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Critical Factors in Successful International Entrepreneurship:

The case of Icelandic Software firms

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Abstract

For most of the 20th century, internationalization was the domain of large, established firms. However, globalization and other recent developments have given rise to a new breed of firms which internationalize soon after their foundation. These firms are referred to as International New Ventures (INVs). McDougall's seminal 1989 article was extremely important in sparking discussion about INVs. This article and subsequent articles have, however, been less successful in explaining the birth and success of these firms. Ventures that internationalize early have been shown to enjoy increased growth and better financial performance in the long run while suffering a lower chance of survival in the short term. This means that they are affected by different success factors than traditional firms, but the literature has thus far been unsuccessful in creating holistic models that describe these factors.

The goal of this thesis is to investigate the topic in the context of Icelandic software firms using the construct of international entrepreneurship (IE), defined by McDougall as "*the development of international new ventures or start-ups that, from their inception, engage in international business*". The thesis presents a new framework, which takes into account the results of case study research conducted amongst twelve Icelandic software and high-tech firms, with varying degree of international success as measured by survival, foreign sales, foreign funding and foreign acquisitions. The framework draws from and builds on Wickham's model of the contingencies of entrepreneurship using dimensions such as the opportunity, the entrepreneur, the resources and the organization.

The results show that success in international entrepreneurship depends on a mixture of factors that are interconnected and that develop over time. In order to add to the knowledge base of managers, a number of recommendations based on the results are provided. They are meant to guide founders and managers in the rapid internationalization of new firms. The outputs are intended to be general in order to benefit the maximum number of managers. This paper does not identify all of the factors required for successful internationalization, but the four contingencies and 12 factors presented serve as a starting point in the search for a holistic and applicable framework.

Declaration of Research Work Integrity

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature of any degree. This thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by giving explicit references. A bibliography is appended.

By signing the present document I confirm and agree that I have read RU's ethics code of conduct and fully understand the consequences of violating these rules in regards of my thesis.

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Date and place Kennitala Signature

Prologue

This thesis constitutes the final assignment towards a M.Sc. degree in International Business from Reykjavik University. It accounts for 30 ECTS credits and was written from January to May, 2014.

This thesis stems from my lifelong fascination with both entrepreneurship and international business. This interest has its roots in my family's business, where I first experienced the thrill of creating value from my work, as well as in the fact that I have been fortunate enough to have been able to travel extensively around the globe. These experiences have allowed me to appreciate the importance of the entrepreneurial spirit and the global viewpoint to increase the total wellbeing of people across the globe and have furthermore inspired me to take an active part in the global economy. This thesis brings international business and entrepreneurship together to perfectly punctuate my academic career.

I acknowledge the help of my interviewees but without their candor I would not have been able to conduct this study. I furthermore acknowledge the aid of numerous other anonymous and informal sources who provided me with second opinions on many of the cases and who aided in the framing of the topic in the Icelandic context. I thank my parents especially for their unwavering support and for giving me the opportunity to pursue my dreams. Finally, I would like to acknowledge the invaluable assistance and guidance of my thesis guide Dr. Rögnvaldur Sæmundsson, without whom this would surely have been a less interesting and less fruitful endeavor.

Tryggvi Guðbjörn Benediktsson

Contents

Abstract	ii
Declaration of Research Work Integrity.....	iii
Prologue	iv
List of tables	vii
1.0 Introduction	1
2.0 Literature review	4
2.1 Defining the International New Venture (INV)	5
2.2 Defining success	7
2.3 Internationalization.....	7
2.4 Entrepreneurship	10
2.4.1 Opportunity identification	11
2.4.2 Opportunity exploitation	11
2.5 Success factors	13
2.5.1 Opportunity.....	14
2.5.2 Resources	17
2.5.3 Organization	19
2.5.4 Entrepreneur.....	24
2.6 The basis of a research.....	30
3.0 Methodology.....	32
4.0 Results	37
4.1 Content analysis	37
4.1.1 Opportunity.....	37
4.1.2 Resources	44
4.1.3 Organization	49
4.1.4 Entrepreneur.....	55
5.0 Discussion.....	62
5.1 Variance between sectors.....	62
5.2 Variance between successful and unsuccessful firms	62
5.3 Importance of factors.....	63
5.4 Other interesting findings	67
5.5 Omitted factors	69
6.0 Conclusion	72

6.1 A clearer image emerges.....	72
6.2 New model proposed and displayed.....	73
6.3 Implications for management practice	74
6.4 Implications for theory.....	79
7.0 Next steps and final remarks	80
8. 0 References.....	82
9.0 List of figures	98
10.0 List of primary interviewees.....	99

List of tables

Table 1 Description of sample.....	34
Table 2 Relevance of factors regarding the opportunity	37
Table 4 Relevance of factors regarding resources	44
Table 5 Relevance of factors regarding the organization	49
Table 3 Relevance of factors regarding the entrepreneur.....	55

1.0 Introduction

Modern society demands a strong economy to fuel social welfare, provide jobs and create wealth. Iceland's economy has faced turbulent times since the 2008 crisis as the country has had to deal with low economic growth and low levels of investment. The country has at the same time become isolated from the international business community because of currency restrictions, political uncertainty and distrust. These factors pose a clear issue that threatens the nation's ability to build sustainable industries and an effective economy.

New ventures have been shown to be vital for the health of an economy since they do in fact drive a large part of economic growth (Acs, & Szerb, 2007; King & Levine, 1993). Unfortunately, the aforementioned issues have discouraged the creation of new ventures in Iceland. Both the Icelandic government and industry have put effort into encouraging entrepreneurship but entrepreneurs still face a number of challenges. In order to solve these challenges it is important to understand them and to provide possible solutions.

The success of Icelandic startups is an issue that lies on the crossroads of entrepreneurship and international business. This is because industry and government are both promoting and supporting entrepreneurship in an environment that, due to its small size, encourages internationalization. The goal of this thesis is to investigate the merger of these two topics in the context of Icelandic software firms using the construct of **international entrepreneurship (IE)**, which refers to the "*the development of international new ventures or start-ups that, from their inception, engage in international business*" (McDougall, 1989, p.387). The field of IE has been developing rapidly over the last two decades and now provides a number of interesting findings (Keupp & Gassmann, 2009; Jones, Coviello & Tang, 2011). It is considered a fascinating research topic which raises a wrath of demanding and fundamental questions and is highly relevant to the current state of the global economy (Aspelund, Madsen & Moen, 2007; Cesinger, Fink, Madsen & Kraus, 2012; Rialp, Rialp & Knight, 2005; Jones et al., 2011).

IE has been associated with globalization and leads to increased competition in global markets (Zahra & George, 2002; Zahra, 2005). IE initially focused on manufacturing firms but now mainly considers technology-oriented firms (Bell, 1995;

Knight & Cavusgil, 1996). Recently researchers have turned their focus towards software firms (Coviello & Jones, 2004). Software firms have become numerous in the Icelandic economy over the last fifteen years and now occupy an important part of the economy. The sector employs over 3,300 people and generates more than half a billion dollars in revenues each year (Íslandstofa, 2012). The development of the software and other high tech industries in Iceland has been made a priority by the Icelandic government (Ministry of Industries and Innovation, 2011) but these sectors are expected to become more important for the economy in near future (McKinsey and Company, 2012).

Ventures that internationalize early have been shown to enjoy increased growth and better financial performance in the long run (Fernhaber & Li, 2010; Autio, Sapienza & Almeida, 2000; Zahra, Ireland & Hitt, 2000) although short term survival is negatively impacted (Carr, Haggard, Hmieleski, & Zahra, 2010). For this reason their development is different from traditional firms (Harveston, Kedia & Davis, 2000; Zahra, 2005). This thesis investigates what internal and external factors allow firms to pursue international entrepreneurship in a manner that is both successful and sustainable. These factors range from the availability of resources to human capital and social connections, and together they create the circumstances needed for the successful internationalization of a new venture.

Entrepreneurship is a complex and dynamic process, which involves acquiring and managing resources, creating an organization and identifying opportunities (Shane & Venkataraman, 2000). This complexity has proven to be overbearing for generations of entrepreneurs and discourages many potential entrepreneurs from starting up in the first place. The benefit of creating actionable guidelines is therefore apparent. A focus on organizational characteristics will aid in the creation of a framework that can be applied as an analytical tool by managers, who will be able to identify the shortcomings of their organization and react to them before they hinder growth.

In order to guide the research the following research question is put forth:

What factors allow new software firms to succeed through international entrepreneurship?

It is important that a conceptual understanding of international entrepreneurship is present and that a clearly specified theoretical foundation is touched upon. In order to

accomplish this, section 2 will introduce IE and INVs as well as explaining traditional methods of internationalization and entrepreneurship. In the same section the effects of early internationalization, the performance metrics and success factors listed in the literature will be introduced. In section 3, the findings from the literature review will be used to frame a case study research conducted amongst Icelandic entrepreneurs. The results will be presented in section 4 and analyzed in section 5. This will result in a holistic framework of the contingencies of international entrepreneurship as well as a set of guidelines that managers can use as they internationalize their entrepreneurial venture both of which will be displayed in section 6. Finally, section 7 will contain recommendation for further research and final remarks.

2.0 Literature review

Although more than a decade has passed since McDougall & Oviatt (2000) called for more solid frameworks, few studies have developed a framework which combines the theoretical perspectives of IB with entrepreneurship theory in order to create a testable hypothesis for the early phases of internationalization (Jones et al., 2011). It has therefore been suggested that theory building rather than theory testing is needed to drive the field forward, as articles in the field could become more and more self-referential, thereby facing a serious legitimacy problem (Keupp & Gassmann, 2009).

Too little effort has been put into understanding how IE activities emerge and what factors influences their success. Research into IE has furthermore been shown to focus on static cross sectional studies, to fail to grasp the complex and dynamic process of the entrepreneurship and to be highly context specific (Jones et al., 2011). Keupp and Gassmann (2009) suggest that future IE research should employ more qualitative research methods and that it should include research into the ways in which firms use the entrepreneurial process when they are starting their international operations.

The literature uses several definitions to refer to the ventures that engage in IE. There are some minor terminological differences between the definitions but they are broadly the same (Svensson, 2006; Zahra, Jennings & Kuratko, 1999). Ventures that have internationalized early in their lifetime have been called; international new ventures, born globals, infant multinationals, instant internationals and global start-ups (McDougall, Shane, & Oviatt, 1994; Knight & Cavusgil, 1996; Preece, Miles & Baetz, 1999; Oviatt & McDougall, 1994). The terms ‘born globals’ and ‘international new ventures’ are used most frequently (McDougall & Oviatt, 2003). In this research the term **international new venture or (INV)** is used since it best captures the nature, age and structure of the firms that engage in international entrepreneurship.

Early efforts to differentiate between “traditional” and international new ventures were conducted by McDougall (1989). Recent findings indicate that INVs are different from traditional startups with regards to geographic distribution of individuals, resources and market opportunities (Jones et al., 2011).

IE studies often focus on INVs only or compare INVs with truly international firms, thus disregarding the similarities that INVs might share with small traditional exporters. Firms that take a more traditional path towards globalization sometimes carry

the same attributes as INVs, since they are transformed by the process of reaching global success (Chetty & Campbell-Hunt, 2004). In smaller markets, such as New Zealand, there is sometimes no noticeable difference in the extent and pace of internationalization between firms that have been defined as INVs and those that are considered traditional in their internationalization. This happens because firms that possess a product able to compete in the world market need to scale up quickly in order to leave the small domestic market (Chetty & Campbell-Hunt, 2004).

Although the field has been criticized extensively, recent empirical studies have revealed that the theoretical framework might be getting stronger and might be able to combine entrepreneurship and internationalization better than before. However, much work is still needed to identify all relevant factors and construct models (Jones et al., 2011). This thesis attempts to strengthen the theoretical framework and extract success factors for INVs. In order to do so it is important to understand what an INV is and how success is defined.

2.1 Defining the International New Venture (INV)

The originators of the concept of International Entrepreneurship noted that INVs often advance from foundation to international markets within three years (McDougall & Oviatt, 2000). This definition is, however, not universally accepted and there have been numerous subsequent conjectures on what the length of time from inception to internationalization should be. These range from the very start of the venture to as long as 12 years after foundation (e.g. Welbourne & De Ciceri, 2001; Shrader, 2001; McKinsey and Company, 1993; Schwens & Kabst, 2009a; Jolly, Alahuhta & Jeannet, 1992; Zahra, Ireland & Hitt, 2000; Zahra, Neubaum, & Huse, 2000; McDougall, Shane & Oviatt, 1994). This makes it difficult to define INVs with regards to time and, in fact, it has been argued that INVs should not be defined with regards to time at all (Gabrielsson, Kirpalani, Dimitratos, Solberg & Zucchella, 2008).

The scope or “level” of international activities has also been used to define INVs, with definitions ranging from at least one to three or more foreign markets (Harveston et al., 2000; Melén & Nordman, 2009). However, this dimension is often left unexplored, which is possibly due to the fact that, although INVs view the whole world as their marketplace, many of them operate in sectors controlled by a handful of huge players which mostly operate in few countries (Cesinger et al., 2012).

An alternative definition of the INV looked at the proportion of exports in the firms' sales. Firms were considered to be international when 25% of their sales came from outside their country of origin (e.g. Knight & Cavusgil, 1996; Moen, 2002). This ratio originated in the US, where firms traditionally have a relatively low export level. Current literature suggests that this ratio is too low (Gabrielsson et al., 2008). Scholars point out that many European firms exceed this sales ratio and that the ratio could be easily met by any firm from a small country that has a specialized product (Kuivalainen, Sundqvist & Servais, 2007).

In fact INVs often export most or all of their products (Oviatt & McDougall, 1994; Chetty & Campbell-Hunt, 2004) and much higher ratios of export have been mentioned in the literature, ranging from 50% to 80% (Chetty & Campbell-Hunt, 2004; Luostarinen & Gabrielsson, 2006; McKinsey and Company, 1993). However, as has been pointed out (McKinsey and Company, 1993), these ratios are highly dependent on industry type and the size of the home market as well as other factors. The lack of an agreed-upon proportion of exported sales and the differences between markets and sectors means that using export sales ratios to identify INVs might be inappropriate (Gabrielsson et al., 2008; Gassmann & Keupp, 2007).

In an attempt to frame the concept, it could be possible to take a more abstract view of the INV. An INV can be defined as a firm that has a product with global market potential and that has the ability to seek methods of rapid internationalization while having a global vision from the onset (Gabrielsson et al., 2008), or, more simply put, as a firm where the founders and managers see the whole world as its marketplace from the very beginning and have a global vision or growth path (Knight & Cavusgil, 1996; Luostarinen & Gabrielsson, 2006). These firms perceive the international market as being full of opportunities rather than obstacles and dangers (Madsen & Servais, 1997). By defining INVs in this way, it is possible to bypass the limitations that make the quantitative definitions unsuitable and to frame INVs as a state of mind rather than a set of criteria.

What remains is that most of the quantitative definitions or criteria used for identifying INVs are largely arbitrary (Madsen, 2013) and that there is no definition of the INV that is universally accepted (Jones et al., 2011). There have been some attempts to create multidimensional measures that combine the scope of the venture with technological diversity and other factors (Zahra and George, 2002) but most studies

employ only a part of the possible differential dimensions (Cesinger et al., 2012). In order to frame the concept of the INV, this study will look at firms that internationalized in less than 10 years, that operate in more than one market and that export a considerable part of their products.

2.2 Defining success

Market performance in the international domain is multidimensional and incorporates metrics such as sales, profits, market share and return on equity (Zahra, Ireland & Hitt, 2000; Cavusgil & Zou, 1994; Blesa & Ripolla, 2008; Westhead, Wright, & Ucbasaran, 2001). Numerous scholars have attempted to define success for the INV, but no common conclusion has been reached since success is often context dependent. The global market performance of a firm must be assessed on a global basis, including the home market. This creates an added layer of complexity as a firm might be doing well in one country but failing in another. Performance can be defined as being *financial*, which describes the firm's efficiency in carrying out its strategy using metrics such as its cost position, growth and profits; or *strategic*, which is the firm's global competitive position measured by market share, marketing analysis and other metrics (Zhang, Tansuhaj & McCullough, 2009). Although financial gains are of course the ultimate goal of for-profit firms, strategic performance nonetheless serves as an important measurement as it can predict financial performance, such as when market share correlates with profitability (Buzzell & Gale, 1987, pp. 17-29; Szymanski, Bharadwaj, & Varadarajan, 1993). Success can also be defined external to the firm's operations, such as by the *ability to attract international funding* or even the ability to *sell most of or all of the firm to an international investor or firm* (Wickham, 2006, pp. 192-197). In a more fundamental manner, it can be defined simply as survival (Delmar & Shane, 2006). In order to frame the concept of success, this thesis will measure success according to survival, sales, foreign funding received and foreign acquisitions.

2.3 Internationalization

In order for IE to take place, entrepreneurs need to move their operations out of their home market. The field of internationalization is one of the most researched fields in business studies, and one that has sparked countless theories and studies that attempt to explain how and why some firms operate outside of their country of origin (Westhead et al., 2001). In IE studies many internationalization theories have been critiqued for the fact that they might fail to predict the behavior of INVs (Chetty & Campbell-Hunt, 2004; Oviatt & McDougall, 1994; Coviello & McAuley, 1999; Andersen, 1993, 1997;

Jones, 1999). These theories include product cycle theories which suggest that internationalization occurs because firms are trying to protect their current products (Vernon, 1966, p.249) and oligopolistic theory which suggest that firms imitate their competitors as they go abroad (Knickerbocker, 1973). The most famous internationalization model is arguably the *Uppsala model*, which concluded that firms involved in internationalization initially target physically and psychologically close markets with low commitment modes of entry (e.g. exporting) and then using what they learned to expand to more distant market areas using more committed modes of entry (Johanson & Vahlne, 1977).

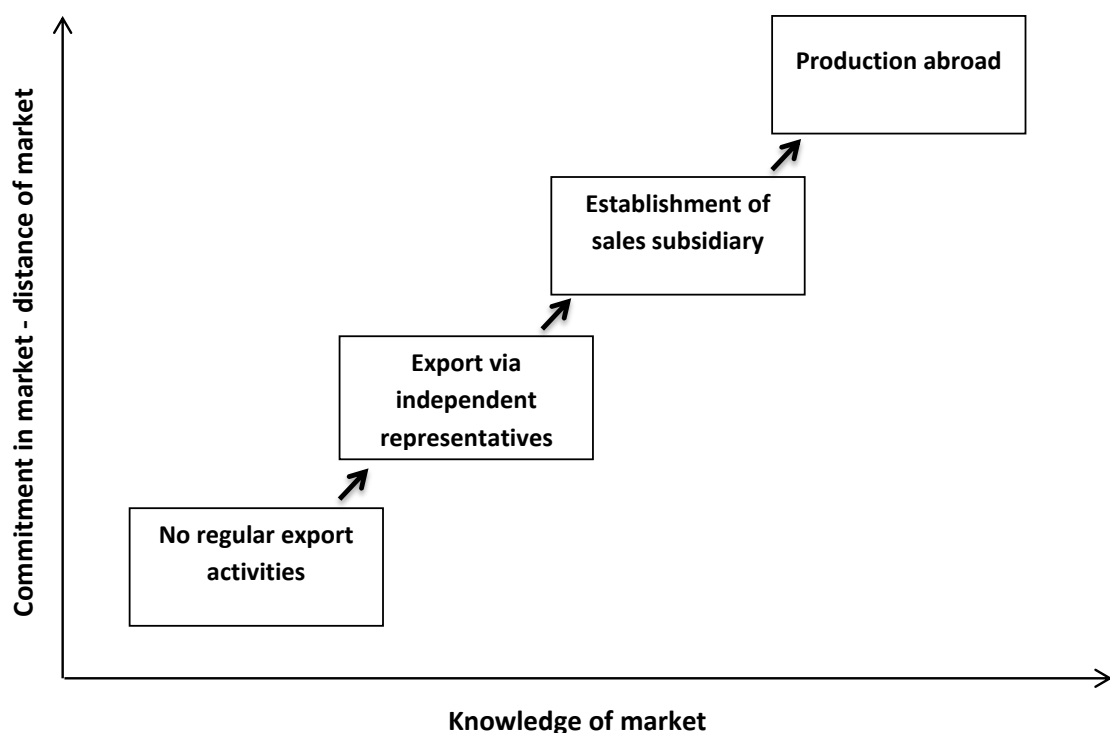


Figure 1 The Uppsala model of the internationalization process (Johnson & Vahlne, 1977).

