Managers’ International Exposure and its Influence on International Startup Performance: An Investigation of the Nordic Startup Community in Silicon Valley

Navn: Mia Sand Hermanseter, Alexandra Mull

Start: 02.03.2017 09.00
Finish: 01.09.2017 12.00
Hand-in date: 01.09.2017

Program:
Master of Science in Business
Major in International Business and Major in Leadership and Change

This thesis is a part of the MSc program at BI Norwegian Business School. The school takes no responsibility for the methods used, results found and conclusions drawn.
Acknowledgements

First and foremost, we are grateful for the help and guidance from our supervisor, professor Jan Ketil Arnulf from the department of Leadership and Organizational Behaviour at BI Norwegian Business School, throughout this process. We also wish to thank our contact at Nordic Innovation House, for her input and assistance in our data collection and startup performance discussion. We are highly appreciative of all respondent companies, without whom this thesis would not have been possible.
# Content

**EXECUTIVE SUMMARY**  

---  

**1.0 INTRODUCTION TO RESEARCH TOPIC**  

---  

**2.0 THEORETICAL BACKGROUND**  

---  

2.1 **INTERNATIONAL STARTUP FIRMS AND ENTREPRENEURIAL MANAGEMENT**  

---  

2.1.1 **STARTUPS**  

---  

2.1.2 **STARTUP MANAGEMENT**  

---  

2.1.3 **INTERNATIONAL STARTUPS**  

---  

2.1.4 **INTERNATIONAL ENTREPRENEURIAL CAPABILITIES**  

---  

2.2 **MANAGERS’ EXPERIENCE AND FIRM PERFORMANCE**  

---  

2.2.1 **INTERNATIONAL EXPERIENCE**  

---  

**3.0 RESEARCH MODEL**  

---  

**4.0 RESEARCH METHODOLOGY**  

---  

4.1 **RESEARCH STRATEGY**  

---  

4.2 **RESEARCH DESIGN**  

---  

4.3 **SAMPLE**  

---  

4.4 **DATA COLLECTION**  

---  

4.4.1 **PRIMARY DATA COLLECTION**  

---  

4.4.2 **SECONDARY DATA COLLECTION**  

---  

4.5 **MEASURES**  

---  

4.5.1 **DEPENDENT VARIABLE – FIRM PERFORMANCE**  

---  

4.5.2 **INDEPENDENT VARIABLES – MEASURES OF INTERNATIONAL EXPOSURE**  

---  

4.5.3 **CONTROL VARIABLES**  

---  

4.6 **QUALITY OF THE RESEARCH**  

---  

4.6.1 **VALIDITY**  

---  

4.6.2 **RELIABILITY**  

---  

4.6.3 **BASE RATE ISSUES**  

---  

**5.0 RESULTS**  

---  

5.1 **ANALYSIS**  

---  

5.1.1 **ADJUSTMENT OF DATA**  

---  

5.1.2 **PRELIMINARY ASSESSMENT**  

---  

5.2 **MULTIPLE LINEAR REGRESSION AND HYPOTHESIS TESTING**  

---  

5.3 **FURTHER INVESTIGATION OF RELATIONSHIPS**  

---  

5.3.1 **CURVILINEAR RELATIONSHIPS**  

---  

**6.0 DISCUSSION**  

---  

6.1 **MAIN FINDINGS**  

---  

6.1.2 **BASE RATES**  

---  

6.2 **LIMITATIONS AND FUTURE RESEARCH**  

---  

6.2.1 **SAMPLE**  

---  

6.2.2 **RESEARCH DESIGN**  

---  

6.2.3 **NETWORKS AND PERFORMANCE**  

---  

6.3 **MANAGERIAL IMPLICATIONS**  

---  

**7.0 CONCLUSION**  

---  

**8.0 REFERENCES**  

---  

**APPENDICES**  

---
Executive Summary

The purpose of this thesis is to investigate whether a manager’s previous international exposure influences the performance of their international startup firm. A cross-sectional study is performed by using an online survey for data collection on managers’ previous international exposure, complemented by secondary data on performance from online databases. The research is conducted on a sample of 58 managers from 49 international startup companies from the Nordics, which are all present in Silicon Valley. Multiple linear regression and analysis of non-linear relationships is performed to test the proposed hypotheses.

The results show that international exposure gained through studies abroad and work-related international experiences, as well as linguistic capabilities, are the most important factors in predicting international startup performance.

The limitations of the thesis relate to the possible difficulty of generalizability due to the sample size, and the chosen research design, which makes it difficult to establish causality of the relationships. Future studies should conduct the same research on different samples and use other research designs to get more comprehensive knowledge about managers’ international exposure and international startup performance.

Keywords: International new ventures; startups; firm performance; entrepreneurs; managers; international exposure; international startups.
1.0 Introduction to Research Topic

The importance of gaining international experience is widely promoted by academic institutions, employers and politicians, and is said to give a person advantages in their professional and personal lives (Halvorsen, 2011; Kaspersen, 2007; Nyland, 2011). An individual taking parts of his/her studies abroad, engaging in international opportunities at work, living abroad or speaking several languages, is likely to gain beneficial experiences and expertise (Nyland, 2011). As such, it is reasonable to assume that also managers with international expertise will exceed in their professional careers, as the capabilities gained through these types of experiences are likely to give the manager advantageous attributes and influence their firms’ performance (Finkelstein & Hambrick, 1996; Hitt, Bierman, Shimizu & Kochhar, 2001; Stuart & Abetti, 1990). The current thesis introduces the term international exposure, encompassing experiences and influences of international character imposed on the individual through different stages in life. Previous research has used terms such as international experience (Biemann & Braakman, 2013; Carpenter, Sanders & Gregersen, 2001; Harrison, 2012; Petersdotter, Niehoff & Freund, 2017; Reuber & Fischer, 1997; Reuber & Fischer, 1999) and international orientation (Piaskowska & Trojanowski, 2014) when discussing international characteristics of individuals found to be important for capability development and international managerial competence. The terms are often used simultaneously and interchangeably, but mostly refer to the same overall concepts of e.g. international career experiences, nationality (Biemann & Braakman, 2013; Piaskowska & Trojanowski, 2014) and cultural knowledge (Harrison, 2012; Lee, Therriault & Linderholm, 2012). International exposure is therefore employed as the main term describing the topic of this thesis, as we deem it better to capture our interest in international experiences from both career life and studies, as well as early-life international influences in managers’ formative years. In an attempt to measure the effect of managers’ international exposure on firm performance, we have studied founders and managers of startup companies and their international exposure prior to founding of their companies. These companies distinguish themselves from more established firms, as the entrepreneur’s background, personality, experiences and capabilities are expected to have a more direct influence on firm performance (Chandler & Hanks, 1994, cited in van Praag, 2003; Peteraf & Shanley, 1997, cited in van Praag, 2003; Reuber & Fischer, 1999).
Research has indicated that the previous experience of founders may influence firm performance (Reuber & Fischer, 1997; Reuber & Fischer, 1999), and most of the findings point to experience acquired prior to foundation of the firm as the most important (Dyke, Fischer & Reuber, 1992). This includes previous experience with startups, business within the same industry, international experience, and family experience (Dyke et al., 1992). Furthermore, the concept of ‘international new ventures’ (INVs), or international startup firms, which are business organizations that internationalize early after initiation (Knight & Cavusgil, 2004), and their leaders, have been of interest in international business literature, and authors have sought to find a rationale for why some firms internationalize already at inception and others do not (Karra, Phillips & Tracey, 2008; Knight & Cavusgil, 2004; Madsen & Servais, 1997). One of the explanations for their internationalization behavior is founders’ and founder team’s background and international experience (Madsen & Servais, 1997). However, there exists little research on how the international exposure of these founders affects firm performance. Most literature that highlights international experience as a factor influencing international venture companies, explain it as a rationale for their early internationalization (Karra et al., 2008; Zhang, Tansuhaj & McCullough, 2009), with little focus on its effect on performance. The relationship between the international exposure of INV managers and firm performance is identified as an underexplored area in current research, and lays the basis for what we want to investigate in this thesis. Managers of international startups provide a good foundation for studying this topic on, as the decision to operate in a foreign country makes these managers ‘international’ by definition. We aim to investigate whether or not managers’ previous (i.e. prior to foundation of current firm) international exposure has an effect on the performance of their firms. For our purpose, the term ‘managers’ refers to both founders and top management of international startup companies. Based on the above, we set out to answer our research question;

“If and how does managers’ previous international exposure influence the performance of international startup firms?”

This thesis first presents a literature review and theoretical outline on which our research question is drawn upon. Based on the argumentative framework, we propose a research model and four hypotheses. The hypotheses are formed to test
the theoretical assumptions drawn from existing literature. By including the aspect of managers’ international exposure as an explanatory variable, we postulate that it will have a positive effect on international startups’ performance. Furthermore, we explain the methodology for data collection and test the hypotheses with a sample of 49 international startup companies, before we present the results. Based on the findings, we draw conclusions and provide an in-depth discussion. Finally, we present limitations of the study and proposals for further research.

2.0 Theoretical Background

The areas of literature that have been deemed relevant in order to investigate the research question include theory on ‘international new venture firms’ (INVs), entrepreneurial management and how managers’ experience influence firm performance. Current literature in these areas are reviewed, followed by a presentation of hypotheses based on the framework this literature offers.

2.1 International Startup Firms and Entrepreneurial Management

2.1.1 Startups

Startup firms are generally associated with great risk, and although we often read stories about successful entrepreneurs, a well-known problem with new businesses is their high dissolution rate (van Praag, 2003). Of every 100 startups, less than 50 firms survive the first three to five years (Patel, 2015; Pryor, 2016; Wever, 1984, cited in Schutjens & Wever, 2000). This ‘liability of newness’ has been shown in a wide range of studies, and the processes that improve performance and capabilities are suggested to increase with organizational age (Carroll & Hannan, 2000, p. 301). Gray (2006) suggests that one reason for why older firms perform better is that the level of the owner’s business experience increases over time, which is dependent on previous knowledge. Thus, as experience grows over time, performance is likely to improve.

