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Domestic Industry Context and INVs’ International Relationship Portfolios

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Abstract

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have an effect on the development of relationship portfolios of international software
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and entrepreneurs’ activeness in forming new international relationships. Strong local
industry relationships can help start-up but can constrain subsequent
internationalization; firms without this local advantage have to develop the capability
of working with weaker international relationships from an early stage. The analytical
framework that we develop from network and INV theories to analyse these
differences may also be useful to help understanding of the role of other factors in the
internationalization process.

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HIGHLIGHTS

A new model for understanding the profile of firm’s international relationships
The portfolio model integrates international entrepreneurship and network concepts
INVs with no local industry more quickly build international relationship portfolios
A local industry encourages strong domestic not weak international relationships
Further internationalization capability involves an ability to develop these portfolios
Domestic Industry Context and INVs' International Relationship Portfolios

Abstract

The importance of relationships to INV internationalization is well recognised, but evidence conflicts as to the relative value of strong personal relationships or weak business relationships within entrepreneurs portfolios of relationships. Here we set out to explore how the presence or otherwise of a substantive local domestic industry can have an effect on the development of relationship portfolios of international software entrepreneurs with and without a local initial market. We find that it influences the strength of the entrepreneurs’ relationships, the location of the relationship networks, and entrepreneurs’ activeness in forming new international relationships. Strong local industry relationships can help start-up but can constrain subsequent internationalization; firms without this local advantage have to develop the capability of working with weaker international relationships from an early stage. The analytical framework that we develop from network and INV theories to analyse these differences may also be useful to help understanding of the role of other factors in the internationalization process.

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Domestic Industry Context and INVs’ International Relationship Portfolios

1. Introduction

Recent research on relationship networks in international entrepreneurship (e.g. Keupp & Gassmann, 2009; Sapienza, Autio, George, & Zahra, 2006; Ellis, 2011) has recognized the important role of personal relationships in the internationalisation of the small firm (Komulainen, Mainela & Tahtinen, 2006; Zain & Ng, 2006; Ellis, 2008, Gemser, Brand & Sorge, 2004). Some of this research stresses the importance of a small group of relationships with whom there is extensive social interaction (e.g. Söderqvist and Chetty, 2009; Ellis, 2000; Harris & Wheeler, 2005). Other research emphasises the importance of large heterogeneous ‘portfolios’ of weaker relationships focused on business exchange from the outset (Kontinen & Ojala, 2010; Jack, Moul, Anderson & Dodd, 2010; Sasi & Arenius, 2008; Sharma & Blomstermo, 2003).

We also know that the direction and speed of internationalisation can depend on the industrial context (Andersson, 2004), including its domestic growth (Shrader, Oviatt, & McDougall, 2000). Industry evolution influences the internationalisation of the firms within the industry, and vice versa, in very specific ways (Liesch, Welch, Welch, McGaughhey, Petersen, & Lamb, 2002). While we know that INV development is affected by a number of industrial factors, these have not been extensively studied (Zahra & George, 2002). This had led Fernhaber, McDougall and Oviatt (2007) to suggest INV research focus on examining ‘how strategy interacts with industry structure in the internationalization of new ventures’ and ‘relationships between industry structure and new venture internationalization’ (p. 536).

Here we specifically examine how entrepreneurial network relationship development might differ in domestic industrial contexts as INV ventures grow, and why they do so. Also responding to Coviello’s (2006) suggestion that the study of network internationalisation be extended to a wider populations, such as high tech firms in mature and new industries (Coviello & Munro, 1997), we study the personal relationships of ten
matched software entrepreneurs who were leading INVs, within two globalized growth sectors, one that had a substantial domestic presence and the other that did not.

Entrepreneurs’ business relationship patterns are highly complex because they draw on who they are, what they know, and who they know (Sarasvathy, 2008), so we need models to describe and explain their network development (Slotte-Kock and Coviello, 2009). We build such a research model inductively from our case data from the notion of ‘relationship portfolios’ previously used in industrial marketing and purchasing research (Zolkiewski & Turnbull, 2002). The model presents network relationship choices from an entrepreneur’s perspective, enabling us to understand entrepreneurs’ network relationship choices in the stages of firm development from initiation to initial internationalisation.