Many contemporary models depict the internationalization as a gradual process that happens in stages, with each stage built on the previous one. Despite weaknesses, these models have generally received support from mainstream international business theory (Andersen, 1993; OECD, 1997). However, there are some indications that the models might be unable to explain the beginning stages of internationalization (Bell, McNaughton, Young & Crick, 2003; Keupp & Gassmann, 2009). These early stages simply require firms to behave more “entrepreneurially” which is a factor that the models cannot account for. Therefore, international business theory alone, cannot explain the beginning of the internationalization of entrepreneurial ventures (Mathews

& Zander, 2007; Johanson & Vahlne, 2003; Moen, 2002; McDougall et al., 1994; McDougall, 1989)

International business literature initially focused on the traditional American multinational, which arose in the wake of WWII in the midst of communication and transportation changes resulting in a number of theories (see Mejri & Umemoto, 2010). In the eighties and early nineties, researchers increasingly turned their attention towards small and medium enterprises in a stream of research that looked at (1) the difference between exporters and non-exporters (2) entrepreneurial activities between countries and (3) the impact of government policies on SME exports. However, these studies mostly looked at mature exporters with small operations rather than recently founded firms, and entrepreneurship theory was usually excluded (Welch & Loustarinen, 1988).

For most of the 20th century internationalization was the domain of large firms since they were more able to face the uncertainty that came with the process (Wiedersheim-Paul, Olson & Welch, 1978). However, large firm size is no longer required for international activities (Gabrielsson et al., 2008), as internationalization today is no longer confined to a staged process that starts with exporting and ends with production abroad (Bell, 1995). Internationalization can simply be a position in the international value chain (Gassmann & Keupp, 2007). Although certain parts of the Uppsala model, such as the emphasis on learning and the targeting of markets that the entrepreneur knows (Sharma & Blomstermo, 2003), still apply to INVs, this calls into question whether the Uppsala model can be used on its own to explain the process of IE (Young, Dimitratos & Dana, 2003; Chetty & Campbell-Hunt, 2004; Westhead et al., 2001).

The timing of internationalization depends on a mixture of internal factors, such as access to resources, experience and the product itself, as well as external factors such as the regulatory environment (Coeurderoy & Murray, 2008). Studies have indicated that firm age has a distinct effect on export behavior (Axinn, Savitt, Sinkula & Thach, 1995; Kaynak & Kuan, 1993), but the differences between firms make this hard to generalize. It is difficult to time the process of early internationalization accurately because the internationalization of young firms is neither linear nor unidirectional (Bell et al., 2003). In addition INVs often go through a period of “gestation” prior to officially start their operations and may spend years on research and development before launching their products globally (Oviatt & McDougall, 1994). Variations in

how long firms wait to start their operations and launch their products can have a huge impact on the type and quality of resources that the firm is able to obtain (Sigurður Ólafsson, personal communication, 10th May 2014).

Potential INVs can either initiate R&D projects that take them to the global market place or they may imitate the behaviors of other firms that have done so (Knight & Cavusgil, 2004) but INVs are considered very creative when they internationalize (Oviatt & McDougall, 1994; Knight & Cavusgil, 2004). Internationalization and entrepreneurship are closely intertwined, since internationalization is at its core an entrepreneurial venture (Lumpkin & Dess, 1996; Zahra et al., 1999; Ibeh & Young, 2001; Zahra et al., 2001).

2.4 Entrepreneurship

The other prerequisite for IE is entrepreneurship, which is the “examination of how, by whom and with what effect opportunities ... are discovered and exploited” (Venkataraman, 1997, p. 218). Entrepreneurship studies the sources of opportunities, their discovery, evaluation and exploitation as well as the individuals that exploit them (Shane & Venkataraman, 2000). Entrepreneurship is the domain of entrepreneurs who invent new products, manufacture them, bring them to market and deliver value to customers (Wickham, 2006, p. 6). It is highly related to the risk-taking capability (Zhang et al., 2009), the usage of information (Shane & Venkataraman, 2000) and the creation of knowledge (Knight & Cavusgil, 2004). Creating wealth and growth are entrepreneurship’s defining objectives (Quadrini, 1999), although it can often take a long time to do so (Zahra et al., 1999; Zahra et al., 2000). The field of entrepreneurship has been researched extensively and now provides a number of theories and proposed frameworks covering everything from the process of entrepreneurship to the contingencies required for it (e.g. Gartner, 1985; Bhave, 1994; Wickham, 2006, p. 223). Research has had difficulty in understanding how the entrepreneurial mindset forms, but, like internationalization, innovation is a process that is complicated and affected by numerous influences (Baron & Ward, 2004; Shane & Venkataraman, 2000; Krueger, 2003).

The discovery and exploitation of opportunities is a fundamental part of entrepreneurship and has been discussed in numerous studies (e.g. Lumpkin & Dess, 1996; Shane & Venkataraman, 2000; Brown et al., 2001; Hitt et al., 2001). The identification and exploitation of opportunities is closely related to the discovery of and

entry into new market segments (Lumpkin & Dess, 1996; Hohenthal, Johanson & Johanson, 2003), but opportunities may be found both in the external environment and within the firms themselves (Zahra, 2005).

2.4.1 Opportunity identification

Opportunities are those instances where new products or services can be sold for more than cost of their production, and they are required for entrepreneurship to commence (Shane & Venkataraman, 2000). Skill and luck are needed to identify opportunities, and certain individuals, sometimes called the entrepreneurial minded, can see and exploit opportunities better than the rest of the population. This is likely to be because they have the information and the cognitive abilities required to identify and give meaning to ambiguous situations (Shane & Venkataraman, 2000; Alvarez & Barney, 2002). Only a small number of people will actually recognize an opportunity for entrepreneurial action when they are presented with one (Shane & Venkataraman, 2000). The identification of opportunities most often does not stem from serendipitous moments but rather from the interpretation of the matches of new knowledge and current resources (Chandra, Styles & Wilkinson, 2009).

International opportunity identification is the prerequisite for international entrepreneurship. It dictates the firm's entry strategy and has been linked to success in the internationalization of new ventures (Oviatt and McDougall, 2005). The founders of INVs identify opportunities for profit in operating their ventures in multiple countries, often because of international experience (McDougall, Oviatt & Shrader, 2003). There are some indications that international new ventures seek and identify opportunities in a different manner than other firms and that they exploit them in a different manner as well (Zahra et al., 2004).

2.4.2 Opportunity exploitation

An identified opportunity is worthless if it is not exploited (Shane & Venkataraman, 2000) and an efficient way (but not the only way) to do so is to create new enterprises (Low & MacMillan, 1988; Shane & Venkataraman, 2000). Creating new enterprises demands that entrepreneurs organize their resources (Gartner, 2001) although some researchers have stated that entrepreneurs exploit opportunities regardless of their access to resources (Timmons, 1994). It is important to keep in mind that opportunities can only be exploited when the firm has the capacity to do so. A firm may actually recognize an opportunity for IE activities with relative ease, but may face

considerable challenges in capitalizing on these opportunities since this requires the application of resources and management skills (De Carolis, 2003). The attributes that increase the likelihood of opportunity exploitation might not be the ones that guarantee success (Shane & Venkataraman, 2000). The exploitation or lack thereof is affected by the opportunity itself and the individual that identifies it (Shane & Venkataraman, 2000). When firms identify valuable opportunities but cannot benefit from them, they will likely not create value for their stakeholders (e.g. Ireland, Hitt & Sirmon, 2003).

IE research explores how, with whom and with what effects *international* opportunities are exploited (Oviatt & McDougall, 2005). International new ventures are hampered by three liabilities; (1) their “newness” or inexperience, (2) their size relative to established multinationals and (3) their “foreignness”, which means that they have to overcome barriers to entry (Zahra, 2003). Consequently, the ways in which INVs and traditional firms act upon opportunities differ, since INVs face different challenges.

The uniqueness of INVs means that the factors that will lead to success differ from those required for normal startups, since INVs have to deal with different obstacles when they gather resources, build organizations and identify opportunities. Numerous researches have tried to identify factors that affect the successful internationalization of new ventures, but this research tends to focus on relatively few factors, often only three or less. The factors that have been mentioned include the founder’s social capital the firm’s knowledge intensity, its customer followership and the view towards and reaction to risk (see Jones et al., 2011). These factors all relate to the subject, but collectively they may not be able to entirely account for the success of these firms. In order to be able to identify all of the factors that are most relevant, the factors must first be understood and defined.

Entrepreneurs vary somewhat between countries, genders, age groups and social situations in their approach and attitude towards factors such as risk, network building and many others (Jones et al., 2011). Their mission, however, is often the same; to identify the potential for change for the better through innovation and thereby make the world more valuable (or value filled) than before. Entrepreneurship is not a zero-sum game since the entrepreneur creates new value that can be shared in different ways. Entrepreneurs may be motivated by many different factors, such as money, fame or vision, and their creations, often sustainable businesses, can vary greatly. Despite this inherent difference between entrepreneurial ventures, the process of entrepreneurship can

be generalized in a framework that can be used as a decision-making guide when starting new ventures. This framework is built around contingencies or requirements, which the entrepreneur is responsible for bringing together in order to create new value. These contingencies are; the entrepreneur herself, the opportunity that she identifies, the business organization that she creates and the resources that she is able to access (Wickham, 2006, P. 223).

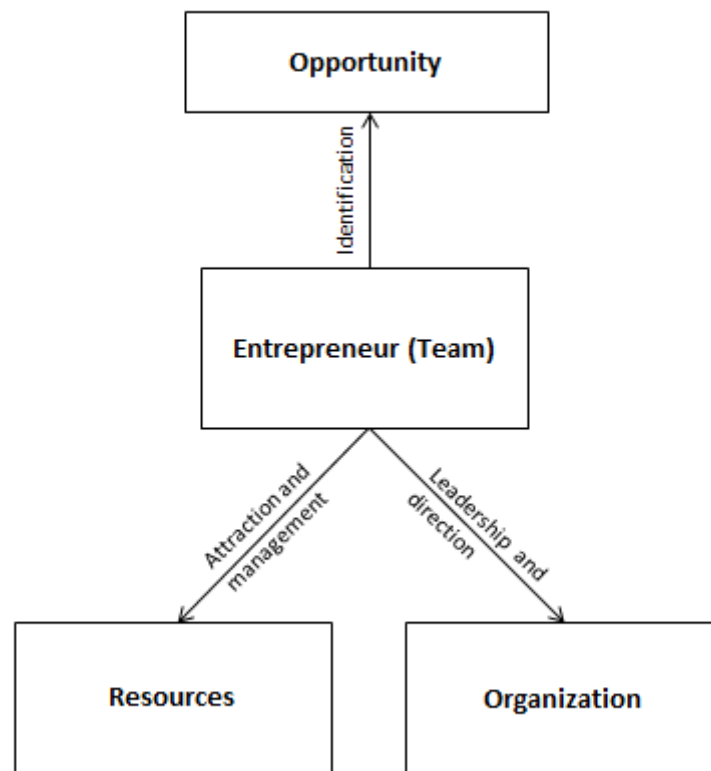


Figure 2 Entrepreneurship contingencies (Wickham, 2006, p. 223).

2.5 Success factors

Several changes in the global economy have spurred the development of INVs. These include globalization (Knight & Cavusgil, 2004), technology development (McDougall & Oviatt, 2000) and better managerial practices (Zhang et al., 2009). These factors can explain the rise in the number of INVs, but they do not account for the fact that most new ventures do not pursue international operations (Acs, Morck, Shaver & Yeung, 1997; Knight & Cavusgil, 2004). There are thousands of small firms in Iceland and all over the world that show no interest in internationalization. Hence, it is apparent that globalization and the aforementioned technological trends are not able to adequately explain the emergence of INVs. The factors that drive early

internationalization must therefore be internal or specific to the organization itself (Knight & Cavusgil, 2004). Every entrepreneur and every startup is unique (Dollinger, 2003, p. 6) but the literature has proposed that those that internationalize early have an innate capability or idiosyncrasy that allows them to do so (Jones & Coviello, 2005)

A stream of research has suggested that international entrepreneurship is a multidisciplinary subject, since the behavior and actions of INVs are affected by economic, demographic, social, cultural, psychological and environmental factors (Gaddam, 2007). Significant effort has been devoted to looking at the personal, cognitive and behavioral attributes of the entrepreneurs themselves (e.g. Moen, 2002; Jones & Coviello, 2005; Rialp, Rialp, Urbano & Vaillant, 2005; Kundu & Katz, 2003). However, the factors that affect the performance of INVs are most likely firm specific and have collectively been called international entrepreneurial capability (Zhang et al., 2009).

The factors that affect the INV's ability to internationalize quickly are often interconnected, meaning that it is difficult to discuss one of them without touching upon another. In order to structure the discussion, the literature review is composed according to the contingencies of entrepreneurship described above. First the opportunity is described, followed by the resources and the organizations, finally ending with the entrepreneur that ties them all together.

2.5.1 Opportunity

Offering

A considerable portion of an INV's competitive advantage can be traced to its ability to develop innovative products (Gassmann & Keupp, 2007) but these products are often the catalyst for firms to become global (Chetty & Campbell-Hunt, 2004). Contrary to some opinions (e.g. Sharma & Blomstermo, 2003), these products do not need to be radical revolutions since incremental innovation is able to support internationalization just as well (Gassmann & Keupp, 2007). If the product can be used universally, it will lead to faster international market penetration. This is due to the fact that products that do not need to be tailored to each specific market have low marginal cost when entering new markets (Gassmann & Keupp, 2007). The product is often the key to early success for INVs, but it must be reinforced as soon as possible with the right channels, networks and strategies (Gabrielsson et al., 2008; McGrath, MacMillan & Venkataraman, 1995). The more tangible an offer is (a physical or electronic product

rather than a service), the more likely it is to support internationalization (Cloninger & Oviatt, 2007). Price competition is most often not a feasible market strategy for INVs since they lack the necessary economies of scale. In lieu of this strategy research has suggested that INVs may follow two other strategies. They may either cater to a niche market or serve a specialized but homogenous global market (Gassmann & Keupp, 2007).

Focus

INVs tend to focus on a limited number of products. They can become market leaders by controlling technologically advanced (Zahra, Neubaum & Huse, 1997) and differentiated (Bloodgood, Sapienza, & Almeida, 1996; McDougall et al., 2003) products that attract a small number of customers in each market and by leveraging their products' great reputations in order to drive up prices and attract customers (Chetty & Campbell-Hunt, 2004). Internationalization is thus most easily accessible through a specialized place in the value chain (Gassmann & Keupp, 2007). In order to reach a specialized place in the value chain, the product must have unique technology or superior value proposition than other products (Gabrielsson & Kirpalani, 2004). Direct competition is therefore rarely a threat to the INV as its products are often novel (Gabrielsson et al., 2008). This uniqueness drives from the INV's different knowledge and processes. The focus on niches has been researched extensively as one of the most important factors of successful IE (Moen, 2002; Madsen & Servais, 1997). Young firms are more likely to focus on niche markets in their internationalization due to resource constraints, which means that they are more flexible (Moen, 2002). INVs often use their focus on niches to price their products so that they have high margins. This allows them to build up their product and brand and possibly expand to the mass market.

IP protection

Products, with unique technology or superior value proposition are susceptible to intellectual property theft. INVs have three possible ways of protecting their intellectual property; patents, continuous improvements of their product to stay ahead of the competition (Autio, 2004) and technological complexity (Gassmann & Keupp, 2007). The method which a firm uses to protect its intellectual property depends on the type of technology that the firm controls (whether it can be used by many firms) and the level of specialization. The high costs involved in the application for, and protection of patents make them an expensive exercise from which many INV shy away. The problem may be solved through partnership, although doing so might jeopardize the

INV's control over its intellectual property (Gassmann & Keupp, 2007). The product's complexity controls whether any part of its value chain should be outsourced. The firm must make diligent decisions in this regard and must also bear in mind that temporary access to tangible assets can replace the ownership of said assets (Gassmann & Keupp, 2007).

Geographic location

Geographic location can be an indicator for a firm's success (Deeds & DeCarolis, 1999; Chetty & Campbell-Hunt, 2004). The maturity of the industry that the firm operates in (Andersson, 2002), and its structure (Callaway, 2004) effect the speed, scope and method of internationalization. INVs often operate in highly internationalized local industry sectors (Madsen & Servais, 1997) often frequently called clusters. Industry clusters have a positive effect on the international intensity and scope of firms that operate in these clusters (Fernhaber, Gilbert & McDougall, 2008) since they provide easier access to capital, access to supply networks, potential partnerships, access to lead users and many other benefits. These industries include sectors like fishing, which has a history of operating globally with actors in many places of the value chain (Moen, 2002). However, this support of a historically internationalized local industry or market seems not to be necessary as many INVs flourish in sectors where the local economy has no previous experience, such as the manufacturing of non-invasive orthopedics in Iceland.

The success of INVs also depends on the situation within the domestic business environment. The dynamism, heterogeneity and hostility of the domestic market (Zahra et al., 1997) as well as its uncertainty (Dimitratos, Lioukas & Carter, 2004) can adversely affect the ability of the domestic firms within it to be successful which encourages more rapid internationalization. Other conditions such as stagnation, saturation, competition for resources and small size might have the same effect (Madsen & Servais, 1997). This is particularly the case if the firm witnesses, growth, demand, an abundance of resources and potential for profit in a foreign market (Hall, 1980; Moen, 2002; Liouville, 1992; O'Farrell, Zheng & Wood, 1996). It can be a hindrance for a firm's internationalization to be located in an area where critical resources are easily acquired since the firm may develop dependencies of these resources and the environment that it inhabits (Gassmann & Keupp, 2007; Westhead et al., 2001).

Government assistance can impact the success of INVs through financial, technical and marketing support as well as many other direct and indirect measures (Preece et al., 1999; Bell et al., 2003). The institutional environment can furthermore have a drastic impact on a country's entrepreneurial environment (Manolova, Eunni & Gyoshev, 2008; Bruton, Ahlstrom & Puky, 2009; Aldrich & Wiedenmayer, 1993; Baumol, 1990).

2.5.2 Resources

The resource-based view has been used by the literature in order to try to understand the factors that affect the success of INVs (Young et al., 2003; Westhead et al., 2001). This is understandable, since resources and their management are an important part of the 1994 definition of the INV (Oviatt & McDougall, 1994). There are two opposing theories on whether firms need tangible resources such as financial capital for rapid internationalization. Some state that a certain resource "endowment" is needed for entrepreneurial action and rapid internationalization to take place (Westhead et al., 2001), while others have pointed out that these actions can take place even under severe resource scarcity (Sapienza et al., 2006). Small firms generally do not own substantial amounts of tangible resources, a phenomenon which some authors have tried to connect to the liability of newness (Aldrich & Auster, 1986) which is a small firm's struggle to adapt to new roles which have to be learned (Stinchcombe, 1965, P. 263).

Some researchers emphasize social ties and connections (e.g. Ellis, 2000; Anand & Khanna, 2000; Kogut, 2000) proclaiming that they can possibly replace tangible resource ownership while Oviatt and McDougall (2007) concluded that entrepreneurial ventures do not need to own resources to internationalize. Firms can in fact substitute the ownership of resources for access to these resources, such as when high tech firms outsource manufacturing rather than building costly factories. INVs can thereby leverage innovativeness, knowledge and capability to make up for their lack of financial, human and other tangible resources (Knight & Cavusgil, 2004). A firm therefore does not need to own resources in other countries if they can control them through other means (Dimitratos et al., 2003; Gassmann & Keupp, 2007).

