much greater diversity in their use of weak and strong relationships for their internationalization.

This chapter has presented gaps in the literature, research questions and propositions in the research papers. The next chapter presents the overall methodology of the research, which is followed by a chapter presenting the four research papers.

6 Methodology

In this chapter, a review of the overall research methodology is presented. A description of the research methodology, selection of cases, and analysis used in the four research papers is presented in each paper in chapter 7. This chapter focuses on the research strategy and research methods, particularly on the overall research methodology, the case study approach (introducing the cases), the interviewing process, and the analysis of the open interviews in the research papers. By doing so, the chapter gives a fuller picture of the underlying methodology used in this research. This chapter therefore adds depth to the underlying methodology in this entire dissertation but without repeating individual avenues of analysis which the research papers take.

6.1 Qualitative/Quantitative methods

This research is mainly based on qualitative analysis. Studies that have observed social networks or business networks of entrepreneurs or ventures have mostly been focused on qualitative methods (Jack, Moulton, Anderson, and Dodd, 2010; Sasi and Arenius, 2008; Elfring and Hulsink, 2007; Laanti et al., 2007; Hite, 2003; Harris and Wheeler, 2005; Halinen and Tornroos, 1998) and have used a case study approach. Hoang and Antoncic (2003) in a review on the literature on network-based entrepreneurship make a plea for more qualitative research in this area and argue that the potential contribution of such studies far outweighs their limits. The thorough analysis of individual relationships points therefore to the qualitative construct of the multiple case study design.

Even though researchers emphasize the value of the qualitative approach as an “intensive investigation of developmental patterns” (Larson, 1992: 79), they also stress the importance of mixing qualitative and quantitative methods (Coviello, 2006; Jack et al., 2010) as a bifocal lens (Coviello, 2006). A similar case has been made for the use of longitudinal studies to enhance the knowledge gained by cross-sectional analysis in the study of dynamic entrepreneurial networks (Greve and Salaff, 2003; Hoang and Antoncic, 2003; Jack et al., 2008).

One should note that there is no one common use of the terms *quantitative* and *qualitative* in social research (Betzner, 2008), a state of affairs often overlooked by IE researchers. Creswell, Trout and Barbuto (2002) describe quantitative data as including numbers, whereas qualitative

Qualitative/Quantitative methods

data include words, symbols, pictures, and other non-numeric data. Later, Creswell (2007) suggests that qualitative research is

metaphorically ... as an intricate fabric composed of minute threads, many colors, different textures, and various blends of material. This fabric is not explained easily or simply. Like the loom on which fabric is woven, general worldviews and perspectives hold qualitative research together (p.35).

In line with Eisenhardt (1989), most researchers in international entrepreneurship use various forms of data and interviews in their case study research (Coviello, 2006; Harris and Wheeler, 2005; Ellis, 2011). The qualitative and quantitative methods are therefore frequently mixed in case study research in international entrepreneurship “given that qualitatively based data can be analyzed and interpreted with a bifocal lens, that is, both qualitatively and quantitatively” (Coviello, 2006: 715). It is very important to note that methods are not synonymous with data type. For example, structured or semi-structured interviews may “collect numerical data as well as open-ended comments in the form of anecdotes or stories, and interviews may collect stories as well as numerical information” (Betzner, 2008: 20).

Scholars in other fields of business with a longer theoretical tradition than IE have criticized their own fields for having a “theory fetish”, which “prevents the reporting of rich detail about interesting phenomena for which no theory yet exists” (Hambrick, 2007: 1346). IE is not yet on as stable a theoretical ground (Kiss and Danis, 2008) as many other research fields. This provides opportunities for theory development but requires a clear research methodology. There are still too many entrepreneurship studies lacking a clear lens regarding the unit of analysis (Jack et al, 2010), and ignoring theories and importing different theories without considering the key and distinguishing qualities of entrepreneurial phenomena (Zahra and George, 2002). The liability of newness for an emerging theoretical field may lead to a lack of sophisticated research methods and of the theorizing and processing of data where the accuracy in methodology is overtaken by poor processing of mixed qualitative and quantitative data in which “*disconfirming evidence*” may be dropped (Eisenhardt, 1989: 540).

The grounded theory (GT) approach has not been popular among international business researchers. Scholars in entrepreneurship have used grounded theory but state specifically that they do not use “full blown grounded theorizing” (Jack et al, 2010) and instead focus on using the constant comparative element of a grounded approach (Anderson, Park, and Jack, 2007), which has become an accepted approach in entrepreneurship

analysis (Jack et al., 2010). GT stresses an open-minded attitude towards the empirical data (Creswell, 2007). For many GT researchers the prerequisite for such work is that there is no preexisting theory when the inductive interviews are conducted. This seems well suited for the emerging IE research. However, scholars have argued that the strength of GT's inductive way of working with data is weakened by its emphasis on avoiding established theoretical categories during coding (Goldkuhl and Cronholm, 2007). This is probably the reason why "full blown" GT theory is not frequently applied in IE research. The method used in this research is based on mixed methods for collecting data, such as interviews, open or semi-structured, participant observation, and secondary data analysis (Creswell, 2007). In line with most IE studies, the research analysis is not full blown grounded theorizing, but utilizes the constant comparative element of a grounded approach.

6.2 Case studies

This research is based on case studies. The case study is a strategy in research that focuses on understanding the dynamics present within a single setting (Eisenhardt, 1989). This method is the most common research method in IE research (Coviello, 2006). Within the case approach, researchers need to be clear about techniques. There is broad consensus that when tackling social phenomena such as relationships in networks, detail is so essential to the research process that studies with strong qualitative background are to be preferred (Jack et al., 2010; Hoang and Antoncic, 2003; Coviello, 2006).

Case study methodology calls for a variety of data collection techniques. The research papers are all based on the qualitative approach to the study of content and the embeddedness in relationships of international entrepreneurs, but with some enrichment provided with the use of participant observation (as in paper 2) and panel (as in paper 3). The approach is thus not simply the uncritical methodological "mix and match" of which much multi-method entrepreneurship research has been justifiably accused (Curran and Blackburn, 2001). The strength of the research, then, is the multidimensional nature of the research methods employed.

6.3 Interview participants

Paper 1 and 2 use the same initial interviews for the research. Paper 3 adds software entrepreneurs in the marine sector. Also, in paper 3 seven

Interview participants

individuals, the panelists, were interviewed. The list of individuals interviewed totaled 26 and can be found in Table 6.1.

Table 6.1. Participants

Business activity	Established	Role	Paper 1	Paper 2	Paper 3
Mobile social matching software	2000	MD	X	X	
Information security software	1998	MD	X	X	
Mobile software	2004	MD	X	X	X
Computer games	2003	MD	X	X	X
Ticketing software	2005	MD	X	X	
Mobile technology	2008	Founder	X	X	X
Web/Mobile technology	2005	MD	X	X	X
Networking technology	2008	Chairman	X	X	X
Flight search engine software	2004	MD	X	X	
Data Mining	2008	MD	X	X	
Software for web crawling	2008	MD	X	X	X
Software solutions for gaming	1998	MD	X	X	X
Software and equipment for seafood processing	2005	MD			X
Weighing equipment for seafood and sea trading software	2003	MD			X
Software and equipment for food preservation	2007	MD			X
Software and equipment for seafood processing	2003	MD			X
Software for food safety	2006	MD			X
Marine energy management software solutions	2002	MD			X
Software energy management on board ships	2007	Dep. MD			X
Icelandic Federation of Industry		Specialist			X
Iceland's largest computer game firm		MD			X
Icelandic Venture Fund		Specialist			X
Iceland Game Association		Leader			X
Advising firm		Computer scientist			X
Iceland largest food processing machinery firm		Board member			X
Iceland largest food processing machinery firm		Chairman			X

A database containing all exporting firms in Iceland was used to identify a list of candidates of which 12 software entrepreneurs were chosen for the first two research papers (see further description of candidate selection in papers). There is difficulty in determining what high-tech firms are mainly software and/or hardware. The software firms with significant exports are mainly in Internet software, gaming, marine, and education. The third research paper compares software entrepreneurs in gaming technology and marine technology. A complete list of software firm in the marine industry did not exist, but a list of game technology firms at the Federation of Industry and the Association of gaming firms in Iceland was available. The researcher collected information about all high-tech firms in the marine sector in Iceland by observing the Internet and export directories and by contacting the firms themselves. Twelve gaming firms were included in the initial list. Of these firms, 7 entrepreneurs were chosen from each group for paper 3.

6.4 Preliminary interviews

Preliminary interviews were carried out with four international entrepreneurs who were not a part of the research data but were all international software entrepreneurs originating in Iceland. These interviews were carried out in the Fall of 2009, were all open interviews, lasted 60–80 minutes, and followed guidelines, e.g., by gaining permission from The Data Protection Agency in Iceland. The interviews were conducted to get a better understanding of how to approach the research topic with the international entrepreneurs. Following guidelines of inductive research, the researcher was as descriptive as possible until the certain phenomena emerged from the data (Creswell, 2007). The interest in the personal network of the international entrepreneur was especially evoked by the complex and somewhat chaotic network of relationships described by the international entrepreneurs. The participants had not thought of their relations as something which needed to be structured and managed, but they all emphasized the importance of various personal relations in their internationalization. The special emphasis placed in this study on the international entrepreneur was also sparked by the fact that these international entrepreneurs had all established various SMEs, but the networks of these SMEs were mostly based on their personal networks, many of which had been built through years of business activities of the entrepreneur. To observe an emerging SMEs network would be useless without taking into consideration the entrepreneur him/herself.

Preliminary interviews

Some important observations were realized, making the interviewing structure for the research more focused and open at the same time. The observation made of the four interviews was the following:

Participants are not “aware” of networks

The interviews indicated that the international entrepreneurs did not view themselves as partners in informal or formal networks. They seemed to relate the concept of formal relationships to, among others, industrial networks, strategic networks among businesses, or individual contracts between a supplier and a producer. Neither did they sense their relationships as a very structured network that can be managed. This is in line with Cross, Borgatti and Parker (2002), who argue that many organizations are unaware of the extent to which formal activities are buttressed by various informal connections. The interviewed had no clear idea of what a network is. In Icelandic the concept can be translated as “tengslanet”. This concept seems to have a fairly negative aura around it. Many Icelanders would probably perceive the concept in the same way as “clique”. This makes the qualitative approach even more important, as formal questionnaires regarding various relationships could be misinterpreted. It is important to keep in mind in a research project which specializes in networks that these networks are in many ways so informal that “members” do not necessarily identify themselves as members of these networks. The members are aware of their interconnection through, for instance, research and development, production, marketing, sales or otherwise. They see themselves only as having a lot of relations, but do not necessarily see how all or many may connect. The lack of understanding of the main research topic needed to be taken into account. Due to this, the interviews were more difficult as the interviewer had to begin to define “networks”. The risk was that by using the term “network” there was more likeliness that the interviewer’s ideas had already been planted. Instead, the interview emphasized on the relationships of the international entrepreneur in line with social network surveys that focus on name generating of relations. Interestingly, when the interviewed had been introduced to the concept of relationships, they expressed very unclear idea about their own relationships. They had been in various relations with certain entrepreneurs in different countries, their colleagues knew people in a country of interest, and they knew a specialist at the Trade Council or at the Embassy who helped them frequently. One mentioned that visiting trade shows were his major relationship network, that is, not any particular individual at the trade show, but the trade show itself. The international entrepreneurs did not distinguish clearly, therefore, between organizations

and individuals in their relationship networks and the strength of relationships had to be carefully researched by the interviewer. The questions in the preliminary interviews were in many ways changed in the research interviews as a result.

Participants show interest in managing ties

When the participants became better aware of the concept of relationships in international business and the ties between different actors, they expressed interesting views about the relationship ties. The tie can be either weak or strong, but the interviewed indicated that it was also a question of how skilled entrepreneurs are in continuously working with the tie and managing the relationship by keeping in touch, managing a large portfolio of weak ties, remembering special occasions of other actors, celebrating success, inviting business contacts to personal events, etc. As the entrepreneurs did not in the beginning of the interviews show strong signs of seeing their relationships as a manageable network or a relationships structure that might have a strategy and be managed, this was even more interesting.

The network on a sheet of paper

As the interviews proceeded, the researcher tested whether it would help the interviewed to remember ties if they would be assisted in remembering ties in line with Lin (2001). This led to a test of two of the interviewed in which they viewed a list of various possible relationships in the structured part of the interview. This became an interesting exercise that the participants viewed favorably, as the lists assisted them in remembering various weak ties which play an important part in this research. The resulting diagrams that were shown to the participants are presented in Figure 6.1 and 6.2 and discussed further in 6.6.

6.5 Interviewing process

The research interviews were conducted in 2010. In an open-ended interview, the respondents were asked to comment about specific issues, the interviewee participating in the process by giving extra input, providing insights into events, or making other suggestions. For the purpose of name generating and name interpreting, a number of questions were posed to the interviewee which provided some structure to the interviews in the three step approach commonly employed to collect personal network data (Matzat and Snijders, 2009; Burt, 1984). First, to obtain a list of the most important relationships, each participant was asked: “What do you think about when

Interviewing process

you consider the future of your business?”, with a follow-up question: “Who do you discuss [this issue] with, or consult with?” (Harris and Wheeler, 2005). Second, a series of questions followed, called name interpreters, which observed the characteristics of the individuals who he/she is in relations with and the relationships they have. Third, further data about the relationships between the participant and the individuals he/she named were collected. This led to a list of relationships which can be defined as ties and gave indications about the strength, embeddedness, and value of those ties. Variations in the set of initial network ties may have consequences for the development of the SME (Greve and Salaff, 2003). Other questions were addressed as well. The importance of the role of knowledge of the foreign market and its intensity was investigated as an influencing factor that determined the speed of entrepreneurial internationalization (Oviatt and McDougall, 2005). Interviewees were asked how relationships affected the process of growth and international development and how the initial internationalization came about. The network size was examined.

The interviews needed to be guided conversations, but they were also based partly on structured queries. This made the interviewing process a delicate part of the research which needs to be carefully considered. Even though the researcher was pursuing a consistent line of inquiry, the stream of questions was planned to be fluid rather than rigid (Rubin and Rubin, 1995). Structuring the interviewing process was necessary to direct discussion to relevant topics (Eisenhardt, 1989). It was also important to conduct the interviews in as open a way as possible so that data were not steered. Harris and Wheeler (2005) build a similar research methodology on entrepreneurs in internationalization. They begin their interviews with non-directive questions and then move to some structuring of the interview process. After the entrepreneurs had raised “native categories”, the interviewer would ask follow up questions with standardized questions. Each relationship the interviewee had mentioned was followed by a set of questions on these relationships. In line with Harris and Wheeler (2005) and Elfring and Hulsink (2005), the interviews were both open in-depth and structured. This triangulation method, using both the open and the structured form of interviews, allows a greater role of the interviewee in the interview and the participant may be seen as an informant rather than a respondent. This is well suited to this study as the aim was to collect experiences of the participants who have actually been in the process. Table 6.2 presents the structured interviewing protocol. As mentioned previously, the planned analytical model building also strengthened this method as it allowed the informants to be actively involved with the structuring of the model, prompting them to suggest other persons to interviewed, etc. (Yin, 2009). As Kvale and Brinkman (2009) emphasize:

The qualitative research interview attempts to understand the world from the subjects' point of view, to unfold the meaning of their experiences, to uncover their lived world prior to scientific explanations (p.1).

Table 6.2. Open in-depth interviewing protocol

<p>Date and time of interview:</p> <p>Place:</p> <p>Interviewee:</p> <p>1. Background of interviewee:</p> <ul style="list-style-type: none"> Family—family involvement in the business Education—tech or non-tech Study/work—here and abroad Upbringing—where <p>2. Interests</p> <ul style="list-style-type: none"> Hobbies—related to work/family Leading vs. researching <p>3. Relationships</p> <ul style="list-style-type: none"> Friends—in business Friends—‘community of knowledge’ Using the Internet for relationships The origins of international relations <p>4. The crisis</p> <ul style="list-style-type: none"> Affects on business Affects on relationships here and abroad <p>5. Self-perception</p> <ul style="list-style-type: none"> How would you describe yourself as an entrepreneur? Well connected/not well connected—abroad and at home Trust/respect <p>6. Anything to add</p>

6.6 Structured interviewing

For the purpose of name generating and name interpreting, there were a number of questions for the participant that make the interviews structured. Almost all network studies have been conducted by means of personal

Structured interviewing

interview (Matzat and Snijders, 2009). The interviewer is available for assistance and the interviewer can motivate the interviewee to continue answering. The most used method to collect personal network data proceeds in three steps. Firstly, the participant is confronted with a name generator where he/she is asked to list a limited number of individuals with whom she is in close relationship. Secondly, a number of questions, called name interpreters, follows about the characteristics of the individuals with whom he/she is in relation and about the relationships he/she has. Thirdly, further data about the relationships between the participant and the individuals he/she has named are collected (Matzat and Snijders, 2009, Burt, 1984).

Name Generator

Researchers in personal networks frequently use name generators to elicit information about the network members and their ties (Wellman, 2007). Even though the method of name generation and name interpretation is mostly used in surveys, similar methods have been used in case studies on international entrepreneurs (Harris and Wheeler, 2005, Elfring and Hulsink, 2005). Burt (1992) suggests a name generator that relies on three to five alters. Researchers ask participants a broad question such as “who are you close with” and then continue about specifics regarding personal networks. As the name indicates, the name generator generates names. The product is a list of individuals (or organizations) that are an important part of the individuals’ network. The name generator in this research was brought up after asking the interviewed about the most important issues regarding the future of his/her entrepreneurship. The name generator was:

- Who do you discuss (this issue) with?
- Are there or have there been other people important to you in the development of your entrepreneurship with whom you would discuss (the issue)?

In social network surveys the name generators are often more general, asking individuals who would water their flowers if they went away, etc. When asking international entrepreneurs in SMEs, the name generator is more related to a topic of business interest to the entrepreneur. Once the list was established in cooperation with the interviewee, the researcher then asked again: “Is there someone important missing here?” (Grossetti, 2005).

People being interviewed tend to forget weak relationship ties more easily (Lin, 2001). The risk in this research was that weak ties might have been forgotten and, given the lack of understanding of the concept of

“networks”, that the interviewed may have had difficulties thinking broadly or strategically in the short time frame of the interview about all his/her relations/networks relating to internationalization. As the weak ties can be of significant importance in the study of international entrepreneurs, the researcher addressed possible weak ties with the interviewed by showing them diagrams of possible relationship networks to assist the entrepreneurs being interviewed about their relationships. The diagrams used in the interviewing included all major possibilities of networks of international entrepreneurs abroad. This was done to help the international entrepreneurs search their memory for strong and weak ties, especially the weak ties.

The diagrams presented in Figure 6.1 and 6.2 are the product of the test interviews and research in various literatures on business and entrepreneurial networks (Ellis, 2000; Elfring and Hulsink, 2007; Halinen and Tornroos, 1998; Hite, 2003, Chetty and Campbell-Hunt, 2003). The interviewed were first shown a diagram of possible relationships in the domestic market. They were asked to carefully consider their domestic network and then evaluate them on the basis of most valuable and least valuable (Figure 6.1).

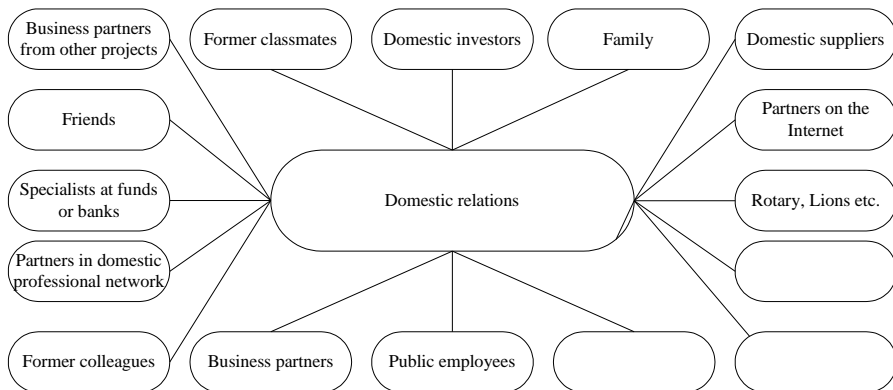


Figure 6.1. Diagram of possible relations in the domestic market

The interviewed were then presented a diagram of possible international relationships (see Figure 6.2). They were asked to carefully consider their relationships in the international market and then evaluate them on the basis of types of relationships, to try to evaluate weak and strong ties, embeddedness of ties, etc. By showing the diagrams of various relationships after the initial questions regarding relationships, such an approach may encourage the interviewed to think about different relationships, especially weak ties.

In line with Pettigrew (1987), the initial question in focus is on the context of the relationship network.

Structured interviewing

Table 6.3. Structured interviewing protocol

<p>Date and time of interview:</p> <p>Place:</p> <p>Interviewee:</p> <p>Questions:</p> <p>What do you think about when you consider the future of your entrepreneurship ventures?</p> <p>(Follow up questions on the issues raised by the entrepreneur on previous question)</p> <p>After explanation of each issue raised by the interviewed:</p> <p>Who do you discuss (this issue) with? (content) (name generator)</p> <p>How would you describe your relations with (name) on (this issue)? (name interpreter)</p> <p>(Addressed for each relationship mentioned by the interviewee)</p> <ul style="list-style-type: none">-When and how did you meet this person?-Who introduced you?-Can you describe your relationship with him/her?-How would you value the business opportunity of this contact?-Any other comments on development of this relationship?-Are there or have there been other people important to you in the development of your entrepreneurship who you would discuss (the issue) with? <p>Any one missing? (present list)</p> <p>On the two diagrams a list of possible relations in domestic and international business are mentioned. Do they remind you of anything that might be missing?</p> <p>Anything else?</p>

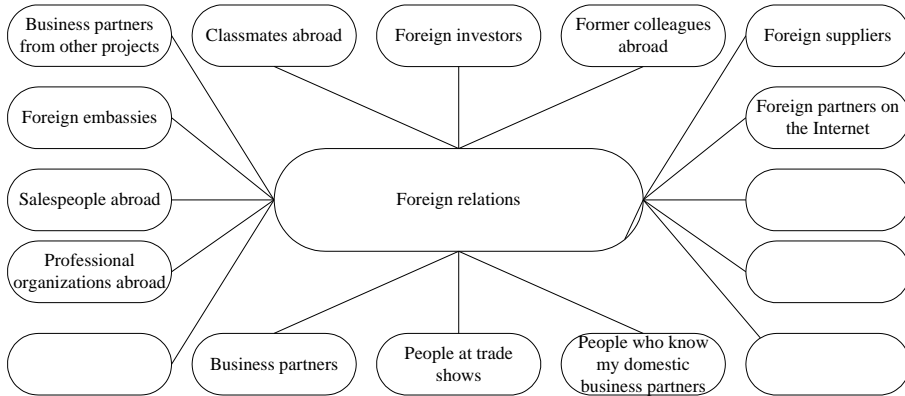


Figure 6.2. Diagram of possible relations in the international market

Name interpreter

Following the name generator is the name interpreter (Burt, 1997). Name interpreters are the questions that go deeper into the relations between the interviewed and the people the interviewed has mentioned as part of his/her personal network. The Interview Protocol in this research is presented in Table 6.3 and follows partly the interviewing protocol by Harris and Wheeler (2005). As the research question addresses what the network contains and how it is used, the questions take note of this focus. There were also questions related to both name generators and name interpreters.

6.7 Data Analysis

Eisenhardt (1989) recommends starting data analysis by first sifting through all the data. By doing so the researcher can discard irrelevant information and combine the most important information. Understanding patterns by using data coding was important. In the preliminary data analysis, textual analysis was used based on grounded theory to analyze the data. These exercises became a valuable part of the data analysis and a good preparation for analysis in paper 1 and paper 2. More importantly, this initial “sifting” laid the ground for the set of research papers to follow.

In the initial coding, the following themes emerged:

Individual’s social relationships

- Current and former colleagues
- Clusters and relationships

Perceptions and beliefs

Data Analysis

- Weak and strong relationships
- Iceland's working culture
- We get things done

Educational/work background

- Work abroad
- Study abroad
- Cooperation with professors
- Global or ethnocentric mindset

The business environment

- Government
- Banks
- Economy and the banking crisis

Industry Clusters

- Important to build trust
- In the industry cluster, there is "same language"

The relationship ties

- NGOs
- Trade show participants
- Suppliers and brokers
- Investors
- Cyberspace
- The strong ties
- Family and friends
- People in same business in Iceland
- People in same business abroad
- Sellers

Coincidental or managed relationship expansion

- Relations by wondering around
- Ability to lead
- Social skills
- Web

Exercising an axial coding, the categories of open coding were analyzed and related to the categories of information to the central phenomenon category (Creswell, 2007). Three categories were chosen as they lay close to the central phenomenon of network patterns and the international entrepreneur's perception and use of the network and the entrepreneur's background. These categories were each linked to more than one category in the open coding; they stood out as umbrellas for further exploration in the PhD study. Figure 6.3 describes the three categories chosen for further research.

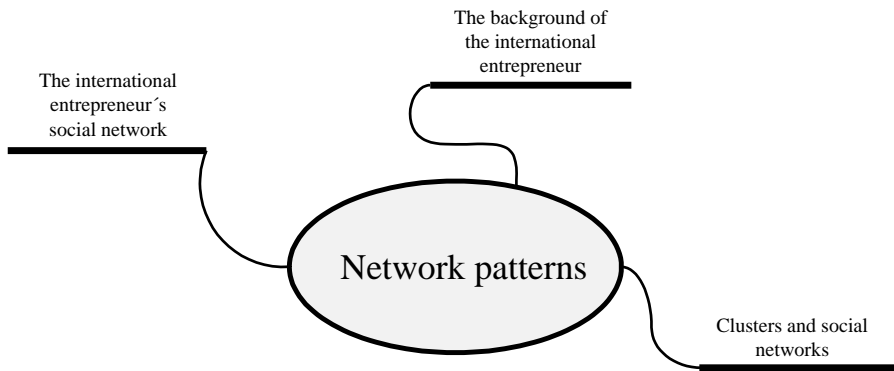


Figure 6.3. The categories of the open coding in initial interviews

These are the three categories:

1. The international entrepreneur's social network

What does the relationship network consist of? This category should assist in the formal mapping of relationship network ties and the strength of ties of international entrepreneurs. These subcategories are included:

- Current colleagues
- Former colleagues
- Family
- Supplier
- Customers
- NGOs
- Trade show participants

2. Clusters and social networks

As the discussions continued, it became obvious that the international relationship networks of the entrepreneurs were based on weak and strong

Data Analysis

ties related to particular industry clusters or -markets, fisheries, service, banking, and game technology..

These subcategories are included:

- Icelandic experience and domestic specialization
- Work (or industry) ethics
- People in same business
- Suppliers and brokers
- In industry clusters

3. The background of the international entrepreneurs

Finally, the third category is the background and skills of the international entrepreneur. This category consists of the education, work, and any other related background of the entrepreneur. How does this individual seem to work with people in an international environment? Which social or leadership skills does he/she have? These subcategories included:

- Social skills
- Internet skills
- Global mindset
- Educational background
- Ability to lead
- Relationship management
- Work abroad

Using this grounded approach which has been used in other studies (see, for example, Jack et al., 2008) provided a way to “undertake empirical research which is informed by prior theoretical understanding, but which is not so determined or constrained by this understanding that the potential for making novel insights is foregone” (Finch, 2002: 57).

This post-positivist approach (discussed in chapter 1 and used in this research) does not follow the qualitative guidelines of grounded theory. Even though the data analysis was partly based on the grounded approach, the analysis was not “full blown” grounded theorizing, with axial and radial coding in all the research papers. Instead, understanding patterns of change was the researcher’s concern.

Wolcott (1990) argued that the objective with qualitative work is not to accumulate all the data that you can, but instead to identify and then to

reveal those essences with enough context to allow the reader to understand the situations individuals are immersed in. Data was then examined and explored for detail relating to these themes, which either had emerged in the open interviews or were under consideration in the IE literature. More of the themes explored in the three research papers resulted from the open interviews rather than from reviewing current literature in IE. The cluster effect or the domestic market influence discussed by the participants in the open interviewing process became the theme of paper 3. Also, the effects of new communication, which was apparent in the interviews, became the theme in paper 2. With these emerging themes or categories, the analysis focused on comparing and contrasting patterns of activities to further determine these categories. So, incidents and experiences, observations and responses were continually compared with others within emerging categories. This process helped to improve description, understanding, and explanations, but it also helped to ensure confidence in the interpretations.

6.8 New research method analyzing web relations in IE

As analyzing web relations of international entrepreneurs in INVs is a recent phenomena, this research contributes to IE. The research presented in paper 2 introduces a methodology which focuses on relationships in cyberspace, such as LinkedIn, and uses a combination of participant observation and interviews to identify how network relationships are shaped.

Creswell (2007) encourages researchers designing qualitative studies to include new and creative data collection methods. Researchers have argued that online communication technologies improve network research (Watts, 2007). Lewis, Kaufman, Gonzalez, Wimmer, and Christakis (2008) argue that open, evolving social network sites represent remarkable new research opportunities which are ideally suited for data collection and analysis

Kozinets (2002) developed "netnography" as an online marketing research technique. Netnography uses the information that is publicly available in online forums to identify and understand the needs and decision influences of relevant online consumer groups. Netnography emphasizes that researchers learn as much as possible about the groups and the individual participants they seek to understand by using online technology. As suggested by Kozinets (2002), the data collection included both direct copies from the online social network and direct interviews, observations of the interactions, and our interpretation of meanings.

The researcher met with the participants for the second face-to-face interview in which the focus was on their preferred professional networking

New research method analyzing web relations in IE

tool on the Web. All of them chose LinkedIn as their primary business network. The procedure was as follows:

1. The researcher went over the list of on average of 60 random relationships of each of the participants on LinkedIn in cooperation with the participants, totaling 720 relationships. Only relationships that were described as both friendship and business or business were identified. Current co-workers were omitted as in many of the firms these relationships were initiated by the firms so that all of the co-workers would be connected on the professional network. The number of random contacts was determined by the estimated time for the second round of interviews that we were able to get from the entrepreneurs to assess the online relationships. Most of them had dedicated an hour for reviewing their lists of relationships and we were able to obtain an average of 60 relationships from each of them.
2. Participants were asked the same questions regarding individual relationships as in the initial interviews and these were:
 - a. How did you first meet this person?
 - b. Who introduced you or who initiated the original contact?
 - c. Can you describe your relationships?
 - d. How would you value the business opportunity from this relationship?
 - e. Any other comments on development of relationships?

Defining ties as weak or strong was based on four criteria: the frequency of contact, the emotional intensity of the relationship, the degree of intimacy, and reciprocal commitments between the actors involved (Granovetter, 1995). The answers and discussion that followed from particularly (c) and (d), but also from (a) and (e) gave information on the frequency of contact and the emotional intensity of the relationship, intimacy, and commitment. Thus, all four criteria were used to determine the strength of ties. As an illustration, a short version of some of the answers is as follows:

- a. "I met him at a conference, I think in Berlin."
- b. "Don't remember."
- c. "We met again in Copenhagen but just in a large group and there was no follow up."
- d. "Could be important if we go to Denmark."
- e. "He is very clever in IT media technology."