Measuring the performance of startups can be challenging, and different measures and definitions are applied in the literature. In a review by van Praag (2003, p. 2) she identifies a variety of possible measures, such as self-employment earnings, firm size, firm growth, (growth in the) number of employees, duration in business, the probability that one has remained self-employed for a certain while, and
subjective empirical measures. With regards to the duration in business, Carroll and Hannan (2000, p. 301) state that the performance of a company will grow over time as the firm matures in age and leaders learn and develop capabilities. However, a challenge when trying to measure a startup performance lies in the desires, motives and plans of the founder and their perceived level of performance of their firms (Robinson & Stubberud, 2011). Some entrepreneurs may have modest growth ambitions and do not necessarily seek profit maximization and growth as their main goals (Buttner & Moore, 1997; Cliff, 1998; Gray, 2006; Roomi, Harrison & Beaumont-Kerridge, 2009; Schutjens & Wever, 2000; Suganthi, 2009). Even closure may not be regarded as failure, as more educated and skilled entrepreneurs may decide to discontinue operations of firms that are successful when being presented with more attractive opportunities (Bates, 2005). As suggested by Robinson and Stubberud (2011), some entrepreneurs are motivated by the lifestyle associated with being a founder and the ‘self-made man’, and their financial goals may simply be to earn what is necessary to make a living. Furthermore, some entrepreneurs may not want their company to grow so much that they need to delegate key functions or employ non-family members (Gray, 2006).

2.1.2 Startup Management

Although the founder is often considered as the main entrepreneur and decision maker in startups, other top managers of the company may have an equally big impact on its performance (Hambrick & Mason, 1984). The top managers of a company, such as CEO, CFO, COO or equivalent, has a crucial impact on organizational processes and outcomes (Hambrick & Mason, 1984), as they are directly involved in strategic decisions regarding the company. For instance, Thomas, Litschert and Ramaswamy (1991, cited in Morgan, 1997) revealed that companies pursuing distinctly different strategies were due to the different characteristics of the top managers, and that such strategies were a reflection of managerial background. Davila, Foster and Jia (2010) further state that many startups require a more structured management approach as they grow, and many entrepreneurs step down from their CEO role as their company expands. The ‘founder CEO’ typically wears multiple hats and controls all aspects of his/her workplace, but this management style inevitably fails as the company grows (Davila et al., 2010). Many startup companies at this stage hire a new CEO or
management team with previous experience from startups and/or management positions to support the founder. The intellect and cognitive skills of managers, such as big-picture thinking and long-term vision, have been found to be drivers of outstanding performance (Goleman, 1998). As such, it is important to consider both founder and the surrounding managers and management team when studying startups.

2.1.3 International Startups

The body of literature on international startup firms lies in the intersection between international business and entrepreneurship. International business literature has tended to focus on large, multinational corporations, while research in entrepreneurship has focused on venture creation and the management of small and medium-sized enterprises (SMEs) within a domestic context (McDougall & Oviatt, 2000). The term ‘international entrepreneurship’ has emerged in the later years, and is by McDougall and Oviatt (2000, p. 903) defined as “a combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations”. There is a clear global trend of entrepreneurship and self-employment, and the number of new ventures is booming in markets all over the world. In Norway alone, there has been a 70% increase in the creation of startup companies over the last 15 years (Dalen, 2016). The increasing globalization further makes establishment of new companies across borders easier than ever, and the number of companies starting early operations in foreign markets has continued to rise over the last decade (WEF, 2011). Whether the startup is ‘born global’, i.e. internationalized from the very beginning (Knight & Cavusgil, 2004), or have taken incremental internationalization steps (Johanson & Vahlne, 1977), international startups are generally faced with the ‘liability of foreignness’, which entails the disadvantage firms have compared to indigenous firms when entering a foreign market. This often raises an additional challenge to international startups who operate in foreign countries in terms of language barriers, unfamiliarity with local conditions and institutions (Petersen & Pedersen, 2002). This separates them from domestic startups, as the decision to operate internationally is associated with innovative, proactive and risk-seeking behavior (McDougall & Oviatt, 2000), and requires a different type experience and capabilities. Although international startups share many of the same characteristics as the domestic, researchers point to some
distinct differences (McDougall, 1989), specifically in terms of strategy and intensity of competition. This suggests that international startups and the managers of them require different kinds of capabilities, to be able to deal with the foreign external environments. Many startups see internationalization as a vehicle for competitive advantage and performance (Han, 2006), and INVs who internationalize at inception do this based on a number of factors, including the founder’s international experience, foreign location advantages and competitive home market conditions (Oviatt & McDougall, 1994).

The Nordic startup society is currently ranked as one of the best places in the world to start a business (Carlström, 2016a; Carlström, 2016b; Carlström, 2017). What this region excels at is scaling startups, which is impressing considering the small size of the ecosystem. In Sweden alone, STHLM Tech Meetup throws monthly events, which is the largest monthly tech event in Europe (Startup Genome LLC, 2017). Sweden also allocate much resources into education focusing on providing entrepreneurs with everything they need to know in order to make startups perform at such high levels. The Danish and Norwegian startup scenes are also flourishing, reporting record high investments in startup companies in 2016 (Carlström, 2016b; Klemisdal, 2017, pp. 52-53). Furthermore, Swedish startups are at the top when it comes to market reach, meaning that they have an international mindset from the outset (Carlström, 2017). This is due to the fact that the domestic market comprises less than $10 million and poses a great limitation for growth, and this situation is similar in the rest of the Nordic.

2.1.4 International Entrepreneurial Capabilities

In regards to INVs or international startups, several studies have emphasized the importance of the capabilities and characteristics of the founder and manager in relation to firms’ internationalization. Among other traits, the international orientation and perspective of the entrepreneur or founder has received considerable attention (Gabrielsson, Kirpalani, Dimitratos, Solberg & Zucchella, 2008; Knight & Cavusgil, 2004). Cross-cultural competencies have further been identified as a key predictor for success in international business environments (Andresen & Bergdolt, 2017; Johnson, Lenartowicz & Apud, 2006), and one of the most prominent streams of cross-cultural competencies is the concept of a ‘global
mindset’ (Lovvorn & Chen, 2011). A global mindset is defined as “the capacity to function effectively within environments that are characterized by high cultural and business complexity” (Andresen & Bergdolt, 2017, p. 183). The capability of a global mindset as a cultural competence is stressed as an important prerequisite for managers working in a foreign location or in culturally diverse environments (Johnson et al., 2006). Furthermore, a global mindset has a clear effect on the internationalization of a firm, as it affects the decision to allocate more resources to international markets and probably also to set the internationalization objectives as a priority in the firm’s strategy (Nummela, Saarenketo & Puumalainen, 2004).

Karra et al. (2008, p. 450) observed that the internationalization process of INVs “extends back to pre-existent experiences and networks of the entrepreneur and others involved in the founding of the firm”, and the characteristics of the entrepreneur in an INV can influence the overall entrepreneurial orientation of the firm, and hence create a structure that allows for innovation, risk-taking and creativity (Zhou, Barnes & Lu, 2010). It is suggested that the core of entrepreneurial capabilities is having an international vision, and that this vision grows from complex cultural knowledge and experience. This suggests that it may in fact be the entrepreneur’s capabilities, developed through experiences, connections and explorations, that underpin INV creation and explain some of the rapid internationalization. One key international skill of entrepreneurs that determine their capabilities of succeeding with INVs is creating access to important networks (Karra et al., 2008). However, this alone is unlikely to lead to successful venture creation, and the authors further state that “interpreting and assimilating knowledge and information from across the international network, much of which is tacit and culturally specific is a key skill” (Karra et al., 2008, p. 450). Hence, having international capabilities and experience as a manager is important in order to exploit the advantages of networks and succeed in international entrepreneurship. Knowledge and knowledge integration is said to be the essence of organizational capabilities, as knowledge provides competitive advantages in international business settings (Conner & Prahalad, 1996). Young and small firms are usually scarcely endowed with financial, human and tangible resources, and Knight and Cavusgil (2004) argue that firms need to have specific knowledge-based organizational capabilities that support early internationalization and that
international entrepreneurial orientation reflects an innovation-focused managerial mindset that leads INVs to pursue strategies to maximize international performance.

2.2 Managers’ Experience and Firm Performance

Researchers provide different explanations regarding the determinants of startups’ success. Gimeno, Folta, Cooper and Woo (1997) argue that organizational survival can be explained by more than just the firm’s economic performance, and more specifically that it relies on the entrepreneur’s human capital characteristics. Gross (2015) addresses startups’ success to their timing in the market, but also emphasizes the importance of the team and the competence of the people as being the second biggest reason. The literature seems to agree that the success or failure of a startup is due to more than factors such as the firm’s initial financial funding, the business model, or the actual idea (Meyer & Zucker, 1989; Levinthal, 1991; Gross, 2015).

The type and scope of experience founders bring into a business has received substantial attention from researchers in trying to determine why some business founders are more successful than others (Reuber & Fischer, 1999). Human capital attributes, including experience, are proven to affect firm outcome (Finkelstein & Hambrick, 1996; Hitt et al., 2001; Stuart & Abetti, 1990), and the decision making process of experienced managers differs from their inexperienced counterparts. Additionally, more experienced managers execute better decision-tasks due to their ability to rely on the outcomes of previous decisions and are able to take advantage of their intuitive skills developed from previous experience (Fredrickson, 1985, cited in Morgan, 1997). Several researchers (Chandler & Hanks, 1994, cited in van Praag, 2003; Peteraf & Shanley, 1997, cited in van Praag, 2003; Reuber & Fischer, 1999) explicitly mention that for new ventures, the firm can be considered to be an extension of the founder. Investors in startups often say that they ‘bet on the jockey, not on the horse’ when choosing which company to invest in, arguing that experienced entrepreneurs will do a better job than inexperienced ones (Delmar & Shane, 2006). This is supported by Cooper (1982), suggesting that the strengths and the weaknesses of the founder is directly reflected in the strengths and the weaknesses of the firm. Furthermore, the entrepreneur’s experience in different functional areas and prior entrepreneurial experience - even failures - has proven to be indicators of better performance (Vesper, 1980, cited in Stuart & Abetti, 1990).
Dyke et al. (1992) identified two types of previous ownership experience that are predicted to have a positive effect on firm performance, namely previous experience in small businesses and participation in previous business startups. Studies have suggested that the characteristics of the entrepreneurs are predictors of the performance of these startup companies (Brüderl, Preisendörfer & Ziegler, 1992; Chandler & Jansen, 1992), but substantial evidence has not been found in regards to the relationship between founders’ characteristics and firm performance (Stuart & Abetti, 1990). An exception is Brüderl and Preisendörfer’s (2000) study where seven characteristics, including gender, education and work experience of the founder, was included. They found that founders with industry-specific, self-employment and management experience have a higher probability of initiating a fast-growing startup. Although inconclusive findings, venture capitalists and researchers are hesitant to conclude that experience or lack of experience has no consequences for firm performance (Reuber & Fischer, 1999).

