

# Managers in Norwegian Born Global Companies

A study on the characteristics of the manager and their commitment to internationalization, and the performance of the firm

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## **Preface**

I wrote this thesis as part of my Master of Science degree in Business Administration at the Norwegian University of Life Sciences, 2010. I have truly enjoyed writing it despite the ups and downs, and some major setbacks throughout the process. This field of study is of great interest to me, and this has been my savior, as it has given me the motivation to carry on at times of no progress.

A big thank you to my supervisor Siv Marina Flø Karlsen at Oslo University College, who has provided me with her insights, first through her course on Internationalization of Small and Medium sized Enterprises and finally throughout the process of completing this paper. Her course inspired me to write this thesis, and her contribution to the result has been significant, and has been very much appreciated.

I would also like to thank all the people who took the time out of their busy schedules to answer my emails and inquiries, and a special thanks to the ones who contributed to this thesis by responding to my survey. Without your help, this paper would be worthless.

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## **Abstract**

The purpose of this study was to test a model developed by Freeman and Cavusgil (2007), which describes different characteristics among managers in the Born Global company, and the relationship between these characteristics and the commitment to accelerated internationalization in these firms. The aim has been to contribute to the development of theory on the relatively new phenomenon “Born Globals”, and more specifically on the characteristics of the manager in this type of firms and the effect he or she has on the behavior of the firm.

The research questions that were answered were whether the characteristics that define the four commitment states, “the responder”, “the opportunist”, “the experimentalist” and “the strategist” in the typology developed by Freeman and Cavusgil (2007), could be identified among the Norwegian Born Global companies and their managers, and whether they are related to each other and to the commitment to internationalization. Further, the research questions of whether there is a relationship between these characteristics and the international experience of the managers, and between the characteristics and the performance of the firm were answered.

The design of the research was descriptive and quantitative, and a survey using Questback was distributed to a sample of companies characterized by having high-tech products or processes, fewer than 100 employees and having been established after 1990. A requirement of international activities being initiated no later than six years after inception was also applied. These requirements are often used to define the Born Global concept. An essential part of answering the research question was the operationalization of the model by Freeman and Cavusgil (2007) by the researcher. The survey and the results obtained were based on this operationalization. When analyzing the data, SPSS was used for the statistical procedures that were conducted to test the relationships between the different variables.

This study found that five characteristics could be identified among the managers in the Norwegian high-tech Born Global companies. These five factors were Adaptiveness, Innovative orientation, Risk-taking behavior, Other-oriented behavior, and Personal interactions. These characteristics did not show strong indication of being related to each other. Further, tests on the relationships between these characteristics

and commitment to internationalization found that Personal interactions were related to higher percentage of international sales within three years, and to the number of continents the companies were present in. Innovative orientation was found to increase likeliness of internationalize within three years after inception. Based on these results, the characteristics of the manager and the relationships between them, as well as the relationship between the characteristics and commitment, were not identified among the Norwegian Born Globals in the same manner as the model in the typology by Freeman and Cavusgil (2007) indicated.

With regards to the relationships between the characteristics and the degree of international experience among the managers, experience gained at home, such as traveling through work or other contact with international market before becoming a part of the Born Global company, had a higher degree of Other-oriented behavior and Personal interactions. International experience obtained abroad, such as working or studying abroad, also had a positive effect on Personal interactions. The characteristics of Adaptiveness, Personal interactions and Other-oriented behavior were found to have a positive relationship with performance. Even when controlling for size in revenues, size in terms of number of employees and age of the company, these characteristics have a significant effect.

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# 1. Introduction

## 1.1 *The Born Global phenomenon*

Born Global companies are a special type of Small and Medium-sized Enterprises (SMEs) (Gabrielsson et al. 2008), which are characterized by their rapid internationalization, as they are known to become international from “inception”. This is not, however, a practical definition as they are not literally international from day one, nor are they necessarily global, in the literal meaning of the word, as being present on several continents. There are many definitions of the concept of Born Global firms and no uniform characteristics exist, and a well-founded theoretical framework for these firms and their internationalization has yet to be consistently developed. The phenomenon was “discovered” as late as in the 1990s, and empirical support for theories around it is still limited, however increasing.

In general, Born Globals are “*companies that from or near founding obtain a substantial portion of total revenue from sales in international markets*” (Knight and Cavusgil 2004:16). Therefore, these companies are mainly characterized by their low age and small size when they first initiate international activities, and thus also by their lack of the financial resources, and the knowledge that traditionally have been considered a requirement for successful internationalization. Despite this, they do in fact represent a strong competitive force against large, established companies. This is an important reason why it has become an interesting area to look at from a managerial point of view. Research may provide managers with additional knowledge on how these new firms can overcome the challenges that arise from both the process of establishment of a new firm and at the same time, the expansion into new international markets (Aspelund et al. 2007:1431).