These examples illustrate low frequency, no intimacy, low intensity, and low commitment.

Following the weak tie analysis of the participant's online relations, an analysis of Grossetti's (2005) three types of contexts for constructing relationships followed. The three types are the collective form, common concern, and relationships derived from other relationships.

In addition, for triangulation purposes and consistent with netnographic methods, open online messages were collected from the participants on LinkedIn. As Kozinets (2002) indicates, "...interesting and useful conclusions might be drawn from a relatively small number of messages, if these messages contain sufficient descriptive richness and are interpreted with considerable analytic depth and insight..." (p. 64).

Researchers have argued that online communication technologies improve network research (Watts, 2007). Lewis, Kaufman, Gonzalez, Wimmer, and Christakis (2008) argue that open, evolving social network sites represent remarkable new research opportunities which are ideally suited for data collection and analysis. In paper 2 the research methodology is described further. The core idea is to utilize the active relationship networks of the participants, often consisting of hundreds of contacts, in order to observe the relationships of international entrepreneurs. This new methodology requires a trusted relationship between the researcher and the participants and opens exciting research doors in the area of relationships in IE.

6.9 Summary

This chapter has elaborated the underlying research strategy in the dissertation. The separate research papers further develop individual research strategies which are described in each paper. IE researchers commonly employ a pragmatic stance in mixed methods where the researcher is allowed to "learn information that is independent of, or in contrast to, existing theory" (Sutton, 1997:99) without losing sight of the importance of rich data and rigorous research methodology (Coviello and Cox, 2006). This chapter has also identified the triangulation method of the mixed research. By giving a fuller picture and a more detailed account of the overall interviewing and analytical methods used in the research papers, the reader should have a more holistic view on how the relationships of international entrepreneurs in INVs/born globals were researched.

This dissertation now turns to the four research papers.

7 Four Papers on International Entrepreneurs and their personal relationship networks

This chapter presents four research papers. The focus of these papers is on the networks and relationships of international entrepreneurs where different angles are researched. The papers are the following:

1 Relationship portfolio strategies for internationalizing entrepreneurs: a resource-based approach.

This paper was submitted and accepted at EIBA in Porto in December 2010 as a competitive paper.

2 Building international entrepreneurial virtual networks in cyberspace

This paper has been accepted for publication in *The Journal of World Business*. The paper was first presented at a workshop at Stanford University in April 2010. It was also presented at a workshop at the University of Edinburgh in September 2010. An earlier version of the paper was submitted to and accepted for Þjóðarspejillinn, a conference at the University of Iceland, School of Social Science. The paper was then submitted and accepted at EIBA as a workshop paper in Porto in December 2010. This paper was then submitted and accepted at AIB Japan in June 2011 as a competitive paper.

3 Domestic Market Context and International Entrepreneurs' Relationship Portfolios.

This paper is in the second revision process at the *International Business Review*. The paper was first submitted and accepted as a competitive paper at AIB-UK chapter conference in Edinburgh in April 2011.

4 Cyber space: A paradigm shift for international entrepreneurs relationships?

This paper was reviewed and accepted as a chapter in the Harris, S., Kuivalainen, O. and Stoyanova, V. (Eds.) *International Business: New Challenges, New Forms, New Perspectives* (Palgrave Macmillan, Hampshire, England, 2012).

PAPER 1. Developing relationship portfolios for initial internationalization: a resource-based perspective

Developing relationship portfolios for initial internationalization:
a resource-based perspective

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Abstract

We examine the relationship portfolios of entrepreneurs with a resource-based perspective to find out how different types of portfolios are developed and their effect on initial internationalization. We study twelve software entrepreneurs as they begin internationalization and the properties of the relationships that they seek. Their responses point to a relationship portfolio framework that reflects relationship embeddedness in international markets, and relationship strength. Their approaches reflect the relationships they start with, and their dynamic capability for developing new relationships. Weak 'introducer' relationships are invaluable for those with the dynamic capability to use them fully.

KEYWORDS:

Internationalization

International Entrepreneurship

Networks

Resource-Based View

Dynamic capabilities

Empirical study

Introduction

The importance of network relationships in the internationalization of firms is well and long recognized within various research streams in international business, including internationalization process research (Johanson and Vahlne, 1977; 2003), international marketing research (Elg, Ghauri, and Tarnovskaya, 2008), relationship perspective research (Dyer and Singh, 1998; Madhok, 1995), network research (Larson and Starr, 1993) and international entrepreneurship research (Oviatt and McDougall, 2005; Coviello, 2006). Network relationships between firms or individuals are especially critical for the internationalization of small high-tech firms (Coviello, 2006). Our understanding as to how managers or entrepreneurs make these relationships develop and work, how they differ, and how they operate in different contexts and at different phases in the internationalization process, however, remains limited (Slotte-Kock and Coviello, 2009; Ojala, 2009).

Relationships are valuable resources for entrepreneurs, making a resource-based perspective (Wernerfelt, 1984; Barney, 1991) appropriate as a theoretical foundation (Liu, Ghauri and Sinkovics, 2010). Network relationships clearly qualify for three of the four criteria that discriminate resource value under Barney's (1991) encapsulation of the resource-based view (RBV): rarity, imperfect imitability and non-substitutability. Network, international marketing and international entrepreneurship research all indicate relationships to qualify for the fourth, value, but we know little, from a firm or entrepreneur perspective, as to what does and what does not represent value in the internationalization process, nor how it does so (Lavie, 2006).

In the next section we integrate our resource-based entrepreneur level perspective with theory and research undertaken from entrepreneur, firm, dyadic and network levels. Business relationship research indicates that the main determinant of relationship strength for internationalizing entrepreneurs is trust, though it is unclear whether strength is associated with value, or how. Network research indicates international embeddedness to be the most important characteristic of relationships for internationalization. We then ask how entrepreneurs value their international relationships and how they balance the benefits with the costs involved in developing relationship portfolios that will help their international growth. We examine the relationships portfolios of twelve internationalizing software entrepreneurs.

We find that these entrepreneurs implicitly adopt a resource-based view themselves: they value strong internationally embedded relationships the most for the process of internationalization, but these relationships are scarce and costly and

difficult to develop. As a result, the most used relationships are not their most revered, but the weak internationally embedded relationships that can be more easily resourced. This leads us to a managerially-based resource-based research framework with which we can analyze international entrepreneurs' proactively managed relationship portfolios (Barney, 1997; Ozcan and Eisenhardt, 2009). Their approaches to relationship portfolio development differ and reflect the qualities of the relationships they start with and their dynamic capabilities for developing new relationships for internationalization Teece, Pisano and Schwen, 1997). This contributes to some ideas pioneered within this journal (Weerawardena, Sullivan Mort, Liesch and Knight, 2007) an entrepreneurial level understanding of the role of relationships in the internationalization process, and how it depends on the resources and dynamic capabilities of the firms involved.

Relationships as valuable unique resources

The importance of relational resources and their development and use between firms has long been recognized (Koka and Prescott, 2002). It makes sense for entrepreneurs to work through cooperative business relationships rather than as competitive individualists (Casson, 1997). For young internationalizing firms, these relationships can be some of the most valuable resources of all (Chetty and Campbell-Hunt, 2003; Harris and Wheeler, 2005).

The resource-based view (RBV) of the firm has evolved from the precepts of “Austrian” economics through the work of Schumpeter (1942) and Penrose (1959) to become a central paradigm of management research (Hill and Deeds, 1996; Rugman and Verbeke, 2002). It is concerned with firms' unique tangible and intangible resources (Wernerfelt, 1984; Grant, 1991), which are valuable, rare and difficult or impossible to replicate (Barney, 1991). Managers keep them unique by using them in unique ways (Collis and Montgomery, 1995; Peteraf, 1993), or by combining them so that they cannot easily be imitated (Dyer and Singh, 1998). Relationships qualify well as unique resources.

Like many others, relationships are resources whose benefits are normally both highly uncertain and largely intangible. Also, relationship resources are neither owned nor controlled by the firm; ownership, control, and the benefits that are derived are shared. This leads to a highly distinctive and important aspect of relationship resources. Their clearly depends on the attributes and qualities of the other parties (with whom the relationships are held). But it also depends on the nature and quality of the relationship itself, because it is only in the interaction within the relationships that benefit will be derived.

Here, firm, relationships, and partner-specific factors all co-determine the resource-based rents that can be extracted, making them even more unique and difficult to replicate (Lavie, 2006). As Lavie, (2006) summarizes, 'the nature of relationships may matter more than the nature of resources' (p642). Being concerned with relationships of value in internationalization, we will next examine the value of relationship resources that can help internationalization, before examining the nature of the relationships that might best bring that help.

International embeddedness in relationships

Relationship linkages determine the access to foreign markets and are critical for early internationalization (Johanson and Vahlne, 2003, Sharma and Blomstermo, 2003; Coviello and Munro, 1995). They can be critical sources of advice, opening doors to information in the chaotic environment in which they operate (Krackhardt, 1992). They enable entrepreneurs to spot opportunities (Ardichvilli, Page and Wentling, 2003) and acquire resources (Batjargal, 2003; Burt, 1992) from those different territories.

Most important, they offer introductions to other relationships that they may have in other countries (Welch and Luostarinen, 1993). By introducing the entrepreneurs to others who are well embedded within the areas of interest, personal relationships open doors for new foreign market opportunities and build further market knowledge (Harris and Wheeler, 2005). These 'introducers' (Johanson and Mattsson, 1988) or 'go betweeners' (Uzzi, 1997) are 'local bridges' that provide links to people and firms between actors in different markets that would otherwise be disconnected (Krackhardt, 1992, Oviatt and McDougall, 2005). These introducers can therefore be local but provide internationalizing firms with access to distant markets.

These relationships are 'embedded' in potentially useful international circles that could become markets. Granovetter (1985) defines embeddedness as the degree to which individuals are enmeshed in a social network. As our concern here is with entrepreneur's relationships in internationalization, we are concerned with the embeddedness *of their relationships* within other *international* circles and networks, which may provide knowledge and market access, depending on whether that embeddedness is in territories, environments and markets that are of value (Yli-Renko et al., 2002). Inevitably, some networks, territories, fields of knowledge and social or professional circles will be more valuable than others, but the potential value of relationships for helping internationalization in a specific market or territory will depend on its embeddedness within it.

Being linked to a network is not the only issue; one must be in a position to do something within that network. A relationship with someone who has a strong social position and reputation in another territory can help build trust, awareness and visibility in that territory (Eisenhardt and Schoonhoven, 1996; Powell, Kogut, and Smith-Doerr, 1996, Hadjikhani, Lee, and Ghauri, 2008). A relationship that is centrally located within the networks of a territory will be more than one that is peripherally attached. A number of sources of this strength of embeddedness within networks have been noted (Hite, 2003). Structural embeddedness comes from the overlap of social relations, cognitive embeddedness reflects how much people share mental models and ways of thinking with others, and cultural embeddedness reflects their sharing of beliefs and values (Zukin and DiMaggio, 1990).

Political embeddedness involves the ability of those involved to acquire power from institutions. Institutional embeddedness reflects the influence within the larger institutional environment that legitimates action (Zukin and DiMaggio, 1990); as Hadjikhani, Lee, and Ghauri (2008) note, this legitimacy is critical, especially in politically governed business environments. Furthermore, a partner that has authority and power to do things and to influence or to motivate the movement of tangible or intangible resources will be far more useful than one that does not. We can regard this as an aspect of embeddedness within a territory, and is an indication of relationship's ability to offer access or other resources in the territories concerned.

Relationships for internationalization

Since the nature of the relationships may matter at least as much as the attributes of the people they are held with (Lavie, 2006), we now turn to value in relationships that derives not from where they are, but from what they are to the entrepreneurs involved. A number of models of inter-firm relationship strength have been developed from different theoretical foundations. These are presented in Table 1, which shows trust to be one universally employed measure of strength, commonly regarded as 'expectations of regular, honest and co-operative behavior based on commonly shared norms and values' (Fukuyama, 1995). Firms seek trust in their relationships because this 'alleviates the fear of opportunistic behavior and enhances the stability of the relationship' (Steensma, Marino and Weaver, 2000, p.593).

Other components of relationship strength have been identified (Hadjikhani and Sharma, 1999; Hite, 2003), commitment being most commonly identified as one component in alliances (Morgan and Hunt,

1994). Trust and commitment can often not be discriminated, trust being a function of previous history in partnership, and the processes of negotiating, making commitments and executing those commitments (Larson, 1992; Ring and Van de Ven, 1994). Trust and commitment is closely related, even interdependent: parties that invest commitment at the beginning of a relationship improve trust, reduce uncertainty and the risk of opportunism (Wuyts and Geyskens, 2005).

Table 1. Characterisations of relationship strength and types of trust

Author(s):	STRONG RELATIONSHIPS	←————→	WEAK RELATIONSHIPS
Lewicki and Bunker (1996)	Identification-based trust	Knowledge-based trust	Calculus-based trust
Harney and Hansen (1994)	Strong trust	Semi-strong trust	Weak trust
Sako (1992)	Goodwill-based trust	Competence-based trust	Contractual-based trust
Li, Eden, Hitt and Ireland (2008)	"Friends"	"Acquaintances"	"Strangers"
Aldrich, Elam and Reese (1997)			
Chua et al. (2008)	Affect-based trust (based on emotion)	Cognition-based trust (based on calculation)	
Williams (1998)	Nonegoistic: Ethics-based trust with conduct norms / empathy; emotions or bonds of friendship, kinship	Egotistic: coercion or fear of sanctions from some authority (God, law) or material advantage or "interest"	

Here we are concerned with entrepreneurs seeking relationships to help their early internationalization rather than established alliances, a stage at which the trust may be more relevant than commitment. Though factors such as personal affection, knowledge of one another, and extent and frequency of social interaction may also be important, these can be seen as trust-building factors (Barney and Hanson, 1994). We will find out whether internationalizing entrepreneurs recognize the notion of strength and weakness, and whether they recognize these or other factors as lying behind them. In other words, we will explore entrepreneurs' *own* meaning of relationship strength.

Strong and weak relationships as resources

For Barney and Hansen (1994) strong trust is where formal safeguards are unnecessary because the parties are confident that their vulnerabilities will not be exploited (Currall and Inkpen, 2002; Dyer and Chuh, 2000). Strong relationships reflect commitment between the parties that comes from feelings of affection, this based on perceptions, knowledge, beliefs and emotions which typically require high quality and frequent social or personal interaction to develop (Granovetter, 1985, Sharma and Blomstermo, 2003).

Strong trust therefore requires time being spent with the other party doing different things, including social activities, over months or years (Hite and Hesterley, 2001). The affective commitment in strong trust relationships can assist when called on, for example, in protecting partners faced with insecure positions (Hite and Hesterly, 2001), but this reflects how strong relationships can carry a range of reciprocal obligations (Oviatt and McDougall, 2005). Relationship strength may not necessarily be a good thing.

Weak relationships bear fewer of these costs. Weak relationships rely on instrumental or calculative commitment, with relationship-specific pledges and investments, and the requirement for sharing of information (Dwyer, Schurr, and Oh, 1987; Gundlach, Achrol, and Mentzer, 1995; Geyskens, Steenkamp, Scheer, and Kumar, 1996). As Barney and Hansen (1994) define, weak or semi-strong trust is either where partners do not have significant vulnerabilities to exploit or where there are contractual safeguards to protect them from opportunistic behavior. A certain level of trust is needed even to gain knowledge and market access from a partner; even minimal security from opportunistic behavior incurs tangible and intangible costs (financial, time, attention, and opportunity costs). No relationships are a free resource, but there is a choice between a minimal level of investment and extensive personal interaction and commitment (Granovetter, 1973). When investing in relationship resources, entrepreneurs have to decide how much to invest in the trust necessary for strength in relationships, especially because relationship strength can carry costs and disbenefits as well as benefits. The possible benefits of the relationships need to be balanced against the costs:

.. trust-building is a costly and time-consuming process, the benefits of which are not so tangible and take a while to show up. If so, why would or should a firm incur such expenditures? It would or should do so only when such expenditure can be justified through adequate returns, the potential for which is provided by the presence of structural synergies (Madhok, 2006).

Here, different relationships can be of different potential value. Relationship formation needs to be 'driven by a logic of strategic resource need and social resource opportunities' (Eisenhardt and Schoonhoven, 1996:137) in enabling access to tangible and intangible resources such as knowledge and capabilities that the firms need for their internationalization (Coviello, 2006). Relationships value, however, is firm specific, and depends on what the firm wants to do, whether it needs relationships to do it, and whether the relationship will help. Here, the resource-based view has tended

to neglect the link between the '(dis)advantages of an individual firm' and the '(dis)advantages of the network of relationships in which the firm is embedded' (Dyer and Singh, 1998: 660). We here address this weakness by bringing together the notion of the internal needs of the firm, the benefits and costs of developing and maintaining outside relationships embedded in international markets, to which we turn next.

Developing relationship portfolios

The notion of 'relationship portfolios' has been used in industrial marketing and purchasing research to recognize how entrepreneurs themselves see the array of relationships in which they have invested to be an asset class comprising diverse individual relationship investments (Zolkiewski and Turnbull, 2002). It has been widely suggested that entrepreneurs begin and rely on a small number of direct, strong and largely personal relationships with family and friends and previous contacts (Larson and Starr, 1993; Hite and Hesterly, 2001), and especially with similar entrepreneurs (Kim and Aldrich, 2005). By providing essential resources for initial firm growth (Jenssen and Koenig, 2002), these personal relationships represent some of young firms' most valuable strategic assets (Hite and Hesterly, 2001; Harris and Wheeler, 2005). Even young global firms use of 'friendship', 'reputation' and 'social norms and sanctions' to build strong long-term relational trust (Elg et al., 2008; Ghauri, Tarnovskaya and Elg, 2008).

These are then used proactively to develop valuable relationship portfolios (Bratkovic, Antoncic and Ruzzier, 2009; Elfring and Hulsink, 2007). Small portfolios of strong relationships can be limiting: innovative solutions require relationship portfolios that include diverse and weak relationships (Rowley, Behrens, and Krackhardt, 2000), something that entrepreneurs recognize themselves (Ruef, 2002). In early growth, entrepreneurs often develop complex and diverse relationship portfolios with more weak relationships (Hite and Hesterly, 2001; Larson and Starr, 1993). These new weak relationships are important for new business leads, but are based on mutual business interest rather than personal interaction (Starr and MacMillan, 1990). Some firms, however, develop portfolios with weak relationships embedded in diverse circles at an early stage (Greve and Salaff, 2003; Steier and Greenwood, 2000).

So we are unclear what 'drives entrepreneurs to establish and deepen some relationships and not others, and how do they manage their mix of weak and strong ties?' (Elfring and Hulsink, 2007, p. 1850). With different views on the benefits of strong and weak relationships, and without a universal model of

relationship portfolio evolution with internationalization, Slotte-Kock and Coviello (2009) have called for a better understanding of entrepreneurial network development, and here we address this for internationalizing firms.

Methods

We wanted to examine the relationship portfolios of entrepreneurs, observe how different types of relationship portfolios in international ventures are developed and to identify if a resource-based conceptualization had some validity within their ventures. For this we needed to observe as thoroughly as possible the context of the relations of international entrepreneurs and the nature of these relationships.

Our methods involve a case study approach advocated by Ghauri and Gronhaug (2010). Case study methods using interview and archival data can uncover contextual or complex multivariate conditions well, so are particularly appropriate for exploring the personal networks of international entrepreneurs in emerging entrepreneurial firms (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Yin, 2003). Here we seek to explore features of international entrepreneur's relationships to a point of data saturation, sufficiently to enable such theoretical generalization that propositions for further research could be made (Silverman, 2006).

The research design sought credibility through triangulation through multiple cases, multiple sources of information, and repeated interviews over time for each case and prolonged engagement through the internet (Ghauri and Firth, 2009; Sinkovics, Penz and Ghauri, 2008). The interview schedule was designed to explore and unravel the issues and the thinking of the interviewees themselves in as non-directive a way as possible (Harris, 2000; Yin, 2003). Figure 1 shows the eight detailed stages of the research.

Stage I: Case entrepreneur identification, checking and follow-up

To meet the study's research aims, the selection of cases was purposeful (Davidsson, 2008). We identified 12 entrepreneurs of independent international new venture start-ups that had entered foreign markets in the previous six years, and that had actively sought market presence in lead international territories (Dimitriatos, Plakoyiannaki, Pitsoulaki, and Tüselmann, 2010; Servais, Madsen, and Rasmussen, 2007). Following earlier studies, all were non-manufacturing software firms in initial stages of internationalization, (Coviello, 2006; Komulainen et al. 2006; Ojala, 2009; Ozcan and Eisenhardt, 2007).

Stage I:	Case entrepreneur identification and checking	Entrepreneur identification from secondary sources. Checking of fit to sample through secondary sources. Soliciting of support for the study.
Stage II:	Parallel participant observation through LinkedIn	Social networking site interaction begins with all participant entrepreneurs. Continues throughout the data gathering process, for 6 months.
Stage III:	Interviews	Each entrepreneur was interviewed twice within 3 months. The first interview lasted 100-120 minutes. The second interview lasted an average 50 minutes.
Stage IV:	Archival data collection	Public and, where available, private data archives retrieved and searched to achieve data triangulation.
Stage V:	Primary Data coding	Coding of all data against coding categories from the theoretical frameworks.
Stage VI:	Analysis	Analysis of adequacy of explanation and observation of gaps; identification of additional elements.
Stage VII:	Data reviewing and overall analysis	Recoding of data against additional coding categories. Analysis of adequacy of explanation

Figure 1. The research design

All originated from Iceland, an open economy with many software firms but with a domestic market of just 315,000 people, making internationalization is a necessity for most Icelandic software firms. Case entrepreneurs fitting the inclusion criteria were identified from secondary sources (list of exporting firms in Iceland). Access and agreement to participate was solicited. Reviewing and checking procedures resulted in 12 entrepreneurs that were eligible within the criteria frame and who agreed to participate, a number that Eisenhardt (1989) suggests is likely to be sufficient to lead to data saturation in qualitative case analysis. Descriptive data on these cases are shown in Table 2.

Stage II: Web network observation

The researchers connected with all the participants in the study on LinkedIn, a professional social networking web site with over 70 million users worldwide. Using these sites is a normal way of working for entrepreneurs in this sector, so a relationship link on LinkedIn was established in 2010 that included all twelve international entrepreneurs. The researchers identified each entrepreneur's relationship links, ascertained the background of their relationship with the entrepreneur, and noted their geographical location. This data provided a list of

relationships that could be explored in detail in interviews and for data-data triangulation

Stage III: Interviews

Our informants are the entrepreneurial owners of the firms. The first interviews ranged from 100 minutes to 120 minutes in length, and were conducted in the Icelandic language. To ensure that a priori research notions were not inserted into the participants' responses, no formal discussion or requests for comments or ideas were made before the interviews. For the purpose of name generating and name interpreting a number of questions were posed which provided some structure to the interviews, in the three-step approach commonly employed to collect personal network data (Matzat and Snijders, 2009). First, to obtain a list of the most important relationships, each participant was asked to about the relationships that were most important to them in the business. Then a series of questions, called name interpreters, identified characteristics of the individuals involved and the relationships that they have.

Table 2. The case entrepreneurs - descriptive data.

Case	Business activity	Current venture established	Role	Age	Entrepreneurial type
A	Mobile social matching software	2000	MD	46	Com-tech
B	Information security software	1998	MD	50	Tech
C	Mobile software	2004	MD	40	Tech
D	Computer games	2003	MD	36	Com-tech
E	Ticketing software	2005	MD	30	Tech
F	Mobile headset technology	2008	Founder	30	Tech
G	Mobile technology	2005	MD	44	Com-tech
H	Networking technology	2008	Chairmn	38	Com-tech
I	Flight search engine software	2004	MD	48	Com-tech
J	Data Mining	2008	MD	36	Com-tech
K	Software for web crawling	2008	MD	26	Tech
L	Software solutions for gaming	1998	MD	51	Tech

Third, an open discussion to elicit further data about the nature of the relationships between the entrepreneur and the individuals named, and how that affected their international venturing. This was pursued in as open and non-directive way as possible (Harris, 2000; Yin 2003). This led to a list of relationships and discursive data that would describe the embeddedness, and strength and value of those relationships. Further, we asked questions to gain a perspective of the overall interests and orientations of the entrepreneurs, in case this also relevant to the kind of relations they had developed.

The second interviews lasted on average 60 minutes. This interview asked more detailed questions about some of the relationships if they were

not clear from the first interview. The interviewer also presented to the participant a list of the relationships which the interviewee had mentioned in the first interview and asked whether there were any other relations who were mentioned in the first interview. Finally, the participant was also questioned about those with whom he had contact only by means of links over the worldwide web.

Stage IV: Archival data collection

A high level of triangulation was achieved with secondary data from sources that included external official documents such as listing documents and annual reports, the firms' own internet sites, written and visual media documents such as newspaper reports, and internal documents and archival data, including firm histories. This source-source data triangulation augmented the case-case triangulation achieved from the multiple interviews (Sharpe, 2004).

Stage V: Primary data coding

Data coding involved content analysis of interview notes and secondary data categorizing between weak or strong relationships based mainly on the concept of trust, with some commitment of interest to the business project. Our criteria for trust in relationships is based on their being viewed as reliable in good and bad times, and having influenced expectations and decision making (Hite, 2003). It also adopted some indication of commitment to the business's future from the parties involved as employed by Hite (2003) and reflected also the frequency of contact (Barney and Hansen, 1994). Cross-coder comparison showed the classifications clearly to demark strong and weak relationships.

Categorization between international and domestic relationships was more straightforward, based on whether the entrepreneur referred to their embeddedness in a foreign market or not, irrespective of their nationality or location. For example, descriptions like: 'this customer was in close relations to similar firms in Scandinavia', 'he is Icelandic and has worked for (a large potential client) in Canada for years', were identified as internationally embedded relationships, even though these were individuals based in Iceland.

Stage VI: Data Analysis

Data analysis then involved interpretation of the case data within the paradigms of understanding that, a priori, appeared to have relevance. The analysis here involved identification of the aspects of the international business behavior that appeared to be adequately explained by the theoretical constructs, and identification of aspects of the business behavior that was

not. Areas of behavior that were not well understood were collated and associated with other frameworks that appeared to have value.

The coding was adaptive, reflecting ideas that emerged inductively from the descriptions themselves (Coffey and Atkinson, 1996). For example, at this stage we found different resources flowing into the entrepreneurial firm through the entrepreneur according to their background. We also found views on relationships and relationship formation to differ according to whether they saw themselves to be high-tech specialists, who we then called tech entrepreneurs, or whether they saw themselves as high-tech entrepreneurs with a commercial orientation, who we then called com-tech entrepreneurs. This yielded new data codes that were used in data analysis in the next stage.

Stage VII: Data reviewing and overall analysis

Data reviewing at this stage involved analysis of interview transcripts and secondary data as in the same way as in stage V, but now we reflected on our emerging observations concerning the differences between the tech and the com-tech entrepreneurs. We defined the tech entrepreneurs as having a technical background, an educational background in technology, and, most importantly, continuously motivated by development of new technology. Com-tech entrepreneurs had a mix of business and technical backgrounds, viewed themselves as generalists who were motivated by business success as a whole and not by a wish to use their technical background in their current venture. The analysis of each entrepreneur, including analysis of their relationship network on the internet, was then fed back to the entrepreneurs to confirm that there had not been misinterpretation of the business behavior observed.

Findings

We now present the network relationships of the participating entrepreneurs, how they perceived those relationships, how they developed them, and how those relationships led to their initial international transactions. The twelve case entrepreneurs named 285 relationships which they defined as relevant to their business ventures. The most obvious distinction for this study is between the 66 relationships that are internationally embedded and that might have the most obvious potential value in early internationalization, and those that were not, and these will be considered in turn. Within these findings, a discrimination that transpired to be much clearer than expected, itself of interest and use, was between strong and weak relationships, will be outlined.

A high valuation on strong internationally embedded relationships

The interviewees clearly identified their strong internationally embedded relationships highly, and saw them as the key to their international venturing. The main factor here was the expression of trust in the relationships, though in nearly every case, this was also associated with regular communication, at least at critical periods. They typically contributed knowledge, and contacts:

Our first contract was through the foreign board member who has been very dynamic in his work, helpful and we often keep in touch on a daily basis. He is a board member for the (American Fund) which is a shareholder in the firm. His personal network helped a lot. [K]

We obtained a lot of knowledge from their CEO of the (Swedish fund) who gave good comments. A huge pusher for us. (L)

Three of the entrepreneurs had part foreign ownership in their recent ventures and even though only one of the entrepreneurs indicated a foreign owner as a strong relationship, links with foreign investors were perceived as valuable for bringing in other investors and presenting the firm as an international venture. All the entrepreneurs discussed these relationships more than the others, and for them, they were clearly regarded to be of the greatest value. The entrepreneurs consistently held these to be the most valuable relationships of all, since they presented the key to international development.

While strong internationally embedded relationships were clearly highly valued by all twelve entrepreneurs, there were very few of them; they represented less than 3 per cent of the total. The entrepreneurs often noted the pressure they placed on them to provide knowledge how to overcome barriers to conducting business in new territories, or to provide contacts and references in those territories.

There was, however, a difference between the com-tech entrepreneurs and the tech entrepreneurs. Few of the com-tech entrepreneurs had strong internationally embedded ties, but most of the tech entrepreneurs had at least one, usually a personal friend who shared their technical backgrounds and interests, but who had either been met while the entrepreneur was overseas, or the relationship had moved overseas or had worked overseas in the past. B, for example, had good relations with former professor at a German university:

This friendship has been valuable to keep up with current affairs in Germany and the culture. I feel that I am much better equipped to talk to potential German clients due to my ongoing friendship with Germans. [B]

The importance of weak internationally embedded relationships

More of the entrepreneurs' internationally embedded relationships were weak: all but one had at least three. Most of these relationships were clearly identified; there was low trust because, usually, the entrepreneurs openly declared that they did not know them very well. Notwithstanding this, many of the entrepreneurs, those with no strong internationally embedded relationships, indicated that weak internationally embedded relationships were the strongest elements of their relationship portfolios. These were not, individually, as valuable as strong internationally embedded relationships, but for many of the entrepreneurs, especially the com-tech ones, these were the only internationally embedded relationships that they had.

As a result, they were, overall, much more important sources of international opportunities, and it was usually these relationships that had led to their firm's first internationalization efforts, often by providing useful introductions to others. None of these first moves towards internationalization had been planned, but rather had been a response to an opportunity presented by a poorly-known, and therefore weak contact. E described the outcome of working with a cold-call to a Danish firm that had been mentioned by a strong relationship:

We got information from a guy about a Danish firm in similar business and we just visited them. [E]

These weak relationships required, however, a high level of relationship proactivity to become of value in internationalization, in the way that E had described, perhaps by following-up leads that were offered:

Last month an American joined our board and we hope he will strengthen our relations with the US market, but we have not had any foreigners so close to the operation before. [F]

.. my foreign network has become inactive. But it is still there and if I need it I can activate it. As soon as I move back to London my personal global network can become much more active again. [H]

Proactivity towards weak internationally embedded relationships was a characteristic more evident in the com-tech entrepreneurs, who not only had twice as many of them, but used them as valuable resources, perhaps because these were the entrepreneurs without strong internationally embedded relationships. But while these weak relationships provided useful introductions to others, they were insufficiently strong to provide much help or tacit and experiential knowledge as to *how* to pursue international opportunities and how, practically, for example, to enter the foreign markets. The level and depth of communication that would be required for this would have involved deeper and more frequent communication, and commitment, which in itself may have led to more trust. This explains the disparity between the high value that the entrepreneurs placed on strong weak internationally embedded relationships, and their lesser role in the actual internationalization process.