Our findings enable us to contribute to our growing understanding of the differing roles for relationships in INV formation and development, the importance of which will depend on specific contextual factors. The size of the domestic industry has a profound influence on the locations where the relationships are embedded, their strength, and the activeness of the entrepreneurs towards developing new relationships. International entrepreneurs who had a substantive local market and industrial support relied on the strong domestic relationships that they had or could readily develop. Others worked from the outset with weaker relationships embedded in international markets, which they actively developed, and through whom they could establish the international presence they needed. The result was that firms that do not have the advantage of a substantial local market internationalized more rapidly, and developed capabilities to form international relationships and to work internationally much earlier.

The remainder of this paper is divided into five sections. Next, we review relevant previous research on international entrepreneurs network relationships and 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.
2. Theoretical background

We will now consider research that has been concerned with three aspects of the array of relationships that INVs addressing global markets will develop: where the relationships that the entrepreneurs seek are embedded, the strength of the relationships that they seek, and then the activeness that the entrepreneurs engage in to find and develop their portfolios of relationships, an aspect that has received less research attention to date.

2.1 The location of the relationship embeddedness that the INV entrepreneurs seek

Research has explored how entrepreneurs in new ventures with limited resources available to expand to foreign markets (Chetty & Campbell-Hunt, 2003) have sought to internationalise quickly (Oviatt & McDougall, 1994; Coviello, 2006; Chetty & Campbell Hunt, 2003). Internationalization process research (e.g. Johanson & Vahlne, 1977; 2003; Ford, Gadde, Håkansson, & Snehota, 2003), relationship perspective research (e.g. Dyer & Singh, 1998; Madhok, 1995), network research (e.g. Larson & Starr, 1993) and international entrepreneurship research (e.g. Oviatt & McDougall, 2005) emphasise the fundamental importance of network relationships for internationalization, especially for small high-tech firms (Coviello, 2006; Moen, Gavlen, & Endresen, 2004).

It is the degree of the relationships’ embeddedness (the extent to which they are enmeshed in useful social networks) that determines their value (Granovetter, 1985). For internationalization, entrepreneurs need relationships that are well embedded in other international circles. It is this embeddedness that enables these relationships to provide the knowledge and market access that INVs need (Yli-Renko, Autio & Tontti, 2002). Supportive relationships that are appropriately embedded in appropriate social, power or market circles in international territories also enable trust, awareness and visibility to be built within those territories (Powell, Kogut, & Smith-Doerr, 1996; Hadjikhani, Lee & Ghauri, 2008). This indicates that internationally embedded relationships will be of greatest value for international entrepreneurs seeking to build their ventures internationally.

A large local market, however, might diminish the urgency to find internationally embedded relationships, though some local relationships may act as ‘introducers’ to new
internationally embedded relationships (Johanson & Mattsson, 1988). How INVs use domestic and internationally embedded relationships at different stages of their firms’ evolution, and why there are differences in their use, remains unclear, so we will explore the effect of a strong local market on their use of domestic and internationally embedded relationships.

2.2 The strength of the relationships that the INV entrepreneurs seek

Granovetter (1973) suggests that the strength of a relationship reflects a ‘combination of the amount of time, the emotional intensity, the intimacy and the reciprocal services that characterise the tie’ (p.1361). Strong relationships have high levels of social relationship or personal interaction with high frequency (Granovetter, 1982). Entrepreneurs rely heavily at early stages on strong direct personal relationships to provide critical resources (Jenssen & Koenig, 2002), these typically being family and friends or previous contacts (Larson & Starr, 1993; Hite & Hesterly, 2001). SMEs have also been found to rely on strong ties in their foreign market entry (Ellis, 2000; Soderqvist & Chetty, 2009). The affective commitment within strong relationships, generated by high levels of personal and social interaction, motivates them to help and protect entrepreneurs, but brings a reciprocal range of obligations that can be costly (Granovetter, 1982; Hite & Hesterly, 2001; Madhok, 2006).