Looking at the INVs' resources would, however, be a good starting point when trying to understand the firm's ability to internationalize (Gassmann & Keupp, 2007). Those firms that possess resources which can't be imitated and are valuable have an edge (Barney, 1991) since these resources allow the firms to generate capabilities that

are important in the internationalization process (Knight & Cavusgil, 2004) and often enable them to gain access to foreign markets (Westhead, Wright & Ucbasaran, 2004). The resources that INVs require differ from firm to firm and they furthermore differ slightly from those that are needed by large firms (Westhead et al., 2001).

Financial resources

Small firms can, in most cases, not rely on their founder's savings to internationalize which leads to a relationship between early financing and operating a global expansion strategy (Gabrielsson & Kirpalani, 2004; Cooper, Dunkelberg & Woo, 1988). Financial resources are crucial, not only with regards to the development of products and distribution networks but also when gaining access to key customers (Solberg & Askeland, 2006). Financial resources are especially important in internationalization since internationalization can be more capital intensive than operating a domestic firm, and the more aggressive the internationalizing strategy is, the more capital is required (Moen, 2002). This provides a clear issue for INVs since young firms often have a harder time raising funds (Bilkey & Tesar, 1977).

The literature suggests that it might not only be the access to capital but more specifically the access to foreign capital that actually drives growth internationally (Gabrielsson et al., 2008). The management of these investments is vital, but Gassmann and Keupp (2007) suggest that firms should limit investments in tangible assets and emphasize activities that create a competitive advantage in the future, such as research and development, as well as human resources.

The investors that typically invest in INVs differ from "traditional" investors in their investment sizes, reasons for investing as well as their exit preferences, but they are often former entrepreneurs or managers of entrepreneurial ventures (Moen et al., 2008). Experienced venture capitals can benefit entrepreneurs beyond financial resources by bestowing them with knowledge (Fernhaber & McDougall-Covin, 2009), meaning that entrepreneurs should take great care in selecting their investors. When looking for financial resources, entrepreneurs can leverage their networks, particularly when seeking private VC and angel investments (Loane, Bell & McNaughton, 2007). Noticeably research has shown that it might be easier to attract informal investors rather than specialized venture capital (Reitan & Sørheim, 2000) especially in Iceland where venture capital for startups is scarce at best (Hilmar Gunnarsson, personal communication, March 5, 2014).

Human resources

Human resources are the knowledge, capabilities, experience and skill of the firm's founders and employees as well as the ability to cultivate these factors through learning (Dess & Lumpkin, 2001). Human resources are known to be vital for the success of firms since they exercise both direct and indirect effects on a firm's performance (Hitt, Biermant, Shimizu & Kochhar, 2001; Hambrick & Mason, 1984; Hitt, Ireland & Harrison, 2001). Human resources are some of the most important resources for new ventures, and they are better able to explain their performance than many other factors (Westhead et al., 2001; Reuber & Fischer, 1997). Human resources become more important in the internationalization phase since the foreign experience of employees is needed as the firm grows and adds additional markets (Kundu & Katz, 2003).

The founder(s) is likely to be the principal source of human resources at the time of the firm's foundation (Cooper, Gimeno-Gascon & Woo, 1994), but as the firm's operations become more complicated and as it grows in size the effects that the founders have on it are "diluted" (Schein, 1983; Kundu & Katz, 2003). Critically, the passion and international orientation of the founder is often diminished by employees that see the firm not as a "calling in life" but rather a job. The end result of this is that the individual intentions of the founders become decreasingly evident at the firm level meaning that the firms' intentions may eventually bear no resemblance to those of the founder(s) (Kundu & Katz, 2003). Of great importance is therefore the selection of employees according to beliefs about innovation and strategy, as well as their training and socialization.

2.5.3 Organization

Organizational capabilities are the abilities to consistently perform tasks that create value. They are built up by the integration of knowledge within the firm (Nelson & Winter, 1982). Organizational capabilities have been identified as one of the main sources of performance advantage (Grant, 1991).

Culture

The culture of a firm is a mixture of the *cognitive elements* such as values, beliefs, norms and assumptions, which dictate the actions, thoughts and feelings of the people in the organization and *material elements* such as the look and layout of the firm's premises, logo and product (Pettigrew, 1979). Organizational culture (OC) has been conceptualized as a mixture of interrelated dimensions (Hofstede et al., 1990). It is

rooted in the history of the firm and is difficult to change (Rowlingson & Procter, 1999; Hofstede, 1991). Despite this reluctance to change, OC is not a static phenomenon but rather a dynamic and evolving process (Goddard, 1999). A popular view found in the literature is the cultural dynamics model developed by Hatch (1993) where organizational culture elements emerge and interact with other elements through processes. This view is a good starting point for understanding the role of culture in INVs and may in fact encompass the process of international entrepreneurship (Hatch, 1993) (see Dimitratos & Plakoyiannaki (2003) for a detailed summary of OC in IE).

IE is embedded in the INV's organizational culture (Dimitratos & Plakoyiannaki, 2003). The firm's culture dictates its relationship with entrepreneurship and can affect the firm's response to internationalization motives and suggestions (Liesch & Knight, 1999). In order to encourage these qualities, culture must be nourished in such a way that it fosters and supports internationalization (Slevin & Covin, 1991).

Several cultural factors have been linked to IE and the success of INVs. These include risk attitude, the international market orientation, motivation, propensity for innovation, network orientation and learning orientation (Dimitratos & Plakoyiannaki, 2003). Two cultural factors have, however, been mentioned to be the most important for the INV. These factors are *international entrepreneurial orientation*, that is the "innovativeness" of the firm, and *international marketing orientation*, which is the managerial mindset that uses marketing elements targeted at foreign customers to create value (Knight & Cavusgil, 2004; Madsen & Servais, 1997). INVs typically display a high amount of international entrepreneurial orientation, which enables them to identify and exploit opportunities in international markets as it gives rise to processes and practices which are often associated with successful market entry (Lumpkin & Dess, 1996) and effect the firm's preparation for internationalization (Knight, 2000; Jantunen, Puimalainen, Saarenketo & Kyläheiko, 2005). INVs that possess international entrepreneurial orientation generally display a higher proportion of international sales and operate in more countries (Madsen & Servais, 1997; Ripollés-Meliá, Menguzzato-Boulard & Sánchez-Peinado, 2007). The international marketing orientation drives firms to offer products that have higher perceived value in the eyes of the customer than globally competing products, which leads to better firm performance (Cavusgil et al., 1993).

Strategy

A firm's culture and orientation leads to the development of specific strategies. Firms that have similar resources and operate in the same environment can have two completely different strategies (Eisenhardt & Schoonhoven, 1990). The literature has suggested that the organizational structure and strategies of firms are an important success factor for INVs and partially control the path that they take (Kocak & Abimbola, 2009; McKinsey and Company, 1993). The most important of these strategies are the development of unique products, the global technological competence, the leveraging of foreign distributor competencies and a focus on quality (Knight & Cavusgil, 2004, p. 129). Global technological competence facilitates the development of better products than the competition can offer, while unique product development creates customer loyalty by meeting a specific need and avoiding direct competition. In addition to creating outstanding products, the INV must also leverage innovativeness and knowledge in order to develop superior quality products that meet or exceed customer expectations and thus enable the firm to command higher prices or improve customer retention. In addition to possessing a superior product and greater knowledge, firms can also compensate for their lack of resources by leveraging foreign market players through a number of strategies such as acquisitions, mergers, joint ventures and licensing deals. Foreign partners thereby enable INVs to function by decreasing risk and dealing with unique foreign market challenges (Gabrielsson et al., 2008).

International Cooperation

When INVs have established some international activities, they must decide how to deploy the resources that they have accumulated and how long they should stay in the networks of large global players that they used to gain access to foreign markets. In short, they need to create their own breakout strategy before they actually need it. INVs that associate excessively with a global firm might grow more slowly, leading to loss of competitive advantage and even operational difficulties. Thus, success in the later stages depends on the plans and strategies developed early on in the lifetime of the firm (Gabrielsson et al., 2008). Strategy must therefore drive internationalization right from the conception of an INV (Chetty & Campbell-Hunt, 2004).

Marketing capabilities

Marketing capabilities are firm specific, but they provide a better sense of the market and its players as well as helping firms connect with customers and channels (Blesa & Ripolla, 2008). Marketing capabilities furthermore include an understanding

of competition and the ability to segment and target specific markets while managing advertising and pricing (Song, Nason & Di Benedetto, 2008). In short, marketing capabilities are the ability to effectively create and execute a marketing strategy (Morgan, Vorhies & Mason, 2009). Marketing capabilities enable firms to create offerings whose perceived value exceeds the perceived value of alternative offerings. Firms that possess good international marketing capabilities create marketing strategies that identify the “right” business opportunities and maximize performance (Zhang et al., 2009). A strong marketing orientation in an INV invariably leads to positive financial performance (Kropp, Lindsay & Shoham, 2006).

Knowledge

The knowledge and learning process of the entrepreneurial team has subjected to increasing scrutiny in the literature (McDougall et al., 1994; McDougall and Oviatt, 2000; Mejri & Umemoto, 2010). Learning and knowledge affects the speed, breadth and depth of the internationalization of new ventures (De Clercq, Sapienza, Yavuz & Zhou, 2012; Mathews and Zander, 2007) with market knowledge in particular shaping the initial internationalization (Spence and Crick, 2009).

When deciding upon the mode of entry, a firm’s managers must assess the level of knowledge within it and the human resource’s ability to learn (Schwens & Kabst, 2009b). Both the traditional stage model of internationalization and IE literature assume that the firm needs a certain set of skills and knowledge in order to internationalize. However, the two differ since IE literature suspects that the skills and knowledge can be obtained very early in the firm’s history or even before it is founded (Oviatt & McDougall, 1997; Jones et al., 2011; Westhead et al., 2001).

Knowledge creation is a process that builds new knowledge on top of prior knowledge and then combines it with an action (Tolstoy, 2009; Casillas, Moreno, Acedo, Gallego & Ramos, 2009). A firm’s ability to absorb knowledge plays a substantial role in its ability to internationalize (Zahra and Hayton, 2008). Furthermore a strong learning orientation usually leads to higher profits and a better image (Kropp et al., 2006; Jantunen et al., 2005) as firms that have a greater learning orientation are more likely to actively look for international opportunities (Burpitt & Rondinelli, 2000). Nelson and Winter (1982), describe the innovation process in detail and come to the conclusion that the ability of some firms to innovate and thereby learn gives rise to more effective organizational capabilities. These capabilities lead to higher performance

and give firms an edge, particularly in competitive and challenging environments, thus supporting the view that internal capabilities are vital for the success of a new venture.

In the resource-based view, knowledge is described as one of the most important resource (Conner & Prahalad, 1996; Cooper, Folta & Woo, 1995), especially in international business, where it facilitates entry into foreign markets (Kogut & Zander, 1993) and decreases the perception of risk (Acedo & Jones, 2007). Some researchers have stated that the knowledge-based view, as a continuation of the resource-based view, is particularly useful as a conceptual foundation for the study of INVs (Gassmann & Keupp, 2007).

Using experience-based learning, small firms can create knowledge that they can use in foreign markets (Blomstermo, Eriksson, Lindstrand & Sharma, 2004). If a small firm is able to create a competitive advantage using its knowledge, it should be capable of internationalizing (Gassmann & Keupp, 2007). Knowledge may also be gained as a result of resource scarcity because a firm may need to cooperate with other firms. Firms with resource constraints can compensate for this deficiency and build up assets and resources through social networks (Gassmann & Keupp, 2007).

Overall performance is directly related to a firm's knowledge (Nelson & Winter, 1982). In fact developing and using knowledge can be both the main performance differentiator between firms and an important aspect of the strategic management of an INV (Deeds & DeCarolis, 1999; Johanson & Vahlne, 2003).

The role of networks in the acquisition of knowledge has been extensively researched. It is believed to be vital that firms collaborate with more experienced firms in order to gain knowledge (Autio et al., 2000), that their managers deal with their resource constraints (McDougall, Shane & Oviatt, 1994) and that they keep their "specialization advantage" (Yli-Renko, Autio & Tontti, 2002). Gassmann and Keupp (2007) have however, pointed out through research that firms seem to use networks to gain access to external resources rather than external knowledge, even though 'embeddedness' in specialized communities could enable INVs to acquire knowledge at low marginal cost (Gassmann & Keupp, 2007). Counter intuitively, weak ties have been proven to have a bigger impact than strong ones when it comes to learning (Presutti Boari & Fracocchi, 2007; Sharma & Blomstermo, 2003) as knowledge is often gained

through social connections rather than formal firm connections but gathering knowledge from many sources makes it more effective.

The most important knowledge is international, unique, inimitable and immovable so that it cannot be stolen away by competitors (Fernhaber, McDougall-Covin & Shepherd, 2009; Dierickx & Cool, 1989). Large firms tend to leverage their tangible resources to internationalize, while small, recently-established firms use intangible, knowledge-based capabilities such as managerial resources (Ursic & Czinkota, 1984; Knight & Cavusgil, 2004). The INV sees foreign markets as places to gain knowledge (Kuemmerle, 2002) and the pace of learning is faster among INVs than in other firms since they possess an aggressive and dynamic learning style with tolerance for failure and experiments (Chetty & Campbell-Hunt, 2004). Learning orientation has a relatively weak presence in IE literature but it has been linked with organizational culture (Dimitratos & Plakoyiannaki, 2003).

Firms that internationalize early may benefit from a “learning advantage of newness” since they don’t have to “unlearn” the routines of their home market (Autio et al., 2000; Blesa, Monferrer, Nauwelaerts & Ripollés, 2008), they can communicate more effectively (Sapienza et al., 2006) and they learn more from their international partners (Zettinig & Benson-Rea, 2008). Needless to say, the information that firms acquire needs to be applied in order to provide value since without the intention or ability to act, knowledge is useless (Acedo & Jones, 2007).

Learning is an important aspect of the Uppsala model’s original framework (Johanson & Vahlne, 1977) and is moreover an essential part of the business network model of internationalization created by the Uppsala model’s original authors Johanson and Vahlne (2003). There is therefore an opportunity for researchers to use learning, and more specifically learning theory to advance the knowledge within IE.

2.5.4 Entrepreneur

Most studies indicate that the founder himself is especially influential in the early internationalization process (Moen, 2002; Miesenbock, 1988) as he has a fundamental role in generating as well as executing the firm's strategy (Westphal & Fredrickson, 2001) and inspiring stakeholders (Gabrielsson et al., 2008). IE can originate on an individual level or a group level depending on the environment that the firm is established in (Gabrielsson et al., 2008), but research has increasingly moved the focus from the entrepreneur towards the entrepreneurial team (Bloodgood et al., 1996;

Eisenhardt & Schoonhoven, 1990; Slevin & Covin, 1992; Cooper et al., 1994). The founding team is often a new venture's most valuable "resource" since it is the source of its vision, innovation, early network and managerial skills (Gabrielsson et al., 2008; Perks and Hughes, 2008). Many studies have looked at the behavioral attributes of the individuals that make the decision to go abroad (Axinn, 1988; Holzmuller & Kasper, 1990; Oviatt, Shrader & McDougall, 2004). A manager's attitude towards innovation, learning and risks as well as his dynamism influence his decisions (Acedo & Jones, 2007).

Oviatt, Shrader, and McDougall (2004) named the personality of the entrepreneur's as one of the drivers behind internationalization, but revised her role to a mediating force in subsequent studies (2005). Other researchers have emphasized the founder as the source of the process of early internationalization but that she is controlled and molded by the environment and external factors (Zahra & George, 2002). In a study of 224 firms, Harveston et al. (2000) differentiated between the individuals behind INVs and gradual globalization firms. Their conclusion was that the managers of INVs display a higher propensity for *a global mindset*, higher levels of *risk tolerance* and more *international experience*.

Global mindset

A firm that has a manager with a strong global mindset and positive outlook towards exporting is more likely to be classified as an INV (Moen, 2002; Harveston et al., 2000; Nummela, Saarenketo & Puumalainen, 2004a; Ruzzier, Antoncic, Hisrich & Konecnik, 2007; Boter & Holmquist, 1996; Karagozoglu & Lindell, 1998; Preece et al., 1999). Managers' willingness to internationalize has been associated with their educational level, foreign language skills, likeliness to travel, international work experience and other experiences (Bloodgood et al., 1996; Kundu & Katz, 2003; Cooper et al., 1994).

Risk taking behavior

The founders of INVs are also more likely to be display risk taking behavior such as assuming debt so that they can exploit opportunities in foreign markets (Lumpkin & Dess, 1996). Risk taking has been related to entrepreneurship (Zahra et al., 1999) and research indicates that Firms that operate in entrepreneurial markets need to possess high risk taking capabilities to cope with the uncertainty that those operations endure (Knight & Cavusgil, 2004; Perks & Hughes, 2008).

International experience

The international experience of founders is one of the most discussed traits of the INV (Cooper et al., 1994; Westhead et al., 2001). It leads to opportunity identification, market knowledge and social capital (McDougall et al., 2003) and may trigger the foundation of an INV (Kuemmerle, 2002). Firms that are founded by entrepreneurs with significant experience are further up the “learning curve” and are more knowledgeable about the practicalities and possibilities of internationalizing (Westhead, 1995). They are for this reason more likely to reach success quickly, to have higher sales and, ultimately, to survive, because they have access to more capable and knowledgeable human capital (Delmar & Shane, 2006). This suggests that firms that are founded by individuals that have these experiences can internationalize quickly, without going through the traditional stages of internationalization, and thereby reach success more rapidly.

A founder with a high level of international education is suggested to be a fundamental requirement for a firm to start internationalization since an educated entrepreneur will be more knowledgeable, motivated, self-confident and outward-looking (Kundu & Katz, 2003; Cooper et al., 1994). The founder’s technical and tacit knowledge, as well as his connection with the customer, have a distinct effect on the ability of the firm to successfully internationalize (Bloodgood et al., 1996; Perks & Hughes, 2008; Kocak & Abimbola, 2009), and there are some indications that the pre-founding experience of the entrepreneur partially explains the success of INVs (Autio, 2000).

INVs can hire export managers or sales people native to their designated market areas to make up for any shortcomings in their experience or capabilities (Gabrielsson et al., 2008), although this requires resources which the INV often does not possess. Firms can also seek the counsel of an outside advisor or mentor (Westhead et al., 2001) although doing so often requires the firms to give up a portion of their shares. The amount of shares varies based on the importance of the advisor and the stage of the firm but ranges from 0.1% to 1.0% (Sigurður Ólafsson, personal communication, 10th may 2014). A look at mainstream IE theory reveals that, although the capabilities of the founder cannot alone explain the success of INVs, they certainly affect it. The successful internationalization of new ventures is therefore highly dependent on both the firm founder and the firm itself (Kundu & Katz, 2003).

Networks

Network Theory has been an influential framework for IE researchers (McDougall & Oviatt, 2003) and has been integrated in the resource based theory (Jones et al., 2011). The field became concerned with networks soon after its existence (e.g. Coviello & Munro, 1997), and studies of the INVs' networks have recently become more numerous (Jones et al., 2011). Founders use networks to access resources, to gain legitimacy, to improve strategic positions, to acquire knowledge as well as to deal with changes in technological (Hitt & Ireland, 2000; Alvarez & Barney, 2001; Gulati, 1995; Das & Teng, 1998). Johanson and Vahlne (2003) call for IE research to integrate network theory into theories of firm internationalization, a view supported by other researchers (McDougall & Oviatt, 2003).