The importance of introducers

Although strong internationally embedded relationships are the most valued relationships, they are scarce. There are very many more *weak* internationally embedded and domestic relationships, and it is these that most often lead to international opportunities. They do this by acting as 'introducers', providing introductions to overseas opportunity presenting contacts, such as potentially useful internationally embedded people (Johanson and Mattsson, 1988). Like Johanson and Mattsson, the entrepreneurs in this study found them to be a very important resource for internationalization.

Only rarely were these introducers strong relationships, but if they were, the value of their introductions could be especially helpful. This is because, as Starr and MacMillan (1990) found, the trust and commitment behind the strong relationships meant that they would put their firms' legitimacy and reputation behind the introduction that would be especially forceful and helpful:

Yes, he invited me to dinner with (person) from the (American broadcasting firm) which became our first client. [D]

With so few strong internationally embedded relationships, however, nearly all the introductions, in practice, came from weak relationships, usually the internationally embedded ones:

Our next contacts abroad were then extensions from (American introducer) personal contacts and me. [G]

A lack of relationship strength did not preclude utility for a persistent and driven entrepreneur:

Our search for international contacts was by emails which we sent to the headset makers and told them about how our software could be of value to these producers. One individual within one of these companies became our contact and we have established a very honest relationship with him. He then left the company but he is still our major contact and introducer. [F]

With relationship portfolios being overwhelmingly domestic, however, it was domestic introducers (as Harris and Wheeler, 2005, have noted) who initiated most of the very first international relationships:

The first significant international contract we made was realized through an Icelandic contact. The CEO of the largest game company in Iceland introduced me to people at a software company in the USA. They introduced me to an employee, a technician who then transferred over to another large firm and through these relations the cooperation began with (a large broadcaster in the USA). [C]

An Icelandic business acquaintance called me some three years ago and said he was talking to a friend of his in the US who was looking for someone who could do something on the mobile front. This contact realized into our first foreign contract. [G]

Our first international contract which was with a Danish firm came as a result of our relations with a similar firm in Iceland which was in a Nordic group with the Danes. They opened the doors for us in Denmark and were very crucial for our initial internationalization. [L]

Four entrepreneurs cited domestic contacts who had been pivotal in their firm's internationalization, and two cited strong relationships with the same individual, who had adopted a role of an introducer for many Icelandic entrepreneurial companies, a national resource. Interestingly, in accessing and using introducers, many of the entrepreneurs themselves began to adopt the behavior of an introducer, one declaring 'I find myself assisting new firms in establishing relations similar as the big ones had done for me in the past'.

The role of relationships that are not internationally embedded

Strong, highly trusted family relationships had been fundamental assets for nearly all the entrepreneurs, with family often becoming cornerstones of their ventures. For nearly all the entrepreneurs, however, strong domestic relationships provided

a solid background for the firm, and indirectly to its international growth, but had an insignificant role in early internationalization.

Some strong family, friends and colleague relationships (often with similar technical educational backgrounds) provided useful introductions to internationally embedded relationships that could help their internationalization. This was especially for the tech entrepreneurs who valued these relationships more highly than did the com-tech entrepreneurs.

The largest number of relationships in the portfolios, for both tech and com-tech entrepreneurs, were domestic and weak, typically people with similar backgrounds to those of the entrepreneurs. These rarely had any role in the internationalization of the entrepreneurs, but sometimes provided introductions to others that could. Here it was the com-tech entrepreneurs that would proactively work with these second-hand, weak relationships.

Many of the entrepreneurs, particularly the com-tech entrepreneurs, were increasingly engaged in social networking on the worldwide web. Com-tech entrepreneurs had an average of 300 links on LinkedIn, about 50% more than the tech entrepreneurs. 46% of the com-tech entrepreneur's links were overseas, compared with 35% of the tech entrepreneurs. We have not included these 'links' within our portfolios of relationships, but they were seen, especially by the com-tech entrepreneurs, as a 'safety net' that might be of value at some stage for opening possible opportunity openings, making referrals, and helping their identity and trust. J used a social networking site:

I needed a contact with (an international publisher) and through LinkedIn I found that one of my contacts had relations with an important guy in this organization. I asked my contact to introduce us and these relations became our initial internationalization [J].

We again have a mismatch between the value placed on this category of relationships, and their performance: they all valued this activity, but few had found it to be of significant value in the first internationalization.

Different relationship portfolio strategies for internationalization

Those entrepreneurs, typically the tech entrepreneurs, who had relationship portfolios that contained more strong relationships, tended to base the development of their relationship portfolios on those. These kinds of entrepreneurs were uncomfortable with the idea of 'developing relationships' and presented an interest in 'real relations' as one interviewed phrased it. They were not interested in spending time talking to lots of people that they did not know. One said 'I am not a

great connector' and another expressed skepticism about the value of 'lots of useless contacts which take a lot of my time'.

The main approach used by these entrepreneurs was to use their historical relationships (of which many were strong and technically based) as the basis for developing new relationships. These relations often had international linkages, based on technical expertise, even if they were not themselves well embedded in overseas territories. Time would be spent with a few of these to see if introductions could be encouraged with internationally embedded relationships that might have the potential for development into strong internationally embedded relationships. The introducer value of these relationships was enhanced by the strength of the entrepreneur's relationships with them.

Other (often com-tech) entrepreneurs had relationship portfolios with few strong relationships and many weak relationships. These were more comfortable with actively seeking contacts and exploring new relationships for commercial opportunity. They valued strong relationships, but did not have them, and had found ways of working with weak relationships that would have the potential for providing new business opportunities or introductions to others who did. Their previous commercial experience appears to have given them the orientation and ability to spot potentially valuable relationships and to invest to strengthen them.

A disadvantage was the cost involved in developing and maintaining large numbers of relationships within their portfolios. Time had to be expended meeting contacts, going to conferences and participating in networking activities. Costs were contained only by maintaining each weak relationship with a low level of input, an approach that com-tech entrepreneurs (such as I, below) saw as their job, but which tech entrepreneurs (such as C) did not:

I know bankers, former business partners, former colleagues from business schools, board members at various associations which I have been a member of ... Then you tend to activate this network as needed. (I)

I have no faith in coincidental business. I believe in small stepping stones in business, not large coincidental relationships. (C)

Such an approach was not sought by the tech entrepreneurs. First, they have international opportunities being presented, actively and helpfully, by their strong relationships, some of whom are internationally embedded themselves and others who know those that are. Second, they are not keen or able in the business of

relationship portfolio development, so choose not to engage in it. The advantages and disadvantages as conveyed by the entrepreneurs themselves within the study are summarized in the research framework shown in Figure 2. We find that the entrepreneurs' process towards their relationships differs from entrepreneur to entrepreneur, but is always strategic.

RELATIONSHIP EMBEDDEDNESS:	STRENGTH OF RELATIONSHIP	
	Weak	Strong
Not internationally embedded	<p>I: Weak relationships, not internationally embedded</p> <p><i>Benefits:</i> Readily accessible without large time investment Possibly an introducer</p> <p><i>Costs:</i> Unlikely to commit to firm internationalization Does not have the access to opportunities sought</p>	<p>II: Strong relationships, not internationally embedded</p> <p><i>Benefits:</i> Trusted to commit to helping firm internationalization: Will give time and effort willingly; Can be a powerful introducer</p> <p><i>Costs:</i> Takes a large investment of time to develop and maintain; Does not have direct access to opportunities sought</p>
Internationally embedded	<p>III: Weak relationships, internationally embedded</p> <p><i>Benefits:</i> Readily accessible without large time investment; May have access to most international opportunities May well be a useful introducer</p> <p><i>Costs:</i> Unlikely to commit to firm internationalization</p>	<p>IV: Strong relationships, internationally embedded</p> <p><i>Benefits:</i> Trusted to commit to helping firm internationalization: Will give time and effort willingly. May have access to valuable international opportunities Useful as a powerful introducer</p> <p><i>Costs:</i> Takes a large investment of time to develop and maintain;</p>

Figure 2. Relationship strength and embeddedness for internationalization: the perceptions of the international entrepreneurs

There were inevitably some limitations in this study. Gaining access to the phenomenon under study requires gaining extended access to the particular entrepreneurs which is not easy; the respondents had to have personal trust in the principle researcher if the deep access required was to be granted. So this is a purposive and not a statistical sample. The conduct of the interviews in the Icelandic language presents the inevitable risk of translation error, but here the overall danger is more limited by the relatively straightforward concepts used within the analysis, and the checking and feedback procedures that the researchers undertook. The interviews discussed the present situation and retrospectively discussed the past development. Ideally, it would have been possible to follow these firms longitudinally, as they internationalized, which would have made it easier to

observe possible associations between different capabilities and practices and internationalization outcomes. Nevertheless, we believe that our exploratory study contributes to existing theory, and adds value with a new framework for understanding relationships for internationalization.

Discussion

This study has found that international entrepreneurs actively consider and assess the value of their relationships, and value them for different things. It also sees them recognizing problems within the array of relationships that they have; without using the term 'relationship portfolios', they appear to consider them in those terms, and regard them as a firm resource that lies at the heart of their firm's international development. This essential idea, presented by Larson and Starr (1993) and developed by Hite and Hesterly (2001) and Zolkiewski and Turnbull (2002) is supported, but it is also strengthened by the theoretical support of the resource-based view of the firm.

These firms, as expected, find internationalization value in internationally embedded relationships over those that are not internationally embedded. What was not expected was the extent to which the notion of strength has real meaning for the entrepreneurs themselves, who were easily able to discriminate their strong from their weak relationships. This was based on trust, reflecting mutual knowledge of each other as much as affection, and perceived commitment within the relationships as reflected in regular contact. Notwithstanding the long recognized pitfalls of strong relationships, (see, for example, Ellis, 2011), these entrepreneurs value them over weak relationships, because they bring valuable support, legitimacy, and introductions. As Harris and Wheeler (2005) emphasize, they are often the most valuable resource of the young international entrepreneurial firm. The model presented in Figure 2 well reflects the relationship resource judgments being made by the entrepreneurs.

Though the entrepreneurs appear to value weak relationships less, we can see from their patterns of evolving internationalization that they gain more benefit from their larger numbers of weak relationships, which have long been recognized as sources for new opportunities (Granovetter, 1973). We saw this mainly in the role of relationships as 'introducers' (Johanson and Mattsson, 1988). As Larson and Starr (1993) and Hite and Hesterly (2001) have observed, these entrepreneurs are intentionally managing the development of complex and diverse relationship.

Proposition 1: Relationship portfolios comprising strong and weak relationships and internationally embedded and domestic relationships help internationalization.

We found 'introducers' through whom relationships can be developed to be very important for all the firms' internationalization (Johanson and Mattsson, 1988). Though the role of introducers has been raised (Uzzi, 1997; Welch and Luostarinen, 1993), it has not been given much attention in recent research. Some were internationally embedded, but many were not. Confirming Ellis (2000) and Harris and Wheeler (2005), one of the best places for entrepreneurs to find international relationship linkages is from existing personal relationships from home. Introducers do not only introduce opportunities; they can be equally essential in introducing other introducers. A relationship that is not internationally embedded can know someone who is, and provide an introduction. That introduction will be much more valuable from a trusted and committed strong relationship with legitimacy and a reputation, as Starr and MacMillan (1990) have observed.

As the legitimacy and reputation of entrepreneurial firms grows, the need for legitimacy and reputation from introducer relationships lessens (Hadjikhani et al., 2008). This may be one reason why stronger relationships are needed more in the portfolios on nascent and young entrepreneurial firms than in more mature firms. In reality, however, introducers are usually weak relationships. Accessing and using introducers, however, required an orientation to do so, observed mainly in the com-tech entrepreneurs, who were most active in accessing and using weak introducer relationships in their quest for opportunities. The tech entrepreneurs typically were less keen, and tended to work mainly through strong network relationships, in the way that Coviello (2006) observed.

Proposition 2: Introducers help internationalization, by presenting new internationally embedded relationship opportunities.

A core principle of the RBV is that it is the resources and capabilities controlled by a firm that underlies firm performance (Peteraf and Barney, 2003). We have observed how the entrepreneurs in this study began with very different relationship resource endowments, and these differences are very influential. Here, some entrepreneurs began with many more strong relationships (with trust and commitment) than others, who began with larger numbers of weak relationships, domestic or internationally embedded. Both relationship development strategies aim to develop internationally embedded relationships with both a mix of weak and strong relationships, and with at least some strong relationships, as indicated from proposition 1.

Some, particularly those with few strong relationships, actively collected weak relationships into their portfolio, and then selectively managed and developed them. This *weak relationship development strategy* requires a

RELATIONSHIP EMBEDDEDNESS:	STRENGTH OF RELATIONSHIP	
	Weak	Strong
Not Internationally embedded	I: Weak relationships, not internationally embedded <i>Weak relationship development strategy</i>	II: Strong relationships, not internationally embedded <i>Strong relationship development strategy</i>
Internationally embedded	III: Weak relationships, internationally embedded	IV: Strong relationships, internationally embedded

dynamic capability for relationship portfolio development. This capability is for networking widely to find and manage large numbers of relationships, domestic or international, and establishing relationship portfolios with large networks of weak relationships (quadrants I and III in Figure 3).

Figure 3. International relationship portfolio development strategies

The individual cost of any of these relationships is low, but the large numbers allow many opportunities to be spotted, a pattern of large numbers of informal weak relationships beneath the formal relationships has been seen in the life science businesses (Powell et al., 1996). These entrepreneurs are strategic in their management of these relationships, in order to build up the numbers in quadrants III and especially, IV. Like Jack, Moulton, Anderson and Dodd (2010), we observe networking to involve 'expanding one's circle of trust' (Aldrich, 1989:108) by developing relationships from weak to strong, selectively targeting investment of time to build up trust and commitment only with those who have the best prospects for development towards quadrant IV.

Proposition 3: Developing a large portfolio of weak relationships and selectively investing in and managing those with useful international embeddedness is an effective relationship portfolio development strategy for those with few strong relationships but with strong networking capabilities.

The *strong relationship development strategy* is followed by entrepreneurs whose relationship resource endowment is of a smaller

number of relationships, but emphasizing strong, even if not internationally embedded relationships. These entrepreneurs can have well established technically or professionally-based relationships and networks, on which to build, and have an orientation to work only with strong relationships. Their dynamic capability and preference for relationship portfolio development, therefore, is for developing internationally embedded relationships from domestic relationships (quadrant II in figure 3), a pattern noted by Coviello and MacAuley (1999) and Harris and Wheeler (2005). For these entrepreneurs, 'introducers' from within their existing networks are essential, who connect and refer them to the lower left side of the grid. Being tightly connected in close relationships, trust and commitment is more easily developed to build them into quadrant IV relationships.

Proposition 4: Actively recruiting existing relationships to be introducers of international embedded relationships is an effective relationship portfolio development strategy for those with limited relationship development capabilities

Conclusions

This paper has adopted a strategic perspective on entrepreneurs' relationships, seeing them as comprising a portfolio of assets that represents a potentially or actually valuable resource. Unlike much previous research into entrepreneurs' networks, we have seen it as a resource that is costly to develop and maintain, but is also subject to the active management of the entrepreneurs involved. In this respect, our research agenda reflects the recent conclusion of Ozcan and Eisenhardt (2009):

Prior research has emphasized a deterministic view of portfolio and network evolution that is shaped by exogenously determined interdependence and a path-dependent trajectory of embedded ties. With a few exceptions (see Ahuja, 2000, Hallen, 2008; Powell et al., 1996), researchers have treated partner characteristics such as prominence as static; viewed relationships (if they are considered at all) as simply strong or weak; and ignored tie execution in favor of tie formation. We add emphasis on agency, strategic action, and the dynamics of portfolios and networks, addressing evolving prominence, shifting centrality, and nuances of execution such as sequential attention. This suggests a research agenda that places agency and strategic action in the spotlight. [p.246]

Working from the theoretical foundations of the resource-based view, and accommodating the costs as well as the potential benefits of relationship resources,

we have developed a research framework that highlights two main factors underlying relationship resource value for internationalization: relationship strength, and relationship embeddedness in international markets. This framework has helped us to understand not only the relationship portfolio strategies of entrepreneurs but also the resource factors underlying them.

RELATIONSHIP PORTFOLIO STRENGTH:	CAPABILITY FOR RELATIONSHIP DEVELOPMENT	
	Weak	Strong
Portfolio rich with strong relationships	<i>Invest in portfolios and/or capabilities</i> for relationship development to enable internationalization	<i>Weak relationship development strategy</i> using capabilities for relationship development to develop portfolio
Portfolio with few strong relationships	<i>Strong relationship development strategy</i> using existing relationships to lead to new portfolio relationships	<i>Mixed relationship development strategy</i> using <i>both</i> existing relationships <i>and</i> relationship development capabilities to develop portfolio

Figure 4. Determinants of relationship portfolio development strategies

The starting skills and capabilities of the entrepreneurs is fundamental to the ability of young firms to internationalize quickly (Madsen and Servais, 1997). But it is not only the relationship inheritance that is important, but also how it is used. Organization is important in the way that resources contribute to the dynamic development of the firm (Barney, 1997). Teece et al. (1997) denote the technological, organizational and managerial processes for the firm's management of the resources, as their dynamic capabilities. These are resources that determine how a firm develops from its historic relationship resource endowments, and the capability here is the human ability to develop and manage relationships. Entrepreneurs of young firms typically start resource poor, which limits their ability to invest in new relationships and building strong relationships, Differences in the historic relationship resource endowments are important, but so is the endowment of the dynamic capability to build it further. Here we see two broad relationship resource strategies that reflect how the dynamic relationship management capabilities interact with the relationship portfolios on which they are working, illustrated in Figures 3 and 4.

The different dynamic capabilities for relationship portfolio development have considerable influence on the entrepreneurial internationalization, and the ways it

does so is managerial and dynamic. The dynamics of resource use is an area of current focus for research within the resource-based view where empirical research is still emerging (Newbert, 2007). But we see strategy and purpose, and a logic explained by the massive resource cost of developing relationship resource portfolios. The resource-based view and its related dynamic capabilities perspective helps us to identify and understand this logic, and in so doing, contributes to previous entrepreneurial network research.

Managerial Relevance

We confirm entrepreneurial network research's identification of founding network relationships to be essential resources for entrepreneurs in the international development of their firms. Internationalizing entrepreneurs place value on both relationship strength and international embeddedness, and valuing strong international embedded relationships highest, but these are rare and costly to develop. Some weak relationships have an essential role in internationalization as 'introducers', a low cost source of international opportunity.

It is not only the relationship portfolio endowments that will determine the strategies followed to develop international portfolios, but also the managerial dynamic capability for developing new relationship resources into the relationship portfolios. So while we are confirming how different founding conditions lead to different relationship structures (Elfring and Hulsink, 2007), we now see these as concerning the interplay of the historic relationship resource portfolios and the dynamic capabilities of relationship management, as is shown in Figure 4. A strong relationship development strategy relies on a rich relationship portfolio that includes a number of useful and strong relationships, and uses these to lead to new relationships that are internationally embedded and which can become strong. A weak relationship development strategy relies less on such a rich relationship portfolio but instead requires a strong managerial capability for developing new relationships, which are then worked with to find relationships that are internationally embedded and which can become strong.

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PAPER 2. Building international entrepreneurial virtual networks in cyberspace

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Abstract

We examine the mechanisms by which international entrepreneurs use new web social media to develop relationships. We found that entrepreneurs actively use these new tools to manage a large number of relationships, particularly weak ties, which have similar characteristics to strong ties as they seem to protect entrepreneurs from opportunism. Entrepreneurs with the largest networks use the web to demonstrate their network strength and to identify opportunities to connect people. Our methodological contribution is that we use a combination of participant observation on the web and open ended face to face interviews to identify how network relationships are shaped.

Keywords:

Web,
Social media,
Embeddedness,
International entrepreneurship,
Networks.

Introduction

Individuals inherit family relationships at birth but subsequently begin to develop their own network of relationships. One aspect of this relationship that we are specifically interested in is the entrepreneur's ability to construct and enhance a network of relationships. This is affected by various factors which includes social background (Anderson & Miller, 2002), institutional development (Kiss & Danis, 2008), social capital (Batjargal, 2007) and mindset (Freeman & Cavusgil, 2007). The focus of this paper is on new social networking tools on the web and how international entrepreneurs use them to develop network relationships.

One form of network relationship is the weak tie which researchers have recognized as important in the internationalization process of new ventures (Komulainen, Mainela, & Tahtinen, 2006; Sharma & Blomstermo, 2003). Internationalization requires more weak relationships because a foreign contact is less likely to be or develop into a strong relationship as the domestic contact (Duque, Shrum, Barriga, & Henriquez, 2009). Most studies on ties and entrepreneurs, however, have focused on ties with relatively high trust level which are referred to as embedded ties (Uzzi, 1997; Hite & Hesterly, 2001) or portfolios of weak and strong ties (Ozcan & Eisenhardt, 2009).

We study the mix of strong and weak ties by interviewing international entrepreneurs and by observing their large network of online relationships. These ties are often counted in hundreds and reflect the international entrepreneurs' "wide" search for solutions across borders rather than "deep" information within local relationships. The questions addressed are: How can we assess these large networks? Are they a usable tool in venturing, often numbering hundreds of contacts? Do these much larger networks have a particular role in the entrepreneur's venture?

Indeed, the web provides users with new tools to build relationships thus providing the opportunity for individuals to have a large number of relationships (Ellison, Steinfeld, & Lampe, 2011). Although scholars have recognized the potential to improve networking by using web-based communication technologies this field remains underexploited (Lewis, Kaufman, Gonzalez, Wimmer & Christakis, 2008). The web has transformed "community" and social capital and made them less dependent on physical space (Wellman, 2001). Web-based services, allow individuals to (1) create a public or semi-public profile within a bounded system, (2) convey a list of other users with whom they share a connection, and (3) view and traverse

their list of connections and those made by others within the system (Boyd & Ellison, 2007).

Collaboration is particularly important in small, open economies (Chetty & Campbell-Hunt, 2003) especially in a country the size of Iceland. The fact that social networks on the internet are used more widely in Iceland¹ than anywhere else in the world confirms this need for collaboration. International entrepreneurs in Iceland are therefore actively using the online social networking, LinkedIn, in their business activities. Since they have less chance of achieving economies of scale within their small domestic market (Kutschker, Baurle, & Schmid, 1997), these firms are forced to go global at early stages of their development. Since these firms are relatively distant from markets, traditional methods of international networking, such as international conferences are costly. Iceland therefore provides an interesting context to study the phenomenon of how entrepreneurs use the web to develop their network of relationships. As the potential for new web technology to develop business relationships advances, online social networks have become increasingly important for international entrepreneurs. Despite its importance online social networks relating to international entrepreneurial firms has rarely been studied. This paper addresses a gap in the literature by examining the influences of an online social network on international entrepreneurs. It uses resource-based view, networks and international entrepreneurship theories as a framework. It assesses how international entrepreneurs use LinkedIn to develop and harness their relationships in their internationalization activities. The study involves 12 entrepreneurial firms in the software industry in Iceland.

The paper is divided into four sections. First, it reviews the relevant literature which frames the investigation. Second, it describes the research methodology. Third, it discusses the case studies. Finally, the paper ends with conclusion, limitations and implications.

¹ <http://www.washingtonpost.com/wp-dyn/content/article/2009/08/28/AR2009082800330.html>

A review of related literature on the resource-based view, networks and international entrepreneurship

Resource based view

Instead of looking at market characteristics to infer which resources are required by a firm to succeed, the focus might be on the resources the firm possesses (Wernerfelt, 1984). This approach is referred to as the resource-based view (RBV) which is based on the assumption that firms possess unique bundles of resources that can be combined into capabilities and be exploited to achieve sustainable competitive advantage (Barney, 1997; Dierickx & Cool, 1998). These resources are firm specific, both tangible and intangible and include physical, social, technological, reputational and financial resources, which are often costly to imitate or substitute (Barney, 1991). The RBV considers resources as internal because they reside within the firm. The RBV represents a departure from the economic view of perfect markets for resources and environmental determinism, whereby firms compete for resources that are used in order to achieve best fit with the prevailing environmental conditions and to achieve superior performance. Instead, the RBV recognizes that firms are heterogeneous as regards their resource base, that some resources are not readily tradable, and that there are multiple routes to competitive advantage (Barney, 1991; Nelson, 1991; Peteraf, 1993).

Using RBV as a framework the existing literature has shown that successful internationalizing entrepreneurs tend to have top management skills such as knowledge and networks to internationalize (Freeman & Cavusgil, 2007; Oviatt & McDougall, 2005). Although international entrepreneurs require resources such as capital, skills and labor to start or expand their business activities they often lack these critical resources. While they hold some of these resources themselves they tend to acquire additional resources through their external relationships in order to internationalize (Agndal & Chetty, 2007; Hoang & Antonic, 2003; Maurer & Ebers, 2006). When partners interact with each other they acquire and develop new knowledge which is considered to be a knowledge based resource. This new knowledge helps them to recognize new opportunities that others cannot see (Agndal & Chetty, 2007).

Networks

Networks are important to help identify opportunities during the firm's internationalization process (Johanson & Vahlne, 2009). Our use of the term network is consistent with Chetty and Agndal (2007) who refer to it as interconnected relationships between different agents. Since we are focusing on entrepreneurs, we define network relationships as dyadic relationships between two agents, particularly through social relationships. The degree to which individuals are enmeshed in the network is referred to as embeddedness (Granovetter, 1985). The embeddedness, or level of strong and weak ties in networks, can enhance the ability of entrepreneurs to acquire resources (Batjargal, 2003). Granovetter (1973) suggests that the strength of the tie is a "combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services that characterize the tie" (p.1361). These ties are either weak or strong.

Strong network ties have high levels of social relationship or personal interaction with high frequency (Granovetter, 1982), and members are motivated to assist and to protect actors who are in vulnerable positions (Hite & Hesterly, 2001). Weak ties, however, are based on less personal interaction among members of the network but may provide strategic advantage for resource availability (Granovetter, 1973). Aldrich, Elam and Reese (1996) label network ties as "friends, acquaintances and strangers", reflecting strong, weak or market ties. Weak ties act as "local bridges" to parts of the network which would otherwise be disconnected (Krackhardt, 1992) and they present new opportunities (Burt, 1992). Individuals who transfer expectations and opportunities from existing relationships into new relationships are referred by Uzzi (1997) as gobetweeners.

When new electronic communication was first introduced, researchers recognized its potential for stimulating bridging social capital (Lin, 1999). More recently researchers have emphasized the importance of weak ties that are formed through online social networking sites which act as bridging social capital (Ellison et al, 2011). Since social networking sites provide the opportunity to maintain weak ties easily and at low cost they increase the number of weak ties that are formed (Donath & Boyd, 2004). More specifically, the web has become a persistent means for conducting international trade especially in industrialized countries (Pitt, van der Merwe & Berthon, 2006). Consequently, researchers have recognized that electronic communication plays a vital part in bridging emotionally distant and geographically diverse actors (Kavanaugh, Reese, Carroll & Rosson, 2005; Wellman, 2001). Creating an effective virtual system lowers co-ordination costs and increases timely responses for an effective social system of exchange (Lee, 2009).

International Entrepreneurship and Networks

We define international entrepreneurship as follows: "... the discovery, enactment, evaluation, and exploitation of opportunities-across national borders-to create future goods and services" (Oviatt & McDougall, 2005:540). International entrepreneurship theory emphasizes the dynamic and chaotic aspects of early internationalization where skills, experience, and social networks play a dominant role (Keupp & Gassmann, 2009; Sapienza, Autio, George & Zahra, 2006; McDougall, Shane & Oviatt, 1994). International entrepreneurship research has recently been adding a geographic dimension when studying the relationships of entrepreneurs in small high tech firms in international markets. (Coviello, 2006; Harris & Wheeler, 2005; Komulainen et al. 2006; Ojala, 2009; Sharma & Blomstermo, 2003). The social networks that these entrepreneurs develop internationally are essential for the growth of these firms.

Consequently, international entrepreneurship research focuses on how social networks enable the international entrepreneurs to acquire and mobilize resources for early internationalization. The outcome of successful contacts which the entrepreneurs hold is called social capital and it is the key component of entrepreneurial networks (Burt, 1992). Social capital refers to the combined resources people acquire from their relationships with others (Coleman, 1988). International entrepreneurship scholars such as Yli-Renko, Autio and Tontti (2002, p. 283) define social capital as, "*the total resources a firm can acquire through its network of relationships*". One important resource that they emphasize is the access to other sources of knowledge. They state that external social capital in the form of network relationships has a positive impact on the new venture's foreign market knowledge. Increased social capital includes better access to resources and international opportunities, and a means to overcome the liabilities of newness and foreignness (Arenius, 2002). In addition, it helps firms to overcome the liability of being outside the relevant network in foreign markets (Johanson & Vahlne, 2009). Tsai and Ghoshal (1998) suggest that "a trustworthy actor is more likely to be a popular exchange partner" (p. 467). Coleman (1988) emphasizes that trustworthiness relating to social capital leads to economic and/or political benefit. Trust is therefore a very important element of social capital particularly when observing the international entrepreneur's network relationships.

While online social networks are under researched they have important implications because of the ease and low cost of developing networks for international entrepreneurs. There is an emerging stream of research,

however, relating to using online social network sites and their impact on social capital formation (Ellison, Steinfield & Lampe, 2007, 2011; Papacharissi & Mendelson, 2008). As Ellison et al. (2011) state; "...the identity information on Facebook serves as a social lubricant, encouraging individuals to convert latent to weak ties and enabling them to broadcast requests for support or information" (p. 1). They explore how undergraduates use Facebook to initiate and develop social relationships and to assess the impact of these activities to build social capital. They identify specific communication practices (i.e. connection strategies on Facebook) such as; "who users are interacting with and what they are doing with their interaction partners" (Ellison, Steinfield & Lampe, 2011, pp.13-14). They identified three distinct modes of behaviors by participants. First, "initiating" relates to meeting strangers on Facebook. Second, "maintaining" relates to communicating with close friends which is a form of Putnam's (2000) bonding social capital. Third, "social information seeking" relates to using the site for information about someone with whom the user shares an offline connection.

Conceptual Frameworks used in this Study

We use two conceptual frameworks from the existing literature to assess how and why international entrepreneurs use LinkedIn to develop and harness relationship networks and to benefit from them. The first conceptual framework is from the network literature and based on Grossetti (2005). It relates to the context for creating relationships because it is of significant value when studying personal networks. By focusing on context we can observe how people encounter people, the importance of the "gobetweeners" (Uzzi, 1997 p.48) and the origins of relationships. This information can have a significant value when assessing how international entrepreneurs create business contacts in different and often unknown markets. Researchers such as Coviello (2006) assess ties of international new ventures based on whether they are initiated by the firm ("outward"), initiated by an external party ("inward"), or initiated by "third party" introductions. Similarly, Grossetti (2005) suggests three types of situations which are contexts for constructing relationships. These are the collective form, common concern and relationships derived from other relationships. The first type of situation involves a collective form where certain relationships may last longer than the collective form which made its initial construction possible. An example of this may be a group of individual entrepreneurs who are working together on a task which later becomes obsolete. Certain relationships in the group may last longer. Another example may be former class mates or colleagues.