2.2.1 International Experience

Among the areas of experience considered to be related to success and internationalization behaviors of firms, international experience has received much attention. Characteristics that have been found to predict success in international business, include the number of languages the founder speaks, whether or not the founder has travelled much and whether the founder has spent part of his/her life abroad; born, studied or worked (Miesenbock, 1988).

International Childhood and Adolescence. Previous research on international experience and firm performance has focused little on managers’ international exposure through childhood and adolescent years. However, Piaskowska and Trojanowski (2014) showed that the international formative years’ experience of executives has an impact on strategic decision making, beyond career experience and demographic orientation. They suggest that growing up exposed to more than one culture creates bicultural individuals. The literature has just quite recently taken an interest in the role that bicultural people play in business contexts, but researchers suggest that bicultural people have access and the ability to use cultural systems, helping them to act as cross-cultural communicators, which make them especially competent in international business settings (Brannen & Thomas, 2010).
Furthermore, many children are affected by their parents’ careers and life choices, including geographic relocation. A study by Chang, Hsu, Shih and Chen (2014) showed that young adolescents from binational families perform better in terms of creativity than those from monocultural families, and a multicultural upbringing through school and family has been positively associated with cultural intelligence (Harrison, 2012). Family background has also been viewed as a source of experience, and observing family members starting companies is associated with tendencies in the children to start their own (Hisrich & Brush, 1984, cited in Dyke et al., 1992). Furthermore, Simmonds and Smith (1968) observed that managers who were born or had lived abroad, or travelled frequently showed little concern for national boundaries across which business was conducted. Based on this argumentation, we believe that international exposure in childhood and adolescent years may have an effect on firm performance, particularly regarding growing up biculturally, spending parts of or whole upbringing in a different country, or in a multicultural family.

_Hypothesis 1: International exposure in childhood and adolescent years will have a positive effect on international startup performance._

**Linguistic Capabilities.** International experience may also be reflected in managers’ proficiency in foreign languages. Decision-makers’ proficiency in foreign languages has been said to be a determinant of success in SMEs (Dichtl, Leibold, Köglimayr & Müller, 1984; Knowles, Mughan & Lloyd-Reason, 2006), as a great deal of trade takes place across borders with trade partners speaking different languages. Language skills have proven to contribute to international success in many ways, such as the enhanced availability of market information, improved negotiation skills, and an improved understanding of trade partners’ business culture (Clarke, 1999, cited in Knowles et al., 2006). Decision-makers with such skills have demonstrated a conscientious, well-motivated commitment to enhancing communication with foreigners and understanding of foreign issues (Knowles et al., 2006). As suggested by Davis (1995, cited in Morgan, 1997, p. 77), “it is not simply a matter of communication. Linguistic skills are also the key to understanding the mentality and culture of people we hope to do business with. Cultural barriers are just as important as financial and legal obstacles.” As such, linguistic capabilities may work as a proxy for success, by enhancing and enabling
certain characteristics possibly connected to the probability of succeeding as a manager.

The ability to acquire proficiency in a foreign language is higher in those individuals who are already fluent in two or more languages (Keshavarz & Astaneh, 2004). If this feature is adopted in childhood years, the effect is even greater. Children who learn two languages during their upbringing, so called bilingual children, have greater success in learning foreign languages as adults (Eisenstein, 1980). Bilinguals use and practice two languages frequently, and this feature is often apparent in people from families where the parents come from different cultures. Even at an early age, bilingual children show cognitive advantages in visuospatial and verbal working memory tests, compared to monolingual children (Blom, Küntay, Messer, Verhagen & Leseman, 2014). Bilinguals have further proven to be better at multitasking, as they are able to sort out and process information more efficiently than monolinguals (Dreifus, 2011). Bilingual experience may also improve the brain’s ability to direct attention to the processes used for problem solving and planning, as well as being able to ignore distractions and switching attention between tasks faster than monolinguals (Bhattacharjee, 2012). Based on the presented argumentation on bilinguals and proficiency in foreign languages, we propose the following hypothesis:

*Hypothesis 2: Multiple language proficiency will have a positive effect on international startup performance.*

**International Academic Experience.** Education level has been found to be a significant part of entrepreneurial capabilities, and to have a positive relationship with firm success (Storey, 1994, cited in Schutjens & Wever, 2000; Robinson & Sexton, 1994, van Praag, 1997, p. 6). As such, experiences gained through academic efforts can have a significant impact on personal development and career achievements later on. Studying abroad for the whole or parts of one’s degree has proven to increase the international orientation and several findings point to a positive impact of abroad experiences on extraversion, openness, agreeableness, and creativity (Lüdtke, Roberts, Trautwein & Nagy, 2011; Maddux & Galinsky, 2009; Zimmermann & Neyer, 2013). Other researchers have also found that an academic stay abroad increased perceived self-efficacy of the students compared to
those who did not go abroad (Petersdotter et al., 2017), and they also perform better on creativity tasks (Lee et al., 2012).

Studying abroad has been found to influence an individual’s international exposure later in life. For instance, Parey and Waldinger (2011) found that studying abroad increased an individual’s probability of working in a foreign country by about 15 percent. Norris and Gillespie (2009) concluded that students who had more recent study abroad experience were more likely than earlier generations to relate working abroad or for a multinational company to their study abroad experience. They found that 48 percent of the students actually had some global dimension to their career (either volunteering or work). Based on the argumentation above we suggest that having studied abroad will have a positive effect on firm performance, and propose the following hypothesis:

*Hypothesis 3: International exposure through studies will have a positive effect on international startup performance.*

**International Work Experience.** International work has generally been seen to enhance the capabilities of the individual (Gregersen, Morrison & Black, 1998), and Dickmann and Harris (2005) found that from an individual perspective, international expatriates, i.e. assignees sent to work in foreign locations on behalf of a company, gain a broader perspective, more cultural competence and higher self-confidence from working abroad. In a review by Morgan (1997), he identified several studies pointing to a positive relationship between decision makers’ foreign travel and the firm’s export success, and explains this by the notion that managers with foreign experience either draw upon their personal contacts to develop export opportunities, or that their perceived psychic-distance is reduced because of their familiarity with foreign cultures. Moreover, internationally experienced managers have greater possibilities of developing foreign strategic partners and to delay less in obtaining foreign sales after startup (Reuber & Fischer, 1997), and it has been indicated that CEOs with international experience perform better in multinational companies (Carpenter et al., 2001).

International work experience has been identified as advantageous in several branches of the literature. From a human capital perspective, it increases the value
of an individual’s skills and knowledge, and thus increase their objective career success (Piaskowska & Trojanowski, 2014). The leader’s international career experience plays a crucial role in their decision making, and helps them to understand differences in cultural and institutional environments, as well as customer preferences and business practices (Piaskowska & Trojanowski, 2014). Furthermore, international expatriates have the opportunity to build international networks that can increase their social capital and aid their future career success (Biemann & Braakmann, 2013). The use of expatriates is not a new phenomenon, and expatriation is an increasingly employed strategic tool for companies. As of 2013, 230 million people lived outside their home countries, accounting for 3% of the world’s total population (Ferraro & Briody, 2017, p. 240). One of the most prominent motives for working abroad as an expatriate is management development, concerned with the ability of managers to develop capabilities for future foreign endeavors by gaining important international experience (Edström & Galbraith, 1977). Based on the above, we argue the following:

Hypothesis 4: International exposure through work-related endeavors will have a positive effect on international startup performance.

3.0 Research Model

Based on the theoretical framework and problem statement of this study, we propose a model to provide a focus and overview of the research. The research model (Figure 1) is built on measures of international exposure, which are hypothesized to influence international startup performance. The performance measure chosen was number of employees in the companies, and the independent measures employed are grouped in four categories suggested to encompass the most important aspects of managers’ international exposure. As other noteworthy factors are suggested to influence the hypothesized relationships, these are included as control variables in the model. An in-depth discussion about the chosen measures is presented in the methodology section.
4.0 Research Methodology

In the following part, we describe and present the research methodology for this thesis. We propose a research strategy for how we have gone about answering the research question (Saunders, Lewis & Thornhill, 2016, p. 177), and a research design providing a framework for the collection and analysis of the data (Bryman & Bell, 2015, p. 49). The sample was drawn from the desired population, namely Nordic startups in an international context. To test the hypotheses, primary data collected through a survey was complemented by secondary data from online databases. Next, the dependent and independent variables in the model are explained, followed by a discussion of the control variables. Finally, we present steps taken to ensure quality of the research, where our main focus is placed on validity, reliability and a discussion of base rates.

4.1 Research Strategy

The objective of this thesis is to determine if and how managers’ previous international exposure (measures of independent variable) influence the performance of their international startups (dependent variable). The objective was theoretically approached by combining theory on the influence of managers’ international experience on performance and INVs, with particular attention to startups. The research question was formed based on the theoretical background presented. Empirically, we investigated our research question by checking for correlations and statistically significant relationships between the chosen variables.
Firstly, we performed a preliminary analysis and descriptive statistics of the data, followed by a linear regression and further statistical analysis to test the hypotheses.

4.2 Research Design

Our research takes a deductive approach, focusing on data to test our theory. In order to answer the research question, we employed a cross-sectional study method using a survey as the source of primary data collection. In a cross-sectional study, data is collected at a single point in time on more than one case in order to get quantifiable data, which can be examined to detect patterns of association (Bryman & Bell, 2015, p. 62). The main reason why a cross-sectional survey design is suitable for our research, is that it allows for collection of standardized data in an economical and time efficient manner. The standardized data obtained from a survey allowed for easier comparison between respondents.

4.3 Sample

The selected sample consists of member companies of Nordic Innovation House (hereinafter NIH), and was chosen based on its representativeness of the population emphasized in our research question, namely managers of international startup companies. NIH was ultimately chosen to have a smaller and more manageable population (Saunders et al., 2016, p. 275). Figure 2 illustrates the sampling approach.