Entrepreneurship is undoubtedly a social process that is context dependent and that involves using resources to create new industry and organizational configurations (Ireland et al., 2003). Hitt et al. (2002) describe social capital as relationships that facilitate action. The social capital of the entrepreneur herself is vital (Arenius, 2002) as it helps firms to absorb knowledge and to access and control resources (Dess & Lumpkin, 2001; Nahapiet & Ghoshal, 1998).

Networks exist between organizations or individuals and can often take a long time and a lot of work to create (Loane & Bell, 2006), but the quickening pace of technological development has meant that new ventures establish networks earlier and with less effort than before, resulting in more rapid internationalization (Knight & Cavusgil, 2004). These connections can take a number of different forms, such as the relationship that firms and employees form with clients, suppliers, service providers and government agencies (Coviello and Cox, 2006). Networks are a vital part of a firm's success as they help the firm to identify new opportunities and acquire market knowledge (Chetty & Holm, 2000) and often reflect the firm's foreign market entries (Coviello & Munro, 1997) even having a stronger impact on foreign market choice than psychic distance (Francis Hoy, Personal communication, 19th May 2014). This, along with empirical research, has led some researchers to conclude that relationships and networks directly affect firm performance (Zhou, Wu & Luo, 2007) and success (Reuber & Fischer, 1997; Westhead et al., 2001).

International networking is the ability to gather resources from the environment using domestic *and* foreign alliances for the purpose of using them in international

activities (Coviello & Cox, 2006; Gulati, 1998). It is one of the most fruitful tools used by INVs to gather resources and cope with uncertainty (Steensma, Marino, Weaver & Dickson, 2000; Alvarez and Barney, 2001) since it means that INVs do not need to develop and market their products by themselves. They can instead use international value chains to make up for their shortcomings and to gain access to learning, technology and growth (Jones, 1999; Gabrielsson & Kirpalani, 2004). In order to be beneficial for INVs, these networks must be sufficiently international so that they can facilitate global reach (Chetty & Campbell-Hunt, 2004).

INVs are characterized by the rapid development of networks (Chetty & Campbell-Hunt, 2004) but the firms are often founded by entrepreneurs that already have international experience access to substantial personal and business networks abroad (Madsen and Servais 1997; Westhead et al., 2001). For this reason it is important to look at the roles of networks holistically. Network roles should be investigated not only when the firm has already internationalized but also before it internationalizes and even before it is founded (Coviello, 2006).

Networks can lead to cooperation between new ventures and large multinational corporations (MNC) which can benefit the MNCs immensely, even allowing the MNCs to identify and exploit opportunities that they could not exploit on their own, despite their access to resources (Vapola, Tossavainen & Gabrielsson, 2008). When an INV ties into these global networks or teams up with a larger partner it must determine its strategy with regards to four key aspects. It must decide (1) to what extent it will give up independence and control, (2) how much scrutiny it must face from its partners, (3) on the level of integration between itself and other firms and (4) on whether it should develop the ability to free itself from the partner in question. These decisions are vital since the wrong decision can have drastic consequences (Gabrielsson et al., 2008).

The social connections between INVs are often especially strong allowing for more inter firm collaboration. These relationships are built on trust of the actors within the group (Gassmann & Keupp, 2007). Entrepreneurs have furthermore often received help and advice from others and are therefore more willing to provide it themselves. "Returnee entrepreneurs" are thereby an important source of knowledge and advice for entrepreneurs that are starting up (Filatotchev, Liu, Buck & Wright, 2009). This benefits entrepreneurs especially since of the three benefits of social connections, (information,

influence and solidarity) information has been viewed as the most effective (Liesch & Knight, 1999).

Some have said that the speed of the internationalization is affected adversely by controlling a network (Nummela, Saarenketo & Puumalainen, 2004b) while others find a positive relationship between being embedded in global networks and the ability to successfully internationalize (Gassmann & Keupp, 2007; Mort & Weerawardena, 2006; Westhead et al., 2001). Either way, it is clear that not all network relationships are beneficial for the firm (Sasi & Arenius, 2008).

Management of resources

There is mounting evidence that it is not only the access to resources that drives success for firms but also the management of these resources (Penrose, 1959, p. 5; Barney, 1991; Ireland et al., 2003; Chandler and Hanks, 1994). In fact, a firm's resources only prove beneficial if managed correctly (Gove et al., 2003). This holds true for traditional firms and INVs alike as the managerial competences of the entrepreneurial team have been proven to directly affect the ability of the firm to internationalize early and successfully (Reuber & Fisher, 1997; De Clercq et al., 2012; Westhead et al., 2001). The management of resources has a huge effect on how the firm internationalizes and how effectively it does so (Mathews & Zander, 2007). Contrary to the traditional stage method of internationalization, INVs develop the skills needed to internationalize before or during the starting of the firm (Knight & Cavusgil, 2004).

Most INVs seem to lack a deeply rooted administrative heritage (Collis, 1991). This makes them more flexible and makes it easier for them to adapt to changes than established firms, since firms that have operated for a long time need to "unlearn" their domestic-based routines before being able to take up new, internationally-oriented routines. This becomes more challenging as firms age since the new knowledge tends to conflict with the old managerial routines, which are the behavior that institutionalize the knowledge built up within the firm. This hinders the firm's ability to innovate (Knight & Cavusgil, 2004).

Export commitment

Commitment was a key variable in the original internationalization model (Johanson & Vahlne, 1977). Zou and Stan (1998) concluded in their literature review that a manager's export commitment was significantly related to internationalization performance in 15 out of 17 studies. These results translate well into the field of IE

since founders that display this commitment for export are more likely to establish international new ventures (Moen, 2002). It is important to note, however, that when a firm has committed to going international it can become very difficult if not impossible to back out, as the investments involved are highly specialized (Meyer & Allen, 1991). Recent studies have found that effective commitment is essential for global success of INVs and that the founder's level of commitment will affect the rest of the staff. The founder's initial commitment is created by a global perspective and the opportunities identified by the entrepreneur (Gabrielsson et al., 2008).

2.6 The basis of a research

There are a large number of factors that affect the early and successful internationalization of entrepreneurial ventures. As many scholars have pointed out, the field of IE is fragmented and lacks a universally accepted framework. For this reason, the approach taken in this research is inductive (framework-generating), rather than deductive (framework-testing). In order to unite the core constructs, they were identified and integrated with the contingencies of entrepreneurship in order to form the basis for the research described below. Each factor in the framework corresponds to a chapter in section 2.5.

In international entrepreneurship studies, the firm is most often the “unit of analysis” (Coviello & Jones, 2004). Since literature has shown that the success of INVs is multidisciplinary, the proposed framework draws from and builds on top of Wickham's (2006) model of the contingencies of entrepreneurship adding dimensions such as the entrepreneur, the resources and the opportunity.

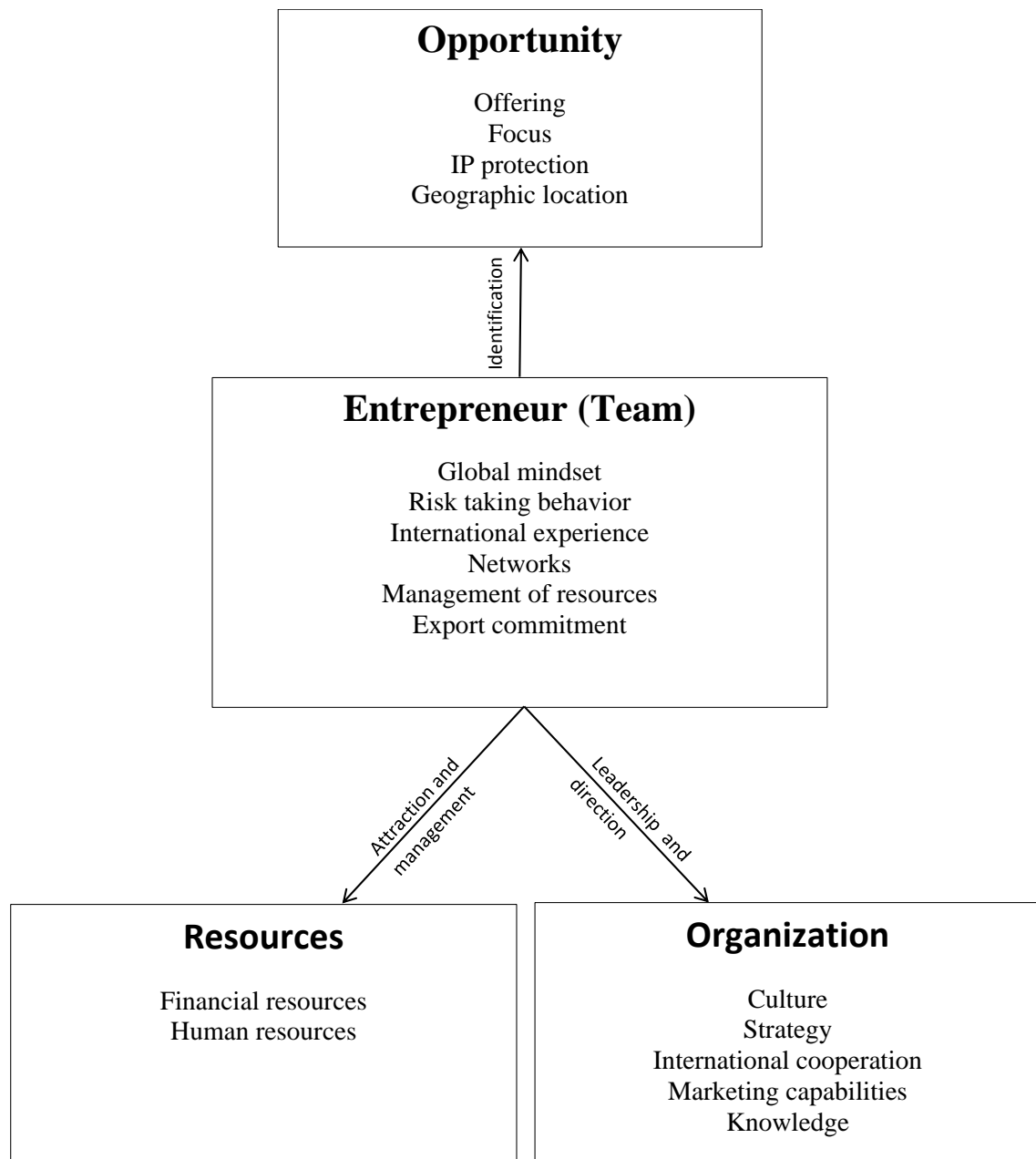


Figure 3: Success factors listed by literature

3.0 Methodology

After dissecting the most relevant theories from literature, an overall framework was created in order to describe the most important factors affecting success in international entrepreneurial ventures. Using this framework as a base, a research was carried out. Previous research has used mostly archival data because of the expense of conducting primary research. Many researchers in the field have therefore used data that was not collected for the purpose of investigating IE and is therefore often unsuitable and unreliable (Shane, 2006). Additionally, few researchers have used qualitative methods such as case studies to distill these factors (Coviello & Jones, 2004).

This research collected primary data through case studies in the form of interviews with the founders and managers of multiple INVs. The case study method provides a dynamic and holistic view of the subject matter as well as the development of the firms over time (Eisenhardt, 1989). This qualitative methodology was necessary to answer the research question due to the high fragmentation of the IE field and because it allows for a better understanding of the world from the subjects' point of view, unfolding the meaning of their experiences (Kvale & Brinkmann, 2009, pp. 28-32).

The data were primarily gathered from the software sector but it included secondary data from high tech firms to maximize clarity. These sectors were chosen for several reasons, mainly because firms in these sectors are more likely to have instant access to the global marketplace (Roberts & Senturia, 1996) as well as the fact that many Icelandic firms have reached success in them. The sectors are furthermore less likely to be influenced by access to raw materials or closeness to market. Lastly the firms in the sectors are numerous amongst Icelandic entrepreneurial firms (Rannís, 2014) and very important for the future of the Icelandic economy (McKinsey and Company, 2012). Although the results of high tech research have been generalized (Autio et al., 2000) this narrow focus could limit the ability to generalize the results across sectors.

The number of entrepreneurial firms in Iceland is hard to estimate but for the purpose of this research a number of lists, gathered by various sources, was used as a starting point. From them a single list was generated and the firms that did not belong in the target sectors were taken aside, leaving around 70 firms. The remaining firms were sorted according to whether they had started internationalization or not and finally by

whether they would provide useful feedback or not, taking care to make the sample varied and interesting. That left 25 firms which could serve as potential subjects.

The founders or CEOs of these firms were contacted through the researcher's network and invited to take part in an interview. The final sample is therefore neither random nor independent but rather specially selected to give a comprehensive description of the specific industries. The sample is therefore a convenience sample which has, although often perceived as being limiting (Zahra & George, 2002), been used by IE literature (Coviello & Jones, 2004) with success (e.g. Gassmann & Keupp, 2007). The final sample of 12 falls into the 15 +/-10 range commonly used by scholars (Kvale & Brinkmann, 2009, p. 113).

In order to control for variables the firms were split up into four groups in a 2x2 matrix divided by sector and success where one to six firms populated each group. As discussed earlier there have been numerous attempts to quantify success for international new ventures but none of them are widely accepted nor suitable for the Icelandic reality and therefore not useful as a basis for the construct used in this research. In order to differentiate between those that are successful and those that are not, 3 criteria were set forth and each firm was measured against them. If the firm fulfilled one or more of these requirements and had not been declared bankrupt it was considered to be a successful INV.

1. The firm has had over \$1 million in international revenues in a single year
2. The firm has received international financing
3. More than 50% of the firm's shares have been sold abroad

Table 1 Description of sample

	Founding year	Main product	Time from founding to success	Number of employees	Interviewees
CCP	1997	Online multiplayer videogames	6 years	520	Board member
Marorka	2002	Energy management software for transport vessels	7 years	60+	Founder, Investor
Betware	1998	Online gambling and lottery software	3 years	120	Founder, investor
Plain Vanilla	2008	Mobile video game platform	4 years	50+	Founder, potential investor
Calidris	2002	Booking management systems for airlines	1 year	45	Founder
Nox Medical	2007	Mobile digital sleep disorder detectors	4 years	30	CEO
Valka	2003	Fish processing equipment solutions	6 years	22	Founder, investor
Oz	1989	Digital communication software	4 years*	120**	Founder, CMO, previous employee
Gogoyoko	2007	Ethical digital music distribution service	Not reached	20**	Founder, investor
Gogogic	2007	Desktop and browser videogames and marketing solutions	3 years	50	Founder, board member, investor
Videntifier	2007	Video recognition software to find copyrighted or illegal material	Not reached	13	Founder, COO
Thorice	2000	Slurry ice machines for fishing ships and processors	Not reached	3	Founder

*Firm went bankrupt in 2002

** At its peak

Industry	Software		
	High-tech		
		Not met	Met
Performance criteria			

Figure 4 Case overview

To ensure the quality of the study, data were collected in the following stages which are in line with the principals of case study research suggested by Yin (1989). First, after establishing the case study protocols, advocated by Yin, (1989) for multi-case designs and an interview design proposed by Kvale and Brinkmann, (2009, p.102), each firm's founder/manager was interviewed individually. The interviews were open but had a structure based on themes that addressed key factors in the development of the INVs. The factors addressed included the founders themselves, the product, the structure of the firm, networks and processes. Several test interviews were conducted with entrepreneurs in order to fine tune the interview process. The interviews typically lasted about 1.5-2.5 hours and were conducted in Icelandic. All interviews were recorded. Second, after each interview a brief history of the firm was drafted in English and a rough indication of the importance of key factors were mapped. Interviewees were then given a chance to make comments or change their answers to prevent misinterpretation. When needed, additional questions were posed though email or telephone. Additional interviewees were found for a part of the cases and interviewed. These included founders that had left the firms as well as ex-employees and investors.

Third, internal documents and archival data were reviewed when available and additional information about the firms was sought from online videos, news articles as well as academic papers. After compiling the data from the interviews and the secondary data, a more detailed history of the firms emerged and served as the starting point of the analysis, organized around central themes such as the opportunity, the entrepreneur, the resources and the organization.

A thematic approach was used to extract results. Each firm was listed in table containing the factors that literature suggested and then compared against the others and overarching themes were extracted. For further validation, the firms were compared to several high tech firms in order to indicate whether any differences existed between sectors and thereby whether the results could be transposed onto other sectors of the startup scene. The results were furthermore compared with four failed or unsuccessful ventures to attempt to identify those attributes that might be overlooked or underrated by those that have, for the time being, only experienced success. This method of focusing on firms with seemingly counter-intuitive properties has been used successfully by literature (e.g. Gassmann & Keupp, 2007).

Although focusing on the history through interviews can be advantageous because of history's contextual richness (Goodman & Kruger, 1988) it also has some fundamental issues. People often interpret events and actions differently in hindsight. They focus too much on what happened, disregarding the infinite other paths that they could have taken and overstate the importance of that path in success or failure. Subjects are also prone to describe their opinions rather than actual events and overstate their own role in the development of the firm (Kvale & Brinkmann, 2009, pp. 168-171). Many managers also tend to keep the specifics of their business secret which emphasize the importance of receiving information from multiple sources (Siu et al., 2004).

Addressing concerns raised by Coviello & Jones (2004) about the quality of the information gathered by previous studies which almost always have only a single informant further interviews were conducted with industry specialists such as private investors, managers of public investment funds and former entrepreneurs – in order to shed a further light on the subjects and to gain general knowledge of the state of entrepreneurship in Iceland.

4.0 Results

Rather than divulging the results of each interview individually, the results are displayed in groups representing the 12 chosen themes. This means that related data can be studied together. A table describing the availability of each factor for the firm groups is provided at the start of each theme, after which the findings for each factor are stated. A proposition is then put forth to summarize the effects of each factor and serve as a starting point for the building of frameworks.

4.1 Content analysis

4.1.1 Opportunity

Table 2 Relevance of factors regarding the opportunity

Category	Firms in category	Homogeneity	Uniqueness	Opportunities in domestic market	Domestic market assistance
<i>Successful software firms</i>	CCP Marorka Betware Plain Vanilla Calidris	Most firms had very homogenous offerings from start or developed them later	Firms had either very or semi-unique offerings	All firms faced extremely bad opportunities in the domestic market	Most firms had moderate market assistance. One firm sought very capable market assistance internationally
<i>Unsuccessful software firms</i>	OZ Gogoyoko Gogogic Videntifier	Two firms had homogenous offering the others had to tailor their offer to specific markets	Two of the firms had significant competition the other two had unique products	Two of the firms had limited domestic opportunities but the other two had sizeable ones	Most cases had limited domestic market assistance. One case benefited slightly from the music industry
<i>Successful high-tech firms</i>	Nox Medical Valka	Both firms had homogenous offering	Both firms had relatively unique offerings	One firm had less than no market the other had a number of domestic customers	One firm had extremely good market assistance the other was aided by the fact that it operated in a sector which previously contained a nearly identical product
<i>Unsuccessful high-tech firms</i>	Thorice	Firm had homogenous offering	Firm had significant competition	A number of domestic opportunities	Good market assistance

4.1.1.1 Homogeneity of offering

All of the cases possessed opportunities that were either somewhat or very homogenous. Homogeneity results in universal applicability in every country regardless of differences between markets. This universal applicability meant that the firms could produce and distribute the same or similar products with low marginal cost, which led to faster international market penetration. *Marorka*, *CCP*, *Videntifier*, *Plain Vanilla*, *Gogoyoko*, *Gogologic* and *OZ* offered software solutions that could be used across the world with minor language changes. *Thorice* and *Valka* are high-tech hardware solutions that could be used anywhere there is a fishing industry and could be used with minimal changes all over the world. *Nox Medical* produces a medical device that could be deployed anywhere in the world without modification since the users are usually highly educated but the firm might attempt to boost attraction by translating the software that comes with it but this is something that could be done at a low cost. All of the interviewees agreed that the homogeneity of their main product aided them in the internationalization phase.