The second type of situation is where relationships are constructed around a common concern. Two entrepreneurs can take part in a large project where they work separately on different parts of the project. These individuals do not necessarily consider these relationships as a collective form but these common concerns may then lead to relationships and a structured collective entity. In this study the common concern includes various trade shows, business conferences and other activities which the entrepreneurs consider as a forum for people with common interests.

The last type of situation which Grossetti identifies covers the relationships derived from other relationships. “Certain people are introduced to us by friends either directly or during recreational or purely social activities (evenings out, suppers etc.)” (Grossetti, 2005, p. 233). For instance, two entrepreneurs are introduced to each other by a “gobetweenner” at a trade fair and a new relationship develops.

The second conceptual framework is from international entrepreneurship and is based on Freeman and Cavusgil’s (2007) typology. It relates to top management’s perception towards internationalization because this perception determines their behavior towards internationalization activities (Oviatt & McDougall, 2005). For example, forming network relationships and choosing foreign markets (Freeman & Cavusgil 2007; Chetty & Campbell-Hunt 2003). Freeman and Cavusgil (2007) suggest a tentative typology of commitment states by owners/managers (F-C typology). The four states in the F-C typology “can be characterized as the strategic mind-sets of senior managers for accelerated internationalization of smaller born globals.” (p. 22). They identify different characteristics of these four states by observing owners’/managers’ views on (1) internal and external environment, (2) network evolution, (3) foreign market selection, and (4) entry modes.

The four states of commitment by top management to internationalization are; the responder, the opportunist, the experimentalist and the strategist. The responder and the opportunist have a more short term and more risk averse mindset than the other two states. Their foreign business relationships tend to be indirect, less personal and based on organizational contacts. While responders do not proactively seek international markets they are willing to respond to unsolicited orders from foreign customers. Responders have few relationships in international markets and these tend to be distant and transactional in nature. The opportunists seek information from their networks about internationalization. They have a short term view of networks and regularly switch partners. The

experimentalist tries out internationalization to determine whether to increase or decrease their sales in foreign markets. The experimentalists are proactive in developing close and long term relationships that will connect them with foreign customers and suppliers. The strategists proactively develop relationships with important partners in their main foreign markets. The strategists have personal and friendly relationships with key customers and suppliers in their international markets.

It is clear from the literature that while online social networking plays an increasing role, we do not understand how international entrepreneurs use these tools. In response to this research gap, there are two underlying research questions in this study:

1. Using Grossetti's (2005) three types of constructing relationships, the question is: What is the context of constructing relationships in international entrepreneurship?
2. Using Freeman and Cavusgil's (2007) four types of mindsets the question is: Is there a difference in the mindset of international entrepreneurs and how does this affect their use of online social network sites to develop business relationships?

Method of research

This research is exploratory and rooted in Eisenhardt's (1989) interpretative methodology, which allows theory and data to interact. The unit of analysis is the entrepreneur's relationships. The purpose is to compare the phenomenon being studied in a systematic way by exploring different dimensions of the issue to be researched. Iceland was chosen because of its small and open economy with an extremely limited domestic market and widespread use of online social networking. Consequently, for Icelandic high tech entrepreneurs internationalization is essential for growth and survival of their ventures. We used a database containing all exporting firms in Iceland to identify a list of candidates. Of the list of 86 firms, 12 were chosen for this study. All 12 case entrepreneurs have been involved with their software business for more than five years and all are owners or part owners of their firms. Their firms are independent startups in software development all with export intensity over 90%. At the time of this research the average number of employees was 12 and ranged from 3 to 35. These firms began international marketing/sales within their first two years of inception (see Table 1 for a profile of entrepreneurs). By focusing on software entrepreneurs, we can compare our findings with other studies in this field (e.g. Chetty & Stangl, 2010; Ojala, 2009; Komulainen et al., 2006;

Coviello, 2006; Sharma & Blomstermo, 2003; Harris & Wheeler, 2005). To our knowledge there are no previous studies on how the web has affected international entrepreneurs and their network development.

Table 1. Overview of the selected Icelandic international entrepreneurs and their current high tech software business

Entrepreneur	Foreign Market spread	Education	Firm est	Business activity	Position in their firms
E1	3	Business	2000	Mobile social matching software	Founder and managing director
E2	9	Engineering	1998	Information Security	Founder and managing director
E3	4	Comp. science	2004	Web solutions	Founder and managing director
E4	8	Engineering	1998	Software solutions for online gaming	Founder and managing director
E5	4	Comp. science	2005	Ticketing software and ticket web service	Founder and director
E6	2	Business	2005	Mobile web technology sites	Founder and managing director
E7	3	Comp. science	2008	Networking technology	Founder and Chairman of the Board
E8	7	Comp. science and MBA	2004	Flight Search Engine software	Founder and managing director
E9	2	Technical	2008	Data Mining	Founder and managing director
E10	3	Comp. science	2008	Web crawler technology	Founder and managing director
E11	5	Comp. science	2003	Online games	Managing director
E12	3	Engineer	2004	Telecommunication software	Managing director

Researchers designing qualitative studies are encouraged by Creswell (2007) to include new and creative data collection methods. Several researchers (e.g. Watts, 2007) have stated that online communication technologies enhance opportunities for network research. Similarly, Lewis et al. (2008) stated that open, evolving social network sites represent remarkable new research opportunities which are ideally suited for data collection and analysis. This research potential has advanced with Kozinets' (2002) development of "netnography" as an online marketing research technique. Netnography emphasizes that researchers learn as much as possible about the groups and the individual participants they seek to understand by using online technology. As Kozinets (2002) recommends

our data collection included both direct copies of messages from the online social network and direct interviews, observations of the interactions, and our interpretation of meanings.

We used the following procedures to analyze how entrepreneurs developed and harnessed their relationships:

1. Initial open ended face-to-face interviews with all the entrepreneurs regarding their relationships and their use of online social networks. The interviews lasted 70-90 minutes and were recorded and transcribed.
2. Participant observation which involved joining the personal network of each participant on LinkedIn. This provided the opportunity for the researcher to follow their networks and actions. The research follows ESOMARs guidelines for internet research (Nancarrow, Pallister & Brace, 2001).
3. Analyzing the individual's network in terms of number of relationships, strength of ties and geographic location of relationships.
4. Follow up interviews which lasted on average 60 minutes regarding entrepreneur's relationships on LinkedIn. All interviews were conducted by the same researcher trained in qualitative interviewing.
5. Mapping different contexts of relationships and identifying distinct categories of entrepreneurs.
6. Data analysis included data coding and summarizing, analyzing interview transcripts where themes emerged from the data, and reviewing the open discussion of the participants on LinkedIn.

Defining ties as weak or strong was based on four criteria: the frequency of contact, the emotional intensity of the relationship, the degree of intimacy, and reciprocal commitments between the actors involved (Granovetter, 1995). Weak ties provide access to novel industry information and new business relationships. Strong ties are relationships that can be relied on in both good times and bad times.

Participant observation occurred by actively following the development of the participant's networks on LinkedIn. This is a professional social network on the web with 80 million members. Nearly all software entrepreneurs in Iceland are active on this network. One concern with a web based social network analysis is whether a relationship on the web between two individuals implies a "social" relationship or is it actually a "hollow"

relationship in which little of substance flows? Watts (2003) responds to this concern by arguing that since human behavior creates contacts between each other on the web then these relationships are indeed social. Our research expands on this viewpoint by emphasizing how valuable it is to examine international entrepreneurs' LinkedIn relationships, their origin and purpose and how they are used.

Method of observing web relationships

When analyzing the context for creating relationships we used Grossetti's (2005) three types of situations. The follow up interviews with participants entailed further exploration of each relationship, clarifying ambiguous relationships, and collecting quantitative data about the context of relationships on LinkedIn. These interviews lasted on average 60 minutes and were conducted three months after the initial interviews. Interviewing and data collection was as follows:

1. The participants were questioned about their preferred professional networking tool on the web. All chose LinkedIn as their primary business network.
2. Each participant cooperated with the researcher to go over the list of on average 60 random relationships that they had on LinkedIn. In total there were 720 relationships. Only relationships which were described as both friendship and business or business were included. Current co-workers were omitted because in many firms these relationships were initiated by the firms so that all of the co-workers would be connected on the professional network. Participants were asked the same questions that they were given in the initial interviews regarding individual relationships and these were:
 - a) How did you first meet this person?
 - b) Who introduced you or who initiated the original contact?
 - c) Can you describe your relationships?
 - d) How would you value the business opportunity from this relationship?
 - e) Any other comments on development of relationships?

For triangulation purposes and consistent with netnographic methods, open online messages were collected from the participants on LinkedIn. As Kozinets (2002) indicates ...“interesting and useful conclusions might be drawn from a relatively small number of messages, if these messages contain

sufficient descriptive richness and are interpreted with considerable analytic depth and insight... ” (p. 64).

Our data analysis can be described as stages of constant comparative analysis. First we searched all the interviews and open discussion on LinkedIn, for any patterns. Second, we refined themes into descriptive categories. Third, we used data on number and location of ties for triangulation. Fourth, we synthesized the descriptive categories into Grossetti's (2005) and our adaptation of Freeman and Cavusgil's (2007) conceptual frameworks.

Discussion of findings

One observation from our study is that the entrepreneurs with the largest number of relationships on LinkedIn were the ones who indicated in the face-to-face interviews that they have few strong relationships in their ventures. The entrepreneurs with the smallest number of contacts on the web, however, have a larger number of strong relationships in their ventures as indicated in the initial open ended interviews. When a participant with the largest number of contacts on the web, was asked about whom he discussed the future of his firm he responded: “I send out my thoughts to a group of 40-50 investors and specialists on my LinkedIn network”. One participant explained: “I blog my thoughts about the venture and then basically try to let them vote on best solutions. It also creates more fans (followers)”. This supports Greve's (1995) suggestions that, in a loosely constrained network, the entrepreneur may be able to discuss ideas and problems without a high risk of idea appropriation. Consequently, the opportunities presented by new web communication technology may further strengthen such international entrepreneurial activities.

Our findings are similar to Ozcan and Eisenhardt (2009) who discovered that executives in firms with high-performing network portfolios visualize their portfolios in the context of an entire network, not as a series of single ties. We found a similar attitude among entrepreneurs with a large number of online relationships. When they reviewed their relationships on LinkedIn, clusters of contacts appeared such as: “This is one of my wireless contacts in London”. “Here is another media guy who I will hook up with when we go ahead with our Scandinavian plan.” They viewed individual relationships as parts of a network portfolio which often related to their specific industry, specialization or foreign market. Consistent with Uzzi (1997) the portfolio of relationships which are connected to the two individuals becomes the referral system or the gobetween. This partly protects against opportunism

which is considered to be the frailty of weak ties by scholars such as Uzzi (1997). One entrepreneur used the referral system to contact an American firm. As he explained: “I sent a mail through LinkedIn to them and noted we had a bunch of mutual connections and I wanted to introduce them to what we were doing in software. This helped to establish the contact and we started business with them soon after.”

A geographic analysis of the individuals contacted in the participant’s network denotes a significant difference between domestic and international relationships. On average, international relationships on LinkedIn account for about 40% of total relationships (see Table 3). As the number of relationships increased so did the proportion of international relationships. Of the 171 weak ties defined by the international entrepreneurs in the initial face-to-face interviews, 41 (24%) were international. Of the nearly 3000 relationships that entrepreneurs had on LinkedIn, 41% were international. This indicates that LinkedIn is opening new doors for these entrepreneurs to build international relationships.

The larger the effective size of the network, the greater its growth of nonredundant ties and the number of structural holes increases, which opens further bridging opportunities (Burt, 1992). Although we identified that numerous weak ties best suit an exploration strategy, participants expressed concern about developing a large number of weak ties. These concerns are twofold. First, serving a large portfolio of weak ties can be time consuming. Furthermore, participants indicated that their social network on the web did not necessarily reflect their optimal business network. Second, there is a growing problem of “buggers” as one participant phrased it. This involves strangers making contact and others who send various requests and comments on these web sites. These relationships are considered to be time consuming and inefficient.

Observing this within the RBV framework, the ongoing capability of web relationship building can lead to an overflow of social capital for the entrepreneur and diminishing returns which is consistent with Ellison et al. (2011). One of the myths of social networks is that to build better networks, we have to communicate more (Cross, Nohria and Parker, 2002). Our respondents’ concerns regarding their increasing network size confirms this myth. Several respondents mentioned that during a 1-3 year period before this study was conducted they expanded their web network rapidly. Consequently, they were communicating more with a larger set of relationships thus increasing the amount of hollow embeddedness. The question is: What effect will this have on the ventures of the international

entrepreneurs? As one entrepreneur explains: “Time is valuable and networking can be very time consuming and more so as time goes by”.

The emergent themes from our research strongly support Freeman and Cavusgil’s (2007) F-C typology. Particularly, as regards internal and external environment and network evolution. We did not find a difference, however, among the entrepreneurs regarding foreign market selection or entry modes. One explanation for this difference between our study and the F-C typology maybe that the entrepreneurs in our study are leading software entrepreneurial firms which are on average much younger than those in the F-C typology. The software characteristic of these firms enabled them to enter new foreign markets, wherever an opportunity appeared. Our focus is therefore on (1) internal and external environment and (2) network evolution. We adapted the typology by adding an analysis of the entrepreneurs’ web networks. This allowed us to explore whether the web networks (number of relationships, who initiated the contact, etc.) would be comparable with the information provided in the open ended interviews.

When focusing on web network relationships we found the mindsets of the entrepreneurs and the development of their web networks similar to three characters in the F-C typology; the responder, the opportunist and the strategist. In the F-C typology, the Experimentalist seems to be the most experienced of the entrepreneurs. This is indicated by descriptions such as “willing to internationalize long-term”, “networks built over time”, “develop close and long-standing person centered networks”. The entrepreneurs in the young firms we studied, however, did not reflect this mindset. They seemed more active in obtaining relationships rather than thinking about the long term.

The three groups which we identify have similar experience and have no great age difference in their current ventures. The opportunists are, however, on average four years younger than the other two groups. Table 2 presents the three patterns we identified and the characteristics that differentiate entrepreneurs.

Table 2. Three patterns of international entrepreneurs

Characteristics	The Responder	The Opportunist	The Strategist
Internal and external environment	<p>8 Not proactively seeking relationships in international markets.</p> <p>9 Aware of the importance of international markets but sees many weak ties as a waste of time.</p> <p>10 Does not actively seek web relationships.</p>	<p>Interested in international commitment and seeks such commitment all over.</p> <p>Is willing to spend time to initiate new relationships and actively seeks them.</p> <p>Actively seeks web relationships.</p>	<p>Proactively seeks key partners in international markets.</p> <p>Considers network of weak ties on the web as a portfolio. This has some characteristics of strong ties, as they protect against opportunism.</p> <p>Receives many requests to connect and is selective.</p>
Network evolution	<p>Has a well established domestic network of strong relationships and is recognized in the field.</p> <p>Network, both on the web and face-to-face reflects the emphasis on strong relationships.</p> <p>Has small international network with few high level relationships.</p> <p>Skeptical about quick-relationship building and web relationships.</p>	<p>Has an established domestic network but lacks identity.</p> <p>Network, particularly on the web, reflects the emphasis on creating new relationships and opening opportunities.</p> <p>Has large web network but very few high level relationships.</p> <p>Emphasis on establishing channels which may change into business and help gain credibility.</p>	<p>Has a well established domestic network and is recognized in the field.</p> <p>Has large web network, both on the web and face-to-face, and proactively seeks to strengthen identity in the network.</p> <p>Has large web network of international relationships and high level relationships and uses it as a “gobetweenner” and for opportunities.</p> <p>Strategically develops relationships to develop the business, both on the web and face-to-face.</p>

The opportunist

The The opportunist represents international entrepreneurs who are actively seeking further opportunities abroad that could mean success or failure. Four participants in the study were categorized as opportunists. The network of the opportunist is unstructured and they see themselves as a member of an international network of “symmetrical” relationships between people of equal status (see Figure 1). Consistent with Zain and Ng (2006) they emphasize establishing relationships that may transform into business relationships and help them gain credibility.

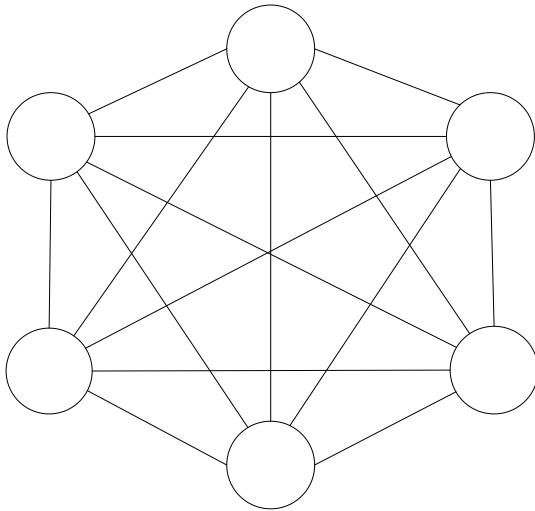


Figure 1. Opportunists seek opportunities on the web from various relationships especially from people of equal status.

Although opportunists perceive both weak and strong ties as important, the weak ties play a dominant role. They actively seek weak ties as they realize that they cannot establish strong ties quickly with international partners. This finding is in line with Sharma and Blomstermo (2003) who demonstrated the importance of weak ties for international new ventures. In addition, it is consistent with Ellison et al. (2011) “seeking” and “initiating” dimensions where the web is used for learning about people and “meeting strangers or make new friends without any prior offline connection” (p.10). Since these international entrepreneurs want to enter new markets, they need weak ties to provide confidential information about business opportunities. They use open messaging to initiate new ties and to create interest. One opportunist sent an online open message saying: “We have developed an exciting new technology for the (particular niche market) and are looking for partners, particularly with good contacts in the US.” This pattern of network evolution confirms the results reported by Hite and Hesterly (2001) and Jack (2005) who studied networks of domestic entrepreneurs. The entrepreneur uses the web as a tool to wonder around and to initiate relationships wherever possible.

Weak ties on the web are perceived to be important when searching for new information about developing products, business-to-business customers, finding distributors or establishing relationships within a particular industry. Financial constraints impede entrepreneurs from investing heavily in these relationships. For example, visiting these firms abroad or attending many

conferences or trade shows. Several respondents perceived these activities as crucial for both creating new ties and strengthening or enhancing existing weak ties. The opportunists were less concerned than the other groups about the time spent networking on the internet. The opportunists indicated that the size of their networks on the web increased significantly during a period of 12-24 months before they were interviewed.

The opportunist's web relationships are geographically dispersed. In many cases these relationships are hollow relationships which respondents hope to eventually develop into business relationships. The opportunists are open to unknown contacts which they perceive as an opportunity; a potential for common concern. This contrasts with previous research emphasizing the role of web networks as maintaining or reinforcing existing offline relationships rather than to meet new people (Lewis et al., 2008; Ellison et al., 2007). In our study the opportunists are actively seeking new and often unknown contacts through the web. The opportunists seem to reflect Cross et al.'s (2002) myth that everyone has to be connected with one another. Opportunists tend to collect various contacts without purpose. As one opportunist explains: "I accept nearly all invitations from people to connect, whether I know them or not. Why not?" Although opportunists perceive themselves as members of a symmetrical network they realize that certain gobetweeners in their network are more important than others. Consequently, there seems to be a ranking in terms of the quality of weak ties. The opportunists tend to have a fairly accurate picture about who the strategists are, and these are usually individuals who are gobetweeners that may initiate business.

The strategist

The strategist represents international entrepreneurs who have shown the largest network of online relationships; the strongest network identity and have high bridging ties (see Figure 2). These traits of the strategists are consistent with results from social network analysis which suggest that heavy web users with bridging ties have high social engagement and bridge social capital in communities (Kavanaugh et al., 2005). Four entrepreneurs are categorized as strategists. They show a positive relationship between their perceived network strength and business venturing. The strategist seems to be the most effective in using electronic and face-to-face interaction to bridge and bond networks. These individuals have three to four times the number of contacts on LinkedIn compared to the other participants. In addition, they have a unique and diverse set of connected partners which increases their attractiveness as network partners.

Although strategists have the largest online network, during the initial face-to-face interviews they indicated the smallest number of strong ties. The strategists are trusted network members with bridging skills and strong network identity. In the initial interviews, however, their list of highly trusted partners was lower compared to the other entrepreneurs. This is consistent with Ellison et al. (2011) who show that bridging social capital decreases as the number of relationships increase. The online relationships seem to serve as a new medium and the large network represents a form of status; a strong network identity. The strategists emphasized building LinkedIn relationship networks with some key players in the industry who they had met at international conferences. Responses during the initial interviews with strategists indicated that they did not believe that the web would overtake conferences, trade shows and face-to-face contact.

Similar to the opportunists, the strategists use the web to obtain new business relationships as well as strengthening their current network. One strategist explained: "I use the web social network to establish connections but not necessarily to enhance existing ones. After initiating relationships on the web I tend to move them into more traditional territories. I use LinkedIn as I would use a conference. I send teasers to five individuals saying that I will be in London on Thursday." One such mail led to a meeting and later on a successful business with a British firm. Another strategist sent out an open message stating that he would be a, "keynote speaker in LA next month", which clearly indicated his status among peers.

In addition, strategists have various ties with important individuals and firms abroad in their relevant field. Their perceived strength lies in their strong network identity. Consistent with Anderson, Håkansson, and Johanson (1994) they are attractive exchange partners due to their unique set of connected relationships with other individuals and their resources and ties. They recognize their strength in networking and go to some lengths to enhance and preserve them. One strategist indicated that since returning from London, where he lived for five years, many of his key relationships had been inactive. The web had helped him, however, to preserve them as "low hanging fruit" as he phrased it but without face-to-face contact, these relationships would possibly dwindle.

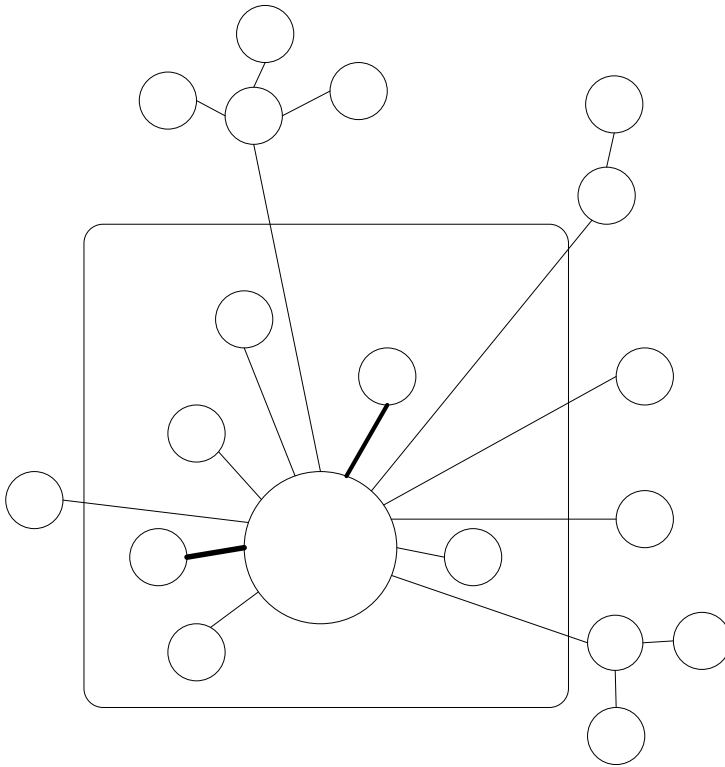


Figure 2. Strategists have the largest network of weak ties on the internet, connect to various key individuals at home and abroad and have the strongest network identity (shaded part represents domestic contacts).

Many people want to initiate contact with the strategists because they are more likely to connect them to valuable relationships. This partly explains why strategists have a larger network on the web than other entrepreneurs. During interviews two opportunists mentioned that the strategists were; “important in our network” and “connected us to an American firm”. These findings are consistent with Tsai and Ghoshal (1998) as they confirm that trustworthy actors are more popular exchange partners.

The responder

The responder represents international entrepreneurs who have shown less interest in personal online networks and have smaller networks than the others. Four participants are identified as responders. On average they are four years older than the strategists and six years older than the opportunists. Although they are interested in the web (see Figure 3), they tend to use traditional methods to communicate with business partners. They have spent most of their career in the same high tech niche in which they have created a

relationship network. Although they are looking for new business they do not actively seek or value weak ties on the web or elsewhere compared to the other entrepreneurs. They use LinkedIn in the same way that Ellison et al. (2011) describe; “using the site to maintain existing close ties” (p.10). They are generally skeptical about large relationship networks and perceive numerous weak ties as a time consuming and inefficient way of doing business. One responder said: “I am not really a dedicated follower of all the newness on the web social network. We focus on finding good partners the traditional way and use the web to keep in close contact.”

A detailed examination of the responder indicates that during initial interviews they have shown a proportionally larger network of strong ties than the other entrepreneurs. They have the smallest network on the web, however, and rarely use online open messaging. One reason for this is because they focus on their smaller trusted network rather than a large set of weak ties on the web. As one responder explained: “I focus on nurturing my existing client base both off line and online but new customers are not brought in through online relations.” Although responders have been successful in foreign markets their network identity is highest in the domestic market. A geographical analysis of LinkedIn connections shows that responders have relatively fewer international relationships than the opportunists and strategists.

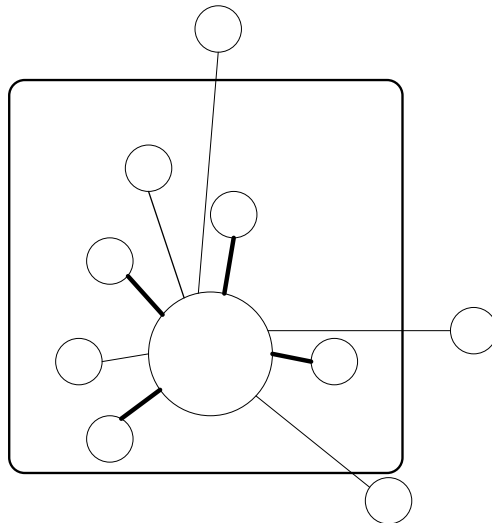


Figure 3. Responders have fewer contacts on the web, especially abroad (shaded part represents domestic contact), but have built more traditional contacts with people and have more strong ties.

When observing third party relationships on the web, i.e. friends of friends, we found that those connected to opportunists and strategists have a much larger 2nd degree network than those connected to responders. This indicates that responders are connected to similar people and have relatively small networks on the web. This is consistent with studies on social relationships on Facebook which have revealed that people tend to connect with similar people (Lewis et al., 2008).

Table 3. Number of ties from interviews and number of contacts on LinkedIn

	Average age	Average number of strong ties defined in interviews	Average number of other ties defined in interviews	Average contacts on LinkedIn	Percentage of international contacts on LinkedIn
Opportunists	37	7	18	168	39%
Strategists	39	6	15	441	52%
Responders	43	9	20	108	17%

Analyzing LinkedIn Network

The number of relationships for the participants on LinkedIn was much larger than those given during the face-to-face interviews and the majority of the relationships were weak. An analysis of the LinkedIn network of the three groups in the study confirms Grossetti's (2005) specific forms of network context on the web (Table 4). The collective form includes former co-workers or current/former domestic client/supplier (lawyers, IT specialists etc.) and classmates. The common concern includes professional conferences or trade shows and related networking activity (parties, meetings etc.). This category includes unknown individuals who requested that the participants connect with them. Respondents accepted these relationships because they seemed to represent common interest or concerns. Finally, relationships through others include relationships formed through a gobetween. These can be formal agents or brokers or individuals who are identified as gobetweeners.

Table 4. Context of relationships on LinkedIn

Type of entrepreneurs	Collective form	Illustrative quote	Common concern	Illustrative quote	Relationships derived from other relationships	Illustrative quote
Opportunists	37%	<i>She worked with me on a previous IT project.</i>	61%	<i>We met at a conference in Seattle.</i>	2%	<i>We were introduced through mutual mail by an industry leader.</i>
Strategists	27%	<i>He wanted to connect on Facebook. I found out we had studied together at gymnasium</i>	64%	<i>I was a speaker at a conference where he was also. He began following me on Twitter.</i>	9%	<i>This is a guy I met skiing in France. We had a mutual friend who introduced us.</i>
Responders	63%	<i>He is a former colleague of mine from previous job.</i>	30%	<i>We were both at the board of New Tech Iceland.</i>	7%	<i>I was introduced to this guy by a former classmate.</i>

Overall, the majority of the relationships of the opportunists and strategists were initiated through common concern, for example, domestic and international trade shows and conferences. Strategists and responders created only a few of these domestic or international relationships before they formerly met people. The opportunists, however, had a higher proportion of such cases, ranging from 10% to 30% while the others had less than 10%. The opportunist and strategist's network relationships on the web seem to be formed through involvement in various groups with a common concern. A frequent response when discussing each contact with the opportunists and strategists was: "I met him/her at a party/conference/trade show and we began to talk". The most common response, however, from the responders was: "I met him/her as we worked/did business together". This is consistent with research which indicates that social media is primarily used to strengthen current ties rather than to create new ones (Lewis et al. 2008, Ellison et al. 2007).

Our findings show that the other most significant parts of the networks consist of the collective form. This includes; former co-workers and former or current business associates and former classmates. The responders' network is based more on former classmates or colleagues compared to the other two groups. One explanation is that responders have proportionally more domestic relationships which tend to consist of mainly former classmates and/or colleagues. A noticeable difference between the opportunists on one hand and strategists and responders on the other was related to who initiated the first contact. The participants were unable to answer who had initiated the relationships in over 60% of the relationships. Nevertheless, they could recount clearly that they met the person at a trade show, at school or a former workplace. We found a large difference between the three groups when they were questioned about who initiated the relationships. The strategists and responders initiated fewer relationships compared to the opportunists. The opportunists were more aggressive in their pursuit of relationships while the others were more passive.

In addition, we analyzed the context for creating relationships on the web and interviewed participants about the origin of these relationships. This provided a description of the three categories of entrepreneurs as follows: The opportunists were aggressive in seeking relationships. The strategists are sought after by others and can therefore be more passive in their approach. The responders have much smaller networks but have a proportionately larger network of former colleagues and classmates thus indicating their smaller but tighter relationship network. Strategists seem more passive in their pursuit of new online relationships. When asked, how they first met a person, they were more likely than the other entrepreneurs to indicate their passive approach and network identity: "I came to know him first as he followed me on Twitter". "I tend to wait until the other asks me to connect."

We did not find a large number of relationships on the web that were created through a third party. In fact, participants often valued the few relationships that they identified as being created through a third party. This included relationships initiated by the gobetweeners which actually resulted in business.