NIH is a Silicon Valley based headquarter of the Nordic Startup Community. Their business concept is to facilitate for their members to have a presence in Silicon Valley, providing them with a ‘soft landing space’ and a community of partners, peers and service providers. NIH is a collaboration between the five Nordic countries Denmark, Finland, Iceland, Norway and Sweden, bringing Nordic technology to Silicon Valley. They have member companies within the Nordic tech industry, and facilitate an innovative learning and sharing hub in the United States. The NIH’s member companies were used as our target population, and served as a good basis for sampling, as all member companies are Nordic companies starting up in an international setting. We targeted both founders and top managers of these companies, as top managers may have an equally important impact as the founder on the decisions of the firm (Hambrick & Mason, 1984), and the founder him-
herself may not even be working in the startup anymore. The fact that they operate an international company, automatically makes them ‘international managers’, which therefore makes them appropriate to study effects of international exposure on. They all have the factor of ‘internationality’ in common, and differ in terms of variety of servicing markets (e.g. health services, media and entertainment, security, telecom). The population was therefore adequately similar and adequately different enough, making it suitable for comparison purposes. 148 companies were identified according to their member list per January 2017 (Nordic Innovation House, 2017), and upon further investigation, four companies were excluded due to lack of information and the age of the companies¹, leaving us with 144 Nordic tech companies as the final target population. The final sample consisted of 58 responses from 49 unique companies. We allowed for multiple answers from the companies, as top managers were also considered valid respondents, and some companies had more than one founder. The final sample equals a response rate of 34%. To determine the sufficiency of the response rate, we applied 33% (⅓) as a general rule of thumb. Literature suggests that 35-40% response rates are reasonable (Baruch & Holtom, 2008, cited in Saunders et al., 2016). However, response rates vary substantially, and low rates is one of the most common issues with surveys. In certain cases, rates as low as 10-20% have been applied (Saunders et al., 2016, p. 284). This suggests that our final response rate of 34% is at an acceptable level. The names of the sample companies are kept anonymous throughout the thesis.

¹ Two of the companies were founded in 1855 and 1856, respectively.
4.4  **Data Collection**

4.4.1  **Primary Data Collection**

We constructed a simple self-completion email survey based on questions relating to international exposure gained through various stages of life and the degree to which the managers of the companies are exposed to international circumstances and experiences (see Appendix 1). The survey was constructed with questions related to family and background, language skills, education and work experience. A self-completion survey is completed by the respondents themselves, and is usually made up of closed questions (Bryman & Bell, 2015, pp. 239-240). An advantage with closed questions is that they allowed for pre-coding, making the processing of data for statistical analysis a simpler task. By using a self-completion survey, we eliminated the interviewer effect often inherent in interviews and it is more convenient and time efficient for the respondents (Bryman & Bell, 2015, pp. 240-241). In order to reduce non-response rates, careful consideration was placed on constructing questions where little room was left for self-interpretation, and on making the survey short and comprehensible. A follow-up process was also initiated, with assistance from our contact in NIH, who is Innovation Norway’s representative on the board, helping us by promoting our survey on their internal forum and encouraging their members to answer. Additionally, the survey was constructed to comply with regulations for privacy (NSD, 2017).

4.4.2  **Secondary Data Collection**

Performance data, being the basis for the dependent variable, was collected on the companies responding to the survey. Publicly available information about employees was gathered from online sources, including the companies’ homepages, LinkedIn, and other company databases such as Orbis, Proff® and Bisnode. These data contribute with objectivity, as they are not self-reported. Hence, they provide us with a measure of the dependent variable that is both valid and reliable. The advantage of using objective data is that it defies interpretation and is a stable and quantified measure.
4.5 **Measures**

The measures chosen for our study are based on the theoretical argumentations presented in the literature, and form the basis of our research model and analysis.

4.5.1 **Dependent Variable – Firm Performance**

Measuring firm performance in startup companies can be challenging and many different measures have been applied (van Praag, 2003). By cooperating with our contact at NIH and revising the literature on firm performance measures, multiple performance variables were discussed, including growth in sales, productivity, number of employees, age and lifetime value. Growth in sales turned out difficult to establish due to different reporting policies across the different countries the companies are registered in. Furthermore, many of the companies had only been operating for one year, and growth over a certain period was therefore impractical to measure for these. For the same reason, lifetime value was dismissed as a performance measure. Additionally, productivity can be challenging to apply as founders may have different performance goals for their companies, and productivity in itself might not be their primary goal (Robinson & Stubberud, 2011), hence not reflecting the success of the firm. Measuring age in number of months was also considered, but deemed to differ too much across the respondent companies, as the age of the responding companies ranged from barely one year to almost eight years. Furthermore, a founder can choose to keep his/her company ‘alive’ for other reasons than performance and growth, as it can be beneficial for other purposes (e.g. tax). A large part of startup dissolutions are in fact voluntary, and may not be an appropriate measure of success (Bates, 2005; van Praag, 2003). The final decision on the measure of performance was number of employees, as it serves as a comparable indication of the size of the company, which is reasonable to believe has a connection to the companies’ performance. The greater the number of employees, the more responsibility lies with the manager. Employing a large number of people requires more capital and resources, and being able to do this and make this resource commitment can be considered a sign that the company is performing well (Cooper, Gimeno-Gascon & Woo, 1994; Robinson & Stubberud, 2011).
4.5.2 Independent Variables – Measures of International Exposure

A manager’s international exposure is a wide measure and is hard to pin down in a specific number. In an attempt to capture the many aspects included in this term, a total of 20 questions were sent out, targeting early-life experiences, language capabilities, study-related and work-related experiences, leaving us with 15 independent variables (see Table 1). This approach is referred to as multiple-indicator measures (Bryman & Bell, 2015, pp. 165-167). By asking a number of questions, we can get access to a wider range of aspects of the concept and make finer distinctions. The multiple-indicator measures were drawn from the hypotheses, and questions were posed about characteristics deemed relevant from literature.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Theoretical foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early-life exposure</td>
<td></td>
</tr>
<tr>
<td>Country of origin</td>
<td>Piaskowska &amp; Trojanewski, 2014</td>
</tr>
<tr>
<td>Foreign mother</td>
<td>Piaskowska &amp; Trojanewski, 2014</td>
</tr>
<tr>
<td>Foreign father</td>
<td>Brannen &amp; Thomas, 2010</td>
</tr>
<tr>
<td>Upbringing</td>
<td>Brannen &amp; Thomas, 2010</td>
</tr>
<tr>
<td>Upbringing (country)</td>
<td></td>
</tr>
<tr>
<td>Vacation</td>
<td>Simmonds &amp; Smith, 1968</td>
</tr>
<tr>
<td>Linguistic capabilities</td>
<td></td>
</tr>
<tr>
<td>Bilingual</td>
<td>Blom et al., 2014; Dreifus, 2011</td>
</tr>
<tr>
<td>Languages</td>
<td>Dichtl et al., 1984; Knowles et al., 2006; Davis, 1995</td>
</tr>
<tr>
<td>Study-related exposure</td>
<td></td>
</tr>
<tr>
<td>Studied abroad</td>
<td>Lüdtke et al., 2011; Maddux &amp; Galinsky, 2009; Zimmermann &amp; Neyer, 2013 +++</td>
</tr>
<tr>
<td>Studied abroad (years)</td>
<td>Lüdtke et al., 2011; Maddux &amp; Galinsky, 2009; Zimmermann &amp; Neyer, 2013 +++</td>
</tr>
<tr>
<td>Studied abroad (countries)</td>
<td>Lüdtke et al., 2011; Maddux &amp; Galinsky, 2009; Zimmermann &amp; Neyer, 2013 +++</td>
</tr>
<tr>
<td>Work-related exposure</td>
<td></td>
</tr>
<tr>
<td>Lived abroad (work)</td>
<td>Gregersen et al., 1998; Dickman &amp; Harris, 2005; Morgan, 1997; Reuber &amp; Fischer, 1997 +++</td>
</tr>
<tr>
<td>Years lived abroad (work)</td>
<td>Gregersen et al., 1998; Dickman &amp; Harris, 2005; Morgan, 1997; Reuber &amp; Fischer, 1997 +++</td>
</tr>
<tr>
<td>International company</td>
<td>Carpenter et al., 2001</td>
</tr>
<tr>
<td>Other international work experience</td>
<td>Biemann &amp; Braakmann, 2013</td>
</tr>
</tbody>
</table>

Table 1: Independent variables in group categories
4.5.3 Control Variables

Other variables that are closely related to international exposure may influence the hypothesized relationships, and were therefore included as control variables in our model. Three characteristics of the manager, and one of the international startup firm were included. They were chosen due to their apparent linkage to entrepreneurial capabilities and firm performance, and drawn from the presented literature. As we are only interested in a small portion of plausible factors related to performance, namely international exposure, all variables that are not of international character are therefore not of direct interest in this thesis.

Age of Company. First, to control for the organizational age differences between respondents, the lifetime of the firms was included. Age of the company was one of the variables initially considered as a possible performance variable, as performance has been found to increase with organizational age, by working as a proxy to knowledge and capabilities (Carroll & Hannan, 2000, p. 301; van Praag, 1997, p. 6). However, other researchers argue that a founder can choose to continue operations for other reasons than performance and growth (Bates, 2005; van Praag, 2003). It is therefore considered to be influential, but more suited as a control variable as another performance measure was chosen, and the lack of international orientation eliminated its interest as an independent variable. Furthermore, many of the startups were barely one year old. This is not uncommon for these types of firms, and age in number of years is not the most appropriate scale to measure the lifetime of these young companies on. To have a scale that better fits the age of these firms, the logarithm of the age in number of months was applied.

Age of Manager. Second, age of the manager was included as a control variable, since it can affect the extent to which managers can acquire experience. Age in itself is not a resource or skill a manager brings into a firm, and is a stable and unaflectable characteristic. Furthermore, it is not given that an increase in manager age is equivalent to an increase in firm performance. Literature has showed that there are both benefits and disadvantages of being an older and more experienced leader (Zenger & Folkman, 2015). On one hand, it has been observed a positive relationship between age at startup and the success of the firm (Cressy, 1994, cited in Schutjens & Wever, 2000), while on the other, Wicker and King (1989) found no evidence that demographic characteristics play an important part in explaining
the firm performance. A more plausible reasoning is therefore that the amount of experiences and influences a manager has is more likely to increase with age. Age may therefore act as a proxy for experiences, and in turn affect firm performance. It is therefore a variable thought to indirectly affect performance. It is out of the scope of interest for our context as it lacks an international element, and is included as a control variable.