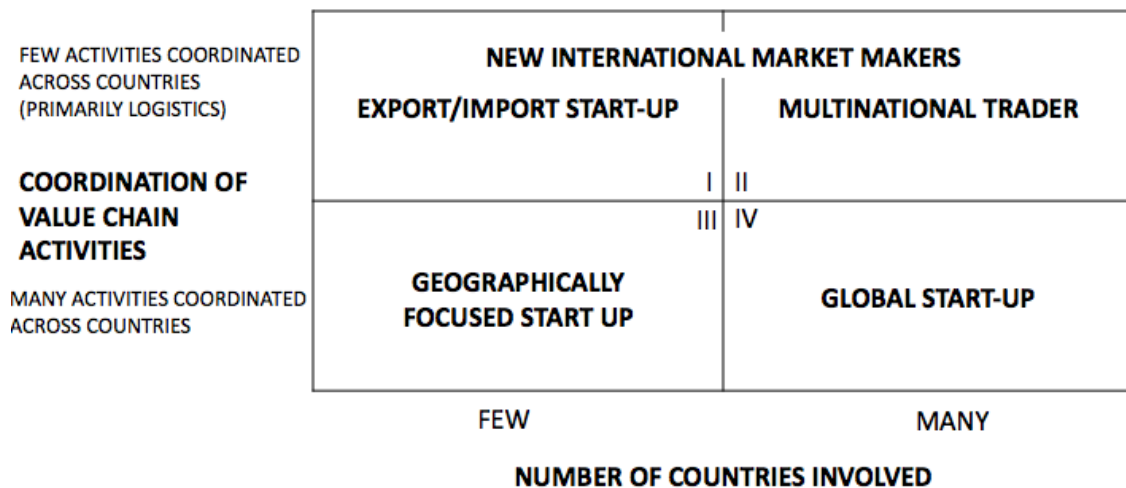
The idea behind studying these new forms of small firms is that one may contribute to a better understanding of them, and in this way help the entrepreneurs, the managers, and the investors in such companies. It is important to determine the factors that may help them make better choices for themselves and their companies in order to create value through success. It is particularly interesting in the context of a small and open economy, such as Norway, with a relatively small domestic market, which may force companies to go international to survive, and at an early stage in its development. In addition, in a small country the frequency of smaller firms are high, and to gain a

better understanding of this phenomenon is important, as these small companies are crucial for the development of the value creation in the economy.

There are several different names for these companies, such as International New Ventures (Oviatt and McDougall, 1994), Global Start-ups (Oviatt and McDougall, 1994), High Technology Start-ups (Jolly et al. 1992), and finally, Born Globals (Rennie, 1993; Knight and Cavusgil 1996), which is the name commonly adopted in recent years. A definition commonly referred to when discussing this phenomenon, is the one of Oviatt and McDougall (1994), who define International New Ventures as “...*a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries*” (Oviatt and McDougall, 1994:49). The operationalization of this broad definition, however, varies to a large extent between studies (Aspelund et al., 2007:1431).

One definition, which has often been used, requires a Born Global company to export 25% of their sales within 3 years after inception (e.g. Knight & Cavusgil, 1996/2004). However, almost any start-up company from a small country that offers a specialized product addressed to a market niche, could meet this requirement (Gabrielsson et al., 2008:387). Rennie (1993) defines Born Globals generally, as firms that achieve a significant international presence within two years. McDougall, Shane, and Oviatt (1994) use an eight-year definition, though in general, the literature suggests that Born Globals enter foreign markets between two and six years after inception (Coviello and Munro, 1995). According to Gabrielsson et al. (2008), it is fair that no universal, numerical definition exists, as ratio of exports or the range of geographically international activities are influenced by the home country and its economy, its neighboring markets of the firm, and other factors, such as type of industry (Gabrielsson et al., 2008:387). This debate underlines the lack of consistent theory and definitions within this relatively new field, which also supports the need for further research.

Oviatt and McDougall (1994) developed a much referred to framework on Born Globals, or what they called International New Ventures (INVs), where they categorize the companies along two dimensions, the coordination of value chain activities, and the number of countries involved, as seen below:



**Figure 1.1: Model of types of International New Ventures**

Source: Oviatt and McDougall (1994:59)

The “new international market makers,” focus on exporting goods and services from their home countries to countries where there is demand, and thus, they have few activities coordinated across countries and they differ in terms of the number of countries involved. Some of them may export to a limited number of countries, while others, like the multinational trader, will export to a large number of countries from or near inception. While these INVs focus on exporting and importing activities, other INVs coordinate several activities across countries, and this latter group is divided into two groups; the geographically focused start-ups, which coordinate their activities across a limited number of countries, and global start-ups, which are involved in several countries (Oviatt and McDougall, 1994:59). This latter group is considered the most radical form, and is the type of firm that is mostly referred to as true Born Globals today (Gabrielsson et al., 2008).

When studying Born Globals, the focus has often been on the high-tech or technology-oriented and innovative firms, or firms with products that aim for a niche market (Knight and Cavusgil, 1996). These are traditionally considered belonging to global industry with a high degree of competition, thus internationalization is unavoidable. Many researchers have looked at the differences between Born Globals and their counterparts, purely domestic firms. However, as the Born Globals have become accepted as a phenomenon and are no longer just an exception to the rule it may

be argued that it is now more interesting to look at the differences between companies within the definition of Born Global, and their success in the international markets.