When describing the evolution of their online network, respondents reported that while they started with a few close friends they subsequently expanded their network through the friends of those close friends. This might explain the relatively larger portion of 'collective form of ties' among the responders, while their ties on LinkedIn are much less than the others. Participants valued relationships with those who had a large number of

relationships on LinkedIn as indicated by these statements during interviews: “You see he has 350 connections.....”. “He has only 23 connections ...”. One interesting aspect about jointly observing contacts on LinkedIn with participants is when they identify the contacts that have made the most difference to their business. As one strategist stated: “Oh, here is the U.S. contact who invited me to dinner at his house with (person XYZ) from (a large U.S. TV network). We later did business with this network.” And the opportunist explained: “Here is my first foreign investor who I met on the internet, we Skype at least monthly”.

Conclusion

We contribute to the resource-based view (RBV), international entrepreneurship and network theory in various ways. First, we have identified that entrepreneurs actively use new social networking tools in their international ventures. These online social networking tools make it easier for users to manage a large number of relationships particularly weak ties. We found that these weak ties have similar characteristics to strong ties as they seem to protect entrepreneurs from opportunism and similar to Ellison et al. (2011) to form bridging social capital. The rationale for this is because the entrepreneur is part of a large online network. The entrepreneur has been accepted by numerous people who know other people he/she is connected with on the web. Entrepreneurs are active in increasing their network identity because it is one of their most important resources in web communication. All these elements within the weak tie structure of the web network establish an initial motive for trust, norms of behavior and protects against opportunism; one of the foundations of strong ties. As Uzzi (1997) found strong ties (embeddedness) promoted “economies of time” such as the ability to capitalize quickly on market opportunities.

Second, we provide a unique window into the important, but often overlooked, role of weak ties in the international entrepreneurs’ ventures. The opportunity to count and evaluate these weak ties on the web opens a new field of research to examine how international entrepreneurs develop their relationships. We therefore contribute to social network theory by sharpening its focal concept of embeddedness.

Third, we contribute to internationalization theory by showing how international entrepreneurs can overcome the “liability of outsidership” (Johanson & Vahlne, 2009). Our findings illustrate how international entrepreneurs connect with potential partners on the web to explore and exploit opportunities to become insiders in the relevant network in foreign

markets. Consistent with Ellison et al. (2011) this insidership position has an impact on their social capital outcome. Thus, our contribution to RBV is that we illustrate how entrepreneurs acquire critical resources such as skills and knowledge through online social capital formation to internationalize. In particular, LinkedIn enhances the opportunities for entrepreneurs to acquire resources through bridging social capital. We have shown how entrepreneurs use the web to build trust that subsequently strengthens their relationships. Entrepreneurs are able to acquire resources to enter new markets and to develop internationally by establishing and maintaining these relationships through the web and face-to-face interactions.

Fourth, by observing the context for creating relationships we contribute towards understanding the different categories of international entrepreneurs. Our focus on this contextual issue combined with the methodology we use can enhance future studies on different types of international entrepreneurs.

Finally, our findings highlight the usefulness of the RBV literature to observe the international entrepreneur's dynamic network structure. For instance, an important aspect of RBV is how entrepreneurs use relationships to access resources and their ability to actively broaden the network of relationships. Since each entrepreneurial network is inimitable this allows the entrepreneurs to acquire a unique bundle of resources (e.g. technology, information, financial and human capital) to obtain competitive advantage in the software industry.

One limitation of this paper is that we focus solely on software firms. Hence, future qualitative studies could be conducted in other industry settings to make analytical generalizations. Another limitation of this study is that some users of these online social networks are more popular than others. Consequently, it is misleading to focus on number of relationships as an indicator of network identity or popularity because a growing number of web users are collecting relationships. One technique to evaluate individuals might be to count how many individuals wanted to connect with them rather than how many relationships they actually have. This would indicate their network strength, thus separating them from individuals who might be collecting hollow relationships from similar people. The number of ties and the distinction between weak and strong ties is not always clear. The ongoing relationship between the researcher and entrepreneurs on LinkedIn provides an opportunity to explore the development of the international entrepreneurs' personal networks by using participant observation as well as longitudinal data. Finally, future studies could observe the phenomenon that Ruef (2002) highlights where individuals positioned in large heterogeneous

networks are more likely to be regarded by their peers as innovative compared to those in homogeneous networks

Managerial relevance

Online social networks provide opportunities for entrepreneurs to enlarge weak ties which are especially important for internationalizing firms. A cautionary note is that entrepreneurs need to use the web wisely to prevent wasting time and inefficiencies. Entrepreneurs might consider how they could strategically build their networks to access diverse skill sets, how to use them to build trust and to strengthen network identity that can provide new bridging relationships. An effective online social network lowers coordination costs and is valuable for business communication. Since LinkedIn provides immense bridging opportunities, participants in this study are continuously searching for the most efficient way to use their networks. Hence, the strategist is particularly interesting for entrepreneurs because they show the greatest opportunities for bridging. The web is therefore a valuable vehicle for entrepreneurs to show their network strength and presents opportunities to connect people.

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PAPER 3. Domestic Market Context and International Entrepreneurs' Relationship Portfolios

Abstract

The importance of relationships to international entrepreneurs' internationalization is well recognised, but we still know little concerning how entrepreneurs find, develop and use different types of relationships for their internationalization. In a study based on international entrepreneurship and network theories, we examine how having or not having a domestic market affects the relationship portfolios developed by born global software entrepreneurs. We find it profoundly influences the personal relationship strength they seek in new international relationships, and their activeness towards developing new relationships that are embedded in foreign markets. Further, the analytical model we develop shows how and why the presence of a domestic market influences international entrepreneurs' portfolios of relationships.

KEYWORDS:

Born Global

International new venture

Networks

Relationships

Internationalization

Introduction

International firms at the entry stage of their life cycles are increasingly embracing a relationship perspective (Coviello and Munro, 1995), and evolving international business research is paying increasing attention to the role of international business relationships. Internationalization process research (e.g. Johanson & Vahlne, 1977; 2003), the relationship perspective research (e.g. Dyer & Singh, 1998), network research (e.g. Larson & Starr, 1993) and international entrepreneurship (e.g. Oviatt & McDougall, 2005) all emphasise the fundamental importance of international relationships for internationalization, especially for small high-tech firms (Coviello, 2006; Komulainen, Mainela & Tahtinen, 2006; Moen, Gavlen, & Endresen, 2004). Being resource poor and needing to secure business opportunities in new territories, entrepreneurial firms seeking access to new international markets must especially develop relationships internationally, in most cases to find partners with valuable nationally specific intangible resources (Johanson and Matsson, 1988; Coviello and Munro, 1995, 1997; Madsen and Servais, 1997; Chetty and Holm, 2000; Freeman, Edwards and Schroder, 2006).

International entrepreneurship research presents an increasingly rich understanding of the importance and value of international business relationships for international entrepreneurs (IEs), but researchers have noted that many gaps remain, especially at the firm and manager level (e.g. Loane and Bell, 2006; Ozcan and Eisenhardt, 2009). Research gaps exist as to the specific functions and contributions of different types of relationships within a firm's portfolio of relationships (Coviello and Munro, 1997; Mort and Weerawardena, 2006; Sasi and Arenius, 2008). Additionally we have limited information on how relationships diverge between small firms of different types or in different industrial contexts (Freeman and Cavusgil, 2007) or what managers actually do in the work of finding, developing and using these network relationships (Chetty and Holm, 2000; Loane and Bell, 2006; Mort and Weerawardena, 2006).

The importance of this study is that it begins to address these gaps by exploring what relationships IEs choose to develop and use to help them develop their businesses, how this changes as their firms internationalize, and how this differs between firms in different industrial contexts. Specifically, we ask how the presence of a strong domestic market influences the numbers and types of relationships that born global international entrepreneurs (IEs) use to develop their businesses, and the effort they devote to develop new relationships that are embedded in foreign markets, in the initial stages of development of their international firms.

The study here focuses on the relationships of software entrepreneurs who were leading their firms through stages of rapid evolution from firm inception to internationalization. Fourteen matched IEs from one small globally trading country are studied, split between two globalized growth sectors, one that had a substantial domestic market and one that did not. To understand the IE's perspective on their strategy towards building new relationships, we adopt the notion of 'relationship portfolios' previously used in industrial marketing and purchasing research (Zolkiewski & Turnbull, 2002), and build a research model inductively from our case data that takes the perspective of the IE towards the different people or organisations in whom they may or may not invest effort to build relationships.

We find international entrepreneurs with a large domestic market initially relied on strong domestic relationships that they had or could readily develop there. Some research has argued that initial relationships help international network development and international networking capability (Gulati, 1999; Johanson & Valne, 2003 Harris & Wheeler, 2005; Freeman, Hutchins, Lazaris & Zyngier, 2010). We noted these benefits, but found that the reduced pressure on IEs with a large domestic market to engage in high levels of international networking activeness at the earliest stages, so they displayed some of the network rigidity noted by Mort and Weerawardena (2006).

Those without a large domestic market had to work much more actively from the outset to develop relationships that were well embedded in international markets, and developed capabilities to form international relationships earlier as a result. We also develop a relationship portfolio model that presents relationship choices from an international entrepreneur's perspective in a way that helps us to understand these in their stages of development from initiation to first internationalization.

The remainder of this paper is divided into six sections. Next, we review relevant previous research on international entrepreneurs relationships in order to link the research questions with the theoretical background of the study. Then we outline the method of research before presenting the findings and discussion around those research questions. Finally, we draw conclusions and implications.

Theoretical background

We will now consider research that has contributed to our understanding as to what relationships IEs will most seek to help their international expansion. First we overview research into the network relationships for internationalizing entrepreneur, from which we define three areas that are considered in turn. These are the strength of the IE's relationship, the

connections that the relationship has in foreign market(s) (which we denote as its embeddedness), and the activeness the IEs put into international relationship development.

The value that relationships offer for IE internationalization

While much research has identified that network relationships have an important role in IE internationalization, research identifying the specific value they offer in this process has remained fragmented. The roles that have been identified in previous research can be split into three broad types, each placing successively higher levels of interaction demands on the relationships involved.

The provision of market knowledge and information is the longest recognised role of relationships in internationalization (Coviello and Munro, 1995; Chetty and Holm, 2000; Madsen and Servais, 1997). Granovetter (1973) saw this information role as requiring only weak relationships, an idea has been supported in some IE research (Freeman & Cavusgil, 2007, Freeman et al., 2010; Nordman & Melen, 2008). To move from a supplier of data to become a supplier of opportunity possibilities requires a process of knowledge sharing that implies a stronger relationship (Welch & Luostarinen, 1993). Johanson and Vahlne's (2003) revised model sees this to involve "relationship partners gradually learning about one another's needs, resources, strategies and business contexts" (p.93). Mainela (2007) therefore sees strong personal relationships being needed for opportunity recognition, and Freeman et al. (2010) summarize research in IB to conclude likewise, since the knowledge sharing involved for internationalization requires trust and absorptive capacity, generally developed through long-term relationships. This opportunity recognition role can therefore be fulfilled in different ways by weak and strong relationships, but these relationships all need to have this information or knowledge in the first place, and this will reflect the extent to which they are usefully connected within those territories (Yli-Renko, Autio and Tontti, 2002).

A deeper and more tacit form of knowledge is know-how in new territories, typically experiential knowledge concerning how to do things, such as how to find and assess partners, access supply chains or marketing and distribution in the new territories (Johanson and Vahlne 1977, 2003; Turnbull 1979; Chetty and Campbell-Hunt, 2004; Freeman et al., 2006). Sharing this tacit knowledge typically requires interaction time between source and recipient (Simonin 1999), strong trust relationships between those involved (Husted & Michailova 2002) and time in relational interaction for that trust itself to be developed (Aulakh, Kotabe & Sahay 1996). More, it requires a deeper level of embeddedness as well, with deep and extensive experience in the territory involved.

A third value of relationships is the provision of actual assistance. An essential task can be linking to new customer or supply chain partners in the territory (Coleman, 1990; Welch and Luostarinen 1993; Coviello & Munro; 1997; Freeman et al., 2006). Granovetter (1973) presents this as requiring only weak relationships, but door-opening or linking into large customer's supply chains, for example, requires more commitment of the partner, indicating stronger relationships (Freeman et al., 2006; Freeman & Cavusgil, 2007). These 'introducers' (Johanson & Mattsson, 1988) or 'go betweeners' (Uzzi, 1997) are 'local bridges' that provide links to people and firms between actors in different markets that would otherwise be disconnected (Oviatt & McDougall, 2005). And can themselves be in the entrepreneurs own countries, so long as they yield access to distant markets (Harris and Wheeler, 2005). This assistance can comprise a foreign market presence and reputation that can be critical in gaining market entry (Ghauri, Tarnovskaya, & Elg, 2008; Komulainen et al, 2006, Sharma & Blomstermo, 2003), and advise, help and support in strategic change associated with the internationalization (Hallen, 1992; Harris & Wheeler, 2005). Providing active help in a territory by persuading and negotiating (Turnbull 1979; Salmi & Backman, 1999), influencing (Coleman, 1990), communicating helpfully (Hallen, 1992), or providing marketing capabilities (Chetty and Campbell-Hunt 2004; Freeman et al., 2006) requires a level of trust and motivation to commit that only comes with strong relationships (Granovetter, 1982, p.113). It also requires linkages to people, firms and institutions in the territory that will make the assistance effective.

This review of the help for IE internationalization that relationships can offer shows that IEs need some level of strength of relationship with the people concerned, and that those people need some presence within potentially useful territories internationally. These two aspects are examined next.

The strength of the relationships that will help IEs internationalization

In early stages of their firm's development, entrepreneurs rely on direct personal strong relationships, typically with family, friends or previous colleagues to provide critical resources (Larson & Starr, 1993; Hite & Hesterly, 2001). Sufficient trust and affective commitment has been generated through high levels and frequency of social or personal interaction that they are motivated to help and protect the entrepreneurs (Granovetter, 1982; Hite & Hesterly, 2001).

Strong relationships, built from extensive social interactions, have been identified to help smaller firms to internationalize (e.g. Ellis, 2000; Harris & Wheeler, 2005; Svejenova, 2006). For people to share their advice, tacit

know-how, and the most subtle knowledge, they need to trust one another, this is usually based on shared past experiences and repeated interactions (Uzzi, 1997; Mainela, 2007). Freeman et al., (2006) and Freeman and Cavusgil (2007) note the importance of strong long-standing relationships with foreign customers for new market entry.

For entrepreneurs to grow their firms internationally, however, weak relationships have been found to be the most useful for acquiring market knowledge of and access to new territories (Sharma & Blomstermo, 2003; Komulainen et al. 2006). International growth may be impaired if they do not widen their circle of network relationships to get them (Sasi & Arenius, 2008). Weak relationships are based on pledges, information exchange and resource sharing rather than longstanding interaction (Gundlach, Achrol, & Mentzer, 1995), so carry fewer obligations for resource constrained IEs that they may find difficult to bear (Granovetter, 1973). Collecting large heterogeneous ‘portfolios’ of weaker relationships focused on business exchange from the outset, therefore, also helps early internationalization (Kontinen & Ojala, 2011; Sasi & Arenius, 2008; Sharma & Blomstermo, 2003).

The evidence therefore indicates that both strong and weak relationships play important and different roles in entrepreneur’s internationalization. Strong relationships appear to be most important resources for the provision of advice and counsel, especially in the early stages, and for offering deep knowledge of how to do things and actual assistance in a new region. Entrepreneurial firms need to use new weak relationships, however, in their search for market opportunity and access to customers in new territories. It is relevant to ask here, however, how the presence of a substantial domestic market may influence this process. Useful personal relationships may be more readily formed and strengthened by the IEs who enjoy a domestic market, and some of these strong relationships may well help the internationalization process as well (Ellis, 2000; Harris and Wheeler, 2005). How, then, do firms without customers nearby form the strong relationships that are suggested to be so important in initial development? The extent to which they use relationships that are less familiar with their industry, use foreign relationships from an early stage, or use weaker relationships within their portfolios of relationships is not clear.

The embeddedness in foreign markets of the relationships that the IEs seek

The embeddedness of relationships has been seen in a number of different ways, but the relevant perspective here is the embeddedness of an IE’s

relationship within networks that might give help in opportunity recognition, know-how, and assistance in foreign markets. We are not here considering the embeddedness (or otherwise) of the IEs themselves, but that of those people who might help their internationalization. This is Granovetter's structural embeddedness which he defines as the extent to which a "dyad's mutual contacts are connected to one another" (Granovetter, 1992: 35). It is a function of how many others the individual interact with, how likely future interactions are, and how likely they are to talk about these interactions (Granovetter, 1985, 1992). It is the totality of the relationship linkages within foreign territories that helps that person, if sufficiently trusted, committed and motivated, to present opportunities, and give know-how and internationalization assistance to the IE.

Zukin and DiMaggio (1990) characterize four elements of such embeddedness to describe the social arrangements underlying economic action: cognitive, cultural, structural, and political. Here we will follow Hite (2003) in viewing these four elements from a firm- and entrepreneur-level perspective to conceptualize entrepreneurs' relationships, here to indicate the support for internationalization that they might offer IEs in foreign territories. A potential partner's cognitive embeddedness would yield understanding of the people's shared mental models and ways of thinking, and their cultural embeddedness would convey their shared beliefs and values (Zukin and DiMaggio, 1990; Hite, 2003). Their structural embeddedness follows Granovetter (1985) in being reflected in their interconnected social relations in the territory, and their actions of "economic exchange in patterns of ongoing interpersonal relations" (p.18), and is key to their ability to provide knowledge, opportunities and linkages that have been highlighted most often in the internationalization process. Political embeddedness will inform what is possible and what is not, and how power and influence can be leveraged in a society, and is an essential element in many markets (p.19). Here, supportive relationships embedded in appropriate social, power or market circles enable trust, awareness and visibility to be built in new territories, especially if they have authority and power to do things and to influence access to resources (Hadjikhani et al., 2008).

Entrepreneur's personal relationships, which can include employees, owners, partners or board members can be very important for initial foreign market entry (Ellis, 2000; Coviello & Munro, 2007; Harris & Wheeler, 2005). The potential value of a relationship within a specific territory, however, does not depend on their physical location near to the IE or within the territory. It will depend on the extent that they are embedded relationship to help internationalization within it, reflecting any aspects of the linkages that can offer informed opportunity, how-to advice and assistance. Some

territories, networks, and social or professional circles will be more valuable than others, and which is most relevant will depend on the specific products or services, customers and markets involved (Yli-Renko et al., 2002).

Activeness in finding new relationships

IEs, however, might put different levels of effort into developing their portfolios of such relationships (Ozcan & Eisenhardt, 2009; Zolkiewski & Turnbull, 2002). Johanson and Mattsson (1988) suggest that firms can compensate for their limited resources by actively seeking new relationships, and IEs can learn “how to build new business networks and connect them to each other” (Johanson & Vahlne, 2003, p. 93). But finding and developing new relationships absorbs time and resources, which young entrepreneurial firms can ill-afford, and this presents difficult strategic choices concerning the effort that they will invest in finding and developing new relationships, and where they will invest that effort. This choice concerns their activeness in the process of networking, a consideration that has been identified in previous studies (Crick & Spence, 2005; Ellis, 2000; Ojala, 2009). Successful born-global firms typically have good abilities at developing relationships and can use different approaches to finding, developing and maintaining relationships (Freeman and Cavusgil, 2007; Nordman and Melen, 2008; Freeman et al., 2010). They might choose proactively to seek out new international network relationships in new territories, or they might choose mainly to work with the relationships that they already know (Kontinen and Ojala, 2011). International entrepreneurs can choose how much to invest in activity to develop relationships internationally (Komulainen et al., 2006), and can choose to do it in a proactive or reactive way (Ghauri et al, 2008; Johanson & Mattsson, 1988; Kontinen & Ojala, 2011).

Proactively seeking new relationships that are embedded in new territories may be compelled by a impediment on the part of high technology firms rapidly to find international opportunities for commercialization (Freeman & Cavusgil, 2007; Nordman & Melen, 2008; Freeman et al., 2010). Products or services in high technology sectors often need to achieve first-mover advantage to survive (Bell, McNaughton, Young & Crick, 2003), and relationships that are embedded in those markets may be needed to achieve rapid market entry. If firms rely on established domestic relationships they face a danger of ‘network rigidity’ (Mort & Weerawardena, 2006), in which they become locked into existing relationships and are discouraged from a proactive networking approach. A large domestic market may therefore diminish the urgency to find the internationally connected relationships they need, and deflect entrepreneurs from seeking and developing them with sufficient proactivity and urgency.

The choice of who to invest effort in developing relationships is critical for resource constrained international entrepreneurs, because not all relationships are advantageous and some may even impair internationalization (Coviello & Munro, 1997; Mort & Weerawardena, 2006; Sasi & Arenius, 2008). But finding and developing new relationships within new international networks may be costly, and these relationships will all initially be weak, and may take time and money to develop to the strength required to be useful for internationalization. Working with existing relationships, with relationships from existing networks, or responding reactively from within existing networks is not only likely to be less costly; it may also be a better strategy. First, firms that already have good relationships are more likely to develop more (Gulati, 1999), and the knowledge of how to network and form relationships builds up over time (Johanson & Valne, 2003). Second, networking capabilities have been found to develop within the internationalization process, and IEs actively reconfigure, extend and develop new networks out of their initial networks (Mort & Weerawardena 2006). Third, existing relationships can represent the most valuable assets for IE's internationalization (Harris & Wheeler, 2005), often acting as 'introducers' to important actors in new international networks. These all mean that established networks can help managers to locate new relationships, whether reactively or proactively (Freeman et al., 2010).

This leaves some sharp questions to address. Do IEs that have a domestic market have internationalization advantages over those that do not, and if so, what are they and how do the IEs take advantage of this? How does the presence of a domestic market affect their relationship strategies? Relationship strategies might differ in terms of the strength of the relationships they use and develop to achieve internationalization, the extent that those relationships are embedded in networks within foreign or international markets, and the activeness with which they work to find, develop and use those relationships at different stages of their firms' evolution.

Research method

This study uses a multiple case study method with the IE as the unit of analysis, in order to examine and compare entrepreneurs' portfolio of relationships in a systematic way, to explore how they develop in the early stages of internationalization, and why these differences come about (Eisenhardt, 1989; Ghauri, 2004; Ghauri & Grønhaug, 2005).

The study design, presented schematically in Figure 1, is characterised by extensive information being gathered from each entrepreneur. Data was sourced mainly from structured but open-ended interviews that were partly structured for direct discussion to relevant topics and to achieve equivalent data (Eisenhardt,

1989) but also aimed to “understand the world from the subjects’ point of view, to unfold the meaning of their experiences, to uncover their lived world prior to scientific explanations” (Kvale & Brinkman, 2009, p1). Interviews involved extensive conversations from non-directive questions rather than directed questions derived from theory (Harris, 2000). The respondents were asked to comment about events and the issues that these raised, and in a process of generating an open and natural conversation the interviewers provided insights or suggested sources of information.

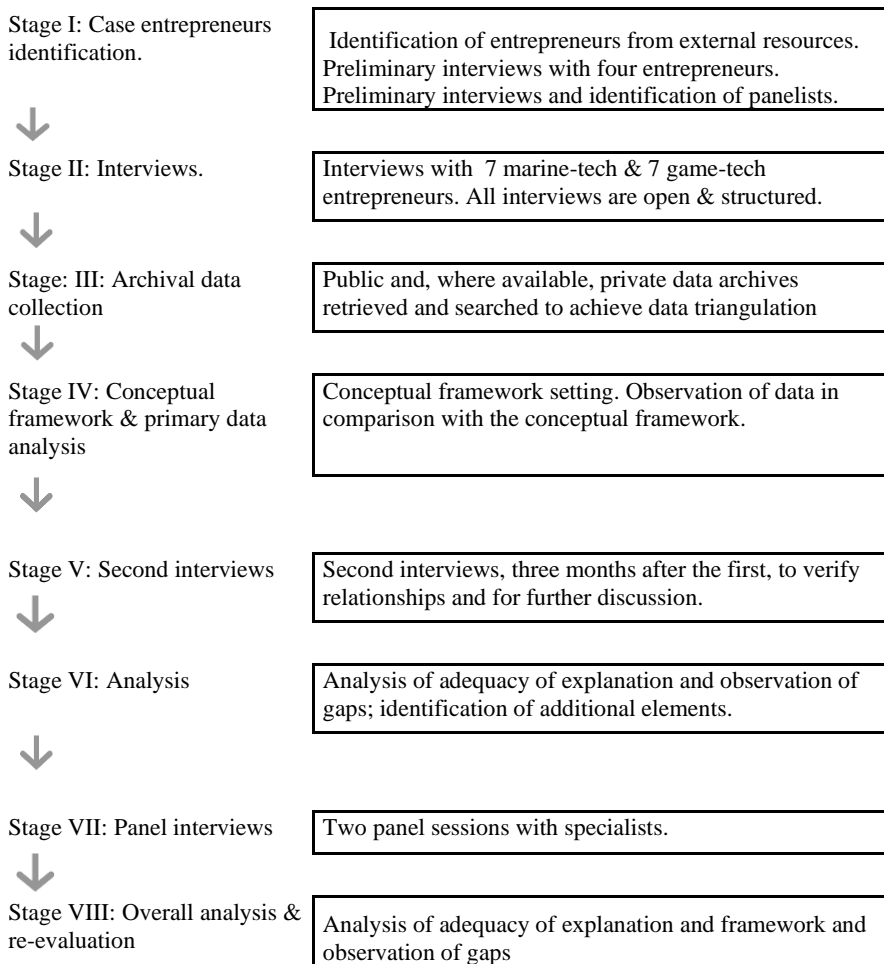


Figure 1. The study design

To strengthen the validity of the findings, interview data was triangulated with other information, such as news from public sources including the internet (see, for example, Halinen & Törnroos, 2005), with evidence also from other

respondents, including industry experts (Sinkovics, Penz & Ghauri, 2008; Yin, 2009). Network analysis in an open interviewing process, however, typically fails to identify relationships specifically and in detail; some relationships may be of no relevance to the venture and others may not be of current or active use (Hadjikhani, 1996).

Ozcan and Eisenhardt (2009) argue that with few exceptions researchers in network research have treated partner characteristics as static, and have viewed relationships (if they are considered at all) as simply strong or weak. We respond to this critique by tracking relationships in different stages of firm development and evaluate only relationships which the participants perceived as relevant in their business ventures. A risk remains that some relationships categorised by the participants as irrelevant may subsequently become important, but we are at least better able to track the influence of relationships related to the ventures.

Industry profile

Iceland, a small open economy with population of just 315,000 was chosen as the country of origin. Seafood is a core industry which directly and indirectly contributes up to 25% of the country's GDP (Agnarsson & Arnason, 2007). Icelandic firms have been highly innovative within the seafood/marine sector, and a number of Iceland's high-tech firms have gained substantial niche worldwide positions in biotechnology, fisheries- and seafood processing technology and software. This study observes software entrepreneurs (which we will call marine-techs) in the marine/seafood industry.

This study specifically observes Icelandic computer game software entrepreneurs (that we will call game-techs) and their networks of relationships. Both the marine-techs and the game-techs are born global in that from inception they sought to "derive significant advantage from the use of resources and the sale of outputs in multiple countries" (Oviatt & McDougall, (1994, p. 49). Born globals are now more commonly defined as internationalizing early in their lifecycles; how long after firm inception this is has been debated (Coviello & Munro, 1995, 1997), but like Madsen and Servais, (1997) and Moen and Servais (2002), we take Rennie's (1993) definition of two years.

With no particular advantages within Iceland, a number of new computer game firms have quickly become a large part of Iceland's software industry, and became internationally successful. During the late 1990s, one Icelandic firm, OZ, developed a strong worldwide position based on leading new ideas and concepts that were of relevance to the growing use of wireless technology. After the internet bubble burst, it downsized and moved its operations to Canada, but left a number of nascent gaming entrepreneurs within Iceland.

These two software sub-sectors have grown rapidly in recent years, though growth has been more rapid in the game-tech sector, where one game-tech entrepreneur noted:

The tools we are building our products with may be obsolete tomorrow. Its like being a carpenter who has to change his toolbox over night as the old tools will just not solve the problems or be competitive tomorrow [Game-tech 4]

Both sub-sectors have one internationally leading player that dominate within Iceland. Marel is a major suppliers of food processing machinery, with 3500 employees worldwide. CCP produces of the computer game Eve Online with 300 of its 750 employees located in Iceland. In both sectors, the next largest firms are medium-sized with 50-100 employees, and the remainder are small, with an average of ten employees.

Table.1. The case entrepreneurs: descriptive data

Marine-tech 1	Software & equipment for seafood processing	2005	CEO	49	1.5
Marine-tech 2	Sea food/ trading weighing equipment software	2003	CEO	45	1.2
Marine-tech 3	Software & equipment for food preservation	2007	CEO	49	0.8
Marine-tech 4	Software & equipment for seafood processing	2003	CEO	52	2.5
Marine-tech 5	Software for food safety	2006	CEO	28	1.2
Marine-tech 6	Marine energy management software	2002	CEO	52	2.5
Marine-tech 7	Software energy management for ships	2007	Dep. CEO	32	1.0
Game-tech 1	Web solutions for gaming	2005	CEO	32	4.0
Game-tech 2	Software solutions for gaming	1998	CEO	52	9.0
Game-tech 3	Social network games software	2008	CEO	44	0.5
Game-tech 4	Game software	2003	CEO	37	2.0
Game-tech 5	Web crawling software for gaming	2008	CEO	26	0.5
Game-tech 6	Wireless tech – games	2004	CEO	45	2.0
Game-tech 7	Game mobile software	2008	CEO	32	0.5

The interview process

Our entrepreneur informants were all founder-owners (or part owners) responsible for general management. Such informants are considered appropriate as they typically have knowledge of the venture's various relationships (Welch, Marschan-Piekkari, Penttinen, & Tahvanainen, 2002). From 35 marine-tech and 12 game-tech entrepreneurs identified, seven of each type were selected for this study (Table 1).

Preliminary open face-to-face interviews were carried out with two entrepreneurs in each sector in January 2010. From these, two observations were made that led to a modification of the interview protocol. First, in line with Cross, Borgatti and Parker (2002), the interviewees did not see their informal relationships to be in a network that could be managed. Second, they had no clear idea of what a network is. The Icelandic translation, 'tengslanet' would be interpreted by many Icelanders negatively, as 'clique'. Since formal questionnaire questions regarding various relationships could be misinterpreted, researchers trained in qualitative interviews started 70-90 minute interview discussions with entrepreneurs about their relationships with the question "how would you describe your relationships with individuals in your business?".

Table 2. The Panellists

Firm/institution type	Interviewed	Relations with industry
Icelandic Federation of Industry	Specialist	Knowledge on entrepreneurial sectors
Iceland's largest computer game firm	CEO	Leader in the game industry
Icelandic Venture Fund	Specialist	Knowledge on entrepreneurial sectors. Board member of one mature & one new software firm.
Iceland Game Association	Leader	Knowledge of industry
Advising firm	Computer scientist	Leading specialist in computer industry
Iceland largest food processing machinery firm	Board member	Industry know-how
Iceland largest food processing machinery firm	Chairman	Industry know-how and international knowledge

Panel interviews to verify the research framework

To further gain trustworthiness in the findings we followed Eisenhardt (1989) and Ghauri (2004) and enhanced validity through triangulation with

experts in each sector. These were interviewed separately and subsequently engaged in panel sessions. These experts (Table 2) were leaders of the single largest firms in each sector, board members of some of the largest firms, and other leading specialists who have been involved with one or both sectors for many years. The panellists discussed what they perceived to be the most important relations in the development of the entrepreneur's ventures at the early stages of development, and what they thought represented the best relationship structures for international ventures.