**Level of Education.** Third, education level has been found to significantly affect the growth and success of the company (Dunkelberg & Cooper, 1982; Robinson & Sexton, 1994; van Praag, 1997, p. 6), and we therefore argue that it is reasonable to believe it will affect the hypothesized relationship between study-related international exposure and international startup performance. Managers with lengthy education might have higher chances of experiencing parts or whole of the education in foreign countries. The level of education is therefore linked to the study-related variables, and included to control for the effect of managers’ general educational background. Due to the apparent relation it is likely that level of education may affect performance, but as it lacks an international aspect, it is included as a control variable.

**Years of Work Experience.** Finally, building on research contending that managers’ experiences affect firm performance (Cooper, 1982; Finkelstein & Hambrick, 1996; Hitt et al., 2001; Fredrickson, 1985, cited in Morgan, 1997; Stuart & Abetti, 1990), prior work experience is deemed to be of significance and included as a control variable. There is a logical relationship between work experience and the *international* work-exposure variables, and managers’ general level of work experience may as such affect the hypothesized relationship between international work exposure and international startup performance. That is, if you have substantial work experience, it objectively gives you a higher probability of having international work experience, all other factors neglected. To propose an example; A 40-year-old with 25 years of general work experience has a higher probability of having more international work experience than an 18-year-old with only three years of general work experience. Years of work experience is therefore added to control for the effect of work experience differences.
4.6 Quality of the Research

4.6.1 Validity

Using a questionnaire as our basis of data collection, we had to precisely formulate our measures and questions prior to collecting the responses, and it was important that the characteristics chosen were appropriate to measure and answer our research question (Saunders et al., 2016, p. 444). The questions designed to capture degree of international exposure in this study are all drawn from theory and are based on characteristics suggested to affect a manager’s capabilities. As the questions are drawn from assumptions based on findings in existing literature, and not pre-tested together as a whole in other studies, it might pose a threat to the measurement validity of this thesis. However, the items of the survey were an informed selection, rooting in existing theories about international experience and performance. We acknowledge that there might be several other measures that could have been included to capture the degree of international exposure, however we argue that the measures chosen cover the most important aspects and is a fair approximation of the concept.

Before sending out the survey to the target group, it was tested out on a selection of random respondents, in order to receive feedback on the layout and establish clarity of the questions being asked. Ambiguous or unclear questions, lack of clarity of instructions and the inability to provide explanations are potential problems with self-completion surveys (Bryman & Bell, 2015, pp. 241-242), and the test-run allowed us to eliminate some of these possible errors and ensure a good face validity of our survey. Furthermore, low response rates and missing values in the dataset can threaten the validity of the study (Bryman & Bell, 2015, p. 242), but both these possible issues were accounted for. As previously mentioned, steps were taken to boost response rates. Moreover, the survey was constructed to make it impossible for the respondents to record missing values, as they were not able to proceed with the survey with any blank fields.

4.6.2 Reliability

In the current thesis, the survey was composed with clear, easy questions with little room for self-interpretation; no opinions were asked, only factual questions about the respondent’s background. This is an important consideration, as it increases the
reliability of the study (Bryman & Bell, 2015, p. 49). Lack of clarity may in worst case lead to incorrect information as interpretation may differ between respondents. Furthermore, it was tested out on a pre-test group, aiming at eliminating ambiguous terms and other potential flaws. This does not only increase validity, but also enhances the reliability of the study.

4.6.3 Base Rate Issues

When studying a phenomenon such as firm performance and international exposure’s explanatory power in this, it is important to consider that there are other factors that are in fact related to, and accounts for a great deal of firms’ success. Although out of the scope of our thesis, research on firm performance, and why some succeed and others do not, point to many possible explanations. These include initial funding, market timing, business model (Gross, 2015; LaPlante, 1997), networks (Hansen, 1995) and, sometimes, even sheer luck (LaPlante, 1997; van Praag, 2003). Observing international exposure as an isolated factor is therefore unlikely to be the sole explanation for a startup success. We are merely looking at a small portion of the already proven determinants of success that is hypothesized to affect firm performance. It is therefore likely that any relationships found in our study may be affected by ‘noise’, as it is reasonable to believe that international exposure is a contributor amongst many other determinants of success. International exposure may act as a mediating factor, by giving an individual a certain set of capabilities that are beneficial in an international business context. The tendency to neglect base rates and ignore prior probabilities (Kahneman & Tversky, 1973) is further a reason for why findings must be interpreted with caution. We have to consider characteristics already present in the context we are examining, as some relationships may already be explained to a great extent by other prerequisites. The quality of the research is therefore dependent on a discussion including exposure as proxies, base rates and prior probabilities.
5.0 Results

5.1 Analysis

5.1.1 Adjustment of Data

For analytical purposes, some of the data collected in the survey were adjusted. All categorical variables, that is ‘yes’, ‘no’ and text answers, were transformed to numerical measures. Binary answers, such as ‘yes’ and ‘no’, were transformed to ‘1’ and ‘0’, respectively, while all countries a respondent listed under where he/she had lived were summarized to a single number. In relation to the variable Studied abroad, if the respondent had reported a study period abroad of ‘< 1’ (less than one), the answer was changed to .50 in order to perform analysis of the relationships in the dataset. All responses reading .50 therefore represents all lengths of foreign studies above zero and below one year. We believe this adjustment is a valid representation of those responses, as the possible variations in these recordings are small compared to the rest of the responses. See Appendix 2 for categorization and calculation of variables.

5.1.2 Preliminary Assessment

To analyze the relationship between the dependent and the independent variables, multiple linear regression techniques were applied. Multiple linear regression makes a number of assumptions about the data that should be fulfilled in order to perform an analysis, i.e. normality, multicollinearity and singularity. In order to address these issues, we performed a preliminary analysis of the dataset prior to the regression. In the following section, the evaluation of the preliminary results is presented, with focus on the exploration of descriptive statistics, representativeness checks and correlations.
Table 2: Descriptive statistics of dependent and independent variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td></td>
<td></td>
<td>12.81</td>
<td>13.72</td>
<td>1.83</td>
<td>3.11</td>
</tr>
<tr>
<td>Age (manager)</td>
<td>1</td>
<td>43</td>
<td>2.50</td>
<td>.64</td>
<td>-.13</td>
<td>-.84</td>
</tr>
<tr>
<td>Years of work experience</td>
<td>2</td>
<td>43</td>
<td>17.52</td>
<td>9.01</td>
<td>.16</td>
<td>-.11</td>
</tr>
<tr>
<td>LogAge</td>
<td>.63</td>
<td>2.52</td>
<td>1.70</td>
<td>.36</td>
<td>-.04</td>
<td>.62</td>
</tr>
<tr>
<td>Level of education</td>
<td>1</td>
<td>5</td>
<td>3.59</td>
<td>.54</td>
<td>-.75</td>
<td>.75</td>
</tr>
<tr>
<td>Foreign mother</td>
<td>0</td>
<td>1</td>
<td>1.10</td>
<td>.31</td>
<td>2.67</td>
<td>5.33</td>
</tr>
<tr>
<td>Foreign father</td>
<td>0</td>
<td>1</td>
<td>.09</td>
<td>.26</td>
<td>3.03</td>
<td>7.42</td>
</tr>
<tr>
<td>Upbringing</td>
<td>0</td>
<td>1</td>
<td>.29</td>
<td>.46</td>
<td>.93</td>
<td>-1.17</td>
</tr>
<tr>
<td>Vacation</td>
<td>0</td>
<td>1</td>
<td>.98</td>
<td>.81</td>
<td>-2.67</td>
<td>5.33</td>
</tr>
<tr>
<td>Country of origin</td>
<td>1</td>
<td>11</td>
<td>3.86</td>
<td>2.26</td>
<td>.10</td>
<td>2.27</td>
</tr>
<tr>
<td>Upbringing (countries)</td>
<td>0</td>
<td>6</td>
<td>.47</td>
<td>1.08</td>
<td>3.62</td>
<td>16.99</td>
</tr>
<tr>
<td>Languages</td>
<td>1</td>
<td>4</td>
<td>2.35</td>
<td>.64</td>
<td>.83</td>
<td>.70</td>
</tr>
<tr>
<td>Bilingual</td>
<td>0</td>
<td>1</td>
<td>.16</td>
<td>.37</td>
<td>1.96</td>
<td>1.59</td>
</tr>
<tr>
<td>Studied abroad</td>
<td>0</td>
<td>1</td>
<td>.71</td>
<td>.48</td>
<td>-.93</td>
<td>-1.17</td>
</tr>
<tr>
<td>Studied abroad (years)</td>
<td>0</td>
<td>1</td>
<td>.71</td>
<td>.48</td>
<td>-.93</td>
<td>-1.17</td>
</tr>
<tr>
<td>Studied abroad (countries)</td>
<td>0</td>
<td>4</td>
<td>.91</td>
<td>.84</td>
<td>1.64</td>
<td>3.13</td>
</tr>
<tr>
<td>Lived abroad (work)</td>
<td>0</td>
<td>1</td>
<td>.98</td>
<td>.48</td>
<td>-8.7</td>
<td>-1.81</td>
</tr>
<tr>
<td>Years lived abroad (work)</td>
<td>0</td>
<td>17.70</td>
<td>3.69</td>
<td>5.14</td>
<td>1.50</td>
<td>1.00</td>
</tr>
<tr>
<td>International company</td>
<td>0</td>
<td>1</td>
<td>.78</td>
<td>.42</td>
<td>-.36</td>
<td>-.16</td>
</tr>
<tr>
<td>Other international work</td>
<td>0</td>
<td>1</td>
<td>.68</td>
<td>.33</td>
<td>-2.99</td>
<td>3.65</td>
</tr>
</tbody>
</table>

Normality. When initially assessing the data, we checked for normality. Skewness and kurtosis are used to test this for each variable. Kurtosis indicates the peakedness of the distribution, while skewness indicates the symmetry of the distribution (Pallant, 2016, p. 57). Many of the independent variables are binary or categorical, and it makes little sense to check for normality of these variables, as categorical data are not drawn from a normal distribution. Furthermore, linear regression techniques make no assumptions about the distribution of independent variables, hence they do not have to be normal. The dependent variable, however, needs to be normally distributed, and the skewness of Employees exceeds the recommended limit of +/- 1 (Hair, Black, Babin & Anderson, 2014, p. 34). Furthermore, kurtosis exceeds the recommended limit of +/- 2, suggesting that the variable should be transformed.