Calidris and *Betware* both produced customized products during their early years of operation, which adversely affected their success by limiting their sales to their capacity to create customized products. Then, one of *Betware*'s major customers demanded that the firm provided a readymade solution that could simply be bought, without having to go through the tedious process of custom making the solution. By reacting to this demand, *Betware* managed to homogenize their main product so that it could be sold all over the world. However, since they waited so long to create this homogenous solution, the firm was not able to reap the benefits from being one of the first in the world to create the solution. Initially, *Calidris* also created an essentially custom product for each customer, but after seeing all of their income burn up due to high development costs they soon decided to offer a standardized product. This increased margins while making it easier to sell the product.

The manager at *CCP* places extreme emphasis on the homogeneity of their product as one of its key selling points. Since the firm's product is a video game which is aimed at connecting people, the founders believe that every player, regardless of their location, should be able to interact with every other player. In order to accomplish this, the game is played on a single server rather than multiple servers distributed all over the world. This means that the product has to be the same everywhere in the world so that the software can work together (the user can change languages within the game). A

notable exception to this is China where political considerations mean that Chinese nationals are unable to play along with the rest of the world. The firm solved this issue by creating a separate server in China, where players play the exact same game but are detached from the rest of the world. Although this effort to keep the experience of the player the same world over has provided some technical challenges, it has nonetheless meant that the firm has been able to focus on creating and updating a single product and has also provided the unexpected benefit of improving customer experience as players greatly value this feature of the firm's product.

Homogeneity therefore aided all of the cases in their internationalization though one way or another. It allows firms to simplify their operations, to focus on the development and marketing of one product, to reduce variable costs, and to increase attraction and retention. However, homogeneity seemed to be insufficient since homogenous products that lacked uniqueness faced tough competition.

Proposition 1: *The successful internationalization of a new venture is positively correlated with the homogeneity of its offering.*

4.1.1.2 Uniqueness

For all of the firms, the uniqueness of their opportunity was a factor that contributed to their ability to successfully internationalize. For example, *Betware*, *Marorka*, *Videntifier*, *OZ* and *Calidris* all created unique software for the B2B market. This meant that their product provided added value for the corporate customers, which gave the firms a competitive advantage that led to increased attraction and retention. Furthermore, the video game developers *CCP* and *Plain Vanilla* furthermore created unique solutions based on previous work by competitors. They modified the business model or product design in order to better suit the customers, which led to higher attraction and retention rates. *Nox Medical* provided a very modernized version of a well-known product and managed to differentiate itself by focusing on a unique customer experience since the doctors using the product preferred the more "high-tech" feel and capabilities of *Nox Medical's* products. *Valka* was one of only two firms in the entire world that could offer the complete product that they were offering (the other is *Marel*), and this gave the firm an advantage as fish processing plants do not want partial solutions.

Thorice produced a slurry ice maker similar to a number of others produced in Iceland and in other markets. This meant that the firm faced a lot of competition, which

it was ill equipped to handle. This is partially to blame for the firm's inability to successfully internationalize. *Gogoyoko* similarly did not offer a unique product since two competitors emerged at a similar time. *Gogoyoko's* product was slightly more advanced, but in terms of functionality all of the competing products were essentially the same. Since the competitors were considerably better funded, and could therefore spend more on advertising and development, they easily pushed *Gogoyoko* out of the market. These examples show the difficulties that small startups face when they don't have a unique product as they are unable to face competition due to resource scarcity.

However, uniqueness can be a double-edged sword. *OZ* was founded around the concept of a 3D internet, where people could shop online, seek information and explore the internet as a 3D avatar rather than on a 2D webpage. This idea was revolutionary and the technological solutions that *OZ* came up with were groundbreaking and unique to the world. However, this technology required very specific infrastructure due to the amount of information that needed to be transferred between the users and the servers. The founders believed that the infrastructure would emerge within a few years but failed to realize that the technology would still too expensive. Since they were virtually the only firm that needed that much bandwidth, service providers were not willing to invest in it. This meant that the firm was not able to get their product to the customer, and, after millions of dollars in investments, the project was scrapped, partially sold off and then reused for other projects. It is evident that the success of the firm is therefore not only dependent on the uniqueness of the opportunity but also the context which it arises in.

Proposition 2: *The successful internationalization of a new venture is positively correlated with the appropriate uniqueness of its opportunity*

4.1.1.3 Opportunities in the domestic market

The small size of the Icelandic market was a major factor in the decision of most of the firms to move towards internationalization. The importance of this factor is apparent when taking a closer look at *Betware*, *Videntifier*, *Calidris*, *Marorka* and *Nox Medical*, none of which had more than two buyers. Furthermore; *CCP*, *Plain Vanilla*, *OZ*, *Gogoyoko* and *Gogogic* all had an extremely small domestic market. As these five firms generate relatively low revenues from each user, they need an enormous number of users in order to generate enough revenue to be profitable. *CCP* has roughly 500,000 paying customers while *Plain Vanilla* each day attracts a number of customers equal to

roughly half of the Icelandic population (around 150,000 per day). It would never make economic sense for these firms to confine themselves to the Icelandic market since the firms would never be able to generate the revenues needed to support the entire firm and finance the product development. The fact that firms were forced to focus on the international market meant that they were encouraged to create better products and to seek international customers earlier and with more vigor, which led to greater success.

Valka and *Thorice* are in a relatively uncommon position amongst Icelandic high-tech firms as they have a strong domestic market due to the high number of fisheries in Iceland. This is likely to have inhibited international growth for both firms since it encourages them to go after domestic buyers and thus results in a lack of focus. As expected, one of them is only moderately successful while the other has never reached success. Similarly *Gogogic's* failure was perhaps rooted in the fact that the Icelandic market was initially too profitable. This meant that the firm operated for too long in the domestic software service business rather than building up its capacity for delivering international value. When the Icelandic market dried up in the aftermath of the 2008 financial crisis, the firm could not effectively enter international markets despite the favorable currency devaluation. *Gogoyoko* faced similar issues since it had great success in attracting Icelandic bands and Icelandic customers (at the very beginning it had higher acquisition rates than Twitter). Assuming the same success would continue abroad, the firm started their internationalization without the necessary resources, networks and abilities. This decreased the firm's marketing effectiveness, which meant that critical mass was never reached.

An INV's success in internationalization is evidently hugely reliant on the state and makeup of the economy that the firm inhabits as it exploits its opportunity. A well-developed, easily accessible and profitable domestic market discourages new firms from internationalizing, defocuses them and leaves them ill-prepared for internationalization. However, a market with poor domestic opportunities but good international opportunities encourages internationalization and helps the firm to focus on creating and marketing a global product.

Proposition 3: *The successful internationalization of new ventures is positively correlated with the lack of opportunities in the domestic market.*

4.1.1.4 Domestic support

This prominence (or in some cases absence) of domestic support in the immediate surroundings of the opportunities had a substantial effect on the ability of the firms to internationalize quickly. This domestic support came in the form of marketing, manufacturing and design co-operations, and access to components, human resources and smart capital as well as government assistance in the form of grants, investments and complementary legislature. For firms in the fish processing equipment industry, whose products cater to one of the main industries in Iceland, the prominence of and help from of the domestic market played a particularly large role in internationalization. *Valka* is a good example of this. The firm emerged out of the largest fish processing equipment manufacturer in the world, Marel, which was founded in Iceland in the 1980's. Although this relationship spoiled quickly, it helped *Valka* enormously in the critical startup phase by providing the firm with access to customers as well as supplying them with specialized parts and increasing the pool of qualified talent, which the growing firm desperately needed. Although the strong domestic fisheries cluster caused the firm to be overly focused on the Icelandic market, it nevertheless provided the firm with a test market and some early customers, which helped the firm to gain credibility as well as early revenues. Despite the fact that *Thorice*, another of the example firms, has not yet reached successful internationalization, it has nonetheless benefited greatly from the prominence of the Icelandic seafood cluster. High-tech firms in similar positions in the market have provided a common international marketing channel, technical and operational advice, and other support, all of which has played a part in the very limited success that *Thorice* has achieved so far.

OZ was a trailblazer in the Icelandic internet software industry and did not benefit from domestic assistance since the sector did not exist yet. *OZ* therefore had to build up a lot of the capacity needed to run a firm in the industry themselves or seek it abroad. Although this led to some unexpected benefits, such as having an extremely diverse workforce, it nevertheless adversely affected the firm's success since it forced the firm to spend considerable resources on building these capacities on their own. This, however, benefited the Icelandic economy since the development of these capacities was accelerated, which greatly strengthened the Icelandic internet and software industry. The software firms that have been founded since the late 90's and early 2000's have benefited from this. *Marorka*, *Calidris* and *Betware*, for example, have all had access to better talent and more informed investors, and they have also enjoyed more

access to internationally experienced firms in the software and support sectors than OZ ever had, which means that they were better able to internationalize.

Despite this development in the software industry, there have always been a relatively low number of video game developers in Iceland. This adversely affected the internationalization of *CCP* and *Gogogic* as they neither had support from firms in the sector nor access to industry specific funding. By the time that *Plain Vanilla* was starting out, the videogame sector had enjoyed a reasonable amount of development, but this was not sufficient to prevent the failure of their first product, which was developed entirely in Iceland. For their second attempt at cracking the international market (which eventually became the product QuizUp™), the firm had better access to talented people that had experience in the making of video games (some of the new employees had worked for firms such as *Gogogic*) and greater access to knowledge and support from the community, such as the Icelandic Gaming Industry Association. However, the firm's success cannot be attributed to the development of the sector but rather to *Plain Vanilla's* ability to access the video game sector in Silicon Valley as is listed in the factor "access to smart foreign capital" described below. Finally, the music sector in Iceland is strong and tightly knit, and it was therefore relatively easy for *Gogoyoko* to penetrate it completely. This made the initial steps easier and created optimism, but unfortunately, as mentioned above, the firm was not able to capitalize on this early success by attracting international bands and customers.

Almost all of the firms accepted some grants from government funds such as "Rannsóknarsjóður" (research and development fund) and "Tækniþróunarsjóður" (technology development fund), or semi-public investments from "Nýsköpunarsjóður Atvinnulífsins" (early stage investment fund) or "Frumtak" (post-seed stage investment fund). *Marorka*, *Nox Medical*, *Videntifier*, *Gogoyoko*, *Calidris* and *Valka* accepted grants from Rannsóknarsjóður or Tækniþróunarsjóður, which paid for early development. *Valka*, *Videntifier*, *Gogoyoko*, *Gogogic*, *Marorka* and *Betware* accepted small investments from Nýsköpunarsjóður and/or Frumtak. These investments were absolutely critical for the survival of the firms due to the lack of a developed VC environment in Iceland but unfortunately this was mostly "dumb money" which did not provide additional benefits.

Proposition 4: *The successful internationalization of new ventures is positively correlated with the domestic assistance they receive in the development of their offering*

4.1.2 Resources

Table 3 Relevance of factors regarding resources

Category	Firms in category	Human resources	Smart foreign capital
<i>Successful software firms</i>	CCP Marorka Betware Plain Vanilla Calidris	Firms had access to very or somewhat internationally experienced human resources	All firms had moderately or very good access to financial resources. One case had access to very smart foreign capital.
<i>Unsuccessful software firms</i>	OZ Gogoyoko Gogogic Videntifier	Firms had poor to moderate access to internationally experienced human resources	One of the firms had good access to smart foreign capital. The other three had moderate access to capital of any kind
<i>Successful high-tech firms</i>	Nox Medical Valka	Firms had good access to internationally experience human resources	Both firms had moderately good access to smart capital. One case had access to smart foreign capital
<i>Unsuccessful high-tech firms</i>	Thorice	Inconclusive	According to the founder the firm has good access to foreign capital but he chooses not to seek it

4.1.2.1 Human Resources

The access to qualified human resources is essential in all ventures but especially in internationalization. When firms compete internationally while they are still in the startup phase, they face huge challenges in the form of competition, complexity and scope. This means that the firms must attract exceptional employees with international experience in order to maximize their potential success.

CCP, Marorka, Calidris, Valka and Nox Medical all had access to phenomenal human resources who for the most part had previously worked in international firms in the same sectors. The employees therefore had experience in conducting business internationally, which their capabilities and knowledge immensely. The employees were therefore better able to plan, prepare and execute entrances into new markets. *Betware* had great access to young and talented employees through one of the owner's teaching position at the University of Reykjavik, and *Plain Vanilla* attracted scores of applicants as news of their success spread through media outlets. *Gogoyoko*, like many of the other firms, got access to socially-minded, ambitious and talented employees by leveraging a unique vision or product that excited potential employees and that even allowed the firm to get away with paying wages that were considerably below the market norm. Globally minded and talented employees allowed all of the firms to focus on the international market and to create world-class products.

Gogogic attracted a large number of applicants, but according to secondary sources they unfortunately mismanaged their hiring process. This resulted in a number of bad hires, which led to underperformance and over emphasis on the domestic market which led to a number of issues. *Videntifier* has had good access to competent employees through their relationship with Reykjavik University, but the firm has not exploited this as well as they might have done. It is unclear whether *Thorice* had good access to human resources since it only has two employees and doesn't appear to intend to recruit any more. Since these three firms have failed or haven't reached success despite years of operation and the creation of an exceptional product, it is possible that it is the lack of internationally experienced talent is keeping them down.

The best example of the attraction and usage of human resources is probably *OZ*. This firm was the first "Silicon Valley" firm in Iceland, and it introduced practices which had not been seen in Iceland before. It was therefore considered to be an exciting place to work and it attracted top level talent. The founder furthermore placed extreme emphasis on employing not only exceptional people but the very best that he could find from multiple industries such as software design, art and business. These exceptional people then attracted more of their kind, which resulted in a snowball effect where "more and more people from all corners of the Icelandic economy joined the firm". The firm became a melting pot of new ideas and energy, which enabled it to create unique, global solutions.

Almost all of the founders interviewed mentioned that they had attempted to recreate this effect by copying the behavior of only hiring the best possible employees and treating them well (although with varying degrees of success). The founders believe that in doing so their firms have become more successful than they would otherwise have done, and an analysis of the firms' histories confirms this view. The talented, *internationally* experienced human resources were vital for the successful internationalization of all of the firms that have internationalized, to the point where internationalization would have been impossible without them

Proposition 5: *The successful internationalization of a new venture is positively correlated with its access to human resources with international experience*

4.1.2.2 Smart foreign capital

Although some of the founders were able to use networks to cope with the resource constraints imposed upon them, the access to capital or lack thereof was still an important factor in the success or failure of most of the firms. The access to smart foreign capital was vital in order to develop, manufacture and distribute new products, especially when the products demanded long development periods and when firm was working by independently.

Gogovic, *Videntifier* and *Thorice* are/were examples of firms that were starved of smart capital and were unable to cope with this issue. The firms experienced slow growth, if any, and were unfocused, which led to wasted resources. This meant that they were unable to build up the capabilities required to get their product to market and to profit from it. These three firms received some managerial assistance but this assistance was largely connected to research and development as well as general operational advice and lacked in international marketing advice and social networks. *Gogoyoko* faced similar difficulties with the notable exception of getting a seed investment from one of the founders of *CCP* games, which meant that the firm received advice from a shareholder with a lot of experience in creating online communities and running software firms. This meant that the firm was able to create a product that suited the market very well, although it later failed as it did not receive international marketing advice or the financial resources necessary to market its product internationally. Most of these firms attempted to attract funding on several occasions but found that Icelandic investors were unable to provide the amount of capital (and experience) that the firm

needed and that foreign investors were unwilling to invest in Iceland because of uncertainty and complexity.

Other firms got by with minimal investment. *Nox Medical* received only small investments, but still managed to be successful. The reason for this is that the founders of *Nox Medical* were able to leverage their experience in order to bypass the resource constraints (In addition to this the firm received around \$750,000 in government grants). The small investment that they did receive was furthermore from an investor who was experienced in international business in the healthcare sector which meant that the firm's founders received excellent advice. *CCP* and *OZ* developed their products for years without obtaining any investment which meant that they were often starved of working capital and that they were frequently forced to take on short-term assignments from other firms and to make unfavorable publishing deals in order to make ends meet. This slowed down their growth and caused issues which left them teetering on the brink of bankruptcy early in their lifetime. After receiving foreign capital (*OZ*) and domestic capital (*CCP*) the firms were finally able to focus on their core products. This paved the way to the success that they enjoyed (although temporarily in the case of *OZ*).

Marorka, *Betware*, *Valka* and *Calidris* got considerable private capital when the firms were founded and received additional funds from the same or other investors a number of times over the following years as their funds repeatedly ran dry due to underestimation of the cost and time involved in bringing the products to market. These domestic investments generally did not provide substantial market or product development advice but often provided some operational advice, which helped the managers to structure and manage their firms. Although all of these firms were very successful, the lack of international investment still slowed down their potential growth as they were not provided with access to foreign social networks, value chains or advice relevant to internationalization in their sector. All of these firms, except for *Valka*, have now been sold abroad partially or completely and have without exception been strengthened considerably by this sale, since they have gained better access to markets and qualified employees.

It is of course impossible to discuss the access of Icelandic startups to smart foreign capital without talking about *Plain Vanilla*, which sought and received capital from Silicon Valley. The firm collected a \$1.2 million seed round from a large number of angel investors including entrepreneurs, talent agents and angel funds. The firm used

this money to create a more complete version of its, product which the founders then presented to Apple and Google executives as well as investors. Eventually, Greycroft, an American investment fund, requested to lead their Series A round before market launch, which collected \$2.5 million. Just before the launch of the product, the A round was extended under the leadership of Sequoia Capital to a total of \$4.5 million. This was an incredibly rare move by this firm as they rarely invest in pre-launch ventures. A couple of months later, Sequoia led a series B round with multiple investors including one of the largest Chinese internet firms (Tencent), which netted the firm around \$22 million. In total, the firm has therefore received just under \$30 million in foreign investments, which has allowed them, to go on a hiring spree in their brand new headquarters in Iceland.

The firm has had amazing results in the market, with their products attracting tens or even hundreds of thousands of new users per day. It has, however, not been the money it self that has helped the firm to attract their amazing user base. The media coverage that the firm received when two famous investors like Sequoia and Tencent invested in the firm was arguably worth millions since the news introduced hundreds of thousands of new users to the game. Due to their investment, Sequoia and Greycroft furthermore had a vested interest in making sure that the game became popular. The investment funds therefore began to champion the game within Apple and Google, which lead to the game being featured on the front of the App Store and thus allowed it to gain momentum. The investors from Sequoia likely also stressed the importance of getting a Chinese investor to the table in order to open up the access to the Chinese market, which has much more fragmented distribution channels than the Western market due to the fact that there are multiple android stores that service the market rather than a single Google Play store. Chinese investment also helps to combat plagiarism as copycats are almost immediately eliminated. In addition to this, the founder feels that he has received priceless advice and guidance through both product development and marketing.

It is evident that the presence of smart foreign capital is not necessary in order to experience successful international entrepreneurship but that it undoubtedly helps as it enables faster product development and market penetration.