Weak relationships are based less on personal interaction and more on instrumental or calculative commitment, this assured by pledges, idiosyncratic investments, sharing of information, and allocation of relationship-specific resources (Dwyer, Schurr, & Oh, 1987; Gundlach, Achrol, & Mentzer, 1995; Geyskens, Steenkamp, Scheer, & Kumar, 1996). Weak relationships are highly useful sources for new ventures to access international markets (Sharma & Blomstermo, 2003; Komulainen et al. 2006), and at the same time, carry few obligations for reciprocity (Granovetter, 1973).

In the early growth stages of their firms, entrepreneurs have been found to expand their relationship portfolios with the inclusion of more weak relationships that are important for new business leads (Greve & Salaff, 2003; Starr & MacMillan, 1990). Personal friendships, however, are not only crucial for the initial growth of
entrepreneurial firms; they can be important for initial internationalisation as well (Harris & Wheeler, 2005; Sasi & Arenius, 2008). Networking with a recognised partners (Ghauri, Tarnovskya and Elg, 2008; Komulainen et al, 2006, Sharma & Blomstermo, 2003) or with a network of employees, owners, partners or board members can also be important in early internationalization (Ellis, 2000; Coviello & Munro, 2007; Gemser et al, 2004; Zain & Ng, 2006).

The evidence concerning the relative roles of strong and weak relationships in INVs’ early stages is therefore mixed. Do they also start with strong local relationships (even though these are unlikely to help internationalization) or do they work to develop (inevitably weaker) internationally embedded relationships from an early stage? A substantial local industry may present potentially valuable strong local relationships that can be worked with easily, but international development might require internationally embedded relationships, even if these are more less accessible and possibly weaker as a result.

2.3 INV activeness towards seeking new relationships

Johanson and Mattsson (1988) suggest that firms can compensate for their limited resources by actively seeking new relationships, and Hite and Hesterly (2001) find that they do it in an intentional and deliberate way. Entrepreneurs transform their network relationships from simple structures in early stages to dense and complex sets of multidimensional relationships as they develop their firms (Larson & Starr, 1993; Bratkovic, Antoncic & Russier, 2009). International entrepreneurs can choose how much to invest in activity to develop relationships internationally (Harris & Wheeler, 2005, Komulainen et al., 2006), and can choose to do it in a proactive or reactive way (Ghauri, Hadjikhani & Johanson, 2005; Ghauri et al, 2008; Johanson & Mattsson, 1988; Kontinen & Ojala, 2010).

We know very little, however, about what the entrepreneurs do to engender these changes, nor the resources that they devote to doing so. As Elfring and Hulsink (2007) note, we still do not know what ‘drives entrepreneurs to establish and deepen some relationships and not others, and how do they manage their mix of weak and strong ties?’
And for international entrepreneurial firms, including INVs, we do not know what action and resources entrepreneurs use to drive the change from networks dominated by strong local relationships to the networks that some consider INVs need, which include relationships (weak or strong) that are embedded in different international circles. This study attempts to address that gap.

3. Research method

This study uses a multiple case study method with the INV entrepreneur 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 from each entrepreneur. Data was sourced mainly from structured but open-ended interviews, that followed Kvale & Brinkman’s (2009) guidance that:

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]

The interviews were partly structured to direct discussion to relevant topics, such as the web, and to achieve equivalent data (Eisenhardt, 1989), but was based on a ‘native category’ approach (Buckley & Chapman, 1997; Harris, 2000), involving extensive conversations from non-directive questions rather than directed questions derived from theory. 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. 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 and Törnroos, 2005), with evidence also from other respondents, including industry experts (Sinkovics. Penz and Ghauri, 2008; Yin, 2009).
Figure 1: Patterns of INV entrepreneurs in initial growth stages

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 of current or active use (Johannison, 2002). Oscan and Eisenhardt (2009) argue that with few exceptions (e.g. Ahuja, 2000; Hallen, 2008), 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 INV development and evaluate only relationships which the participants perceived as relevant in their business ventures. This carries a risk, that some relationships which may be categorised by the participants as irrelevant may subsequently become important, but we are, at least, now able better to capture to track the influence, over time, of relationships related to the ventures.

3.1 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, green ocean technology, fisheries technology, seafood processing and software. This study observes software entrepreneurs (which we will call marine-techs) in the marine/seafood industry.