The Shapiro-Wilk statistic \((W)\) is another way to assess normality (see Appendix 3). A statistically significant value \((p < .05)\) is an indication of violation of the normality assumption, and that the variable is not normally distributed. Employees (the dependent variable) had a statistically significant value \((W = .768, p < .01)\), suggesting procedures to improve normality was necessary. After log-transforming the variable, the Shapiro-Wilk statistic showed a non-significant value \((W = .968, p > .10)\), suggesting normal distribution. LogEmployees was therefore instituted as the transformed dependent variable for further statistical analysis.

Table 3: Descriptive statistics of LogEmployees

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>LogEmployees</td>
<td>0</td>
<td>4.09</td>
<td>2.20</td>
<td>.96</td>
<td>-.15</td>
<td>-.04</td>
</tr>
</tbody>
</table>
Correlations. The Pearson correlation statistic ($r$) displays some preliminary results showing the strength of the relationship between variables. An initial correlation analysis (see Table 4) seems to give little support to hypothesis 1, as no variables related to early-life experiences have significant relationships with $LogEmployees$. Neither of the variables disclosed in study-related international exposure nor in work-related international exposure have significant correlations with the dependent variable, and indicate low support for hypothesis 2 and 3. Language-related variables, although not statistically significant at a 5% level, showed stronger relationships with $logEmployees$. Despite being mostly non-significant, there are indications of some types of relationships, although quite weak.

Further, some strong inter-correlations were identified, that is correlations between the independent variables. Several of the inter-correlations were rather expected, as answering ‘yes’ to a question in the survey was followed up by a related question. For instance, if a respondent answered ‘yes’ regarding whether or not he/she has studied abroad, the next question asked about the duration of the stay.
### Table 4: Pearson correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>LogEmployees</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (manager)</td>
<td>-13</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of work experience</td>
<td>.33</td>
<td>-.25</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LogAge</td>
<td>.18</td>
<td>-.10</td>
<td>.04</td>
<td>.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign mother</td>
<td>.08</td>
<td>-.12</td>
<td>-.09</td>
<td>.05</td>
<td>-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign father</td>
<td>.08</td>
<td>.02</td>
<td>.11</td>
<td>.03</td>
<td>.17</td>
<td>.35</td>
<td>.38</td>
<td>.36</td>
<td>.35</td>
<td>.08</td>
<td>.09</td>
<td>.06</td>
<td>.09</td>
<td>.02</td>
<td>.10</td>
<td>.08</td>
<td>.06</td>
<td>.10</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Years abroad (countries)</td>
<td></td>
<td>.08</td>
<td>.10</td>
<td>.03</td>
<td>.14</td>
<td>.19</td>
<td>.09</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Country of origin</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>LogNumberOfLanguages</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>Years abroad (years)</td>
<td></td>
<td>.11</td>
<td>.02</td>
<td>.11</td>
<td>.17</td>
<td>.21</td>
<td>.9</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>.11</td>
<td>.02</td>
<td>.11</td>
<td>.17</td>
<td>.21</td>
<td>.9</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Studied abroad</td>
<td>.11</td>
<td>.02</td>
<td>.11</td>
<td>.17</td>
<td>.21</td>
<td>.9</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Study abroad (countries)</td>
<td></td>
<td>.11</td>
<td>.02</td>
<td>.11</td>
<td>.17</td>
<td>.21</td>
<td>.9</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Years abroad (work)</td>
<td>.03</td>
<td>.04</td>
<td>.04</td>
<td>.02</td>
<td>.02</td>
<td>.06</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>International company</td>
<td>.03</td>
<td>.04</td>
<td>.04</td>
<td>.02</td>
<td>.02</td>
<td>.06</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Change in international work experience</td>
<td></td>
<td>.07</td>
<td>.08</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.05 level (2-tailed).**

**Correlation is significant at the 0.01 level (2-tailed).**
**Multicollinearity and Singularity.** Multicollinearity is what occurs when a single independent variable is highly correlated \((r > .90)\) with a set of other independent variables (Pallant, 2016, p. 152). The analysis of Pearson correlations between the independent variables revealed no such values, and thus multicollinearity was of no concern. Singularity occurs when an independent variable is actually a combination of other independent variables (Pallant, 2016, p. 152). This could pose a problem for some of our variables, as one is directly related to the other (i.e. *Upbringing* and *Upbringing (countries)*; *Studied abroad*, *Studied abroad (years)* and *Studied abroad (countries)*; *Lived abroad (work)* and *Years lived abroad (work)*). However, the correlation matrix displayed no signs of extreme values between these, and hence singularity did not pose any problems for us.

**Comparison of Respondents and Non-Respondents.** Preliminary analysis of the data indicated that respondents and non-respondents did not differ much in terms of the nationality of the firms. The survey was sent out to Danish, Finnish, Icelandic, Norwegian and Swedish companies, and the distribution between the different countries were similar in the sample and the respondents (see Table 5). This indicates that there was an equal distribution of non-respondents across the different countries, and little information is lost. Moreover, the average age of company for the non-respondents’ firms were 6.8 years and for respondents 5.5 years. This constitutes a small difference, suggesting that they did not differ much in terms of average lifetime. In terms of number of employees in the companies, the average number of employees was 18.4 and 25.2 for respondents and non-respondents respectively. The main reason for this difference is that the spread in number of employees was greater in the non-respondents group, with values ranging from 0 to over 300.

<table>
<thead>
<tr>
<th></th>
<th>Sample</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>2 1 %</td>
<td>0 0 %</td>
</tr>
<tr>
<td>Finland</td>
<td>25 18 %</td>
<td>9 18 %</td>
</tr>
<tr>
<td>Iceland</td>
<td>11 8 %</td>
<td>4 8 %</td>
</tr>
<tr>
<td>Norway</td>
<td>58 41 %</td>
<td>21 43 %</td>
</tr>
<tr>
<td>Sweden</td>
<td>46 32 %</td>
<td>15 31 %</td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>49</td>
</tr>
</tbody>
</table>

*Table 5: Sample distribution*
The reason for examining differences between respondents and non-respondents is to establish whether the proportion of respondents achieved is actually representative for the target population. Preliminary assessment showed that the respondents did not differ much from the non-respondents, indicating that the sample is a good representation of the target population.

### 5.2 Multiple Linear Regression and Hypothesis Testing

After completing the preliminary analysis of the data, we performed multiple linear regression (see Appendix 4). This enabled us to determine which factors of international exposure seem to influence performance, and to test the contribution of each predictor to the overall model. To assess the ability of international exposure to predict performance, after controlling for the control variables, we performed a hierarchical linear regression, resulting in five models (see Table 6). The independent variables were added in the analysis in an order based on the theoretical considerations, and the logical sequence of their occurrence. In the following section, all five models are explained, hypotheses are tested, and the results are discussed in detail.
<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Beta</th>
<th>Sig.</th>
<th>Adjusted R²</th>
<th>F</th>
<th>Δ R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant) (manager)</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Age (years)</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>LogAge</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Years of work experience</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Level of education</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign mother</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (countries)</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (countries)</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (countries)</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign mother (countries)</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (languages)</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (languages)</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (languages)</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (languages)</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (nationalities)</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (nationalities)</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (nationalities)</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (nationalities)</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (international work experience)</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (international work experience)</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (international work experience)</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (international work experience)</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (years lived abroad)</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (years lived abroad)</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (years lived abroad)</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (years lived abroad)</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (years lived abroad (work experience))</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (years lived abroad (work experience))</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (years lived abroad (work experience))</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (years lived abroad (work experience))</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (years lived abroad (international work))</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (years lived abroad (international work))</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (years lived abroad (international work))</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (years lived abroad (international work))</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (international company)</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (international company)</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (international company)</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (international company)</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (international company (work experience))</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (international company (work experience))</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (international company (work experience))</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (international company (work experience))</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (international company (international work))</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (international company (international work))</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (international company (international work))</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (international company (international work))</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (international company (international work (work experience)))</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (international company (international work (work experience)))</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (international company (international work (work experience)))</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (international company (international work (work experience)))</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
<tr>
<td>Upbringing (international company (international work (international work)))</td>
<td>.181</td>
<td>1.362</td>
<td>.179</td>
<td>.638</td>
<td>.016</td>
</tr>
<tr>
<td>Country of origin (international company (international work (international work)))</td>
<td>.538</td>
<td>2.137</td>
<td>.037</td>
<td>.301</td>
<td>.115</td>
</tr>
<tr>
<td>Employment (international company (international work (international work)))</td>
<td>.341</td>
<td>1.392</td>
<td>.027</td>
<td>.270</td>
<td>.142</td>
</tr>
<tr>
<td>Foreign father (international company (international work (international work)))</td>
<td>.409</td>
<td>3.049</td>
<td>.004</td>
<td>.088</td>
<td>.016</td>
</tr>
</tbody>
</table>

Data in the table represents standardized beta coefficients.

Table 6: Hierarchical multiple linear regression
Adding the control variables in Model 1 provides us with a baseline model to compare the additional models to. This model had an $R^2$ of .202, meaning that the control variables alone explain 20% of the variance in the dependent variable LogEmployees (Bartholomew, Steel, Moustaki & Galbraith, 2008, p. 148).

Model 2 shows the results of adding the variables related to early international exposure. Adding these variables resulted in an $R^2$ of .270, showing that this model explains 6.8% more of the variation in LogEmployees than the baseline model. However, the change in $R^2$, although quite large, turned out to not be statistically significant, and none of the added variables were a statistically significant contribution. This indicates that early international exposure has little added effect on performance, as there are no strong relationships present. This gives little initial support for hypothesis 1.

In Model 3, the language-related variables were added, resulting in an $R^2$ of .301. This model showed an improved fit, suggesting that the model including language-related variables explains 3% more than Model 2. This indicates that adding linguistic capabilities to the variables, overall does a better job at predicting performance. However, the change in $R^2$ itself was not statistically significant. None of the variables added were of statistical significance, suggesting that language capabilities do not explain performance very well, considering early-life exposure and the control variables. Model 3 therefore gives little initial support to hypothesis 2.

Model 4 includes study-related variables to the regression, and provides a total $R^2$ of .420. Adding study-related variables gave a significant positive change in $R^2$ of .119 ($p < .05$). This implies that study-related international exposure explains more of the total variation in performance compared to Model 3, providing relevant results for hypothesis 3. However, most of the new independent variables added were statistically non-significant, with the exception of Studied abroad ($\beta = -.475$, $p < .05$). Despite the negative beta coefficient, the variable itself does not contribute negatively to performance, due to the log-linear nature of the regression. The interpretation of the beta coefficients is different than in a linear model, and the negative $\beta$ of Studied abroad reflects a positive change in performance in this
model, all other variables considered. Hence, hypothesis 3 receives moderate support.