Data analysis

Data analysis involved interpretation of the case data against the theoretical constructs outlined above, and identification of aspects of business behaviour that did and did not conform to those constructs. To focus on the relationships at the firm's initial stages, we followed Coviello (2006) and adapted the growth stage categorization offered by Kazanjian (1988). Stage I is concept generation, resource acquisition and technology development, Stage II involves production start-up and commercialization, and Stage III involves sales growth and organisational development. Kazanjian's stage IV, capability and profitability, was not yet achieved by these firms so was not used, and like Coviello, we add initial internationalization to stage III, and see technology development to take place at all stages and not just Stage I.

To assess relationship strength we used the four criteria for strength of Granovetter (1995): the frequency of contact, the emotional intensity of the relationship, the degree of intimacy, and reciprocal commitments between each other. These were ascertained from questions in initial and follow up interviews that asked how they first met, who introduced them or initiated the original contact, how they described the relationship, whether they valued the business opportunity from the relationship, and whether they had any other comments on the development of the relationship. For assessing embeddedness in international markets, we examined the number, and location of the linkages that the relationship offered to the entrepreneur, and the value placed by the entrepreneur on those linkages.

The IE's relationship strategies

In this section we present the findings from the case firms in the different stages of their firm's development. The patterns of relationships within the IE's portfolios within the two different types of firms are presented and summarised in tables. In the subsequent section, we examine the strategies and capabilities of the firms in the process of relationship building, before drawing discussion points and drawing conclusions.

The relationship portfolios in stage I

The two groups of entrepreneurs developed different relationships from the outset. In Stage I, the marine-techs were able, relatively easily, to obtain market knowledge and early revenues from strong domestically embedded marine industry relationships. These people quickly saw value in the knowledge and the skills of the marine-techs and sufficiently confident to invest in them. It was natural therefore for the marine-techs to focus on these domestic relationships, which were:

.. in our homegarden and we could get in touch with them right here [Marine-tech 6]

These IEs had all developed their products in relationships with domestic customers before their firms had even been founded, and they did this with people known to them. The effect of this in the early days was profound. One relationship with someone in an Icelandic processing company:

I got a kick-start as (Icelandic firm) bought my concept and idea from day one [Marine-tech 3]

This early establishment of strong relationships with nearby firms at Stage I considerably benefited their firms' establishment and early development. First, it helped the firms to attract other resources such as finance, for example, from institutions that knew their sector well. Second, these relationships presented possibilities for developing valuable inter-personal relationships in other sectors and territories that could become stronger over time. Most important, they were building relations with further potential business clients, irrespective of territory, which for the marine-techs meant

... finding the customer who is willing to try the product [Marine-tech 4]

At stage I, some of the game-techs had relationships with business partners, but few had access to good business experience in their field. Their relationships could provide general business or technical knowledge, but not market or international business knowledge, or contacts that would be of value in the gaming world. Unlike the marine-techs, finding any kind of useful relationship was difficult. Even at stage I, these entrepreneurs had to source useful customer relationships, who would be located in foreign markets, themselves because there were so few people nearby who could even understand the industry, let alone would be helpful for

commercialization. The game-techs had weak relationships at this stage with people outside of Iceland in their same niche field:

Table 3. Patterns of relationships in stage I

	<i>Marine-tech entrepreneurs</i>	<i>Game-tech entrepreneurs</i>
Strong relationships with relationships who are embedded only domestically	All the IEs here have developed their products in close relationships with domestic customers in the marine sector.	Some of the IEs have some strong domestically embedded relationships, but none of these are of relevance for finding customers
Weak relationships with relationships who are embedded only domestically	Some of the relationships with domestic customers are weak at first. These relationships are developed to become stronger during this period	A few domestic relationships but not yet important. Icelandic banks bought basic IT services from two IE's which provided income but had no relevance to the core business concept.
Strong relationships with relationships who are embedded in international markets	None of the IEs have any relationships of this type	None of the IEs have any relationships of this type
Weak relationships with relationships who are embedded in international markets	None of the IEs have any relationships of this type	Four of the IEs have developed some relationships of this type

I had worked with a writer in the US who knows everything about this technology. I emailed him about my ideas and we began chatting on Skype (Game-tech 1).

I knew that there was very limited know-how about this field in Iceland but I knew there was potential here. I hooked up with a guy who I had met at a conference in California but he seemed reluctant to share ideas. (Game-tech 3).

Figure 2 diagrammatically presents the shape of the initial relationship portfolios of the two types of firms in stage 1. The marine-techs have a large number of strong relationships but few of them are embedded in any way in foreign markets. The game-techs have few relationships at all, and while they may have some good industry colleagues, none of these are in a position to help internationalization. They already, therefore, have to seek out contacts and linkages in foreign markets.

The relationship portfolios in stage II

For the marine-tech firms there was a natural development from initialization (stage I) to early commercialization (stage II) in which the entrepreneurs could rely on their domestic relationships to help them. No involvement in international markets or from or from internationally embedded relationships was needed to achieve early survival through commercialization. So the strong relationships established in Stage I

presented them with a ready source of clients that could be further developed. The proximity of the marine-tech industry to the large Icelandic marine industry had led to a tradition of cooperation between the two sectors that helped the IEs to generate a revenue stream from the earliest days.

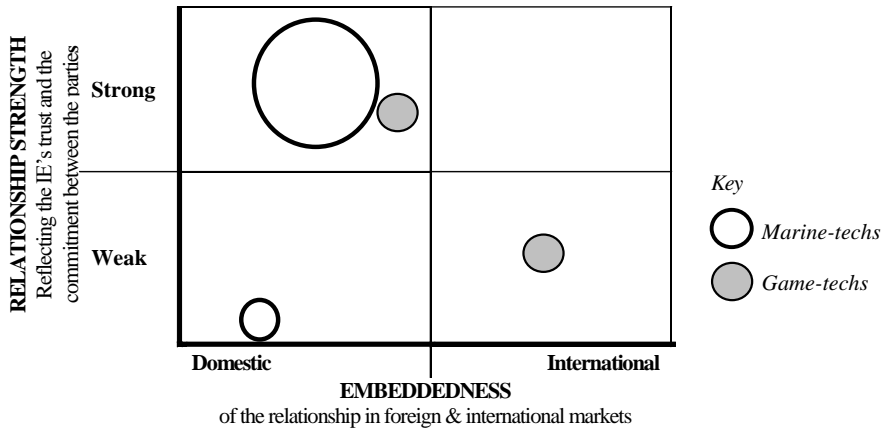


Figure 2. Patterns of the IEs' relationships at Stage I

My background is in fisheries and my family grew up in a small fishing village. I know this business. So after returning from studying engineering it was obvious for me to consider developing tech business opportunities in this field. [Marine-tech 2]

For the game-techs, stage II (commercialization without internationalization) did not take place at all: the absence of a domestic market meant that their commercialization required the development and use of relationships with international linkages. One noted:

There is only a handful of people in Iceland that knows anything about what we are doing and understands our vision. At the start-up we therefore had to visit trade shows abroad and get into the real circle which was strongest in the US (Game-tech 6).

The establishment of many of the game-techs, however, coincided with a number of innovative Icelandic software engineers developing new gaming software, with whom the game-techs developed relationships in their early days. One game tech said:

There is a lot of interest in computer games in Iceland and we know of each other. Some of them helped me to finalise my products and were willing to get paid later, it really helped (Game-tech 5).

	<i>Marine-tech entrepreneurs</i>	<i>Game-tech entrepreneurs</i>
Strong relationships with relationships who are embedded only domestically	Many domestic relationships are developed who then invest in their know-how. Focus on strong relationships with domestic businesses.	Strong relationships are developed with similar software engineers in Iceland, but there are no domestic customers.
Weak relationships with relationships who are embedded only domestically	Some weak relationships are developed, but the IEs are not used to working with such relationships.	Three IEs develop relationships with a group of Icelandic individuals who are interested in gaming.
Strong relationships with relationships who are embedded in international markets	Some relationships are developed from within the large domestic industry who are introducers with the same shareholders	One game tech succeeds in forming a strong relationship with an international investor from the startup.
Weak relationships with relationships who are embedded in international markets	Some weak international relationships are formed from attendance at trade shows. Focus remains on domestic relationships who may become international introducers.	A large network of weak international relationships is developed at trade shows, by using the internet and social networks on the internet.

Table 4. Patterns of relationships in stage II

This did not help the game-techs, however, to establish customer relationships overseas. With little game-tech industry within Iceland, there was little understanding of or interest in the industry among supporting services, especially finance. Many game-techs had to build overseas relationships not just to find customers, but to resource their firms as well.

The different approaches to commercialization in stage II were driven by pragmatic constraints rather than strategic choices. Specifically, differences in the networks of relationships at Stage I influenced network development at the next stage, making differences in the patterns of relationships at stage II even more striking. Whereas the marine-techs began with a body of strong Icelandic industry relationships, the game-techs began with a network ‘clean slate’. Several game-techs only survived these early stages by providing computer design in advertising media, or by offering basic web services to Icelandic firms. They were continuing, actively and with considerable effort, to develop potential commercial relationships with people who had network relationships in useful circles internationally. The reason was indicated by one game-tech entrepreneur:

We were always certain where we were heading; to develop games for the international market, but we needed a certain agility to go there. [Game-tech 4]

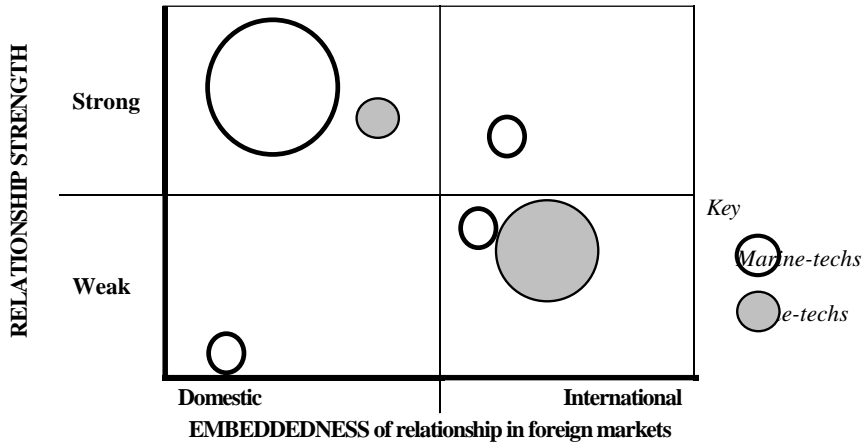


Figure 3. Patterns of the IE’s relationships Stage II

The relationship portfolios in stage III

By stage III we see a striking difference between the relationship strategies of the marine-techs and the game-techs. The internationalization (stage III) of the marine-techs then took place in the staged way highlighted by Coviello (2006). They had already commercialized through easily developed relationships that were well embedded within Iceland. For internationalization they then sought internationally embedded relationships, but this was a new and unfamiliar task for these entrepreneurs. Some of the domestically embedded relationships, however, were within firms that were part of international networks, and could fulfil the role of ‘introducers’ in the way that Johanson and Mattsson (1988) suggest. For example,

We had high hopes that the part ownership of the Icelandic fish processing plant by a European firm would push us further into the European market with our technology. [Marine-tech 1]

The effect of these ‘introducers’ was that the marine-techs were all achieving significant “sale of outputs in multiple countries” to be born global firms (Oviatt & McDougall, 1994, p.49). While they could take advantage of international ‘introducers’ from their home territory, the effort they devoted to developing new international relationships had to be balanced with the

effort required to maintain domestic relationships that were now beginning to generate revenue. None of the marine-tech firms described any sustained proactive efforts to expand their circle of weak relationships.

Table 5. Patterns of relationships in stage III (initial internationalization)

11	<i>Marine-tech entrepreneurs</i>	<i>Game-tech entrepreneurs</i>
Strong relationships with relationships who are embedded only domestically	Domestic focus maintained; few strong international relationships. One uses a strong domestic relationship to initiate first export contract.	None of the IEs have any relationships of this type
Weak relationships with relationships who are embedded only domestically	None of the IEs have any relationships of this type	Some good Icelandic relationships but of no commercial use.
Strong relationships with relationships who are embedded in international markets	One cooperation with a European firm is developed from a strong domestic industry relationship	Two gain help from foreign board members. Ongoing interaction with US firms increases trust.
Weak relationships with relationships who are embedded in international markets	Now comfortable working with and selling to strong domestic relationships from earlier. Not keen to build weak international relationships.	A large domestic firm CEO. gives useful international introductions to several IEs. A large network yields international sales and opportunities.

To open doors to substantive markets the game-techs had to build a relationship network with potential business partners overseas from scratch and without established industrial contacts. This focus on finding internationally embedded relationships now resulted in a rapid development of rich and dense international networks that included people within large international firms. One game-tech said:

We are now in formal relations with one of the largest e-commerce companies in the world. These relations were both created by our product – we believe we are a disruptive force with this innovation – and by being consistently building relationships with key people in the industry (Game-tech 5).

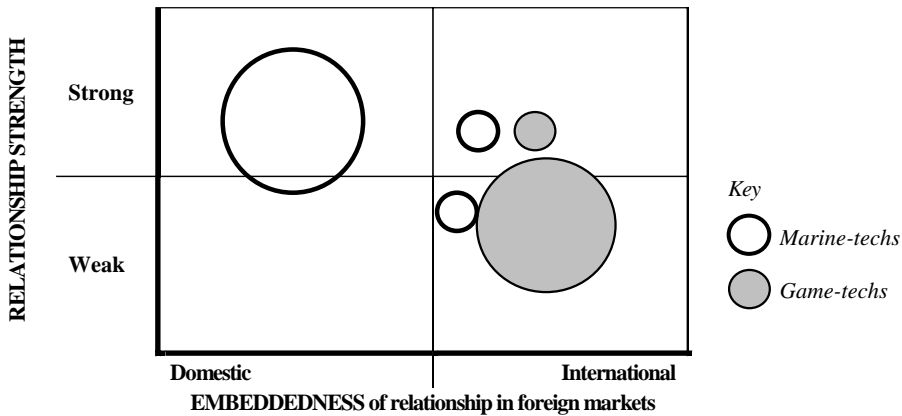


Figure 4. Patterns of the IE's relationships at Stage III

Their early relationship portfolios with weak relationships, following the path observed by Sharma and Blomstermo (2003), Komulainen et al. (2006), and Kontinen and Ojala (2010). For the game-techs, stages II and III are almost undistinguishable: commercialization meant internationalization, and this had to be based on weak internationally embedded relationships. The pattern of development we see here show two very different strategies for the development of relationships, reflected in the two propositions presented below:

Proposition 1a: The presence of a large domestic market leads international entrepreneurs to work mainly with strong relationships that are not embedded in international markets at the early stages, and to work with relationships that are embedded in international markets only at the stage of internationalization.

Proposition 1b: The absence of a large domestic market leads international entrepreneurs to work mainly with weak relationships that are embedded in international markets at the early stages, and to focus work on these relationships to develop them to help their firm's internationalization.

The IEs' activeness towards seeking new international relationships

All the entrepreneurs worked hard to develop new relationships at the initial stages, but it was much easier for the marine-techs then to develop a relationship portfolio with strong and weak relationships, domestically and

internationally embedded. They had a great number of advantages when it came to developing new relationships overseas.

First, they started with a good array of strong domestic relationships, some of whom were also internationally embedded and could become 'introducers' to useful contacts internationally (Johanson & Mattsson, 1988). These introducers included formal sales agents abroad, people with strong international connections in a different industry, or individuals who had an extensive and successful career in the same industry. So networks within the domestic market could be used to gain a foothold abroad:

A part owner of the second Icelandic processing firm we worked with is a Belgian company in the same industry. Our first contract abroad was with these guys and it was realised through the Icelandic firm. [Marine-tech 3]

Second, having a proven product that was selling domestically, made it much easier to generate interest, especially at trade fairs which could be used to good effect. Third, they inherited a worldwide strategic network identity based on Icelandic prominence in the marine industries generally. Several discussed the benefits gained from the domestic track record and having strong Icelandic specialists in fisheries and seafood. As Anderson, Håkansson, and Johanson (1994) note:

.. when a firm perceives that it has a strong strategic network identity, brokering, negotiation, and selection advantages can then be parlayed into competitive advantage for the firm. (P. 3).

We see here a strong network identity representing "an important strategic capability that enhances the value of a firm's relational assets" (Bonner, Kim & Cavusgil, 2003: 1378), which would help them to form new relationships internationally, which they typically did through participation in trade shows.

The thing is Iceland is known in the seafood business around the world as being in the forefront of quality [Marine-tech 4].

I am known in the industry as bringing new ideas – I came from a seafood country, people bought my ideas and they worked well. They trusted that I would not run away from them [Marine-tech 7]

But though forming relationships could be very much easier for the marine-techs, the number formed by the game-techs was vastly greater.

There were three reasons for this. First, even though the marine-techs' domestic relationships often led to exports, so these firms were born global, they rarely led by themselves to internationally embedded relationships that would represent a valuable international network portfolio.

Second, the marine-techs formed and invested in stronger relationships. In stage III they had continued their strong-relationship approach. Being used to working with strong relationships, they all sought to work closely with any contact that they made and develop these into strong relationships if they could. They were less comfortable about changing their way of working with weak relationships. One marine-tech illustrated the internationalization based on strong ties well:

I have a Scottish client whom I met at a trade show years ago. We have developed very good relations which has led to further product development. He is my largest international client. [Marine-tech 4]

Strong relationships carry benefits, but also maintenance costs of time and opportunity costs (Sharma and Blomstermo, 2003, p.745). This meant that the numbers of relationships were few, so the available net for collecting international opportunities, linkages and assistance. The outcome of this is the approaches to relationships represented in the analytical model shown in Figure 5.

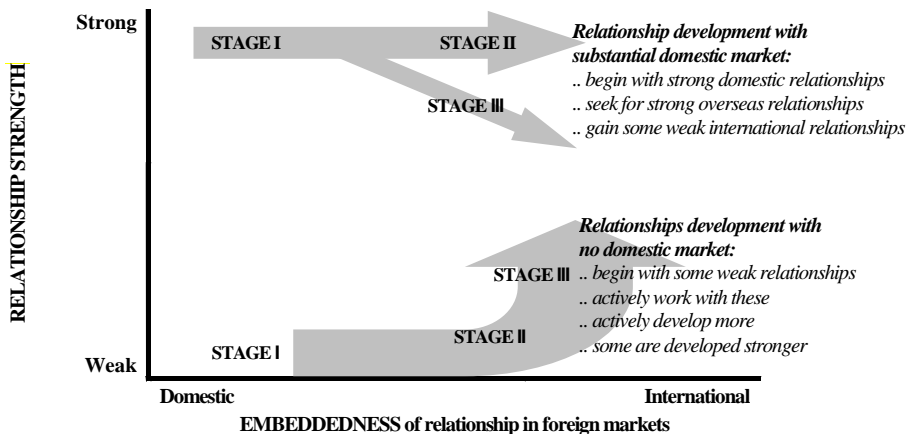


Figure 5. Analytical model of relationships development strategies

The marine-techs had a strong domestic market and sought international opportunities less actively. Having actively worked to build large relationship networks of international relationships from the outset, the game-techs had become familiar with working with and used weaker

relationships based on straightforward calculative dealings. They met the resource constraints by maintaining them on a 'potential for use' basis that cost them relatively little, and leaving more resources to be available for developing new, potentially useful relationships. By stage II, the game-techs had expanded and were working to develop their international networks, using these to establish ties with large and internationally known US and European partners. Over time, their experience of working with international partners enabled relationships with some of them to strengthen:

I see this relationship with the wireless company as a great opportunity. We have shown that we deliver and even though we do not have many employees, we have been upfront with them about it, but they like us. [Game-tech 5]

Third, the marine-techs had a protective attitude towards relationships. They had invested time, and commitment in strong network relationships with a few customers, in which and had also acquired a number of obligations. It was natural for them to protect their valuable assets:

There is a lot of duplication going on [Marine-tech 3]

An employee of mine left a couple of years ago ... with my invention, just changing the look but using similar ideas and software. [Marine-tech 5]

Unprompted, the marine-techs, on average, mentioned fewer than two other Icelandic marine-techs as relationships. The game-techs, by contrast, mentioned on average six other Icelandic game-techs; the game-techs approach was more collaborative. In 2008 several of them had formed an association which became a platform for developing valuable relationships, exchanging ideas, and giving mutual support. Several of the game-techs cited each other as sources of advice about how to internationalize. They found, as Casson, (1997) suggests, that they could work better as a cooperative network than as a collection of competitive individualists. Their critical need to internationalize and the difficulty of doing it led them to cooperate with one another in the task.

Overall, the game-techs 'activeness' (Kotinen & Ojala, 2010) towards finding new relationships was considerably greater. This activeness in the context of severe resource constraints meant that by stage III, all these game-techs had developed capabilities for developing new internationally embedded relationships. In a virtuous self-reinforcing process, this in turn helped them to become more

active in an efficient way. So their activeness in international relationship development in part reflected that they had developed considerably greater capabilities in doing this activity. From observing the very different capabilities in international relationship development of the two groups of firms by stage III, we draw the following proposition:

Proposition 2: The absence of a domestic market leads international entrepreneurs to greater international relationship development activeness and to the rapid development of international relationship development capabilities

Their greater levels of activeness and their different networking capabilities were reflected in a number of ways. For accessing and working with the weak relationships that would yield internationalization opportunities, the game-techs found social networking sites on the internet to be invaluable. They formed three times the number of contacts on LinkedIn, their preferred social networking site for business on the internet, than did the marine-techs, and the internet records accessed as part of this study showed the game-techs seeking relationships overseas with this technique much more actively than the marine-techs. The following comments were made by the game-tech interviewees while pointing to their social networking pages on-screen:

This is a guy in Norway which I met at a trade show. I may contact him if we go ahead with the project in Oslo. [Game-tech 3]

This is a journalist I contacted via another journalist who I have also links with through the web social network. [Game-tech 5]

Internet social networking sites proves to be a valuable resource for helping the IEs to match the opportunity possibilities represented by a large number of weak relationships with the resource cost of finding, keeping, managing, and developing them. It did this by enabling the game-techs to activate their relationships according to need (Granovetter, 1985), so they were only nurtured if there is a particular benefit or possible opportunity in mind from doing so.

The different level of activeness was also reflected in how they thought about their relationships. The marine-techs thought about their relationships as individual personal ties, with personal rights and personal and social obligations. They expressed the value of those relationships in terms of the strength of the individual relationships. The game-techs, by contrast,

expressed their internet relationships in resource portfolio terms, reflecting Halinen and Tornroos' (1998) notion of different embeddedness in internationalization. They valued embeddedness in particular geographical locations, customer groups, market segments, or fields of knowledge and considered their portfolio as a whole as a strategic resource for the international development of their firm. In short, the thinking they displayed here demonstrated a strategic approach to internationalization that Freeman and Cavusgil (2007) identified in senior managers of internationalizing firms, whereas the marine-techs demonstrated more reactive and opportunistic approaches.

Conclusions and Implications

This paper has addressed a serious gap in the international entrepreneurship literature concerning how much international entrepreneurs' first important business relationships are based on strong social interaction (Ellis, 2000; Komulainen et al., 2006), and how much are based on mutual business interest (Sharma & Blomstermo, 2003; Kontinen & Ojala, 2010). We have done so by comparing the network development of entrepreneurs within two technology sectors with very different backgrounds, as Coviello (2006) recommended. In doing so, we have departed from the focus on the firm that most born global literature shares, and instead, as Ellis (2011) recommends, focused on the entrepreneur, the entrepreneur's relationships, and the way in which those relationships help the entrepreneur's ventures to develop.

This study clearly supports the suggestion that is now being widely made that focus on the issue of relationship strength in the relationships for IE internationalization has tended to divert attention from other factors that may be as important, or more important (e.g. Freeman et al., 2010; Ellis, 2001, Jones et al., 2011). We have confirmed the important characteristic of the embeddedness in foreign markets to IEs, even though we cannot yet confirm its contribution to performance. Some previous research has indicated that strong relationships in domestic markets aid internationalization (e.g. Johanson & Valne, 2003), but the firms in this study do not witness that. It is not, however, because of organisational inertia (Autio et al., 2000). Supporting the conclusions of Freeman et al. (2006) and Freeman and Cavusgil (2007), by recognizing the costs of forming and maintaining relationships as well as the benefits, we see it to be because strong domestic customer relationships places relationship demands on the firms that sap resources from the internationalization effort. This is especially critical for high-technology firms whose windows of opportunity to break into world markets may be very short. For these firms, short term survival may be better

supported by strong and supportive domestic customer relationships, but success in international markets may demand larger, more heterogeneous portfolios of weaker relationships.

This, however, demands a much more active approach to finding, managing and developing international relationships, and an enhanced capability for doing so. The game-techs in this study had no alternative, and if they learned this from anyone, it was from each other. A domestic market did not, as Johanson and Vahlne (2003) suggest, provide a learning ground for the marine-techs. This is a form of generic, non-market specific internationalization knowledge that was learned, experientially, very quickly, with the benefit of some vicarious learning from fellow game-tech entrepreneurs (see Fletcher & Harris, 2012). Strong Icelandic customer relationships prevented the marine-techs from acquiring either activeness in the process of international networking or the knowledge of how to undertake this work. Such strong relationships may be the best conduit for tacit knowledge, but only if they have it; otherwise, weak relationships with others that do serve better. In short, we see international networking ability to be core to internationalization (Freeman et al., 2010) and like Mort and Sullivan (2006) we see this to be a dynamic capability that is driven by the entrepreneurs themselves. But it is experience in internationally embedded networks from which entrepreneurs see the need for actively acquiring this capability, and see the means to get it; strong domestic networks are more likely to disguise this need and can lead to the development of network rigidity (Mort and Sullivan, 2006) within the domestic market.

Our study has a number of limitations. First, the validity of the data may be limited to the specific type of firms that we have studied, which places some limits on the analytical generalizability. More extensive studies in other settings, including other geographical and industrial settings would add to our confidence that our findings will be more generally applicable. Second, our findings regarding the role and position of the relationships should ideally have been corroborated by evidence from those relationships themselves, requiring an examination of all the parties in the networks involved. Third, while we know that all these firms were succeeding as born global international entrepreneurial firm, we so not yet know their long-term success.

International entrepreneurs should clearly not ignore strong domestic markets that they can easily address, but IEs in global technological fields should beware the risks of over-attention to their strong relationships with domestic customers. Nearby customers can provide revenue streams when they are most needed, but IEs with ambitions to enter global markets need

rapidly and strategically to invest those revenue streams both in actively sourcing and developing weaker relationships with people embedded in useful networks from across the world, and in investing in their own capabilities and the capabilities of their firms to do so. Those without domestic markets may well face more perilous and difficult early stages of development, but in facing these, may well build capabilities that will advantage their longer term international prospects.

We believe that we have also contributed a new analytical model to help our theoretical understanding of the role of relationships in their development. This analytical model of IEs relationship portfolios according to the strength of the relationships involved, and according to the domestic or international embeddedness of those relationships has offered useful insights that we believe could contribute to future studies studying international entrepreneurial relationships within different industry sectors, or originating countries, and with different starting characteristics. It would also be useful to compare these portfolios over longer time periods, and to be able to associate different portfolio development strategies with different firm capabilities and different performance outcomes.

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PAPER 4. Cyberspace: A paradigm shift for international entrepreneurs relationships?

Thor Sigfusson and Simon Harris

Ever since Bott (1955) first presented the concept of social networks as a systematic way of understanding relationships in London families, social network researchers have observed and developed the idea of close-knit and loose-knit networks of relationships. This dichotomy has since become a well developed line of enquiry in both entrepreneurship and international entrepreneurship research. Network relationships between firms and individuals have powerful influence on the internationalization of small high tech firms (Coviello, 2006; Moen et al., 2004; Oviatt and McDougall, 2005). Entrepreneurs' social or interpersonal relationships makes them aware of foreign market opportunities (Loane and Bell, 2006).

Studies of the history of commercialization and industrialization suggest that when entrepreneurs in related lines of activity work well together the speed of 'take off' is higher (Grassby, 1995), so entrepreneurs work better as a cooperative network than as a collection of competitive individualists (Casson, 1997). As the internationalization of small firms can be both sudden and destabilizing, internationalization through business networks is the only feasible way (Chetty and Campbell-Hunt, 2003), which makes relationship-creating skills key resources for international entrepreneurial growth (Ellis, 2000; Harris and Wheeler, 2005). The qualities of international entrepreneurs relationships have therefore attracted research interest (Coviello, 2006; Komulainen et al., 2006; Oviatt and McDougall, 2005; Sharma and Blomstermo, 2003).

These studies, however, have given conflicting indications regarding the value of strong or weak relationships for embryonic international firms. We have indications, however, that the context within which these relationships form can make a difference. The strength of relationships in internationalization might be affected by national cultural aspects (Zhou et al., 2007), with the structure of the industry concerned (Fernhaber et al., 2007), and the extent of both social and non-social linkages (Coviello 2006; Ellis, 2011).

One dramatic context shift in recent years has been the explosion in the role of electronic communication through computer networks, in which online communication takes place, that we will here call 'cyberspace' or 'cyber'. As

technology changes, and the potential of new cyber technology affecting business relationships develops, cyber space becomes of greater potential importance for international business ventures. Researchers have long recognized the potential role for cyberspace to stimulate bridging social capital (Lin, 1999), and it has, after a short stall at the beginning of this century, begun to enable new collaborative forms of organisation (Loane, 2006).

Cyberspace now plays a vital part in bridging emotionally and geographically distant people (Kavanaugh et al., 2005; Wellman, 2001), especially in the internationalization of small firms (Loane, 2006). As cyberspace is 'intrinsically international' (Kobrin, 2001, p.688), Pitt, van der Merve, and Berthon (2006) note that it: "has become a pervasive mechanism for conducting international trade, and this is particularly true in industrial markets" (p.607).

As it is becoming such an important mechanism for the formation of relationships, it is likely to be having some influence on the types of relationships that international entrepreneurs develop and use for the development of their relationships. Indeed, since cyberspace changes the way in which people communicate with one another, it has the potential to generate a fundamental shift in the way that business relationships and networks develop, and how those relationships can influence the development of the international firm. This field, however, remains under-researched (Lewis et al., 2008).

This chapter presents some key questions that international business researchers can address in the area, and combines social network theory with previous international entrepreneurship research to help develop some useful research propositions in relation to the role of cyberspace for international entrepreneurial embeddedness. These propositions together suggest that cyberspace may lead to a paradigm shift in relationship formation of international entrepreneurs and the use of weak and strong relationships by entrepreneurs. It is hoped that chapter may form a practical basis for future empirical studies in the field of relationship formation of international entrepreneurs, and the chapter concludes with some suggestions for future research avenues in the relationships of international entrepreneurs.

The role of trust in international business

Trust between parties is a fundamental to the development of the agreement between people that is needed in all international business, because all international business requires cooperation between people at one stage or another (Buckley and Casson, 1985; Williamson, 1985). It lies at the heart of the relationships that are fundamental for entrepreneurial internationalization

(Johanson and Vahlne, 2003), by offering the necessary linkages to networks in other countries (Welch and Luostarinen, 1993).