This study also observes Icelandic computer game software entrepreneurs (that we will call game-techs) and their networks of relationships. With no particular local advantages, 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. It’s 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.

The entrepreneurs are 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 (McCartan-Quinn & Carson, 2003; Welch, Marschan-Piekkari, Penttinenc, & Tahvanainenc, 2002). From 35 marine-tech and 12 game-tech entrepreneurs identified in Iceland, seven of each type, whose firms match Oviatt & McDougall’s (1994) definition of an INV were chosen for this analysis (Tables 1 and 2).
Table 1: The case entrepreneurs: descriptive data.

<table>
<thead>
<tr>
<th>Case</th>
<th>Business activity</th>
<th>Venture established</th>
<th>Role of entrepreneur</th>
<th>CEO Age</th>
<th>Sales US, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine-tech 1</td>
<td>Software &amp; equipment for seafood processing</td>
<td>2005</td>
<td>CEO</td>
<td>49</td>
<td>1.5</td>
</tr>
<tr>
<td>Marine-tech 2</td>
<td>Sea food/ trading weighing equipment software</td>
<td>2003</td>
<td>CEO</td>
<td>45</td>
<td>1.2</td>
</tr>
<tr>
<td>Marine-tech 3</td>
<td>Software &amp; equipment for food preservation</td>
<td>2007</td>
<td>CEO</td>
<td>49</td>
<td>0.8</td>
</tr>
<tr>
<td>Marine-tech 4</td>
<td>Software &amp; equipment for seafood processing</td>
<td>2003</td>
<td>CEO</td>
<td>52</td>
<td>2.5</td>
</tr>
<tr>
<td>Marine-tech 5</td>
<td>Software for food safety</td>
<td>2006</td>
<td>CEO</td>
<td>28</td>
<td>1.2</td>
</tr>
<tr>
<td>Marine-tech 6</td>
<td>Marine energy management software</td>
<td>2002</td>
<td>CEO</td>
<td>52</td>
<td>2.5</td>
</tr>
<tr>
<td>Marine-tech 7</td>
<td>Software energy management for ships</td>
<td>2007</td>
<td>Dep. CEO</td>
<td>32</td>
<td>1.0</td>
</tr>
<tr>
<td>Game-tech 1</td>
<td>Web solutions for gaming</td>
<td>2006</td>
<td>CEO</td>
<td>32</td>
<td>4.0</td>
</tr>
<tr>
<td>Game-tech 2</td>
<td>Software solutions for gaming</td>
<td>1998</td>
<td>CEO</td>
<td>52</td>
<td>9.0</td>
</tr>
<tr>
<td>Game-tech 3</td>
<td>Social games software</td>
<td>2004</td>
<td>CEO</td>
<td>44</td>
<td>0.5</td>
</tr>
<tr>
<td>Game-tech 4</td>
<td>Game software</td>
<td>2002</td>
<td>CEO</td>
<td>37</td>
<td>2.0</td>
</tr>
<tr>
<td>Game-tech 5</td>
<td>Web crawling software for gaming</td>
<td>2007</td>
<td>CEO</td>
<td>26</td>
<td>0.5</td>
</tr>
<tr>
<td>Game-tech 6</td>
<td>Wireless tech – games</td>
<td>2004</td>
<td>CEO</td>
<td>45</td>
<td>2.0</td>
</tr>
<tr>
<td>Game-tech 7</td>
<td>Game software</td>
<td>2008</td>
<td>CEO</td>
<td>32</td>
<td>0.5</td>
</tr>
</tbody>
</table>

3.2 The interview process

Preliminary open 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 80-120 minute interview discussions with entrepreneurs about their relationships with the question ‘how would you describe your relationships with individuals in your business?’

3.3 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.

3.4 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 initial stages of the INV, we followed Coviello (2006) and adapted growth stage categorisation offered by Kazanjian (1988). Stage I is concept generation, resource acquisition and technology development, Stage II involves production start-up and commercialisation, and Stage III involves sales growth and organisational development. Kazanjian’s stage IV, capability and profitability, was not yet achieved by these INVs so was not used, and like Coviello, we add initial internationalisation to stage III, and see technology development to take place at all stages and not just Stage I.