In Model 5, $R^2$ is .490, but the change ($\Delta R^2 = .070$) is not significant. The four added variables in this model are related to international work exposure, and among these, two (Lived abroad (work) and Years lived abroad (work)) were moderately significant ($p < .10$). Additionally, adding these variables made Languages moderately significant ($p = .057$), and Studied abroad becomes less significant ($p = .061$) than in Model 4. This indicates that when work-related exposure is accounted for, the number of languages spoken becomes an important predictor for performance, while having studied abroad becomes less, although still significant, important. Thus, Model 5 gives moderate support for hypotheses 2, 3 and 4.

Table 7 summarizes the conclusions from the multiple linear regression and testing of the hypotheses when all variables are included.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Results</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. International exposure in childhood and adolescent years will have a positive effect on international startup performance</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Country of origin</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Foreign mother</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Foreign father</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Ubringing</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Upbrining (country)</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Vacation</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>2. Multiple language proficiency will have a positive effect on international startup performance</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Bilingual</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Languages</td>
<td>$p &lt; .10$</td>
<td></td>
</tr>
<tr>
<td>3. International exposure through studies will have a positive effect on international startup performance</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Studied abroad</td>
<td>$p &lt; .10$</td>
<td></td>
</tr>
<tr>
<td>Studied abroad (years)</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Studied abroad (countries)</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>4. International exposure through work-related endeavours will have a positive effect on international startup performance</td>
<td>Moderate/Yes</td>
<td></td>
</tr>
<tr>
<td>Lived abroad (work)</td>
<td>$p &lt; .10$</td>
<td></td>
</tr>
<tr>
<td>Years lived abroad (work)</td>
<td>$p &lt; .10$</td>
<td></td>
</tr>
<tr>
<td>International company</td>
<td>n.s</td>
<td></td>
</tr>
<tr>
<td>Other international work experience</td>
<td>n.s</td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Results from hypothesis testing
5.3 Further Investigation of Relationships

The Pearson correlation statistic \((r)\) assumes linear relationships between the variables, but when looking at the scatterplots, only a few relationships seem linear. This does not necessarily mean that an independent variable has no relationship with \(\text{LogEmployees}\), it might just be that the relationship is shaped differently, e.g. quadratic or cubic. Hence, there might be some relationships between the independent variables and the dependent that need to be investigated by another approach, and are not suited for multiple linear regression.

5.3.1 Curvilinear Relationships

Checking for curve fits between the dependent and independent variables, we found other interesting relationships that are not evident in linear regression (see Appendix 5).

\textit{Languages} became moderately significant after adding work-related variables in the linear regression, already providing some support for the variable’s influence on performance. A curvilinear investigation of the variable gave some additional verification of its explanatory power, as speaking multiple languages (\textit{Languages}) is significantly related to performance if adjusted as cubic \((p = .019)\). This indicates that the variable is more predictive of performance if a cubic dependency is considered. As for the relationship between \textit{Bilingual} and \textit{LogEmployees}, it is statistically non-significant, but seems to be more important for managers with smaller firms and few employees. Overall, this suggests that the curvilinear investigation of linguistic capabilities gives some additional support to the conclusions drawn from regression.

\textit{Studied abroad (years)} became moderately significant if the relationship was adjusted as quadratic \((p = .073)\). This indicates that there is in fact a certain amount of explanatory power in the number of years one has studied abroad. In the linear regression, studying abroad was moderately significant, all other variables considered, and gave some support to hypothesis 3. The curvilinear investigation further showed that studying abroad seemed to be more important when the performance is ‘low’ with few employees and when the performance is ‘high’, with
many employees. Combined with the extra information shown in the quadratic relationship between $\text{LogEmployees}$ and $\text{Studied abroad (years)}$, this gives additional support to hypothesis 3.

In the linear regression, $\text{Years lived abroad (work)}$ showed to be moderately significant in explaining performance. Looking at the relationship between this variable and the dependent, we found that the relationship was moderately quadratic, and significant at a 5% level ($p = .034$). The shape of the relationship suggests that the number of years one has lived abroad in relation to work becomes more important as the performance of the company increases, and substantiates the results from the regression, giving moderate support to hypothesis 4.

6.0 Discussion

6.1 Main Findings

The purpose of this thesis was to explore managers’ international exposure as an explanatory factor of international startup firms’ performance. Managers and founders bring along a great deal of experience and expertise into a firm, and previous experience has been investigated by researchers when trying to determine why some are more successful than others (Reuber & Fischer, 1999). The findings however, have been rather inconclusive (Dyke et al., 1992), and the literature says little about the effect of the international aspect of their background and experience. The purpose of this thesis was therefore to aim at establishing relationships between international exposure and performance of international startup firms.

The contributions of this study provide some additional insight into the existing literature on the effects of managers’ international experience. Furthermore, this study provides an extension of the current literature on INVs. In particular, earlier research has focused on the characteristics of the manager as determinants of internationalization behavior among these types of firms (Karra et al., 2008; Knight & Cavusgil, 1996; Oviatt & McDougall, 1994). However, few studies have looked into the effects of managers’ international exposure and background on the performance of their firms once they have made the decision to operate internationally. Furthermore, few studies have found a direct relationship between the performance of a new venture and the experience of the manager (Reuber &
Fischer, 1999). Hence, the contributions of this study is new insight into the international characteristics that the managers of the specific target population bring into their firms, and the influence these characteristics have on the firms’ performance.

The results of this study showed some interesting viewpoints compared to the initial assumptions. In particular, early international exposure seemed to be of little significance in relation to performance, and the hypothesized positive relationship in hypothesis 1 received no support. What we did find, however, was that the importance of some aspects of early-life exposure increased as the company succeeds and grows in number of employees. For instance, the relationship between Foreign mother and LogEmployees and Foreign father and LogEmployees could be considered of interest in explaining performance, despite the lack of significance. Although linear regression gave little support to hypothesis 1, checking the dependencies seem to give some additional information about the early-life international exposure and performance. Having foreign parents turned out more important as the number of employees increased, suggesting that there is in fact a ‘critical’ point in a firm where the effect of having a bicultural upbringing is more evident. This is in line with the findings of Brannen and Thomas (2010), who reported that bicultural people are competent in international business settings. There are further theoretical concerns for why the idea of early international exposure’s effect should not be neglected all together. Multicultural upbringing through school and family has been positively associated with cultural intelligence (Harrison, 2012), and there might be some associations of early-life exposure on later international exposure. As evident in the preliminary analysis, growing up in a foreign country has a clear and positive relationship with the number of countries one has studied abroad in. This suggests that a lot of the variation in number of countries one has studied abroad in, is explained by growing up in another country. Thus, individuals who have grown up or lived abroad show little concern for national boundaries (Simmonds & Smith, 1968). Hence, early-life international exposure may in fact influence the choices made later on in life, and thereby affect international exposure gained at a later stage.

In support of hypothesis 2, we found that Languages was a significant variable in explaining firm performance, once international exposure through work was
accounted for. This indicates that having high linguistic capabilities is important first when one also has a certain amount of international work experience. The results from the investigation of curvilinear relationships further suggest that its importance increases with the performance of the company, and that high-performing firms have managers with high linguistic capabilities. We found that among the respondents who spoke the most languages, the highest performing managers had also lived abroad in relation to work. This is supportive of why languages seem to become important first when work exposure is accounted for. Finding that the relationship is positive supports our preliminary assumptions that proficiency in languages enhances the probability of success (Dichtl et al., 1984; Knowles et al., 2006). The overall contributions of the analysis gave moderate support to hypothesis 2, suggesting that language capabilities to some extent have a positive effect on performance.

The significant change in $R^2$ that occurred when adding study-related factors gave some interesting insights in support of hypothesis 3. It showed that when the variables related to international exposure gained through studies were added, the model explained more of performance than when not accounted for. The only statistically significant variable from the linear regression, Studied abroad, had a somewhat surprisingly small impact on number of employees. The difference between having studied abroad and not is in fact only 0.7 employees, in isolation. If looking at the whole model including all variables, having studied abroad reduces the total positive effect of the other variables on number of employees. Its isolated effect is less than one, and the zero-effect of not having studied abroad is in fact better on the total performance. This is somewhat surprising, and contradicts to some extent the initial assumptions about its positive influence. From the analysis of curve fits, hypothesis 3 received additional support from Studied abroad (years)’s moderately significantly quadratic relationship. However, its dependency with LogEmployees indicated that more years of international studies is not necessarily better, in relation to performance of the firm. The literature in general is inconclusive in relation to the effect of studying abroad, and tends to be less overwhelming positive than the rhetoric surrounding studying abroad would have us believe (Twombly et al., 2012, p. 90). Furthermore, the significance of Studied abroad decreased as work-related variables were accounted for. It remained significant, but it seems that it lost some of its predictive power, or became more
‘redundant’, considering international work endeavors. Literature provides some possible explanations for this. In a study about the long-term impacts of studying abroad, Norris and Gillespie (2009) found that 48% of students who had studied abroad went on to have some global dimension of their careers after college. Other researchers have also found that studying abroad increases the probability of working abroad later on in life (Parey & Waldinger, 2010). This supports our results, and we see already in the preliminary analysis of correlations that Studied abroad (years) is significantly correlated with Lived abroad (work) and Years lived abroad (work), suggesting that much of the variance in these variables are explained by each other. Hence, its decrease in significance, once work-related variables are added, seems more logical. The hypothesis received moderate support initially, and these findings provide some additional explanations of the results.

In support of hypothesis 4, we found that some of the variables related to international work exposure were moderately significant, consistent with literature suggesting that living abroad for work-related purposes increases managers’ objective career success (Piaskowska & Trojanowski, 2014). The results from linear regression and curvilinear investigations further show that the longer you have lived abroad for work-related purposes, the more likely you are to perform well with the company. Our initial assumptions about the positive relationship is moderately confirmed by the findings, and it seems that the specific type of international work experience one has, is less important than actually having international work experience. To provide an example: having worked in an international company was not statistically significant, while the overall notion of international assignments (i.e. lived abroad for work purposes) was. International work has generally been seen to enhance the capabilities of the individual (Gregersen et al., 1998), and from our study we can conclude that international work experience, in terms of experiencing a different culture and spending time in an international business context, is more important than having prior experiences from short-term stays and international companies.