The development of trusting co-operative relationships between businesses has long been recognized as an essential element of international business, whether this is through joint ventures, alliances, contracts, informal understandings, or networks arrangements (Axelsson and Easton, 1992; Blankenburg and Johanson, 1992; Child et al., 1997; Johanson and Mattsson, 1992). It is these linkages that provide the foundation for the search for opportunities abroad (Ellis, 2011).

Investment in a relationship through commitment enhances parties' credibility at the beginning of the relationship, improves trust, and reduces uncertainty and the risk of opportunism (Wuyts and Geyskens, 2005). For two parties to co-operate, however, *both* must be prepared to co-operate, and *both* must sufficiently trust the other party (Harris and Dibben, 1999). Being embedded in a network of relationships therefore helps people to co-operate with one another because there can be a context of trust between known partners or people who can be endorsed by known others (Uzzi, 1997). Then, in turn, trust promotes commitment to a relationship, and this commitment, when expressed in co-operation, builds trust in turn (Uzzi, 1997).

How trust develops in relationships and the extent to which it needs to do so for the necessary cooperation to take place is subject, however, to the context; we can expect different levels of trust within different contexts (Grossetti, 2005). Internationalization increases the distance from markets and relationships and requires a broader focus towards other and new networks (Fletcher, 2001). New international entrepreneurs' relationships need not be permanent alliances but need to provide market knowledge and opportunities, which may require less commitment between the parties involved. These relationships may therefore be valued for knowledge and market access rather than for permanent commitment (Hadjikhani and Sharma, 1999; Hite, 2003).

The benefits of strong relationships

Relationships can be strong or weak, and strength has therefore been seen in terms of trust and commitment; indeed, the primary conceptualization of the relationship marketing model sees relationships in these terms (Morgan and Hunt, 1994). Granovetter (1973) presents the strength of a relationship to be a: "combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services that characterize the tie" (p.1361).

Strong relationships have high levels of social relationship or personal interaction with high frequency (Granovetter, 1982), which motivates the

individuals involved to protect and assist one another when required (Hite and Hesterly, 2001). Weak relationships are not as heavily based on personal interaction but may nevertheless provide access to, for example, resources or markets (Granovetter, 1973).

Most entrepreneurship studies have focused on the role of strong relationships. The trust inherent to strong relationships can be very important for young firms. Domestic advice networks also provide strong mechanisms which include criticism or disapproval which can lower transaction costs (Mesquita and Lazzarini, 2008). This advice-giving between entrepreneurs depends on trust between entrepreneurs, often based on shared past experiences and repeated interactions (McGrath et al., 2003). The idea that the relational trust that smaller firms can develop helps them also with their globalization and by building useful long-term international relationships has been supported by Svejnova (2006) and by Sasi and Arenius (2008). The internationalization of the venture relies heavily on intangible assets such as relationship networks of the entrepreneur (Keupp and Gassmann, 2009; McDougall et al., 1994). Indeed, Harris and Wheeler (2005) present strong domestic relationships to be the most important assets that young internationalizing firms can have: they can open the doors for new foreign market opportunities and build further market knowledge.

The importance of weak relationships for international entrepreneurs

Ellis (2011) proposes that when looking at the relationships of international entrepreneurs seeking opportunities in the global market, 'the sum total of the entrepreneur's relationships with others' need to be examined (Ellis, 2011, p.102). This sum total includes not only a few strong relationships, but a possibly large number of weak relationships as well. For new ventures accessing a global market, most relationships are relatively new (Morse et al., 2007), and because trust may not have had time to develop, so they will be weak. McDougall and Oviatt (2005) therefore suggest that when entrepreneurial ventures have an international aspect, weak relationships are very important. Oviatt and McDougall (2005) note: "Because of their small number and the investment required, we believe strong ties are not the most important type for internationalization. Weak ties are. They are relationships with customers, suppliers, and others that are friendly and business-like. Weak ties are far more numerous than strong ties because they require less investment. Their number can grow relatively quickly, and they are important because they are often vital sources of information and know-how" (Oviatt and McDougall, 2005, p. 545)

International entrepreneurship focuses on the ‘*discovery, enactment, evaluation, and exploitation of opportunities*’ (Oviatt and McDougall, 2007, p.7) and recognizes how opportunities are recognized by individuals (Aldrich and Zimmer, 1986). For all new ventures, scarcity of resources requires relatively more use of relationship than other resources in comparison with more established firms (Harris and Wheeler, 2005). International entrepreneurs’ relationships are very important (Keupp and Gassmann, 2009; McDougall et al., 1994), but their differing context places different demands. The geographical or location demands involved in opportunity seeking, are considerably greater for international than for domestic entrepreneurs; the ties tend to be long, connecting socially distant locations (Centola and Macy, 2007). Weak ties, that research often overlooks, plays an important role in the ventures of the international entrepreneur in the INV as they provide opportunities and bridge these gaps (Komulainen et al., 2006; Sharma and Blomstermo, 2003).

Oviatt and McDougall (2005) therefore have argued that the international aspect of the venture may involve a completely different set of relationships, where the weak relationships are very important, and a growing body of research has been linking the early internationalization of the firm to the use of weak relationships (Duque et al., 2009; Komulainen et al., 2006; Presutti et al., 2007; Sharma and Blomstermo, 2003). We still do not have, however, a clear picture of the role of weak relationships in the internationalization of small ventures.

From a strong/weak dichotomy to evolving relationship portfolios

Jones, Coviello and Tang (2011) suggest that network research in international entrepreneurship is becoming more sophisticated than the notion of just ‘strong’ or ‘weak’ in relationships. Relationships do different things, combined and singly. Introducing the notion of ‘virtual embeddedness’, Morse, Fowler and Lawrence (2007) present the idea that strength can be seen in very different ways. Separately, Ozcan and Eisenhardt (2009) have proposed that rather than regarding relationships ‘as simply strong or weak’ (p.246), we should be regarding relationships and alliances in ‘portfolios’. These portfolios develop and evolve according to the different resource and strategic needs of the firms concerned, and can be managed in a strategic way.

In their classic model of network development, Larson and Starr (1993) suggest that, over time, network relationships are transformed from simple

dyadic exchanges to a dense set of multidimensional and multilayered organisational relationships. They propose that, in the emerging stage, the ties shift from reliance on dyadic ties with family and friends or previous contacts to a stage which clarifies more mutual business interests, causes social and economic relationships to overlap and the number of economic ties to increase. Developing from this, Hite and Hesterly (2001) argue that an entrepreneur's personal network evolves from strong ties, towards an intentionally managed one rich in weak ties. Jenssen and Koenig (2002) have supported this view, arguing that the entrepreneur's personal friendships are crucial for the initial venture creation, making strong relationships more important in the start-up and early growth stage than in later stages (Starr and MacMillan, 1990). So we have a dynamic picture of emerging enterprises relying strong relationships who will provide resources, later expand their networks to include weaker relationships that will help to give information on new business leads.

Greve and Salaff (2003) and Steier and Greenwood (2000) argue that the mix of strong and weak relationships develops very differently. They observed more weak relationships in the emergence phase, seeing this to enhance the search for new information that helps the development of an entrepreneur's business plan. Elfring and Hulsink (2007) suggest some reconciliation of these conflicting ideas by suggesting that different patterns of relationship portfolio evolution will result from different initial founding conditions and different post-founding entrepreneurial processes. This debate about the value of relationships at the emerging stage of entrepreneurship has not, however, included an international dimension.

The dynamic aspects of relationship portfolio evolution are critical for young international firms. and have been subject to much research (Oviatt and McDougall, 2005; Coviello, 2006; Komulainen et al., 2006; Sharma and Blomstermo, 2003), but remains far from conclusive (Kiss and Danis, 2008). Notwithstanding the conflicting research evidence, from that which we have a pattern, can be drawn, as is suggested in Figure 1, which helps us to induct a conceptual framework. With this framework we can consider the evolution of relationship portfolios of entrepreneurs in domestic (D) and international (I) contexts.

The framework proposes that relationship networks of entrepreneurs will be a mix of weak and strong relationships at the initial development of the venture. We can see that most domestic entrepreneurship studies have emphasised the role of strong relationships at the early stages, while more studies in international new ventures are emphasizing a greater role for weak relationships. We can now use

this conceptual model to examine how the developing use of cyberspace might affect these initial relationship portfolios.

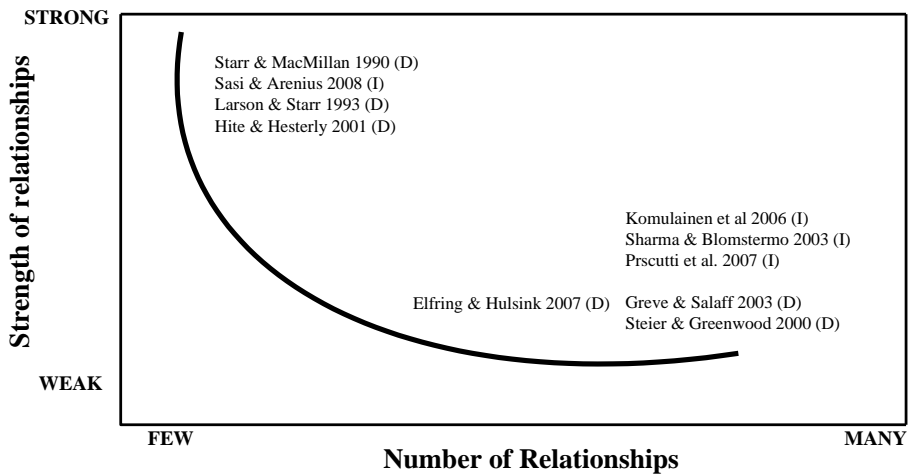


Figure 1. Studies on relationship strength for entrepreneurial firm foundation in domestic (D) and international (I) firms

Cyberspace can make it easier to form and manage international relationships

Cyberspace provides new tools for relationship building that opens further the opportunity for individuals to have relationships, strong and particularly weak ties, with large group of people. Researchers have also recognized how cyber space plays a vital part in bridging emotionally distant and geographically diverse actors (Kavanaugh et al., 2005; Wellman, 2001). The formation of networks on Facebook, LinkedIn, and Twitter, for example, has transformed the ‘community’ within which people develop their social capital and made it less dependent on physical space (Wellman, 2001). We see these networking tools easily extending across borders. It is already evident that many international entrepreneurs are actively using cyberspace for their relationship building in international ventures (Sigfusson and Chetty, 2011). These entrepreneurs have large social networks in cyberspace, and these networks seem to be particularly affecting the formation and development of international new ventures; it appears to be leading to new trends in the relationship formation of international entrepreneurs.

First, we see that international entrepreneurs using cyberspace ‘know’ many more people, albeit, not deeply. But these people are useful. By finding new relationships within cyberspace, many international entrepreneurs establish contact with people who are also connected to other members of their relationship networks. The international entrepreneurs seek opportunities through the large

number of weak relationships that they hold in cyberspace, in the anticipation that a few of these will lead them to competent relationship partners.

Second, there is a profound change in the way that these portfolios, the social capital of the firms, are managed. There have always been methods of organizing relationships, from the exchange and stacking of business cards to e-mails. Cyber space has opened new ways of managing and organizing a large set of weak relationships. Cyber-based networking services allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (Boyd and Ellison, 2007). This allows the cyberspace using international entrepreneur to manage large number of relationships in an active way, as is illustrated in Figure 2.

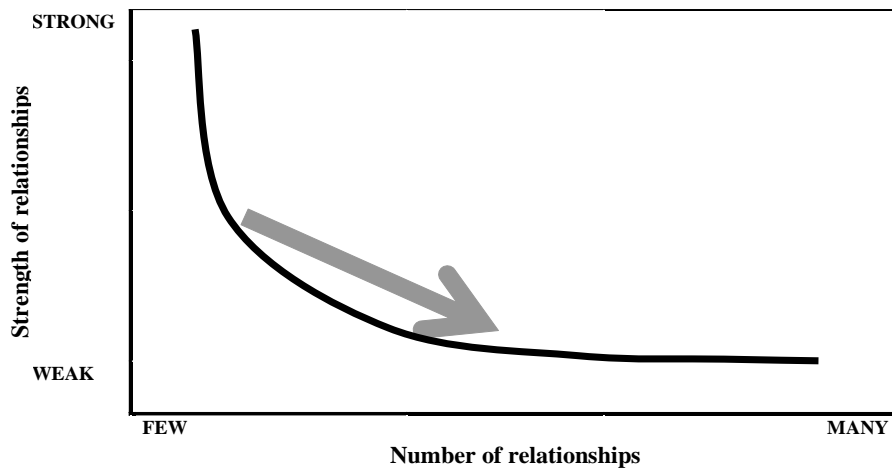


Figure 2. Cyberspace may result in more relationships

As the relationship networks of international entrepreneurs in the cyberspace becomes larger and more complex, there is more urgency to organize these networks. Entrepreneurs with the largest numbers of weak relationships appear to perceive them and manage them as portfolios within LinkedIn or Facebook, which share some have geographical or professional characteristics. (Sigfusson and Chetty, 2011). Relations are therefore kept in different portfolios such as a portfolio of relations in a particular country which will be activated if the firm decides to expand to that territory and a portfolio of expertise which is activated if the firm’s agenda becomes more within that specific field of specialisation.

The networking tools allow the international entrepreneurs to archive several hundreds of often ‘sleeping ties’ within useful categories, which can

be drawn on or reapproached as need be. These tools help them to visualize their portfolios in the context of an entire network, not as a series of single relationships, in the way that Ozcan and Eisenhardt (2009) found practiced by executives in firms with high-performing network portfolios. Cyberspace tools help relationships to be formed ‘in the context of building portfolios (p.246). This leads us to our first proposition:

Proposition 1 International Entrepreneurs who actively use cyberspace will have more relationships in managed relationship portfolios.

Cyberspace makes it easier to form the trust necessary for opportunity seeking

Relational exchange theory emphasises trust to be critical for to fostering and maintaining value-enhancing relational exchanges. (Lewicki and Bunker, 1996; Uzzi, 1997). Barney and Hansen (1994) distinguish weak trust, when partners have no significant vulnerabilities to exploit, semi-strong trust, when partners have contractual safeguards to protect them from opportunistic behaviour and strong trust, when formal safeguards are unnecessary because the parties are confident that their vulnerabilities will not be exploited (Currall and Inkpen, 2002; Dyer and Chuh, 2000). So relationships based only on a calculation of value are of a lower quality than those that have a social aspect within which trust is developed (Hite and Hesterley, 2001). Trust ‘alleviates the fear of opportunistic behaviour and enhances the stability of the relationship’ (Steensma et al., 2000, p.593).

Research is suggesting, however, that the nature of trust in business is changing. Trust, historically has been identified to be based on incremental investments, associated with the development of knowledge of each partner, and commitment on each side (Barney and Hanson, 1994; Lewicki and Bunker, 1996; Morgan and Hunt, 1994). Now, especially with high tech firms in information technology, we are seeing swift or fast trust, where actors have neither shared history nor a shadow of the future (Jarvenpaa, 1998; Blomqvist, 2005). There are two powerful roots to this trend of cyberspace enhancing the speed with which trusted relations are formed.

First, cyberspace tools present an effective virtual system that lowers co-ordination costs and helps timely responses to take place, itself developing an effective instrumental social system of exchange (Lee, 2009). This enables international entrepreneurs trust people they contact up with in cyber space, people who are, in every other respect, strangers. In a study of computer networks, Constant, Sproull and Kiesler (1996) use the term ‘kindness of strangers’ to show how individuals access mainly technical

advice from strangers through a global computer manufacturer's computer network. They collected survey and observational data from a group of employees that they split into information seekers and information providers. They found that although information seekers were strangers to the information providers they gave useful advice to solve technical problems.

Using Granovetter's (1973) 'strength of weak ties' concept Constant et al. (1996) argue that the information seekers are obtaining information that is unavailable through their friends and colleagues, as it is easier to provide information to strangers through cyber space than through face to face interaction. The motivation to contribute can be personal benefit such as emotions, values and self identities (Bandura, 1986; Schlenker, 1985). But cyber networks also provide large numbers of people to observe the others contributing information to requests, which encourages norms of contribution within a computer network community. There is a community sanction against inappropriate or malicious information.

Second, we have the powerful force of virtual embeddedness. Fowler, Lawrence, and Morse (2004) introduce the emergence of virtually embedded ties which are 'interorganisational linkages that are initiated and maintained through electronic technologies and that provide distinctive solutions to the same problems with exchange relationships that are addressed by socially embedded ties' (p. 648). Cyberspace opens the opportunity for virtually embedded relationships to develop within a cyber community, and this, in turn, allows a form of fast trust to be developed very quickly. As Constant et al. (1996) conclude, it is not the number of weak ties that is useful but the ability of these weak ties to bridge relationships - as Granovetter (1982) had originally proposed.

Being developed through cyberspace, the international entrepreneur's new relationships are also connected to other members of their relationship networks, within a virtual community. Though new relationships, they are strong enough to do the job of bridging people across countries with sufficient trust to protect the entrepreneurs from opportunism (Uzzi, 1997). This allows them to expand a 'sufficiently trusted' portfolio of relationships network much faster than traditional methods would allow (Morse et al., 2007), in the way represented in Figure 3.

We see here the role of the virtual community within which these entrepreneurs and their relationship are embedded not generating strong trust, based on confidence in the other party that comes from a history of personal experience with the other party (Barney and Hansen, 1994). Nor even is it Barney and Hansen's semistrong trust base on contractual agreements.

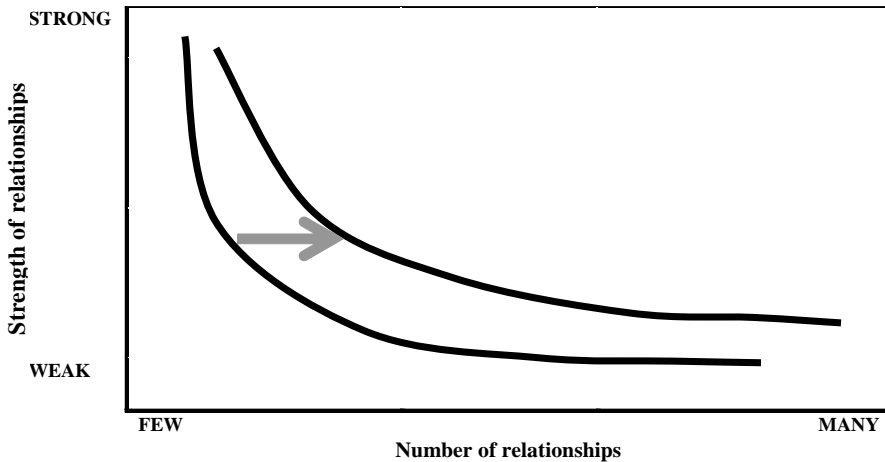


Figure 3. Cyberspace may result in more trusted relationships

Rather, this virtual embeddedness considerably reduces the level of opportunism often associated with new ventures (Uzzi, 1997), and by decreasing the liability of newness associated with the new ventures lack of strong trust relationships. We have a semi-strong form of trust developed fast within the virtually embedded community, that is entirely sufficient for the cooperative behavior that the entrepreneurs seek, but which is based on an 'important alternative form of interorganisational connection' (Uzzi, 1997, p.140). This leads us to our second proposition:

Proposition 2 International Entrepreneurs who actively use cyberspace will have more semi-strong relationships in their relationship portfolios.

Cyberspace offers new approaches to relationship portfolios

The advent of cyberspace is not a direct force for change; rather, it is a facility that may or may not be adopted by international entrepreneurs. For those who do adopt it, they may well adopt it in different ways.

Notwithstanding the shifts noted earlier, many international entrepreneurs using cyberspace may have relatively few relationships These

entrepreneurs may well be implicitly adopting the pattern advocated by Larson and Starr (1993), and use the new network now made available in a similar way to the way that they used their old networks. The network may well be much larger, but little of it will actually comprise relationships to be used in the way considered in this chapter.

Instead, cyberspace is used for screening opportunities and as a way of identifying and contacting the 'right contacts' with the 'right resources' (Larson and Starr, 1993). At different stages of firm evolution and growth, these resources will change. In Shirky's (2008) observation of writers on weblogs, a 'power-law distribution' is noted, whereby most writers have few readers, and they can all pay similar attention to one another, forming tight conversational clusters. This mirrors behavior outside cyberspace, so that cyberspace is used to enact behavior previously seen outside it, and cyberspace is just used to make it easier. We might especially expect this pattern among international entrepreneurs whose relationship behavior developed before the use of cyberspace became more established. In short, the older international entrepreneurs may well have smaller relationship networks.

If the establishment of the firms and the creation of ideas has mainly been based on relationships in cyber space, however, the pattern may well be very different. Many of the younger high tech entrepreneurs have been living and thriving in cyber space for a larger part of their lives. The world in which they have developed their ventures, from the initial startup, to the development of ideas and to the formation of groups is increasingly shaped by their experience of using cyberspace, and is very different from more traditional methods of conducting business ventures (Sigfusson and Chetty, 2011). The international entrepreneurs with the largest relationship networks seem to begin with a large number of contacts, in effect, a large crowd. They may broadcast their ideas to crowds in cyberspace and only later begin to create concrete links, depending on the reactions received.

This use of crowds in cyberspace to come up with the best, most clever solutions, this letting cyberspace vote on your ideas, and this gaining of trust through cyberspace by promoting your ideas among crowds to whom you have displayed network strength is a completely different approach. It is problematic to see this new pattern in the same way as we have understood network relationships hitherto. For example, it is difficult to define these crowds either as portfolios of relationships (Ozcan and Eisenhardt, 2009), as weak ties (Hite and Hesterly, 2001) or as 'social or business ties' (Coviello, 2006).

Perhaps we can better see these crowds as a wide global community of international entrepreneurs (Roberts, 2010), as a 'sea of informal ties'

(Powell et al. 1996) within which ideas can be broadcast and within which there is a certain basic level of virtual embeddedness, that will come into play only when a response is provoked. The new international entrepreneurs in cyberspace seem to rely on these anonymous crowd communities in cyberspace (Roberts 2010), but use them as large portfolios of weak relationships (Ozcan & Eisenhardt, 2009) to obtain ideas and create business plans in their ventures. In a similar way to that observed by Shirky (2008), some have thousands 'readers' from whom response may be elicited.

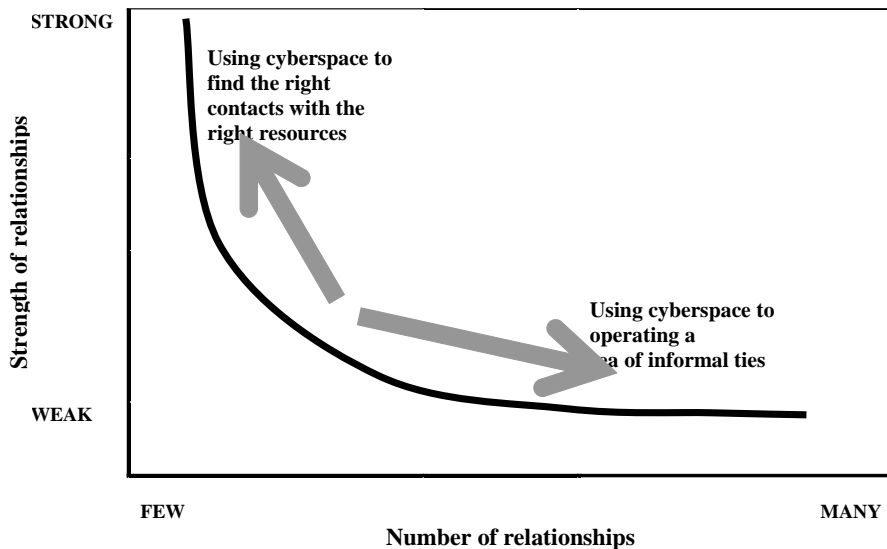


Figure 4. Cyberspace leading to greater diversity in relationship portfolios

Figure 4 shows these two extremes on our conceptual framework. We can expect international entrepreneurs in new ventures working at each ends of this spectrum; those with a relatively small relationship network on the cyber and those with a large network. While a small portion of the population has a large relationship network. At the same time, as these patterns become more evident, we may also find international entrepreneurial firms working at both ends of the spectrum. One 35 year old international entrepreneur based in Edinburgh, Scotland, having followed the Larson and Starr approach very successfully, has recently recruited a 22 year old as a marketing manager to pursue the next stage of his internationalization through crowdsourcing. This evolving diversity of patterns of relationships strategy leads us to our third proposition:

Proposition 3 International Entrepreneurs who actively use cyberspace will show much greater diversity in their use of weak and strong relationships for their internationalization

Conclusion

This chapter has presented three propositions that all argue, in a concrete way, that the advent and use of cyberspace in international entrepreneurship may be leading to paradigm shifts concerning the role of relationships in the internationalization of the firm, an issue that lies at the heart of much international entrepreneurship research. Just as new communication methods are changing society so will they change the conduct of businesses and trustbuilding. As existing international entrepreneurs become increasingly involved in social networking in cyberspace, and as new international entrepreneurs increasingly come from a generation where cyberspace social networking is the norm, this issue will become more important.

Much of the work reviewed here presents weak relationships to be more quickly developed into fuller business relationships than previously suggested (Morse et al, 2007). But the world of relationships in cyberspace means that we will need a new language to examine the relationships involved; 'weak' and 'strong' will do no longer (Jones et al, 2011). Work being done in social networks may well point the way: Opsahl, Agneessens, & Skvoretz (2010) value relationships according to, for example, their length, position and significance.

The use of cyberspace networks of international entrepreneurs offers new questions concerning the relationship network of international entrepreneurs, how they are changing over time and whether the new kinds of relationships are leading to different organisation forms and patterns of internationalization. Observing young international entrepreneurs might give us some pointers. This presents a challenging arena for future research, but one in which the cyberspace networking systems themselves carry with them tools that could help our research. For example, research has been conducted on Facebook, using the Facebook programs, into individual's social capital (Ellison, Steinfield & Lampe, 2007) and taste sharing (Lewis, Kaufman, Gonzalez, Wimmer, & Christakis, 2008). If international entrepreneurship researchers can gain access to entrepreneur contact lists on, for example, Facebook, LinkedIn, or Twitter, we could gain more complete pictures of their larger networks than by examining only those that we find in the transcripts of our interviews, which will inevitably only describe their most used or memorable, and not necessarily their most useful relationships.

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8 Contributing to International Entrepreneurship

The papers in the previous chapter emphasize the importance of the relationship networks of entrepreneurs in their internationalization. By doing so, they expand research in relation to IE theory as well as the theory on social networks. This chapter combines the results of the four papers and shows how they, independently and as a whole, contribute to theory. Figure 8.1 shows how the three first papers research different aspects of the relations of the international entrepreneur and how the three major topics in these papers, which all originate from international entrepreneurship theory, are directly linked to network theory. Even though the three research papers in this study are each to be viewed as independent research and as contributing to international entrepreneurship theory and social network theory in their own right, this dissertation argues that by combining their findings, they can as such contribute to a theoretical model for conceptualizing and studying the effects of relationship skills and relationships of international entrepreneurs within industry. Weak relationships have been poorly studied in IE literature despite the fact that studies indicate that internationalization requires more weak relationships as foreign contact is not as likely to be or develop into a strong relationship as the

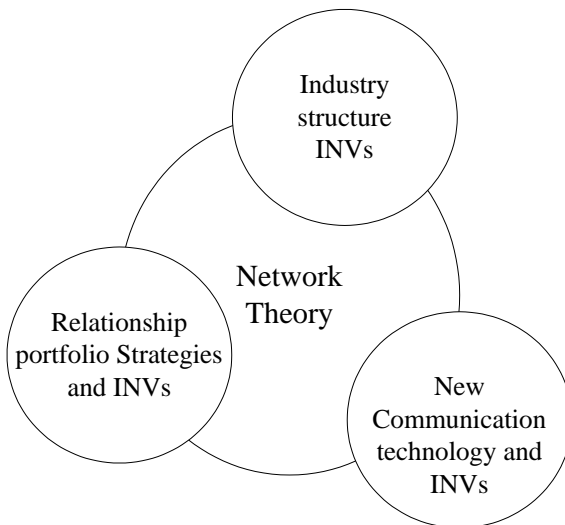


Figure 8.1. The three research papers in this study are all within the field of network and IE theory and all observe different angles of relationship networks of international entrepreneurs

domestic contact (Duque, Shrum, Barriga, and Henriques, 2009), that weak ties connect socially distant locations (Centola and Macy, 2007), and that they are a source of opportunity (Hansen, 1999). In this research, which focuses mainly on both weak and strong relationships in international ventures, the number of weak or non-redundant international relationships (at the initial stages of the development of the INV) are seen to be affected by both the characteristics of the entrepreneur and exogenous factors of the market in which his/her venture is a part.

8.1 Introducing a model of relationships

This dissertation provides an integrated theoretical lens through which to view and understand the relationship formation of international entrepreneurs. The model in Figure 8.2 presents a suggested view on conceptualizing relationships of international entrepreneurs. This model partly addresses Slotte Kock and Coviello's (2009) call for further examination of their "general model" on network development. Their model consists of the following components: "what develops?", "how and why does the network develop?", and "what occurs over time?" The model in this dissertation further develops the issue of how and why the network develops and the variations in ties, an issue which is a part of Slotte Kock and Coviello's "what develops". The model is not concerned with the speed with which opportunities are internationalized, as Oviatt and McDougall (2005b) emphasize in their model of the speed of internationalization. The focus is rather on the nature of the relationship formation which leads to discovery or enactment. The model shows the relationship opportunities in the network of the international entrepreneur as an outcome of the characteristics of the entrepreneur (which might be described as the internal factor). Inherent in the model is the argument that the essence of entrepreneurship is the entrepreneur (Bygrave, 1993). The focus on entrepreneurs and their background is therefore an important part of the model (Ellis, 2011). Research in the INV/born global literature has focused on different types of small international firms, such as "early starters", "lonely internationals", "late starters", and "internationals among others" (Coviello, 2006). But, even though analysis at the firm level is useful for giving the theorist a sense of the bigger picture, "it does so at the risk of overlooking important information exchanges that take place at the level of the entrepreneur" (Ellis, 2011:102). So, the analysis of entrepreneurs' social networks offers a significant conceptual advantage (Ellis, 2011) over the analysis of inter-firm networks. Aldrich and Zimmer (1986) note that entrepreneurial opportunities are recognized by individuals and not by firms. Shane (2003) also suggests that "individuals, not groups or firms, discover entrepreneurial opportunities" (p. 45).

In one of the early research projects at Uppsala, Wiedersheim-Paul, Olson and Welch (1978) address the characteristics of the decision maker in the first steps of internationalization:

In the enterprise environment factor we stress the importance of contact patterns that allow an efficient exchange of information, creating possibilities for “contagion transmission” of ideas from other firms, in different stages of expansion. These contacts are likely to change the attitudes and mental maps of decision-makers (p. 49).

The model also emphasizes that the domestic market affects relationship networks. The model therefore allows for both exogenous and endogenous influences in relationship networks of international entrepreneurs. As reviewed in this study, both factors—the character of the entrepreneur and the domestic industry—are underexplored in IE literature.