Proposition 6: *The successful internationalization of a new venture is positively correlated with its access to smart foreign capital.*

4.1.3 Organization

Table 4 Relevance of factors regarding the organization

Category	Firms in category	International culture	Ability to take on a position in the global value chain	Learning organization
<i>Successful software firms</i>	CCP Marorka Betware Plain Vanilla Calidris	Moderate or high international marketing and High or very high entrepreneurship orientation	Moderate to very good ability to take on a position in the global value chain	Good or very good knowledge transfer relationship with stakeholders. Active processes in place to facilitate learning. Learning applied in operations
<i>Unsuccessful software firms</i>	OZ Gogoyoko Gogovic Videntifier	Low to moderate international marketing orientation. Moderate to high entrepreneurship orientation.	Poor to very poor ability to take on a position in the global value chain	One firm emphasized organizational learning. Others were unable to put effective processes in place to facilitate learning and apply what was learned
<i>Successful high-tech firms</i>	Nox Medical Valka	High or moderate international marketing and high entrepreneurship orientation	One firm was moderately at taking a position in the global economy and the other was very good	Good or very good knowledge transfer relationship with stakeholders. Active processes in place to facilitate learning. Learning applied in operations
<i>Unsuccessful high-tech firms</i>	Thorice	Moderate entrepreneurship orientation. Low international marketing orientation	Firm had very poor ability to take on a position in the global value chain	Learning emphasized but inability to act on that knowledge

4.1.3.1 International Culture

Culture was vital to the success of the firms since it drove innovation and internationalization. *CCP, Marorka, Betware, Plain Vanilla, Calidris, Nox Medical* and *OZ* all fostered cultures that had moderate or strong international entrepreneurial- and international marketing orientation. This allowed the firms to create new value through innovative means, which enabled them to stand out from the crowd and to create value

by effectively targeting foreign markets. These firms used a mixture of selection and training methods to build up the appropriate culture as they grew and the founders' influences decreased.

Videntifier, *Gogoyoko* and *Thorice* all had cultures that drove innovation, which allowed them to create innovative products. However, they lacked international marketing orientation, which meant that they were not able to effectively take those great products to the international market. This led to slow growth. *Valka* was one firm that achieved moderate success despite the fact that it had a (relatively) weak internationalization orientation. This is likely to be due to the aforementioned strength of the domestic market, which was able to sustain the firm, although the firm was not as successful as it could have been due to the lack of international focus. Unfortunately, *Gogogic* had a weak innovation and marketing orientation, which meant that the firm worked mostly on projects made up by clients and that they were unable to internationalize when their domestic market dried up in the wake of the Icelandic banking collapse.

Betware mostly hired people straight from college into their firm. This meant that their employees were predominantly young and innovative people that thought of the entire world as possible market area from the start. In addition to this, the firm also emphasized these factors to their employees resulting in a culture where these factors were championed and thereby international success. The founders of *Calidris* took a different route. They hired mostly experienced people with children. The firm then attempted to build up a culture of innovation, for example by banning overtime and implementing other policies meant to increase creativity. The firm also championed their values, one of which was focusing on the fact that the firm's success was integral to their international customers' success. This cultivated an international marketing outlook which allowed the firm to improve their relationships with current and potential customers abroad leading to better attraction and retention.

The founder of *Marorka* tried to select for an international marketing orientation when hiring employees like many of the firms but also tried to build up this orientation by emphasizing the importance of international customers. The firm had a lower international entrepreneurial orientation but as the firm was only working on a single product that did not hurt the firm's performance. The culture at *Plain Vanilla* was young and still developing at the time of this writing. The firm places emphasis on building the

appropriate culture (as the founder is dreaming of building a “culture similar to the one in Google”). The firm actively screens for international entrepreneurial orientation and marketing orientation as these aspects are extremely important for the firm. This is meant to make sure that the firm continues to develop the product so that it attracts more users and (hopefully) starts to create revenues. The effectiveness of these initiatives remains to be seen however.

***Proposition 7:** The successful internationalization of a new venture is positively correlated with its capacity to build and foster an international culture that leads to international entrepreneurial- and marketing orientation.*

4.1.3.2 Ability to take on a position in the global value chain

The ability of the firms to take on a position in the global value chain had a highly positive relationship with reaching international success. The founders of *Marorka*, *Betware*, *Calidris* and *Valka* had all worked in domestic and international firms in their respective sectors. This meant that they had built up knowledge and connections, which allowed them to identify and access supply and distribution networks, potential partnerships and marketing channels from the moment that they created their firm. These firms were therefore all able to internationalize relatively easily, and, in fact, three of the firms are amongst the highest performing in the case study and have been successfully sold, partially or entirely, to international investors.

Using experience from *Flaga*, the managers of *Nox Medical* knew that building a production line in Iceland would be prohibitively expensive. The firm therefore made the decision to outsource the production of their machines to China. *Nox Medical* also knew from experience that they would likely not be able to distribute the product on their own, and they therefore decided to negotiate with a distributor, which proved to be very beneficial despite issues with their initial distribution partner. Due to the outsourcing of both manufacturing and distribution, *Nox Medical* is a textbook example of how an international startup can occupy on a position in the international value chain by focusing on their core competency, which is designing world-class software and equipment.

The founders of *Videntifier*, *Thorice*, *OZ*, *CCP*, *Gogoyoko* and *Gogogic* had little experience when it came to the international distribution of their respective products and were unable to identify employees that had the required experience. As a result, they faced major issues when they released their products. The founders of

Gogoyoko had neither experience in marketing a global solution nor the ability to enter a partnership with a larger firm. This meant that their very capable music distribution service was not adopted as rapidly as it might have been. It thus never reached critical mass and eventually faded as competitors that were able to enter the global market chain overtook them. Similarly *Gogogic* did not have experience in creating and marketing a desktop or Facebook game. This meant that they neither marketed nor distributed it correctly, nor did they look at the correct product performance measures. This meant that the firm's managers did not realize that the product that they had created (Vikings of Thule) possessed stupendous potential. *CCP* did not have extensive experience in distributing video games, and they therefore sold their publishing rights, which proved to be disastrous since the publisher they dealt with stopped distributing video games shortly after the contract was signed. Fortunately, the firm was able to buy back the publishing rights and started to distribute the game in the way that it should have been distributed from start: directly to the consumer. After this change, the firm became much more successful, which emphasizes the importance of positioning oneself correctly in the value chain.

Videntifier was not able to sell their product to the most profitable possible customers since they did not have the necessary connections and know-how. They instead focused on a single domestic customer who provided a quick revenue stream and paved the way to other customers in the same, less profitable, sector (management considered this to be due to the lack of funding). The importance of this factor is perhaps best exemplified by looking at *OZ*'s failure to get its revolutionary product to the customer through the correct channels. When *OZ* became one of the first in the world to enter the instant messaging business, it failed to identify the correct position in the value chain. The firm marketed its product through a reseller rather than directly to its customers like Skype and Microsoft did. The sales force at this reseller was not motivated to sell the product and the end user was never engaged. This was devastating for the firm and was among the foremost reasons for why it finally went under. This experience underlines the importance of being able to take on a position in the value chain.

The failure of the firm's first product helped the founder of *Plain Vanilla* to understand the value of the ability to take on a position in the global value chain. After the disastrous failure of their first product "Moogies", the firm took an entirely different

strategy with their next one. Realizing that the reason for the failure was the firm's inability to successfully enter the global marketplace, which in this case was the Apple App Store, the founder moved to California for three months in order to raise the necessary resources and build up networks that would allow him to get the access that he needed. There, the founder met up with various stakeholders such as investors, agents and movie studios. This allowed him to gain experience and access to a major movie studio, which landed the firm its first successful game, the "Twilight Saga" question game. By capitalizing on a previously established franchise and using Apple's excellent delivery channels, the firm was able focus on its core competency: creating amazing games. This provided the firm with some much needed revenue as it prepared to launch its major product "QuizUp". When the firm was ready to launch QuizUp, it received an investment from a well-connected investment fund, which ensured that the game started out and stayed on the front page of the App Store. *Plain Vanilla's* relationship with the aforementioned Chinese firm also allowed the firm to enter the Chinese market, which would not have been possible using other methods.

Proposition 8: *The successful internationalization of a new venture is positively correlated with its ability to take on a position in the value chain by leveraging international experience and knowledge.*

4.1.3.3 Learning

Knowledge is one of the most important resources possessed by a firm. The acquisition of knowledge, i.e. learning, had an effect on the success of the firms as it enabled them to benefit from their exposure to new markets by: enabling them to respond to market changes, gain market entry and compensate for their lack of resources. The firms used multiple different learning methods, but they all undoubtedly benefited from the learning advantage of newness. The staff at *Marorka's*, *Valka's*, *Betware's*, *Nox Medical's* and *Calidris'* all frequented trade shows and stayed in personal contact with their customers in order to better understand the desires of the market. This one-on-one relationship with international customers was vital since the firms only dealt with very large customers from foreign countries, who often needed rapid solutions to their problems. These five firms furthermore had processes in place to facilitate learning. The founder of *OZ* described his firm as a "learning organization" that absorbed as much information as possible. This helped the managers to identify the instant messaging potential in their doomed 3D browsing system and to (temporarily) stay off the firm's demise.

The managers of *CCP* put great care into acquiring knowledge of the market and the customer by frequenting tradeshows and by talking with industry players. However, the biggest emphasis was on having a great relationship with their customers through a specially appointed customer representative board and a “Fanfest” where customers from all over the world meet the firm in order to exchange information. This means that the firm has an exceptional understanding of the market and their customers, enabling them to offer outstanding value to their customers. Although *Videntifier* did not have specific processes in place to acquire knowledge, they did benefit from learning when they used their experience with the Icelandic police force to learn how to sell their product to international buyers in the same market. This allowed them to deliver a more developed product and helped them somewhat during the sales process.

Gogoyoko worked with a Norwegian entrepreneur accelerator to develop their firm and sought knowledge from as many sources as possible including from other entrepreneurs and investors. Unfortunately, the firm did not have processes or relationships in place that would have been necessary to acquire international information, which meant that they had difficulty in understanding the international music market. The firm was furthermore unable to apply the knowledge that they had gained in their domestic market to their international operations (although this can be partly attributed to the lack of financial resources). *Gogogic* attempted to obtain knowledge from abroad, but did not have any processes in place to do so. The founder admitted that the firm had failed to “learn how to read the market” which led to the firm being unable to see that one of their products (Vikings of Thule) had great potential. This meant that the firm did not invest in the game and eventually went bankrupt.

The founder of *Plain Vanilla* gained substantial knowledge from the failure of the firm’s first product and was able to apply this knowledge in order to succeed with the firm’s second try.

Proposition 9: *The successful internationalization of a new venture is positively correlated with its capacity to create an organization where learning takes place.*

4.1.4 Entrepreneur

Table 5 Relevance of factors regarding the entrepreneur

Category	Firms in category	Global approach to business	International experience	Social networks
Successful software firms	CCP Marorka Betware Plain Vanilla Calidris	Very to extremely global approach to business	Low to high international experience. Cases with low international experience compensated with international education or work experience in similar sectors.	Moderate to good global networks
Unsuccessful software firms	OZ Gogoyoko Gogogic Videntifier	Low to relatively global approach to business for most firms. Extremely global approach for one firm.	No to low international experience	Poor to moderate global networks
Successful high-tech firms	Nox Medical Valka	Moderately global to very global approach to business	Good to very good international experience in same markets	Good to very good global networks
Unsuccessful high-tech firms	Thorice	Low/moderately global approach to business	Moderate international experience	Moderate global network

4.1.4.1 Global approach to business

A majority of the firms were founded by entrepreneurs with some international experience. The founders of *Betware* and *Plain Vanilla* had studied abroad in various disciplines while the founders of *CCP*, *Calidris* and *Nox Medical* had professional experience in working for international firms in the same sector, and the founders of *Gogogic* had similar experiences in IT sector unrelated to their firm. The founders of *Marorka* and *Valka* had both had an international education and had gained international professional experience before starting their own firm. *Videntifier's* case is particularly interesting because the founder is an Austrian-born immigrant who studied briefly in Russia before moving to Iceland to study at Reykjavik University. These international experiences helped the founders to develop their global vision and their identity as global citizens. This global vision helped the founders to identify gaps in the

global market place and thereby to recognize opportunities to create value in foreign markets that did not exist in their domestic markets. This is the first step towards creating an international firm and it is vital if the firm is to skip the traditional stage method of internationalization.

The founders of *Gogoyoko* had little international experiences, but the international nature of the digital music industry drove the founders to look at the international market. Similarly, the founders of *Gogogic* had limited professional and academic experience in an international environment but still decided to target the global market due to the nature of the video game market. Unfortunately, neither firm was truly focused on the international potential of their opportunities since they were stuck in a vicious cycle of either focusing on domestic musicians and users or doing small projects for domestic firms (and later international firms to a very limited extent). The founder of *Thorice* also had limited international experience, which possibly contributed to the fact that firm's focus was limited to Icelandic fisheries and customers. Interestingly, the founder stated that he actually "viewed the entire world as his market", but, for one reason or another, the firm still does not put sufficient emphasis on international markets. This lack of international focus means that the firm puts insufficient resources into acquiring international customers and thereby decreases its chances of success.

OZ's founder created his first piece of commercially viable electronic control mechanism at the age of 14. The software was simple but was effective in the task of controlling the length of pool game rentals. The founder and his friend took the game to a local pool room operator and showed it to him. The owner of the pool room was impressed with the solution and took it with him to a convention abroad where it received great interest. The owner of the pool room returned ecstatic and wanted the young inventor to continue to develop the solution. However, since the summer break was almost over, he had to go back to high school and the project fizzled out. This experience showed the founder that he was indeed able to create something that could have value and that could effect on the entire world. Three years later, when the founder was, on behest of his father, thinking about starting his own firm, his global outlook enabled him to identify international opportunities in the World Wide Web. Although *OZ* eventually failed because it was not able to take on a position in the global value

chain, this international focus, and the resulting ability to identify global opportunities, played a large role in the firm's early success.

Proposition 10: *The successful internationalization of a new venture is positively correlated with the ability of the founders to identify opportunities through a global perspective.*

4.1.4.2 International experience - Ability to turn intangible resources into tangible resources

A firm's resources are comprised of a mixture of tangible resources such as financial and human resources as well as intangible resources such as networks, innovativeness, knowledge and capabilities. INVs often face a scarcity of tangible resources, monetary resources in particular. In order to bypass this scarcity of tangible resources, many of the founders used their international experience to leverage intangible resources and thus facilitate the successful internationalization of their firms. The founders that were less able to do this experienced greater difficulties in their internationalization.

The founders of *Calidris*, *Nox Medical*, *Valka* and *CCP* were all able to leverage their extensive international experience in similar markets in order to successfully transform intangible resources into tangible resources. The founders used their networks to create business relationships and to secure resources, their knowledge to create innovative products that would be accepted worldwide and their personal capabilities to bypass their shortage of human resources. The founders of *Betware*, which had limited international experience but substantial industry-specific experience, was able to gain access to its first customer despite a distinct lack of human resources and marketing resources. This is due to the fact that its founders were able to leverage their technical abilities and their relationship with the Icelandic lottery in order to both develop a suitable product and sell their product directly to them. They also compensated for their lack of monetary resources by capitalizing on the fact that one of the founders had access to cheap talent through his position as a teacher at Reykjavik University. The founders furthermore used their extensive technical abilities and knowledge of the lottery industry to introduce the concept of internet based lottery in their home market. The founder of *Plain Vanilla* furthermore was able to use the experiences from his time as the CEO of a separate Icelandic startup to recognize the need and identify possibilities for using his intangible resources.

CCP was severely underfunded for most of its early existence as the founders underestimated the funds and time necessary to bring the product to market. The founders used every trick in their arsenal to compensate for this, such as creating innovative board games to raise capital and joining forces with people in other industries with the hope of benefiting from each other's strengths (such as *CCP's* relationship with *LazyTown*). The founders managed to build up an incredible culture within the firm. This led to extreme loyalty, a notable example of which emerged when the firm stopped paying salaries for months and not a single one of the employees quit their job. Most importantly, the founders were able to capitalize on the knowledge that they had acquired and the work that they had done at *OZ* which allowed them to lower the cost of creating their product. *Marorka*, on the other hand, suffered for lack of experience their founder had. They underestimated costs, overestimated demand and went into a damaging business relationship with a foreign firm. Although the firm was later able to recover due to a great product, this lack of experience still adversely affected the firm's ability to internationalize successfully.

The importance of international experience is perhaps best illustrated by looking at the firms that failed. A considerable part of *Gogogic's* failure possibly stemmed from the founder's inexperience, which led to a high cash burn rate, poor talent selection and the inability to identify and capitalize on their biggest international opportunity, the Vikings of Thule video game. The founders of *Videntifier* had limited experience in international business and were therefore relatively unable to leverage their intangible resources to create value. The founders of *Gogoyoko* were able to build one of the most impressive solutions in the marketplace. This, coupled with vast knowledge of the domestic market, allowed them to reach great initial success despite the firm's lack of access to tangible resources. However, their inexperience in the international marketplace meant that they were not able to use their intangible resources to accomplish the most important task: driving international user growth. Domestic experience therefore does not automatically translate into international capabilities. The founder of *Thorice* was relatively capable when it came to leveraging his knowledge and technical skill his firm since he created impressive machines with only a handful of people and limited capital resources. The founder has, however, not been able to capitalize on these great products due to his lack of networks, the firm's lack tangible resources and the offering's lack of uniqueness. This shows that, although the ability to

turn intangible resources in to tangible resources helps in the internationalization process, it is not enough to keep the firm from failing.

Proposition 11: *The successful internationalization of a new venture is positively correlated with the founder's ability to use international experience to turn intangible resources into tangible resources*

4.1.4.3 Social networks

As firms often face severe resource scarcity in their early days, their social networks become paramount for survival. All of the firms that had successfully internationalized had, without exception, benefited from their founders' access to domestic or international social networks in some form. These social networks came from many different sources and were different in scope but they all provided the relevant firm with an opportunity to make up for the aforementioned resource scarcity. *CCP*, *Valka*, *Calidris*, *Nox Medical* and *Betware* benefited from their owners' previous employment at large international corporations in the same or similar industry as their startup. The founders of these firms had access to extensive and appropriate social networks through those former employers, which allowed them to seek advice, funding and human resources from the suppliers, customers, investors and remaining employees at their previous employer. This social network also gave them access to lead user customer who could assist in development by giving feedback as well as much needed revenue.

These networks were not always the result of previous employment at a firm in the same sector. The founder of *Marokra* was able to sell a prototype to an Icelandic shipping firm due to informal acquaintances and was furthermore able to get access to a cheap office space through his informal network. The founder of *OZ* was able to use his informal network to attract qualified employees to his firm, and was able to use the network an early investor bestowed upon him to seek additional funding. For many firms, the informal network was even more important than the ones that were bound in contracts.

The founders of *Gogoyoko*, *Gogogic*, *Thorice* and *Videntifier* all had good or even great domestic social networks. This meant that the firms were able to attract domestic customers and seek qualified employees. Unfortunately, they did not have access to appropriate international networks. This had various consequences. The founders of *Gogoyoko* were, for example, unable to capitalize on their early success,

which was driven by their connections in the Icelandic music industry (which included huge names such as Sigur Rós), as they did not know any international musicians or producers. These firms furthermore could not raise international funds, seek advice or build up marketing channels. This meant that the firms were underfunded, that they made the wrong strategic decisions and that they were unable to get their product to the customer.

The importance of international social networks is perhaps best explained by taking a closer look at the history of *Calidris*. *Calidris* was founded by former employees of Icelandair (an airline which flies to multiple countries in Europe and America). These founders had identified two problems with the bookings of airplane seats. They worked on a solution internally but were not able to come up with one so they put the project on ice. After quitting his job at Icelandair, one of the founders took over as the COO of *OZ* in Iceland for a short while, and then went on to occupy an executive position at another software firm. When he finally founded *Calidris*, he had amassed a huge network of people, both in the software and airline industry. The most important of these networks were his and his cofounder's connections with their old employer, Icelandair. This connection provided their young firm with an early customer that provided feedback and early revenues as well as important advice and access to databases that could be used in the development of the product. This relationship was also vital in order to build trust with international customers. Furthermore, selling to those international customers was made easier by the fact that *Calidris* had access to top level employees at Icelandair, who complimented their product immensely during corporate visits. In addition to this, their social networks also gave them access to their first (and most important) international customer, Finnair, which "fell into their lap because of social networks". This customer was essential in building up international credibility and helped the firm to gain the resources needed to further develop their product to the point that the founder described Finnair as an "angel customer".