To illustrate how the case data concerning the different relationships developed and used by the different types of firms at the three stages of INV evolution have been coded for analysis, examples are displayed in Table 3. Since the purpose of this paper is to develop and build theoretical understanding of the relationships that INV entrepreneurs choose to develop, and the reasons why the relationship portfolios that result are shaped as they are, we next follow Eisenhardt and Graebner (2007) and present the findings from the case firms alongside our understandings from previous literature and research, addressing each of the research questions in turn.
Table 3: Patterns of relationships at different stages

<table>
<thead>
<tr>
<th></th>
<th><strong>Marine-tech entrepreneurs</strong></th>
<th><strong>Game-tech entrepreneurs</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage I</strong></td>
<td>Marine</td>
<td>Game</td>
</tr>
<tr>
<td>Examples of strong</td>
<td>All develop products in close</td>
<td>Strong relations developed</td>
</tr>
<tr>
<td>relationships with</td>
<td>relations with domestic</td>
<td>with similar software</td>
</tr>
<tr>
<td>domestically embedded</td>
<td>buyers in the marine sector.</td>
<td>engineers but no</td>
</tr>
<tr>
<td>relationships</td>
<td></td>
<td>domestic industry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>customers.</td>
</tr>
<tr>
<td>Examples of weak</td>
<td>Some rel’s with domestic</td>
<td>A few domestic rel’s but</td>
</tr>
<tr>
<td>relationships with</td>
<td>buyers. Initially weak rel’s,</td>
<td>these are not yet important.</td>
</tr>
<tr>
<td>domestically embedded</td>
<td>these develop into strong</td>
<td>One further develops rel’s</td>
</tr>
<tr>
<td>relationships</td>
<td>rel’s over time.</td>
<td>in a larger group of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>interested in gaming.</td>
</tr>
<tr>
<td>Examples of strong</td>
<td>None</td>
<td>Very limited. One</td>
</tr>
<tr>
<td>relationships with</td>
<td>Development of rel’s from</td>
<td>game tech with an international investor from the startup.</td>
</tr>
<tr>
<td>internationally embedded</td>
<td>strong domestic marine</td>
<td>Two gain help from foreign board members interaction with US firms increases trust.</td>
</tr>
<tr>
<td>relationships</td>
<td>sector introducers with</td>
<td></td>
</tr>
<tr>
<td></td>
<td>common ownership.</td>
<td></td>
</tr>
<tr>
<td>Examples of weak</td>
<td>None</td>
<td>A large network of weak</td>
</tr>
<tr>
<td>relationships with</td>
<td>Some weak intern’l rel’s from</td>
<td>intern’l rel’s developed at</td>
</tr>
<tr>
<td>internationally embedded</td>
<td>trade shows. Focus is on</td>
<td>trade shows, by using</td>
</tr>
<tr>
<td>relationships</td>
<td>domestic rel’s who are</td>
<td>internet &amp; social networks</td>
</tr>
<tr>
<td></td>
<td>hoped to become</td>
<td>or the internet.</td>
</tr>
<tr>
<td></td>
<td>international introducers.</td>
<td></td>
</tr>
</tbody>
</table>

4. The location of the relationship embeddedness that the INV entrepreneurs seek

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

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

This led to a natural development of these firms 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.
The internationalization (stage III) of the marine-techs then took place in the staged way highlighted by Coviello (2006). They had already commercialized through domestically embedded relationships that being local, were easily developed. 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 part of international networks, and could fulfil the role of ‘introducers’ in the way that Johanson & Mattsson (1988) suggest. For example,

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

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 already commercial domestic relationships. This constricted their development of internationally embedded relationships.

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 internationally embedded relationships themselves, because there were so few people locally who could understand the industry, let alone would be helpful for commercialization. As a result, stage II, commercialization without internationalization, did not take place at all: the absence of a domestic industry presence meant that their commercialization required the development and use of internationally embedded relationships.

By stage III we see a striking difference between the marine-techs and the game-techs. The game-techs focus on finding internationally embedded relationships from their first days resulted in a rapid development of rich and dense international networks that included large international firms. Working with these linkages helped develop new international linkages in a self-reinforcing process that involved them in the internationalization process of the industry as a whole.