In Part A of the model in Figure 8.2, certain characteristics of the entrepreneurs are observed which may affect their embeddedness and relationship networks. The characteristics of the entrepreneur influence the model as his/her experience has affected the relationship network and therefore opportunities (Paul-Wiedersheim et al., 1978). The different characteristics of entrepreneurs is an issue raised in paper 1 and 2. The model recognizes different entrepreneurs and their relationship approaches, which is in line with Freeman and Cavusgil’s (2007) study on relationship capabilities in INVs and Ellis’s (2011) emphasis on *why* some agents manage social and business networks better than others. The *why* question will not be answered solely on the basis of experience as it may not be helpful in terms of lessons learned by entrepreneurs (Liesch, Welch and Buckley, 2011). Freeman et al. (2010) emphasize differences among entrepreneurs rather than homogeneity, which is the focus of most studies. This also stresses the importance of the personal relationship network of the entrepreneur over the firm. By observing the entrepreneur’s context for creating relations (paper 2), valuable information is obtained that enhances our understanding and categorization of the different entrepreneurs. Freeman and Cavusgil (2007) identify different entrepreneurial mindsets that facilitate internationalization. These characteristics are important when viewing the relationship networks of international entrepreneurs and how they manage them. The research papers explore different characteristics of entrepreneurs and define three types: Strategists, Opportunists, and Responders. The papers also observe entrepreneurs who have commercial or technical orientation.

This research finds that the entrepreneurs themselves implicitly adopt a resource-based view that reflects their relationship resource endowments. The more strategically or commercially driven entrepreneurs have specific dynamic capabilities for relationship development, which they use to build their portfolio. Rather than being dependent on existing relationships, they seek new internationally embedded relationships, balancing the costs and benefits of developing them. This capability alone, however, does not explain why some entrepreneurs are better than others in forming relationships for internationalization. There are also exogenous factors, such as the domestic market, which need to be addressed and are addressed in this dissertation.

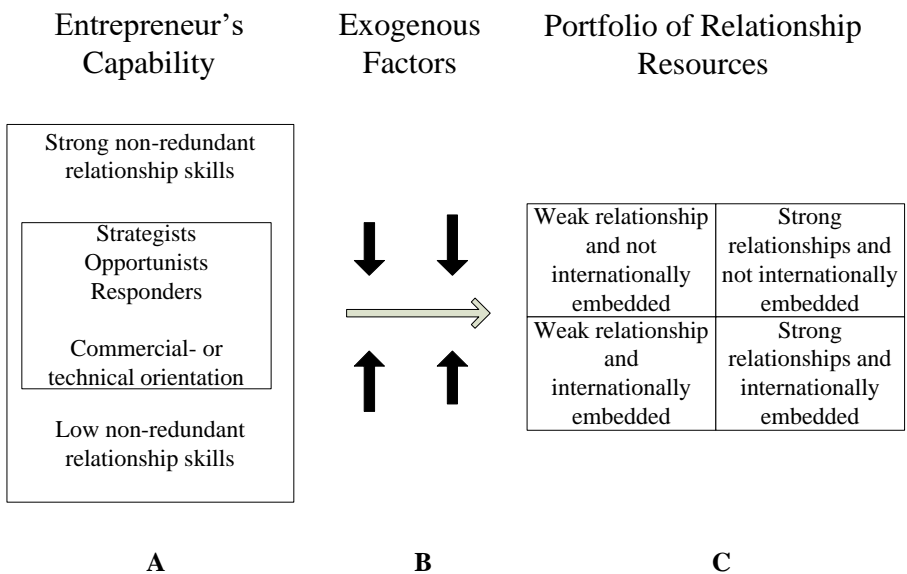


Figure 8.2. Model of relationships of international entrepreneurs

In part B of Figure 8.2, the effects of exogenous factors such as domestic industry presence on relationships of international entrepreneurs are noted. Focus on relationship strength in the internationalization of the INV has tended to divert attention from other factors that may be as important (e.g., Freeman et al., 2010; Ellis, 2001, Jones et al., 2011). The co-evolution of industry and globalization can provide partial explanation of the firm's internationalization (Andersson, 2004) and partly explain how the type and speed of internationalization is dependent upon the domestic market or the industrial context (Liesch, Welch, Welch, McGaughery, Petersen and Lamb, 2002). Aldrich (1999) argues that the entrepreneurial process takes on meaning only in the context of the broader social context and Coviello

(2006) encourages IE researchers to explore ventures in different contexts. IE research has mainly been focusing on software ventures without specifically considering the industry background of different software ventures. While IE literature suggests that new ventures tend to internationalize during the growth stage of an industry (Fernhaber et al., 2007), this research finds significant differences in the relationships of entrepreneurs with a different domestic market presence. Research paper 3 identified a clear pattern of different relationships among entrepreneurs in different industries. This study contributes to the IE and social network theory by linking domestic market/industry background and embeddedness. Using this model, the research shows that domestic industry presence affects the “process through which ties are selected for entrepreneurship” (Jack, 2010: 133) as the entrepreneurs in emerging industry structure tend to build on larger relationship networks of ties.

Sarasvathy (2001) states that creating a firm in an industry which does not exist calls for a very different strategy from creating a firm in a well-defined industry. The entrepreneur in an emerging industry is more likely to form alliances and partnerships rather than other types of competitive strategies. Here the model indicates that different market structure leads to different entrepreneurial approaches regarding relationships and that the entrepreneur in a small firm with little or no domestic market is more active in obtaining weak ties which may open doors in the international market. This supports Fernhaber et al. (2007) and Coviello (2006) in suggesting that industry background should be addressed further by IE researchers. This research focused on the effects of the domestic market and industry on the relationship network of international entrepreneurs in two high-tech sectors. The observation regarding the network development of entrepreneurs in these sectors helps to extend recent theoretical work on the development of the INV within different industry structures (Fernhaber et al., 2007).

The relationship resources in part C show the portfolio of relationships of international entrepreneurs, where factors such as the entrepreneur’s capability and exogenous factors such as domestic market are important determinants of the entrepreneur’s relationship portfolio. Zollkiewski and Turnbull (1999) raised the importance of modeling the set of indirect relationships that surround the firm and perceived the portfolio as a mechanism in which practitioners could map their relationships in a simple manner. The notion of a portfolio of relationships offers an interesting mechanism which can be beneficial to IE literature. By observing the relationship ties in the often large relationship networks of entrepreneurs in INVs/born globals, the characteristics of the ties can be viewed as a whole

rather than as individual relationships. The entrepreneur may have various contacts in foreign countries or in particular industry niches or in groups of specialists which are not nurtured actively. But as soon as the foreign country or a particular industry niche becomes a part of a possible business venture, these ties are activated according to need (Granovetter, 1985) and the entrepreneur perceives these particular ties as the “German contacts” or the “portfolio of web software specialists”, as noted in the analysis of the interviewing data. This notion of network as a set of portfolios was also addressed by Ozcan and Eisenhardt (2009), who emphasized that ties are formed “in the context of building portfolios” (p.246). The different dynamic capabilities for relationship portfolio development have considerable influence on entrepreneurial internationalization.

All international entrepreneurs, irrespective of their industry or domestic market, create personal relationships to develop their ventures. By exploring relationship networks and identifying a clear pattern of different relationships among entrepreneurs in different industries, this research suggests that domestic market background should be addressed by IE researchers when observing software ventures in different industries. International entrepreneurs with a domestic market backup tend not to nurture their international relationships and show less interest in a sea of weak international relationship ties as international entrepreneurs with little or no domestic market background. The observation on the network development of entrepreneurs in two different software industries helps to extend recent theoretical work on the development of the international venture within different industry structures (Fernhaber et al., 2007) and responds to calls for further studies on multiple sectors on the development of the INV (Coviello, 2006; Fernhaber et al., 2007).

8.2 Sharpening embeddedness in social network theory

In relation to Figure 8.2, it is argued here that embeddedness and particularly the non-redundant relationships—the sea of weak ties—play an important role in the ventures of the international entrepreneur in the INV/born global. This dissertation therefore contributes to social network theory by sharpening its focal concept of *embeddedness*. The research finds international entrepreneurs to value strong internationally embedded relationships most, but these are scarce and difficult to develop. The entrepreneurs need to balance the costs of developing relationships with the relationship strength and international embeddedness benefits that they hope to gain. The entrepreneurs themselves implicitly adopt a resource-based

view that reflects their relationship resource endowments. This supports Ozcan and Eisenhardt (2009) in finding that entrepreneurs proactively and strategically manage their relationship portfolios. Due to the scarcity of strong internationally embedded relationships, paper 1 found international entrepreneurs actively seeking large numbers of weak relationships in their internationalization. With the relationship between new venture internationalization speed and social networks remaining poorly investigated (Kiss and Danis, 2008), a managerial, resource-based perspective (Barney, 1997) helps our understanding of the role of the management of relationships in the internationalization process.

The model contributes to social network theory by showing that different dynamic capabilities for relationship portfolio development have considerable influence on entrepreneurial internationalization, and the ways it does so are managerial and dynamic. The dynamics of resource use is an area of current focus for research within the resource-based view where empirical research is still emerging (Newbert, 2007). But there is also strategy and purpose, and a logic explained by the massive resource cost of developing relationship resource portfolios. The resource-based view and its related dynamic capabilities perspective helps to identify and understand this logic, and in so doing, contributes to previous entrepreneurial network research and social network theory.

8.3 Contributing to IE by identifying new communication tools in venturing

This research has identified that entrepreneurs actively use online relationship networking tools in their international ventures. These new tools “are fundamentally redefining how we truck and trade and how we interact with one another in every sphere of human action” (Sarasvathy, 2001: 244). New communication tools enhance the management of a large number of relationships, particularly weak ties, which have similar characteristics to strong ties in that they seem to protect entrepreneurs from opportunism. In particular, entrepreneurs with the largest networks of weak ties perceive weak ties as portfolios. The findings also show that the web has greatly increased bridging opportunities. Entrepreneurs with the largest networks show the greatest opportunities for bridging and they use the web to demonstrate their network strength and to identify opportunities to connect people. The methodological contribution here is that the research uses a combination of participant observation and interviews to identify how network relationships are shaped. As part of the study on new networking

tools, this study offers a methodological contribution to the study of online networking relationships and a context of these relationships of entrepreneurs. Paper 2 uses both face-to-face interviews as well as participant observation on the Internet to collect data. The opportunity of counting and evaluating weak ties of entrepreneurs on the Web opens a new and exciting field in the study of the development of relationships of international entrepreneurs. New social media technology has made the list of relationships much more organized and reachable, creating the opportunity to explore weak ties in a more systematic manner.

The international entrepreneurs can overcome the “liability of outsidership” (Johanson & Vahlne 2009) by connecting with potential partners on the Web to explore and exploit opportunities. In doing so they become insiders in the relevant network and this insidership position has an impact on their social capital outcome (Ellison et al., 2011). The findings also stress the importance of RBV literature in the observation of the changed network structure of software entrepreneurs. Entrepreneurs use contacts to access resources and the dynamic capability to actively broaden the network of contacts is an important part of the RBV.

This chapter has indicated where research has contributed to theory. In the following chapter, the managerial implications are discussed, followed by a discussion of the limitations of the study.

9 Managerial implications and limitations

This chapter includes managerial implications of the research, which is followed by a discussion on the study's limitations. There is also a brief introduction to how this research has been used to initiate a networking programme among international marine-tech entrepreneurs.

9.1 Managerial implications

Turning to managerial implications, the research papers make specific arguments for the managerial implications of their results.

Paper 1 argues that a managerial, resource-based perspective helps international entrepreneurs to understand the role and the value of the management of relationships in the internationalization process. In other words, developing and strengthening relationships in international venturing should be an important part of the international entrepreneur's relationship strategy. Rather than being dependent on existing relationships, entrepreneurs should systematically seek new internationally embedded relationships, balancing the costs and benefits of developing them.

Paper 2 implies that networks on the Web can provide opportunities to enlarge weak ties that are especially important in the development of internationalizing firms. Entrepreneurs might consider how they should form a strategy on building these networks to access a more diverse array of skill sets, and how to use them to build trust and strengthen network identity. Such strategy can provide new bridging relationships for their ventures. In these days of the Web, a global business-to-business of software firms will include global web networks of relationships, whether these are intentional or not.

Paper 3 addresses an exciting field to explore for international entrepreneurs: how personal relationship networks are influenced by forces external to the venture. Practitioners should take into account the possible effects of domestic industry presence when forming their relationship strategy in internationalization and be aware of the costs and benefits of different domestic industry presence. The entrepreneur's personal relationship network is influenced by the broader system of relationships within the industry and its strength. Practitioners should clearly not ignore strong domestic markets that they can easily address, but they should be aware of focusing mainly on their strong relationships with domestic customers. INVs with ambitions to enter

global markets need rapidly and strategically to invest those revenue streams both in actively sourcing and developing weaker relationships with people embedded in useful foreign networks and in investing in their own capabilities and the capabilities of their firms to do so. Those without domestic markets may well face more perilous and difficult early stages of development, but in facing these, may well build capabilities that will advantage their longer-term international prospects.

Paper 4 elaborates on how cyberspace can be used by international entrepreneurs to screen opportunities in international entrepreneurship and as a way of identifying and contacting the “right contacts” with the “right resources” (Larson and Starr, 1993). The paper suggests online networking in cyberspace may lead to a paradigm shift in the conduct of building business relationships and trust.

Following from practical implications in the research papers, and combining the results of the research papers into an overall message for practitioners, the message would be the following: entrepreneurs see the advantages of a wide range of relationships at work every day. But have they realized how the diverse array of skills and information which relationship networks can bring them can become even more powerful tools if managed properly? “Insidership” in networks (Coviello, 2006, Johanson and Vahlne, 2009), developed before entry into a new market, can be instrumental to the international entrepreneurship. By mapping your current network of relationships and building an effective network relationship strategy which utilizes new opportunities in managing large portfolios of weak ties, your international business may gain from the efficient utilization of weak relationships.

Map the current network of relationships

Entrepreneurs who follow a path-dependent trajectory of strong relationships in their ventures will experience fewer opportunities and their ventures will best be described as average firms building mediocre portfolios of relationships (Ozcan and Eisenhardt, 2009). The international entrepreneur in high-tech INVs should understand his/her strengths and capabilities (and the strength of the industry network around him/her) in creating and developing personal relationships in international entrepreneurship. The entrepreneur requires an understanding of the overall patterns of the network he/she operates in. A mapping of the network of relationships is a very valuable approach as it can lead to defining strengths and weaknesses in the network, particularly if viewed at the side of an internationalization strategy, which would give an idea about what kind of relations are required for the

expansion or development of the venture in international markets. As Welch and Welch (1996) note, even though network development cannot be fully controlled, “its importance needs to be recognized and supported by deliberate company policies” (p. 24).

Build relationship strategy

To accelerate the pace of international ventures, entrepreneurs must ensure that they use their capabilities to build relationships as effectively as possible. Following the mapping of relationships, the practitioner should emphasize building a relationship strategy that seeks to capture different relationships (weak and strong) in a portfolio which can be managed. By “building an ever-increasing network of customers and strategic partners, the entrepreneur can then identify a workable segment profile” (Saravathy, 2011:247). The development of social networks on the Web has opened doors for entrepreneurs to manage large portfolios of relationship networks which can be crucial for the international venturing.

An active and strategic networking approach, built on personal relationships of the international entrepreneur, can lead to superior relationship portfolios which can, if allowed to effectuate, be an important part of the success of opportunity seeking and the venturing of the international entrepreneur.

9.2 Initiating actual networking programme for practitioners

In this research, it was noted that the marine-tech software entrepreneurs have large hurdles to expand abroad as they have not nurtured their international relationships and have put less effort in forming ties with partners abroad as they had a strong but limited domestic marine market. While the strong domestic ties of the marine-techs bind, the lack of international weak ties means that they do not span structural holes. This leads to weak relationship networking in the internationalization of the marine-tech firms.

With these results, which are particularly addressed in paper 3 on INVs, and the effects of domestic market structure on network relationships, the researcher initiated a networking programme for Icelandic marine-tech entrepreneurs. Meetings were held in December 2010 and February 2011 with 20 marine-tech entrepreneurs. These were only partly the same participants as were interviewed for the research in paper 3 but are all international entrepreneurs in the marine-tech industry, basing their business partly or mostly on software. The mission of these meetings was to introduce to the participants the results of paper 3 in particular—on domestic market and INVs—which discussed specific networking

characteristics of the marine-tech entrepreneurs. The meetings were held to explore the possibility to develop further actionable knowledge (Argyris, 1996) for use by practitioners.

The meetings of the group of marine-tech entrepreneurs were transcribed and are thought of as potential future research material. It opens the doors for longitudinal research in the field of networking of the marine-tech entrepreneurs and the effects of action-driven research. At the group meetings of the marine-tech entrepreneurs, the importance of prominent partners, particularly large international seafood and fisheries firms that are the most valuable potential customers of these ventures, became evident. Some of the marine-tech entrepreneurs had created business relations with the international partners. The lack of relationships within the group of the marine-tech entrepreneurs had however resulted in very limited sharing of information about these relationships. It should be noted that the ventures provided a wide range of products that in most cases were complimentary rather than competing in the international market. As the discussion continued, the participants seemed willing to share their contacts with other entrepreneurs and even cooperate regarding those business relations. They also expressed interest in networking with other people within the marine sector. Icelandic fishing trade companies have been active in the global market and Icelandic fishing trade specialists could become a valuable part of the marketing network for the marine techs.

It became evident that there is value in sharing relationship networks as individual entrepreneurs had their specific resources in valuable but different business relationships with international partners. There were significant structural holes to be filled. The meetings resulted in a formal initiation of a networking group which did not exist before and which has extended cooperation among the marine-tech entrepreneurs, sharing of relationship networks abroad, possible cooperation at trade shows, etc. There are already a few examples of how these networking activities have resulted in new opportunities. A fishing gear technology firm was willing to open their relationship network to an Icelandic firm specializing in control equipment for electrical winches on board ships. The particular relationship was with one of the largest fisheries companies in Russia. The marine tech entrepreneurs have also formed a cluster of excellence around the development of small fishing boats; the cluster's mission is to become a leading global player.

In May 2011, the Iceland Ocean Cluster, a network of marine related industries, was formerly announced at a public meeting in Reykjavik. The

Cluster's mission is to strengthen networking opportunities for businesses in the marine sector in Iceland and to assist them in their international activities. The Cluster was initiated by this research. At this meeting there were representatives from most sectors of the Icelandic marine industry, from shipping and fish trade to fisheries, and from fishing and processing technology to biotechnology. The board of the Iceland Ocean Cluster consists of CEOs of some of the largest companies in high technology, fisheries and transportation in Iceland. In April 2012, there are over 50 firms and institutions that are formal members of the Iceland Ocean Cluster.

Picture 9.1 presents the Iceland Ocean Cluster and the industries involved. The mission of the Cluster is to strengthen relationship networking among entrepreneurs in the marine industry in Iceland.



Figure 9.1. The Iceland Ocean Cluster

The ideas of strengthening the network of entrepreneurs resulted also in the forming of the Ocean Cluster Park at the Reykjavik harbor, which is

planned to open in August 2012. The Ocean Cluster Park will include at least twelve small firms in the marine sector, ranging from tech firms to aquaculture firms and fisheries advisers, all of whom are active in international marine entrepreneurship.

9.3 Limitations

As with any research, certain limitations must be noted. First, the methodology relied on the accuracy of interviews with nineteen entrepreneurs as regards their personal relationship networks. This means that information from other individuals in the entrepreneurs networks were not researched (other than partly in paper 3). Depending on the research objective, future studies might include perspectives of other individuals within the entrepreneur's network.

Secondly, the focus has been only on high-tech entrepreneurs, all of whom base their venture on software utilization. More extensive studies in other settings are required to test the extent to which the findings can be applied more generally.

Paper 2 explores new online communication technology and international entrepreneurs. This is a new field of research for IE and a contribution to empirical work in this field. This research is partly based on evaluating relationship ties on the social web networks of the participants. Using a number of relationships to indicate network identity or popularity may be misleading as a growing number of web users are collecting links. One method to evaluate individuals might be to find out how many sought to create online relationships with them rather than how many relationships they have. This might indicate their network strength and separate them from individuals who might be collecting relationships from similar people for various reasons such as impressing others, interest in collecting links, etc. This was partly exercised in this study, but a more structured study in this area could be of interest.

Fourthly, with the seemingly growing importance of weak ties in the internationalization process of firms, it would be valuable to explore the further weighing of weak ties similar to the work being done in social networks in which ties get values according to their significance. One is also left with questions regarding the validity of obtaining lists of weak ties from interviewees through mostly open-ended interviewing. The list of connections on the web networks indicated many weak ties which the participants had not mentioned. The open-ended interview should not be to test the memory of participants regarding their large number of weak ties.

Managerial implications and limitations

This does not necessarily downplay the value of observing weak ties in an open interviewing setting but mainly emphasizes the opportunities which the online social networks represent in obtaining data on the number of ties, the context for creating relationships, and the character of the ties.

The continued cooperation between the researcher and the entrepreneurs on LinkedIn further opens the opportunity to explore the development of the personal networks of the international entrepreneurs using the method of participation observation as well as longitudinal and dynamic data, (Lewis et al., 2008). Future studies could observe the phenomenon that Ruef (2002) highlights, namely that individuals positioned in large heterogeneous networks are more likely to be regarded by their peers as innovative in comparison to entrepreneurs in more homogeneous networks.

Coviello (2006) describes one of her researched firms as approaching networks as “viral marketing”, as there is abundance of arm’s length ties and rapid growth. Coviello asks when the abundance of these relationships may cause control problems and a lack of prioritizing and leveraging of key relationships. This research has indicated that entrepreneurs worry about the growing numbers of weak ties and how to manage them. Future research might focus particularly on the effects of large portfolios of weak ties on the management of these ties.

10 New avenues for research

This study has recognized that personal relationships in networks are affected by factors such as the characteristics of the entrepreneur and the domestic market. This study has also shown that weak relationships, which have rarely been studied in international entrepreneurship, may have a significant effect on international opportunities obtained by the entrepreneurs. It is recognized in the literature that network ties have a positive effect on competitiveness (Wincent, 2005), cooperation between large and small firms (Han, 2006), and cooperation between entrepreneurs (Casson, 1997), especially for the internationalization of small high-tech firms (Coviello, 2006; Moen, Gavlen, and Endresen, 2004). It is also recognized that for young internationalizing entrepreneurial firms, the personal relationships of entrepreneurs can be some of the most valuable resources of all (Harris and Wheeler, 2005). But most of these studies have emphasized the strong ties.

10.1 Weak ties

The issue of weak relationships continues to be the avenue of future research that can have a significant impact on international entrepreneurship theory. In the researcher's continued research among young computer game entrepreneurs at their initial stage of their firm's development, a sidestep from the literature on ties has been found. These young entrepreneurs perceive anonymous links on the Internet as some of their most important resources. What if the establishment of the firms and the creation of ideas is mainly based on cyber ties, using crowds on the Internet to come up with the best, most clever solutions, let the internet vote on your ideas, gain trust through the internet by promoting your ideas among crowds and indicating your network strength? Can we define these crowds as portfolios of ties (Ozcan and Eisenhardt, 2009), as weak ties (Hite and Hesterly, 2001), as a "sea of informal ties" (Powell et al. 1996), as social ties (Coviello, 2006), or as community of international entrepreneurs (Roberts, 2010). The game entrepreneurs seem to rely on communities (Roberts 2010), anonymous groups or crowds in cyberspace, or large portfolios (Ozcan and Eisenhardt, 2009) of weak ties to obtain ideas and create business plans in their ventures.

Most network research in the area of the establishment of firms has focused on weak and strong ties and how they are used in the establishment of firms. Scholars have different views on whether weak or strong ties are

more important at the initial stage of the entrepreneurial firm's development (Hite and Hesterly, 2001, Elfring and Hulsink 2007; Harris and Wheeler, 2005).

Coviello's studies and various other research projects have indicated that as network grows, density increases. The young gamers seem to be doing it partly vice versa. They begin with a large crowd, broadcast their ideas on cyberspace, and then begin to decrease the density and create strong links. Many of the young game entrepreneurs being researched have been game enthusiasts since early in their childhood and have been living and thriving in the Internet world for a larger part of their lives. It would be overstating to say that they live in a virtual world, but many of their ventures, from the initial startup, development of ideas and formation of groups seem to be different from more traditional methods of conducting business ventures. It is argued that the way of business of these entrepreneurs may represent trends that might become much more common and widespread in the years to come. Just as new communication methods are changing society, so too may they change the conduct of businesses and trustbuilding. The question is how will they change? Observing young entrepreneurs in the computer game industry might give us some hints.

10.2 New generation of software entrepreneurs

In order to achieve a deeper understanding of the personal relationships networks of entrepreneurs and how they affect the development of their international business, an avenue for future research might be to study the initial steps in the internationalization of young generation (20–30 year old) entrepreneurs in the game software industry in particular. If network relationships are the facilitator of internationalization, it is reasonable to assume that such ties emerge pre-internationalization and to understand the network evolution one needs to observe the INVs from their initial startup (Coviello, 2006). The research would therefore focus on the ties of the entrepreneurs at the establishment and commercialization of their ventures.

The theoretical goal would be to make a general contribution to the literature on trust and social networks of entrepreneurs and to strengthen the field of international entrepreneurship (IE).

Figure 10.1 presents the trends seen in the development of relationships of new software ventures. Research in entrepreneurship has long recognized the importance of strong ties at the initial stage of entrepreneurship (Hite and Hesterly, 2001). Other studies have also recognized the mix of weak and

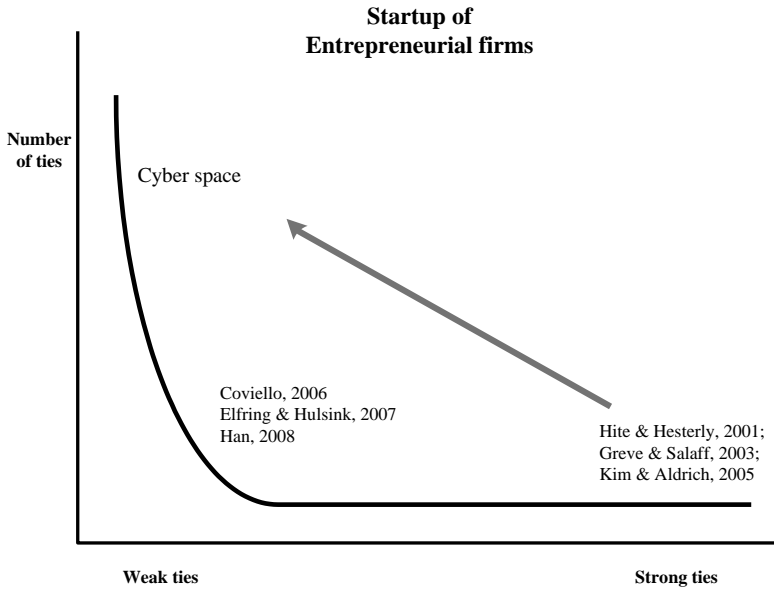


Figure 10.1. Research in relationships of new ventures

strong ties at the initial stages of the ventures development (Coviello, 2006; Han, 2008). There seems to be a growing trend of a sea of weak ties among young game entrepreneurs. In many ways it is similar to the trend in the world of weblogs. In the power-law distribution of weblogs, most writers have few readers and they can all pay similar attention to one another, forming tight conversational clusters. Few writers, on the other hand, have thousands or even millions of readers (Shirky, 2008). The young computer game entrepreneurs perceive the crowds as portfolios of ties. These portfolios consist of game enthusiasts whom the young entrepreneurs see as future clients, but they also realize that the portfolios can also consist of game enthusiasts who are representatives of more established computer game firms, investors, or future partners. At the initial stage of their firm’s development, they observe ties as single dyadic ties in a crowd. As comments and suggestions flow in, they begin to see the ties as portfolios of ties. To further strengthen the ties, they need to function more as broadcasters than businesses as they hold on to their ties by stimulating the group with newness and excitement rather than trust. This is the avenue of research that offers a potential for further contribution to the theories of international entrepreneurship and social networks.

11 Conclusion

Forming relationships in new markets is a critical aspect of the internationalization process for entrepreneurs and their ventures. Recent years have seen two important developments. The rapid advance of new technological developments has been accompanied by the phenomenon of entrepreneurs leading and exploiting these for rapid, sometimes instantaneous internationalization. But this has created a presence as well—entrepreneurial firms *need* to internationalize very rapidly if they are to exploit any technological or commercial advantages they have before their ventures become redundant. So entrepreneurs are pressured to develop new international relationships much quicker than hitherto. They seek to be inside large relationship networks which they can utilize in their continuous search for opportunities. At the same time, within the last 10 years new communication technology has had a profound effect on the development of relationship networks and the communication and interaction of entrepreneurs.

This dissertation has examined relationships in the initial stages of the development of the international venture, the character or the background of the entrepreneur, and the venture's industry and market background. These factors seem to have a crucial influence on the relationship structure and the opportunity seeking of the entrepreneur. The reasons why and how international entrepreneurs develop particular relationships have gone largely unexamined in the international entrepreneurship literature.

The research finds international entrepreneurs to value strong, internationally embedded relationships most, but these are rare and costly to develop. When observing how entrepreneurs use their personal relationship networks, the research sees both different types of entrepreneurs and exogenous factors, such as domestic market strength, as having an impact on how relationship networks of international entrepreneurs are developed and managed. There is also an increasing importance of weak relationships in the international entrepreneur's ventures, relationships which certain entrepreneurs view as important portfolios in their ventures.

The most significant contribution of this research lies in the identification of the role of weak ties in international venturing and the new methodology to approach and evaluate these ties.

From theoretical constructs from IE and social network literature, this study has examined, in detail, the focal international relationships of entrepreneurs, and

found out from where they originated, how they developed, and how quickly they developed, the way in which commitment has developed within them, and how this has led to new international business activity. This study also reveals the profound and different effects of the new communications technology on the development of relationships, the consequence of which is that relationships can be identified and developed much more quickly than hitherto. This indicates a possible paradigm shift in the globalization of small ventures in which weak relationships play a more important role in international ventures and in which there are certain capabilities of entrepreneurs and environmental factors that may be more important in this new era.

The international entrepreneurship theory is still in the making, but “it takes much more than a theory for an academic field to advance” (Hambrick, 2007:1351). IE uses pre-theoretical work in related fields to strengthen its theory building, but the exciting part about IE is the dynamic global and somewhat chaotic environment in which this theory thrives (Jones et al., 2011). This environment calls for a wider theoretical lens, a need which has been addressed in this dissertation. The various fascinating phenomena IE researchers are examining and the different theoretical and research approaches requires extra emphasis in IE on creative data collection (Creswell, 2007) and careful data analysis. The research approach in this dissertation and findings will contribute to both the international entrepreneurship and social network research and theory. But theories are not “ends in themselves, and members of the academic field of management should keep in mind that a blanket insistence on theory, or the requirement of an articulation of theory in everything we write, actually retards our ability to achieve our end: understanding” (Hambrick, 2007: 1346).

Contributing both to theory and practice has been an underlying thread in this research. This dissertation has introduced a number of implications for international entrepreneurs in INVs, implications which will increase *understanding* and strengthen the interest and use of the relationship strategies of international entrepreneurs.

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