It is also important to examine *Plain Vanilla* in this context. The firm had attempted to create a complete game on their own without any help from international social networks, and, although they did manage to create and release a game to the App Store, it did not reach success. The founder of *Plain Vanilla* realized that a large part of the failure was due to the fact that the firm lacked the social network that it needed to get the game on the front page of the App Store, which is vital since most apps are

buried in the avalanche of the over 1000 video games released each day. In order to address these issues, the founder went to California with two employees in order to raise funds and form connections with the right people so that the game would be featured on the front page of the App Store. When he got to San Francisco, did not know anybody, which meant that almost no productive meetings took place during the first couple of weeks. The investors who took the time to answer his requests were mostly low level investors who scheduled meetings months into the future, which was useless since the founder only had a tourist visa.

After a while of getting nowhere, the founder got in touch with an Icelandic he did not know, Davíð Helgason, who he had heard was well connected in Silicon Valley. After getting to know him and taking a small investment from him, the founder got Davíð to set up a series of meetings which allowed the founder to gather a number of small investments. These meetings eventually led to a meeting between the founder and one of the partners at Sequoia Capital. Sequoia Capital does not invest in such early stage startups, but the partner did reach out to his network with an email that introduced the founder and recommended his firm as an impressive option. Where the founder was used to waiting days for replies that at best scheduled meetings months into the future he now received replies from all five recipients within 20 minutes with invitations to lunch or dinner that same day. These investors put money into the firm and put the founder in touch with further investors, which paved the way to the firm's successive financing rounds and eventual success. *Plain Vanilla* was thereby able to access and capitalize on a social network that they were previously not a part of. This case provides an important insight into how people are able to gain entry to new social networks. This leads to the conclusion that INVs do not necessarily need to possess or control substantial international networks before they start their firms if they are able to construct them as and when they are needed.

Proposition 12: *The successful internationalization of a new venture is positively correlated with its founder's access to or ability to construct international social networks.*

5.0 Discussion

There are several factors that directly affect a firm's ability to internationalize early and successfully. The literature has previously listed a number of "vital" factors that affect this ability (Jones et al., 2011) but the results show that the success of a firm depends upon a mixture of factors that interconnect and develop over time. The discussion in this section is in line with the conceptual framework and results presented earlier in this paper but contrasted with previous findings in the field.

5.1 Variance between sectors

There were few differences between the software firms and the high-tech firms, but four factors did stand out. The high-tech firms experienced slightly better domestic market conditions since one of the firms catered to the highly populated fisheries industry in Iceland. They also had marginally better domestic market assistance since they were founded in sectors which previously had or currently have world-class firms within them. Furthermore, they also had considerably better international social networks since their founders had been working for firms in the same sector. The software firms, on the other hand, had a more global approach to business because of the nature of their products.

However, these minor differences do not mean that it is not possible to generalize the results. The firms were undoubtedly affected by each factor, regardless of the sector that they occupied. The factors therefore apply across both sectors as the fundamental success factors of international entrepreneurship, although some sectors might need to consider additional factors in their internationalization. For example, pharmaceutical startups, need to put extreme emphasis on patent protection (Gassmann & Keupp, 2007) while social entrepreneurs might be affected by their social goals (Townsend & Hart, 2008).

5.2 Variance between successful and unsuccessful firms

Predictably, there were considerable differences between the firms that succeeded and those that did not. The results undoubtedly show that the firms that failed did not possess (or were not able to use) at least a portion of the factors. Interestingly, the firms that succeeded sometimes faced similar issues but were able to use a combination of the other factors to compensate for their shortcomings and thereby avoid failure. These findings support the conclusion that the factors selected have a decisive

effect on the performance of the firms and strengthen the theoretical and managerial applicability of the framework.

The firms that succeeded had more homogenous offers, either from the start or as a result of a pivot later in the firm's lifetime (interestingly, these changes in strategy were sometimes on the behest of their customers). The majority of the successful firms had very small domestic markets, which meant that they were driven abroad due to the lack of opportunities and resources in the Icelandic market (Moen, 2002). As suggested by the literature, the successful firms were also either assisted by their home market (Andersson, 2002; Callaway, 2004) or were able to get assistance from markets in other countries.

The successful firms had much better access to internationally experienced human resources and were able to use the technical and foreign experience of their employees in order to create and maintain business relationships, enter new markets and create new products in a more efficient and effective manner (Kundu & Katz, 2003). They also had better access to foreign and domestic capital, and were more likely to have access to smart capital. The successful firms were provided not only with financial aid by the investors, but also with access to advice and social networks (Fernhaber and McDougall-Covin, 2009). The investment also helped the firms to receive great publicity, which attracted customers, employees and further investors.

All of the firms that succeeded (at least for a period of time) had a culture that was strongly orientated towards *both* international entrepreneurship and international marketing (Knight and Cavusgil, 2004). The successful firms had an excellent ability to access the global value chain and were able to create learning organizations that had the ability to acquire and use relevant knowledge (Gabrielsson et al., 2008). Their founders were especially capable (Moen, 2002; Jones et al., 2011) as they had extremely global mindsets and a fantastic ability to turn intangible resources into tangible resources (Knight & Cavusgil, 2004) and had great access to international social networks (Gassmann & Keupp, 2007).

5.3 Importance of factors

The factors had varying degrees of importance with regards to the success of the firms and some of them proved to be more important than others. The most important factor was likely the ability of the organization to take on a position in the global value chain. Those firms that had excellent abilities to do this from the start were amongst the

highest-performing firms. Additionally, one firm, which possessed and was able to employ every single other factor, failed specifically because it was unable to take on a position in the value chain. This is in line with current literature (Gassmann & Keupp, 2007), which suggests that having the correct position in the value chain is vital for successful internationalization.

The Uniqueness of the offer also had an important effect on the firms since those that operated in markets inhabited by firms that offered similar products failed without exception. This happened because the firms that did not offer a unique product faced harsh competition, which they were (or are) unable to face due to lack of resources (Moen, 2002; Jones et al., 2011). This confirmed the assumption that INVs must control unique technology/value proposition in order to reach a specialized place in the value chain (Gabrielsson & Kirpalani, 2004). Interestingly, the uniqueness could be a double-edged sword because if the market was not ready to implement the product due to technological or economic considerations, then the product was not accepted by the market, regardless of how good or technologically advanced it may have been.

The founders had a profound effect on the firms, which corresponds with most IE theory (Moen, 2002; Jones et al., 2011). The founders' access to social networks had a particularly noticeable effect on the ability to successfully internationalize (Mort & Weerawardena, 2006; Alvarez & Barney, 2001; Steensma et al., 2000). The founders used the networks in order to access resources, improve the firms' strategic positions, learn new skills, gain legitimacy and cope with technological challenges, all of which are behaviors that have been previously observed by the literature (Coviello & Cox, 2006; Gulati, 1995; Alvarez & Barney, 2001; Das & Teng, 1998; Hitt & Ireland, 2000).

As expected the founders' approach to business was important for the firm's success (Boter & Holmquist, 1996; Karagozoglu & Lindell, 1998). The firms that were founded by entrepreneurs with a global vision and a positive outlook towards exporting achieved considerably more success in their internationalization, making this one of the more important factors. A global approach was not enough, however, as this approach needed to be supplemented with a good product and international experience. However, the global perspective of the founders strengthened the firms' ability to internationalize successfully by allowing them to identify and pursue international opportunities, a phenomenon confirmed by most studies on the subject (Harveston et al., 2000; Nummela et al., 2004a; Moen, 2002). The lack of a global perspective, however, led

without exception to failure as it caused the founders to fail to see international opportunities or to overestimate the risk of pursuing them. There are multiple different methods of obtaining this global outlook. Managers that had been educated or had lived abroad for example were more likely to have a global perspective (Kundu & Katz, 2003; Cooper et al., 1994).

All of the founders attempted to turn intangible resources into tangible ones. The firms' ultimate success was largely based on how well the founders performed this task (Mejri & Umemoto, 2010) since most of the firms faced severe resource scarcity (Aldrich & Auster, 1986). Performing well on this factor did, however, not guarantee successful internationalization. For example, one of the founders had an excellent ability to use this factor but was not able to internationalize because of the lack of a global approach to business and lack of tangible resources as well as the lack of a unique product. Another founder experienced great success in turning domestic intangible resources into tangible resources but was incapable of repeating this success abroad since his firm lacked the international intangible resources, such as social networks or financial capital, which would have been required to do so. This raises the question as to whether a firm's intangible resources always need to be international in order to support internationalization.

Of the intangible resources, the social networks of the founder were the most important by far as firms were able to use them to compensate for almost all of their deficiencies, especially resource deficiencies and lack of international experience (Dimitratos et al., 2003; Oviatt and McDougall, 2007). These results are in line with a stream of research that particularly emphasizes social ties (e.g. Ellis, 2000; Anand & Khanna, 2000; Kogut, 2000). It is difficult for a single individual to possess all of the skills required to effectively perform this mission. This underlines the importance of having an entrepreneurial team in order to facilitate more successful internationalization.

The other six factors had less effect on the firms but still influenced the firm's success. Homogeneity enabled the firms to penetrate the international market more rapidly and with lower costs (Gassmann & Keupp, 2007) and in one instance even provided added value for the customer. Most of the offerings were homogenous, likely due to the fact that most of them were created by software firms whose products are often homogenous. Those that successfully attracted domestic resources and customers

were less able to transform into an international venture when it became necessary, which led to failure (Gassmann & Keupp, 2007). This happened as the firms were not focused on internationalization and therefore not prepared for the challenges of internationalization. The Icelandic market is on its own unable to sustain a firm that offers a globally competitive product in the corporate software or high tech market. These firms only have one or two domestic customers (one firm even had to give away their products in a CSR initiative since the domestic user could not even afford a single unit). Furthermore, the market is most likely unable to sustain a consumer software firm since the only firms in that category that have survived have had users that numbered more than the entire Icelandic nation.

The effects of domestic market assistance were predictably positive when they were present (Moen, 2002). The domestic market helped the firms to access qualified employees, capital, raw materials, components and, perhaps most importantly, advice and collaboration. Government assistance played a large role in the success of the firms but the founders emphasized the importance of not getting dependent on that assistance. The two firms in the fishing industry received substantial help from their domestic market. Despite this, one of them only achieved moderate success while the other was unable to successfully internationalize. This raises the question as to whether these domestic market aids need to be used in a specific way or whether other factors such as international experience and the ability to take a position in the global value chain are needed in conjunction with the domestic market aid in order to reap the full benefit from it.

Human resources, both in the form of the entrepreneurial team and the employees, were very important for the success of the firms (Hitt, Ireland & Harrison, 2001; Hambrick & Mason, 1984; Hitt, Biermant et al., 2001). The influences of most of the founders decreased rapidly after the firms were founded, which is in accordance with the literature (Schein, 1983; Kundu & Katz, 2003). The importance of having the correct selection and training tools then became evident, since the firms that did not possess the ability to attract new employees were markedly less successful. Today, Icelandic high-tech industries are facing a serious talent shortage (McKinsey and Company, 2012), and firms wishing to internationalize might need to look abroad in order to fulfill their needs.

Considering that small firms are in most cases unable to rely on their founder's savings in order to internationalize, since internationalization is often more capital intensive than traditional entrepreneurship (Gabrielsson & Kirpalani, 2004), it is not surprising that most of the firms studied received capital investments in order to finance their internationalization. Although some of the cases were able to get past the need for capital by utilizing networks and by turning intangible resources into tangible resources, a firm's access to capital or lack thereof proved to be a major influence. A considerable portion of the firms were underfunded when they started their internationalization, often because of underestimation of costs. This made the firms dependent on small, short-term projects that were often unrelated to their core business, which slowed the firms down, defocused them and decreased their ability to service their customers, thus confirming previous studies on the issue (Solberg & Askeland, 2006).

The entrepreneurial culture, which dictated how the firms conducted their daily operations (Lumpkin & Dess, 1996), had a positive effect on how quickly and successfully the firms internationalized. International learning can be costly for Icelandic firms due to travel distances (Hilmar Gunnarsson, personal communication, March 5, 2014), but the firms that employed effective learning were more successful than those that did not. Learning enabled the firms to react to customer and market expectations, to modify their offering and to optimize their organization in order to create and provide as much value as possible (De Clercq et al., 2012; Mathews & Zander, 2007; Spence & Crick, 2009). One of the founders employed extensive learning by continuously staying in contact with potential customers and industry experts but did not act on the information acquired due to lack of resources and experience, which emphasizes the fact that knowledge without action is worthless.

5.4 Other interesting findings

A unique and technically advanced product is often the key to early success for INVs prompting literature to put a large emphasis on it (Chetty & Campbell-Hunt, 2004). However the results of this research show that having a great product was not enough. It had to be reinforced with the correct channels, networks and strategies as soon as possible (Gabrielsson et al., 2008). According to many of the founders, attracting the best possible employees from the very beginning also proved to be important, since these initial employees tended to attract further new employees with similarly high credentials. Furthermore, many of the firms additionally attracted great people by offering an "exciting" place to work and a "world-changing product". Culture

therefore played an important role in the internationalization of the firms. Interestingly, firms that had a strong entrepreneurship orientation, but a weak marketing orientation were able to create great product but were unable to sell it. This indicates that a firm's culture must be strongly orientated towards both international entrepreneurship *and* international marketing in order to achieve success. This furthermore emphasizes the importance of having a diverse entrepreneurial team since the people who possess one of the orientations do not necessarily possess the other.

Many of the firms received funding from government-backed grant programs and investment funds. This support played a pivotal role in the success of the firms by providing them with a substantial part of what little funding they had, and thereby partially fulfilling the role of smart foreign capital. The relative importance of government assistance is, however, largely due to the lack of capital in Iceland and the immaturity of the Icelandic venture environment (Hilmar Gunnarsson, personal communication, March 5, 2014), and it is unlikely that it plays such a large role in other countries. It is important to note that these government programs also resulted in an unexpected disadvantage. Applying for these grants and investments required numerous business plans, proposals and presentations, which diverted the focus of the founders away from what really mattered, creating and selling products. The grants and investments were also for the most part rather small and were therefore not sufficient to easily facilitate internationalization, which forced the firms to live “from handout to handout”.

Receiving substantial amounts of seemingly smart foreign capital was, however, not enough. One firm that received massive amounts of foreign capital failed completely, due to the inability to identify the right distribution channels. Another firm received the highest foreign investment of any Icelandic entrepreneurial venture but has barely made any sales and their profitability and viability is uncertain. The results therefore support the conclusion of Gabrielsson et al. (2008), in that access to smart foreign capital helps the firms as they grow and develop their organizations, but it is not a guarantee for success.

Research has emphasized “pre-founding” learning and the experience of the founder. The results of this research show that although it was very beneficial it was not *necessary* for the founder to have all of the qualities from the start as they could be built up over time through learning, a position in the value chain, smart foreign capital and

good hiring decisions. Although they were not required, the firms that had specific learning processes in place furthermore enjoyed more targeted learning and proved to be amongst the more successful. However, their success might be due to the mindset that drove them to learn, rather than the learning itself.

The results show that social networks do not need to be formal or bound in contracts, since the informal relationships that the firms had were often more productive (Presutti et al., 2007). As expected, the networks that the founders were a part of were extremely varied (Coviello & Cox, 2006), were most often created before the foundation of the firms and had often taken years to form through social and professional interactions. Notably, the founders did not have to own or control these networks before they started the firms if they were able to construct them *very* rapidly through investors, customers or employees. This explains why INVs are sometimes characterized by the rapid development of network (Chetty & Campbell-Hunt, 2004). Not all relationships or social capital were helpful (Sasi & Arenius, 2008), and some that started off well ended up turning sour. Some of the firms made deals that adversely affected their ability to get their product to the market. These inevitable snags are perhaps the source of the conflicting results regarding the helpfulness of networks for INVs: Some researchers proclaim that the speed of internationalization is affected adversely by controlling a network (Nummela et al., 2004b), while others assert the opposite (Gassmann & Keupp, 2007).

5.5 Omitted factors

The literature has listed numerous factors which are supposed to affect the INVs success in internationalization (e.g. Gassmann & Keupp, 2007). In order to simplify the results, several of these were integrated into the factors listed above and those that were less relevant were taken aside. These factors include IP protection abilities, which were advocated by Gassmann and Keupp's (2007) study of biotech firms. This factor was largely irrelevant for the firms in this thesis, regardless of which of the two sectors they occupied. This raises the question as to whether some factors are industry specific and whether the results apply to all firms.

"Marketing capabilities", which includes ability to effectively create and execute a marketing strategy (Morgan et al., 2009), has been suggested by the literature as being an important factor in the success of INVs (Kropp et al., 2006). The results showed that this was a relevant but not decisive factor for the firms. This is because the

firms could use their position in the global value chain in order to get past the need for marketing capabilities, e.g., by partnering with a distributor (Jones, 1999) who then handled all marketing duties or a lead user who championed the product. The consumer firms which succeeded were furthermore aided in their marketing by a fanatical user base, by extensive news coverage and by preferential treatment by distributors. Since the marketing capabilities were therefore not essential to the success of the firms, they are not included in the framework. Another proposed factor, risk acceptance, was an aspect which contributed to several of the factors, such as the entrepreneur's global orientation and the firm's culture but it was omitted from the list of factors for simplicity's sake.

The "processes" and "strategy" are other factors that were omitted from the final outcome since they were perhaps too general and hard to pinpoint to be usable as a success factor in IE. The "innovativeness", which has been repeatedly (and rightfully) mentioned as an extremely important factor, was skipped since it is a part of some of the factors included in the framework. The same goes for "commitment", which has also been extensively connected to successful IE. The management of resources was taken aside for the same reasons and because the term is too general. Previous research has emphasized the "focus on niches" (Moen, 2002), which on its own has a distinct effect on the firms' ability to successfully internationalize, but was also covered by other factors in the framework. This factor was perhaps the hardest to omit from the final framework, but it eventually became incorporated into homogeneity and the ability to take on a position in the global value chain, in the interest of decreased complexity.

With the exception of accessing international value chains, the firms could generally lack or mismanage one or more of the factors and still succeed if they compensated for it by using some of the other factors effectively. The factor that the successful firms most often lacked was smart foreign capital. The lack of this factor could be addressed by the application of a mixture of the other factors, such as the ability to turn intangible resources into tangible resources and having a unique product that did not have competitors. Many of the firms also did not benefit from domestic market assistance but were able to cope by applying the international experience of the founder. Additionally, some of the successful firms started out with products that weren't completely unique but compensated for that by accessing the correct

international value chains and using social networks to get the product an advantage in the distribution line, ahead of the competition.

As previously established, the factors needed for successful international entrepreneurship are not exactly the same as those needed for traditional entrepreneurship. INVs face international challenges, and they need international abilities to fight these challenges. In fact it may be possible that everything in the process must be at least somewhat international. This means that, besides the opportunity, every aspect of the firm, for example, the entrepreneurial team, the resources and the structure of the organization, must be in some part international to increase the chance of international success. This view was voiced by several of the interviewees and merits further investigation.

6.0 Conclusion

6.1 A clearer image emerges

After identifying all of the relevant factors for the cases, a clearer and simpler image of the process of international entrepreneurship emerges. Current theories of IE partially explain the success of INVs but lack a unified framework to combine these factors. In order to remedy this issue, this paper presents a new framework which takes the results into account. One of the final outputs of this thesis is therefore a framework that researchers can use as a basis for further research in order to advance knowledge within the field of IE. The framework is rooted in current theory but constructed using the results from the research. Given the possible difficulties in creating a conceptual framework that is simultaneously simple, general and precise, the proposed framework sacrifices precision in order to focus on giving a broad picture, with the aim of benefiting as many researchers and managers as possible. The factors identified in this paper are relatively easy to identify and measure which will make the usage of the framework simple and efficient.

The second output is a number of recommendations intended to guide founders and managers in the rapid internationalization of new firms. In order for this section to be of use to managers, regardless of their experience with scientific articles, it is written in an unembellished form with as little jargon as possible.