**Proposition 1:** INV entrepreneurs located distantly from markets will develop internationally embedded relationships more than those who start with a strong local market.
5. The strength of the relationships that the INV entrepreneurs seek

Most research (e.g. Coviello, 2006) indicates that at early stages, most entrepreneurs would seek to rely on strong trust and knowledge based relationships, people with the ability to add directly to the competitive advantage of the new venture and/or introduce, possibly develop potential customer relationships. All the marine-techs had developed their products in relationships with domestic individual firms that pre-dated the inception of the firms, with people known to them very well. The effect of this in the early days was profound:

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

This early establishment of strong relationships with local firms at Stage I considerably benefited the establishment of their firms and their early development. First, it helped the firms to attract other resources. Suppliers of finance, for example, had already experienced success in the sector, which they were hoping to repeat. Second, these relationships presented possibilities for developing valuable inter-personal relationships in other sectors and territories that could become stronger over time. But most important, the focus at stage II was 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 4]

The strong relationships the marine-techs established at Stage I presented them with a ready source of clients by stage II that could be further developed. Their proximity to the marine industry had led to a tradition of cooperation between the two sectors that helped the INVs to generate a revenue stream from the earliest days.

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

We see, as Oviatt and McDougall (1994) have noted, INVs to be highly affected by the evolutionary stage of its industry. The establishment of many of the game-techs coincided with a number of innovative Icelandic software engineers developing new gaming software, with whom the game-techs developed close relations in their early days. This did not help them, however, subsequently to establish industry based customer relationships, these all being overseas. Further, with no domestic industrial presence, there was little understanding of the industry or interest among supporting services,
especially finance. Many game-techs had to build overseas relationships also to resource their firms.

There were profound differences in their approaches to commercialisation in stage II, driven by pragmatic constraints rather than strategic choices, and reflecting clear and inevitable path dependencies. 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 local industry relationships, the game-techs began with a network ‘clean slate’ (Milanov & Fernhaber, 2009: 47). Several game-techs only survived these early stages by providing computer design in advertising media, or by offering basic web services to local firms. As one game-tech entrepreneur indicated:

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 4]

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. These new relationships, inevitably, were weak. In expanding their early relationship portfolios with the kind of weak relationships that Starr & MacMillan (1990) identified to be important for new business leads, they followed the path observed by Sharma & 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. But by this stage, they were well used to forming weak business relationships based on straightforward calculative dealings. They were then able to use these to establish ties with large and internationally known US and European partners, and 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 5]

**Proposition 2:** INV entrepreneurs located distantly from markets work with weak relationships more than those with substantive local markets who mainly work with strong relationships.
6. The INV entrepreneurs’ activity towards seeking new 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 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 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 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 initial exports, they rarely led to strong internationally embedded relationships. The domestic client industry was inwardly focussed, so maintaining strong relations with domestic relationships did not greatly help them to develop a strong international network.

Second, they formed and invested in stronger relationships. By stage III they had, unlike the game-techs, not worked with weak relationships and were uncomfortable about changing their way of working to do so. They were used to working with strong relationships, and the all sought to work closely and not remotely with any contact that were made. One marine-tech illustrated the approach 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. [Marine 4]

Strong relationships carry benefits, but also maintenance costs of time and opportunity costs (Sharma & Blomstermo, 2003, p.745). The game-techs worked with and used weaker relationships much more, 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, while the marine-techs were busy maintaining their strong domestic relationships, as is illustrated in Figure 2, below.

![Figure 2: Patterns of INV entrepreneurs in initial growth stages](image-url)
Third, the marine-techs had a more protective attitude towards relationships than the game-techs, whose approach was more collaborative. They had strong network relationships with a few buyer companies, in which they had invested time, and commitment and had collected 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 domestic marine-techs. The game-techs mentioned six other domestic game-techs, nearly all there were. In 2008 several Icelandic game-techs formed an association which become a platform for developing valuable relationships, exchanging ideas, and giving mutual support. They found, as Casson, (1997) suggests, that they could work better as a cooperative network than as a collection of competitive individualists. The game-techs often cited each other as sources of advice about how to internationalize: their critical need for internationalization 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 was necessary for them (but not for the marine-techs) in stages I and II because there were no industrially embedded partners locally, so had actively to search them out from overseas. By stage III, the game-techs had well developed capabilities for developing new internationally embedded relationships; the marine-techs did not. This would already start to influence the dynamic development of their firms internationally: their activeness in international relationship development in part reflected that they had developed considerably greater capabilities in doing this activity. The marine-techs and the game-techs had very different capabilities in international relationship development.