6.1.2 Base Rates

An interesting aspect of the overall findings, is that the results, although present, are weaker and not as positive as we initially suspected. An explanation of this can
be rooted in the issues of base rates and prior probabilities (Kahneman & Tversky, 1973). Sometimes, occurrences that happen due to share luck are disguised as non-luck events, or skills, which implies that someone who has experienced a great deal of luck might attribute his/her success to other precise reasons or skills (Taleb, 2005, p. XXXIX).

In the Nordic countries, the level of proficiency in languages is relatively high compared to other regions, much due to advanced school systems and free education. Additionally, living in a Nordic country provides a rather high probability of speaking more than one language, due to proximity of languages like those of Scandinavia. Said differently, if a respondent is from Norway, the probability is high that this individual also speaks, or at least understands, both Swedish and Danish as well. The proximity of languages is much due to the historic connection between the Nordic countries, like previous country-unions and ownership between nations, and is also an explanation for why many Finnish people speak Swedish today. Furthermore, most Nordic children learn English and even a third foreign language (i.e. French, German or Spanish) from an early age in school, resulting in a language proficiency in at least two languages, and often more. As such, there is a high probability of substantial linguistic capabilities of Nordic managers, which was evident in our sample as well. Most of the respondents spoke at least two languages, giving reason to believe that the base rate of multiple language speakers is rather high in the context we are examining. This does not, however, directly mean that speaking multiple languages is crucial in order to succeed with an international startup. There are examples of managers operating in far corners of the world, without ever speaking the local language, who still succeed. Additionally, there are a lot of linguistically capable individuals who never go abroad to establish a startup. Considering that most of the respondents in our sample actually speak more than one language, it is not so surprising that some of them are high performers as well, yet this might be influenced by randomness or other factors, and not linguistic capabilities alone. However, the significance of languages cannot be dismissed. From a theoretical foundation, languages seem to work as a proxy for success through giving the individual certain advantages, such as cognitive skills and an enhanced understanding for foreign cultures (Blom et al., 2014; Clarke, 1999, cited in Knowles et al., 2006) in business contexts. From an empirical point of view, our findings show that when all other factors are
considered, there is a significant relationship between performance and number of languages spoken.

When discussing determinants of success for international startups, it is important to look at the context in which it occurs. The Nordics are one of the most attractive regions in the world for startups, and four out of five countries are ranked as top ten best countries to start a company (Carlström, 2016a). The Nordic countries, with Sweden in the lead, allocate a great deal of resources to startups, including entrepreneurial education and startup incubators, and in Denmark and Norway, startup funding has never been higher (Carlström, 2016b; Klemsdal, 2017, pp. 52-53). For our findings, this implies that the companies investigated all have roots in one of the most attractive startup regions and have great prerequisites for success compared to other regions. Statistics further show that Nordic countries have been more successful than the rest of the world in creating billion dollar international companies, so called ‘unicorns’, and that this can be explained by the small size of the Nordic market. Small markets force companies out early in order to expand and grow their success (Carlström, 2016a). This implies that all the companies in our sample initially have higher possibilities than the rest of the world to establish a startup in a foreign location. The base rate of Nordic startups with international orientation is therefore deemed quite high, and the probability of finding successful Nordic international startups in our sample is quite high. Does this mean that international exposure is redundant in explaining performance for these firms, and that most of success comes from home market advantages? No, we merely suggest that international exposure may act as a moderator of this relationship as it may give a manager additional benefits of penetrating international barriers, in addition to already existing benefits in the Nordic startup community.

Finding that work-related exposure was a moderately significant factor in explaining performance was a rather expected result, once the prior probabilities were considered. According to United Nations’ population statistics, 230 million lived outside their home countries as of 2013, accounting for 3% of the world’s total population. In OECD countries, the number is even higher, and here expatriates account for 40 million, or 13%, of the total OECD population (Ferraro & Briody, 2017, p. 240). Furthermore, 76% of respondents of Cartus’ 2016 survey on trends in relocation (Spinolo, 2016) said they saw an increased need for
flexibility in the future as well, suggesting that the number of expatriates will increase in the coming years. In relation to our results, the probability of having had previous stays abroad in relation to work is therefore rather high, seen on a global scale. This does not necessarily mean that former work stays abroad automatically make you more successful as a manager of an international startup. But we do see that it seems to have an impact on the performance of the firm, which may be rooted in the fact that leaders with former expatriation experience, have the opportunity to build international networks that can increase their social capital and aid their future career success (Biemann & Braakmann, 2013).

6.2 **Limitations and Future Research**

The results of this thesis should be viewed in light of a number of limitations, some of them which open up for future research.

6.2.1 **Sample**

The sample size of this study is somewhat small, which may pose some challenges when interpreting the results. Although deemed sufficient according to the desired level in representation of the target population, the generalizability of the results can be limited when the sample is rather small. It is suggested that future research should be conducted on a larger sample of the same type of startups, to see if the results have stronger indications of the relationships between the predicting variables and firm performance, and thereby further generalize the findings to other groups of managers. Furthermore, due to the fact that this particular sample is drawn from a tech-intensive group of startup companies, the results might differ from other industries or other types of companies (i.e. not startups). Additionally, the Nordic affiliation of the startups in this thesis may represent other properties of the sample, for instance in relation to education and favorable political conditions. The general level of education is assumed to be high in the Nordic compared to other regions, and the Nordic startup community offers especially advantageous conditions for these firms. We therefore suggest that future research should be conducted on samples from other geographical areas.
6.2.2 Research Design

Although using a cross-sectional method has its benefits, such a design also has its limitations. With data being collected at a single point in time, the consideration of what happens before or after the data is collected, is neglected. Although the cross-sectional study gave us some interesting insight into the relationships between international exposure and startup performance, future research could benefit from a longitudinal design. The cross-sectional study design is advantageous for screening hypotheses and lay the foundation for a longitudinal design. Applying a longitudinal design would allow to check for changes in number of employees over a period of time, so as to assess the actual improvement or decline in success of the companies. Furthermore, when treating the international exposure as a stock of experiences, and limit the measurement to a specific point in time (as done in a cross-sectional method), it raises the question about how long these measures can be considered valid (Reuber & Fischer, 1999). Furthermore, in cross-sectional studies, the internal validity is typically weak (Bryman & Bell, 2015, p. 64). It is difficult to establish causal direction from the data, and although we can establish obvious relationships, we might not be able to determine the causality of it. This is due the nature of the cross-sectional study design, as the exposure and outcome are simultaneously assessed, which makes it difficult to prove that the exposure caused the outcome. For the current thesis, this means that the results should be interpreted with caution.

6.2.3 Networks and Performance

Organizations, regardless of size and age, depend on their environment, and networks are important for discovering and exploring ideas and gathering resources (Aldrich & Zimmer, 1986). Networks can be especially important for startup companies, and successful entrepreneurs have been found to be active in networking (Dollinger, 1985). Furthermore, entrepreneurial networks have been positively associated with organizational growth (Hansen, 1995), and by participating in venture associations, founders can accumulate social capital in networks and gain managerial ‘knowhow’ about startup management, information about opportunities and access to professionals (Lee, Lee & Pennings, 2001). Furthermore, networks have been viewed as an important factor in terms of entrepreneurial outcomes. Positive perceptions based on a company’s network, can
lead to more investors and employees beneficially valuing the potential of the venture (Hoang & Antoncic, 2003), and entrepreneurs who have broad social networks that they receive help and support from are more successful (Brüderl & Preisendörfer, 1998). Considering that our sample is drawn from internationalized startups in a tech hub in Silicon Valley, they are all part of a network that provides them with resources and support. It is therefore likely that the membership in NIH increases the likelihood of performing well, and thus, our sample’s base rate for success is higher than in other contexts. The topic of networks was out of the scope of this thesis, but for future research it could be interesting to also investigate whether startup networks have a moderating effect on the performance of these companies.

### 6.3 Managerial Implications

The results of this thesis shed light on some interesting aspects of international exposure and international startup performance. Finding that there are certain types of international exposure that are more prominent in high-performing startup firms can have implications for managers, policy makers and lenders. Recruitment policies should favor hiring managers with beneficial international characteristics. For company policy makers it could be used to develop educational training programs. Programs should facilitate for managers to pursue international careers and experiences through working in the company. Language training could also be implemented in company policies, and managers without foreign language skills can be able to acquire them with the right kind of training (Knowles et al., 2006). For lenders, it could be used to evaluate the managers and their business plans. As an entrepreneur, you are often dependent on funding, and it can be difficult to convince investors that your idea is a safe bet. Our findings suggest that lenders should consider previous international exposure as generally favorable when evaluating applicants. Furthermore, entrepreneurs who are considering starting an INV would have some criteria to assess their own readiness on, and could use the results to identify experiences they might want to develop further. In addition, they can gain some insight into how they better can utilize the international exposure they already possess.
The practical implication of these findings, is that they propose a fuller appreciation of the concept of international exposure, and how managers of international startups can utilize their qualities, not only for internationalization purposes itself, but for managing their firms towards success.

7.0 Conclusion

This thesis aimed at examining the influence of managers’ international exposure on international startup performance. By adding the aspect of international exposure, we sought to extend the literature on entrepreneurial capabilities and firm performance. The results have pointed to the importance of recognizing how certain international experiences enable and benefit managers of startups in a foreign environment.

Our findings suggest that managers’ international exposure influence international startup performance positively, yet the results are not as strong as initially suspected. The most influential factors are in managers’ linguistic capabilities, studies abroad and work-related exposures. The study-related factors showed less obvious relationships than we initially suspected, but may still have an effect on international career choices later on in life. Early-life exposure seems less important, but may be influential in the sense that a bicultural upbringing gives advantages in international business settings, and affects decisions made at a later stage in life. As such, early-life exposure may influence the international trajectory of managers, as the concern for national boundaries is less evident in individuals with a bicultural background. When considering base rate issues, the somewhat weak results are not so surprising, as linguistic capabilities and international work experiences seem to be linked to some qualities that might make it easier for managers to succeed in international startup management. What the findings imply for the conclusion of this thesis is that later international exposure seems to be the most important, through studies, work-related exposure and linguistic capabilities, controlled for managers’ age, level of education, years of previous work experience and the lifetime of the company. The results support prior studies on how experience is a determinant for firm performance (Dyke et al., 1992) to some extent, and further show that the international aspect of experiences and influences should be looked at as proxies for certain qualities that enable managers to succeed with international startup firms.
8.0 References