As mentioned, there were limited differences between software and other high-tech firms. In addition to that, the factors had similar effects on firms in both sectors. These similarities between the two industries suggest that the results could possibly be generalized across other industries.

6.2 New model proposed and displayed

The results demonstrate that a number of characteristics are shared by successful international entrepreneurs. In order to clearly present the factors as they relate to the process of IE, a new model is proposed. The image below demonstrates the proposed model, which contains the most important factors for each condition of the process of IE.

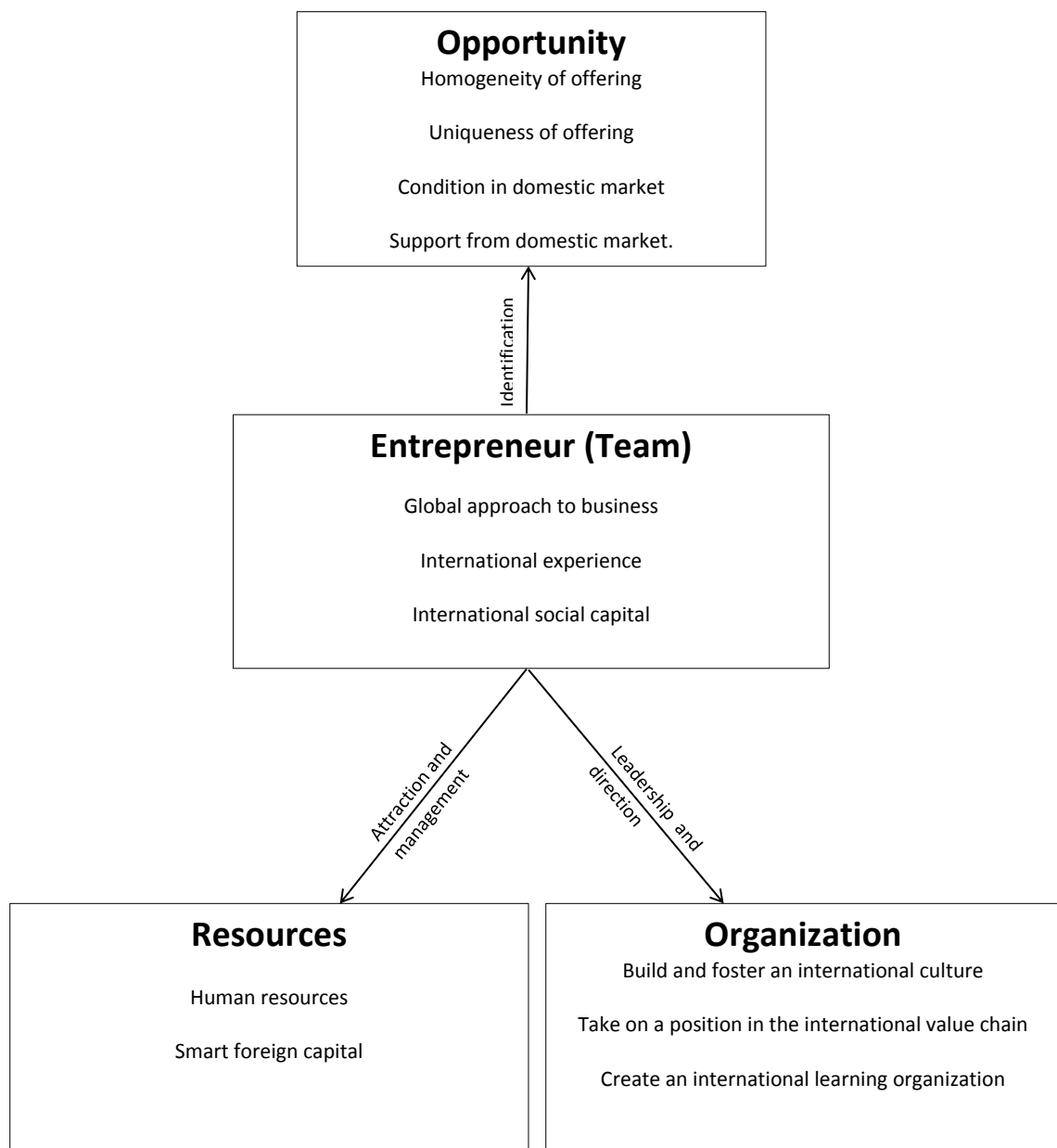


Figure 5 A new model of the international entrepreneur process

6.3 Implications for management practice

The results benefit managers of entrepreneurial firms in various ways. First, they allow managers to analyze whether they have all of the factors required to grow rapidly in an international environment. This will allow them to time and structure their growth more efficiently as well as to identify the factors they lack so that they can be obtained or compensated for earlier in the process. Second, the results give managers a mixture of empirical knowledge and anecdotal stories that will allow them to identify and react to possible issues. Third, they might allow entrepreneurs to realize that there are multiple ways to internationalize and that internationalization is becoming easier, thereby encouraging more current and potential entrepreneurs to exploit possible opportunities. Fourth, the results provide managers with a set of criteria to use when they compare themselves with competitors in order to better understand their market position.

Becoming an entrepreneur by founding a firm is one of the most challenging professional endeavors that one can undertake. Long hours, hard work and emotionally draining situations are common, which means that many fail and even more are discouraged from ever starting. International Entrepreneurship is arguably even more difficult as it demands that the entrepreneur consider and manage more factors and risks. Many entrepreneurs, however, consider entrepreneurship to be one of the most fulfilling and enjoyable experiences in their life, even disregarding the monetary rewards.

Entrepreneurs are rather unique. They are better able to identify opportunities and disregard risks and are often driven by extreme interest and passion. International entrepreneurs must embrace these qualities to a greater extent than traditional entrepreneurs since they must identify and exploit opportunities outside of their home market. In order to reach successful internationalization, it is important for entrepreneurs to consider the factors listed above. There is no one way to creating a sustainable international business as firms require different advice based on their nature, resources and position, but the results indicate that some practices are more likely to lead to success. Below is a short compendium of the factors and the recommended course of action for each one. The recommendations are split up into two tables, one covering the founding period when the firm is transformed from an idea into an organization and the other covering the internationalization period and beyond.

Theme	Factors	Recommended course of action in startup phase
Opportunity	<i>Design a product that can be used in every country in the world</i>	Simplify your idea as much as you can. Strive to solve a very specific problem for a group of people which exist in every country. Test your idea with people from as many countries as possible and reiterate. Fail quickly and cheaply in testing! Select sectors that are more likely to have homogenous products.
	<i>Enter the market with a unique product</i>	Realize that it is extremely difficult if not impossible to compete with incumbents with similar products without considerable resources or radical new ways of delivering value through those products. Define and redefine your target market, making it smaller and smaller, until you can comfortably say “I am the only one doing what I do” and you will be able to dominate your market.
	<i>Don't get distracted by the domestic market</i>	Do not let potential domestic market opportunities distract you and the firm from its main purpose which is to create an internationally successful organization. Use domestic buyers as a test market but focus a large majority of resources on international sales and learning.
	<i>Seek support from local sector from the start</i>	Enter sectors which have large and fully developed international clusters in your home country or consider moving abroad to somewhere that has these clusters (e.g. Silicon Valley for digital solution, or Paris for fashion and cosmetics). Use government assistance smartly but avoid getting stuck in living “from handout to handout”.
Resources	<i>Attract A+ people and build an entrepreneurial team</i>	Make sure that you attract a team of entrepreneurs around you with a variety of skills and personalities but similar drive and passion. Individual entrepreneurs have a much harder time reaching success. Remember that it is better to get a small piece of a large pie than the entirety of a small or non-existent pie so be generous with capital in order to attract good partners but remember that the capital will be thinned out by future investments. It is extremely important that a shareholders agreement is made as soon as possible in order to decrease risks of infighting. Hire only the best possible people, preferably with international experience in a similar sector and remember that A people hire and attract A+ people. Use your international social network and the social networks of employees to attract additional employees. Emphasize trust and openness, encourage cooperation and be considerate towards the work-life balance. Act like you want your employees to act.
	<i>Seek capital abroad and emphasize firm-investor fit</i>	Get outside help to estimate costs and seek more money than you think you will need. Build professional business plans and make sure that all of your presentation material looks professional. It is nearly impossible to seek foreign capital while sitting in Iceland so you must travel abroad to do so. Value experience, social networks and firm-investor fit above the amount of money. Seek money from grants and governments but beware of getting “trapped” in the grant environment. Use the investor to the fullest, she does not want you to fail and your co-operation should be extremely close.

Organization	<i>Emphasize the marketing- and innovation orientation during employee selection.</i>	Build an international culture from day one! Many entrepreneurs disregard this important step in the early “honeymoon” days of a partnership where everyone is having fun getting the product out the door but this factor cannot be overlooked. It takes conscious effort to build up the right mixture of marketing and innovation orientation through selection and cultivating of employees. The founders’ influences decrease steadily as the firm grows so this must be done as soon as possible.
	<i>Access a global value chain</i>	A startup has no way of performing all tasks, from resource acquisition to distribution, unless it has serious financial backing. In order to bypass this issue the firm must assume a position in the global value chain. By having a specialized position the firm can focus on what it does best e.g. engineering a technical solution and outsource the manufacturing and distribution to a Chinese factory and a US multinational respectively. Make sure that relationships with potential partners are established as soon as possible so that trust is allowed to properly form before formal deals are made. Take your time and research your potential partner and the market environment extensively before committing to a deal and preferably seek offers from multiple partners.
	<i>Emphasize learning</i>	Seek a board of advisors as well as lead users as soon as possible. Consider giving them a very small amount of capital. Establish lines of communication with suppliers, customers and other market players immediately
Entrepreneur	<i>Have a global approach to business</i>	Seek education in your field abroad, even an exchange year might suffice if time is used efficiently. Seek employment for international firms, preferably in the sector that interests you most, seek positions which require you to travel extensively or be in touch with foreign suppliers and customers.
	<i>Seek international professional experiences before founding</i>	Be aware of your experiences and skills/weaknesses and attract partners that compliment them. If you are good at coding attract someone who is a great salesperson and vice versa. Learn what you can do without resources before you get them, this way you will be more apt at using them efficiently.
	<i>Enlarge your professional and social network as much as possible before founding</i>	When building up a social network remember that ideas are essentially worthless. Keeping the idea to your self is a surefire way of making it extremely difficult to reach success. Remember, vital assistance and feedback can even come from a simple conversation with a stranger so yelling from the highest mountain is usually the best strategy. Surround yourself with people you would consider master networkers and use their networks. Remember you don’t need to control or build the networks yourself to benefit from them. Always leave your jobs on good terms; the most valuable help is very often from previous employers!

Theme	Factors	Recommended course of action in internationalization phase
Opportunity	<i>Test the product in multiple markets and use the results to create a global product.</i>	Perform rigorous market testing to understand better what various markets need and seek a common denominator. Design products from the start that can be used globally, don't wait until the product is nearly finished as that might mean higher development costs. Consider narrowing your target market if it means that you can make the product more homogenous.
	<i>Compete on value rather than on price</i>	Small firms are not able to compete on price or distribution. Aim for smaller markets with very specific needs. Continue to redefine your market until you can positively say "We are the best at doing what we do" Be everything for a small group of people rather than something for everyone.
	<i>Keep focus on the internationalization</i>	Make sure that you don't become overly dependent on the domestic market by continuingly seeking (at least small) business deals from abroad but take care not to lose focus.
	<i>Work with domestic firms in similar sectors</i>	Make sure that the firm is integrated in the domestic market. Have a hand in building the sector in your environment through the creation of industry specific organizations and cooperative deals. Attempt to acquire support from markets in other countries if you have the chance to do so.
Resources	<i>Emphasize employee-firm fit and international experience in hiring</i>	Hire people with international experience from the sector. Make employees feel safe and pay them enough so that they don't have to worry but use non-financial incentives to increase performance. Remember that your employees are your most valued asset and that losing one or making a bad hire can be extremely costly in the short and long term. Put extreme emphasis on employee – firm fit and the quality of the initial employees. These employees shape your firm and have an effect on future employee's perception of the firm. Make sure to use the networks of employees to seek further employees.
	<i>Seek venture funding internationally and ask for more than you think you will need</i>	Seek venture founding as soon as business plans, product and the market are ready. Take care not to wait until you are weeks or even months away from running out of cash, most investors can "smell" distress. Establish informal relationships with potential investors a year or more before you foresee that you need cash and start formal discussions no later than 6 months before. Seek the advice of entrepreneurs that have sought cash internationally.
Organization	<i>Take measures to build and strengthen the entrepreneurial and marketing orientation</i>	Continue to select employees not only based on their skills but also according to their attitude. Take explicit measures to build up the culture that fits the firms, emphasizing the international – entrepreneurial and marketing orientation. Build up trust and a sense of ownership and use tools such as flexible time, delegation, empowerment and team building to foster an entrepreneurial orientation. Send employees abroad to sales conventions, training and joint projects with partners and make the whole team responsible for communicating

with international customers when applicable to increase the international orientation. Use tools such as re-training programs and horizontal movement to strengthen both orientations.

Focus on doing only what you do better than others and outsource the rest.

If possible, outsource everything that could not be considered your core competency such as manufacturing, distribution, it, finances, legal issues and patent protection. Make sure that you don't outsource all quality management or the attraction of early employees. Understand who your real customers are and make sure that you chose the appropriate distribution and marketing channels to reach them. Sometimes this can be achieved through partnerships or 3rd party distributors but consider what the rest of the market is doing and don't overlook distributing directly to end users.

Build a Learning organization

Build specific learning processes and engage actively and relentlessly with every stakeholder.

Entrepreneur

Work closely with international customers and other industry players

Open an office abroad if possible and continue to at least occasionally travel to meet with clients and suppliers, even if you hire employees to handle most of these tasks. Keeping in touch with the stakeholders around your firm allows you to identify opportunities that you might have overlooked. Many entrepreneurs focus on selling and raising capital in the most promising markets and leave the development of their product in the hands of their employees or partners in their home country. This makes it **WHAT**. Partner with international firms, choose your partner based on the best opportunity for firm wide learning and network building rather than the one with the most short term profitability.

Leverage networks and technical abilities to get past resource constraints

Prepare to face resource constraints before they happen (and they will!) use the networks you acquire during the firm's operations to create business relationships and to secure resources, the knowledge that is built within the firm to create innovative products that would be accepted worldwide and their personal capabilities to get past the shortage of human resources.

Access networks of the people are connected to the firm

Use the networks of employees, investors, suppliers and customers to enlarge your own network. Business relationships can open up new networks but take care to emphasize unstructured relationships within the partner firm as they are often more fruitful than the formal relationship written down on the contract

6.4 Implications for theory

The original 1989 and 1994 articles by Oviatt and McDougall were extremely important in raising questions and sparking discussion about international entrepreneurship. These articles and subsequent articles have, however, been less successful in explaining the birth and growth of these firms (Jones et al., 2011). The main contribution of this research is that it identifies core concepts and integrates them with the contingencies of entrepreneurship in order to construct a testable framework for the internationalization process, which researchers can build upon (Jones et al., 2011). It addresses criticism in the field of IE (Keupp & Gassmann, 2009) and allows researchers to delve deeper into the subject. This thesis furthermore answers the call for a more multidisciplinary approach (Keupp & Gassmann, 2009) as it addresses issues from both entrepreneurship and internationalization and thus better integrates these fields into the field of IE.

The study adhered to and elaborated on the most common definitions applied in IE research in an effort to aid the development of definitional rigor, which enables easier comparisons between the study and others in the same field (Keupp & Gassmann, 2009; Jones et al., 2011). This definitional rigor furthermore increases the validity, robustness, reliability and clarity of the study within the domain of IE. The study used a qualitative research method with multiple informants from within and outside of the firm in order to address the concerns of previous researchers about the quality of the information gathered (Coviello & Jones, 2004).

The thesis compiles and simplifies the factors that have been described as having the largest impact on successful internationalization. This reduces the number of factors that researchers need to look at and simplifies future research. It furthermore divides the factors into themes, which allows researchers to see the connections between the factors with more ease and thereby makes them easier to study.

7.0 Next steps and final remarks

As is always the case whenever the scientific method is applied, more questions arise than are answered. Revisiting the research question raised in Section 1, it is clear that there is no magic approach that guarantees success in IE. There are many factors that affect a firm's ability to successfully internationalize, and it is difficult to identify them all, especially considering that no two firms are exactly the same. This paper does not claim to identify all of the factors needed, but the four themes and 12 factors presented above serve as a good starting point. The research hints at the presence of other factors and considerable further research is still required.

A number of limitations are acknowledged. The study's location in Iceland might reduce the ability to generalize and, although single country case study research has been conducted with interesting results (Kundu & Katz, 2003), studies that investigate the subject across borders would greatly strengthen the theoretical soundness of the framework. The research appropriately used a small sample as its purpose was to create a new framework. Using this framework to structure a questionnaire, which would be distributed to a large sample, might be useful in order to increase the validity of the framework and test its applicability.

The gradual staged internationalization process does not seem to explain the origin of INVs. However, it might be relevant to connect this process of gradual involvement to the entrepreneur himself and the environment in which he operates since they have often gone through this process *before* the firm is established. Doing so, could result in a view of the internationalization process that extends past the firm to the entrepreneurs and the environment, and could therefore provide a number of interesting results.

The framework presented here is intended to be general, with the aim of encapsulating the fragmented field of IE as well as benefiting the maximum number of managers. However, the general nature of the framework means that managers will not find all of the answers that they are looking for within it, and that researchers investigating very specific fields might find it to be insufficient for their studies. In order to amend this issue, researchers must continue to develop the framework through further research. The research furthermore investigates a long period in the firms' lifetime, which gives a good perspective for the creation of a general framework but is

ill suited for detailed investigation of the factors needed at each stage in an INV's lifetime. Future research might therefore consider narrowing the time frame considerably in order to focus on giving managers more detailed advice.

There is likely no single factor that is on its own able to explain the successful internationalization of new ventures as it is an ever-changing process that is affected by internal and external influences. As the IE field begins to coalesce, more frameworks will begin to emerge and a stronger theoretical foundation will be built. The field is currently starting its third decade as an independent field, and research is becoming more common and is starting to display proper definitional rigor. As economies become more dependent on international trade and as they continue to derive a lot of their value creation from entrepreneurship, IE becomes more and more established as an important component of business theory.

Icelandic software and entrepreneurial ventures will continue to become more important for the economy. Providing managers in these sectors, and other sectors that are likely to host international new ventures, with the tools to better plan and execute their rapid internationalization will result in more successful international entrepreneurship amongst firms in Iceland and across the world. The world's economy faces unique challenges as billions of people will step into the middle class in the next decades but supporting entrepreneurial ventures is an important step towards creating a more sustainable and rent-generating economy so essential to preserve and improve living standards.

8.0 References

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9.0 List of figures

Figure 1 The Uppsala model of the internationalization process (Johnson & Vahlne, 1977).....	8
Figure 2 Entrepreneurship contingencies (Wickham, 2006, p. 223).....	13
Figure 3: Success factors listed by literature	31
Figure 4 Case overview	34
Figure 5 A new model of the international entrepreneur process	73

10.0 List of primary interviewees

Þorsteinn I. Víglundsson	Thorice	14. February 2014
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Herwig Lejsek	Videntifier	21. February 2014
Guðjón Már Guðjónsson	OZ	22. February 2014
Sigurður Ólafsson	CCP	28. February 2014
Jón Þorsteinsson	Marorka	7. Mars 2014
Magnús Ingi Óskarsson	Calidris	11. Mars 2014
Ólafur Andri Ragnarsson	Betware	12. Mars 2014
Haukur Magnússon	Gogoyoko	13. Mars 2014
Jónas Björgvin Antonsson	Gogogic	18. Mars 2014
Pétur Halldórsson	Nox Medical	19. Mars 2014
Þorsteinn Friðriksson	Plain Vanilla	26. Mars 2014