Here, social networking sites on the internet proved invaluable. The game-techs formed three times the number of contacts on their preferred social networks on the internet than did the marine-techs, and internet records showed the game-techs actively seeking relationships overseas much more actively than the marine-techs:
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]

This provided a source for much faster and more rapid internationalization, these weak relationships are typically the source of internationalisation opportunities (Duque, Shrum, Barriga, & Henriques, 2009). This internet portfolio comprised weak relationships that could be activated according to need (Granovetter, 1985), and only nurtured if there is a particular benefit in mind from doing so. Here, the challenge of the game-techs was not only to acquire resources as the network internationalisation literature indicates (Coviello, 2006), but also to identify relationships internationally who might provide those resources.

The game-techs saw their internet relationships in portfolio terms and reflected Halinen and Tornroos’ (1998) notion of different embeddedness in internationalisation. They placed value on embeddedness in particular geographical locations, customer groups, market segments, or fields of knowledge. The value of their portfolios was expressed in terms of the diversity of embeddedness of the relationships and in its locations, more than in the strength of the relationships.

**Proposition 3**  
INV entrepreneurs located distantly from their industry will more actively develop and use relationship portfolios than those with a substantial local industrial presence.

7. Conclusion

This paper has addressed the conflicting evidence concerning how much international entrepreneurs’ first important business relationships are strong relationships based on strong social interaction (Ellis, 2000; Komulainen et al., 2006), and how much are weaker relationships based on mutual business interest (Sharma & Blomstermo, 2003; Kontinen & Ojala, 2010; Steier & Greenwood, 2000). 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 INV 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.

Our study has a number of limitations. Most important, the validity of the data may be limited to the specific type of INVs 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. Further, our finding of the importance of weak relationships in the internationalisation process of firms should ideally have been corroborated by evidence from those relationships themselves, requiring an examination of all the parties in the networks involved. Nevertheless, we believe that we both contributed to understanding of why some INV entrepreneurs seem to rely on strong relationships and others on weak relationships, and have contributed a new analytical model to help our theoretical understanding of the role of relationships in the INV development process.

By restricting our focus to tightly defined INV types, however, we have been able to examine their relationships at three stages of the ventures initial development. We have then analyzed this according to the strength of the relationships involved, and according to the domestic or international embeddedness of those relationships (Figure 1), and offered an insight into the importance of domestic presence in the relationships of INV entrepreneurs. This study shows that a substantial presence, or otherwise, of a domestic industry for the INVs to serve domestic industry presence may partly explain the conflicting results of previous studies, many of which have researched heterogeneous groups. This shows that domestic industry presence may affect the ‘process through which ties are selected for entrepreneurship’ (Jack, 2010: 133).

Combining and using network and INV theories to examine entrepreneurs’ relationships, this study makes an original contribution to international entrepreneurship theory that extends recent theoretical work (Coviello, 2006). To address our research question we have responded to Slotte-Kock & Coviello’s (2009) call for precise models to describe and explain entrepreneurial network development and presented a descriptive model (Figure 2) that illustrates the different relationships of international entrepreneurs.
at the three stages of their venture’s initial development. This has provided the basis for the analytical model presented in Figure 3.

This model shows INV entrepreneurs with no domestic industry presence actively working to build large relationship networks of international relationships from the outset, and those with a strong domestic presence leaving this for later, relying on strong domestic relationships to commercialize. This derivative model sees the paths of relationship development of INV entrepreneurs at opposite ends of an ‘embeddedness curve’. In this case, entrepreneurial INVs with different levels of domestic industry presence lie at those different ends. This model is presented as a possible basis for analytical generalisation for future studies studying INVs from different industry sectors, or originating countries, and with different starting characteristics.

Figure 3: Analytical model of relationships development by entrepreneurial INVs
References