### ***1.2 Factors explaining the emergence of Born Globals***

Several factors in the environment of SMEs help explain why the Born Global phenomenon has emerged in the past decades. These factors also help explain why SMEs are able to compete in the international markets despite the fact that they lack resources, experience, and knowledge, and that their competitors may be large, traditional MNEs that have built up resources, experience and knowledge in the foreign markets over time. These factors are often referred to as pull factors, and are mainly globalization forces in the environment of the SMEs.

Market conditions have changed dramatically in the last 20 years, and the main cause has been the technological developments that we have been experiencing. This has led to an increasing amount of information available and the flow of it has become more efficient, which has also led to an increasing knowledge on international markets among, not only firms, but people in general. In addition, technological developments have enabled small-scale production to become economically beneficial, therefore that economies of scale are no longer necessarily a competitive advantage for large companies.

The increasing flow of information has contributed to making markets more homogenous across nations, which has increased the demand for products regardless of their origin. At the same time, the emergence of new niche markets have made increased specialization possible, as traditionally, the domestic demand for niche products may have been too small. The availability of these new market opportunities have made it possible for small and young companies to internationalize early on. The niche focus has also enabled small companies to efficiently compete against large competitors by not necessarily providing direct substitutes, but rather complementing products.

Enabling forces, such as the huge reductions in transportation costs, and the increased availability and reliability of transportation have greatly contributed to reducing the distances to foreign markets and making them more available. In addition, the breaking down of trade barriers due to organizations such as the EU and the WTO

has enabled exporting. Developments in communication have also contributed to bringing markets closer to each other and making the world smaller. Such forces of globalization have provided markets that may be physically distant to become psychically closer and thus more available to any firm wanting to go global. The Internet has been a major contributor to the availability of, and the free flow of information. This has led to founders of small companies gaining more knowledge than they previously would have, if they lacked first hand international experience. Furthermore, they would be able to provide their potential customers in distant markets the knowledge of their products.

This increased availability of information is an important factor explaining why a small company with limited knowledge and experience on paper may gain advantage in competition with larger companies. Some have also claimed that in today's increasingly globalized world, age and size can be harmful (Reuber and Fishcer, 1997). This is due to large and older companies having reduced ability to be flexible enough to adapt to continuously changing market conditions. They may have developed routines that have become strongly institutionalized and a hierarchy within the organization, which slows down processes of change. Smaller companies, on the other hand, will have flatter organizational structures that provide them with the opportunity to adapt rapidly to their environments or changes in demand.

As a result of the factors described above, it is now possible to argue, in opposition of traditional research on the area of internationalization (Johanson and Vahlne, 1977), that small size and lack of on paper experience, knowledge, and resources in a company is less of a disadvantage than previously presumed in theories on internationalization. In this context there is need for development on the theories around these new types of companies with different characteristics than traditional large and international companies or traditional small and domestic ones.

### ***1.3 Purpose of the study***

The main purpose of this study is to contribute to the development of theory and knowledge on the relatively new phenomenon of the Born Global firm, however, it is essential for this thesis to also provide useful information to the future founders and managers of these companies, in particular, information on how to succeed in this

setting. Managers in small companies have proven to be key assets to success (Knight and Cavusgil, 2004; Madsen and Servais, 1997), as the company itself is young and often lacks financial strength as competitive advantage. Many have focused on the global mindset and other characteristics, such as prior international experience, of these managers (e.g. Reuber and Fischer, 1997), and the question is whether these characteristics are key assets for the manager, and thus for the company in the process of early internationalization of companies.

An important aim of this thesis is also to base it on prior research and thus help develop theories that have already been explored to a certain extent. The research previously conducted in this area is mainly qualitative in nature, and thus this study aims to provide a quantitative approach, and the testing of previous research in larger samples.

The purpose is to try to identify certain characteristics that have been claimed to be found among managers of Born Global companies, and connect this to prior international experience, as well as to the degree of commitment to internationalization, and finally, to performance, in other words, degree of success in international markets. An interesting point about connecting the managers' characteristics to their commitment to internationalization is that it allows for testing of whether the degree of the company's involvement in international markets necessarily is a result of environmental factors, such as globalization forces mentioned above, or if it is a result of the mindset of the managers, in other words, their characteristics.

The focus in this research is on the founders and/or key employees that affect the strategic directions of the company, and how their characteristics may be related to their international experience, and to the internationalization of the firm and its performance.

### *1.3.1 Problem definition*

The thesis will focus on a typology of commitment states to internationalization among managers in Born Global firms, developed by Freeman and Cavusgil (2007). I would like to test whether the characteristics they found which define these different commitment states can be identified among Norwegian Born Global firms, and explore whether they can be connected to the international experience of the managers and to the performance of the firm in the international markets. I would also like to test

whether they can actually be connected to the international involvement of the companies, in other words to the commitment to early and rapid internationalization, as suggested by Freeman and Cavusgil (2007).

This can be summarized into the following research question:

*Can the characteristics that define the four commitment states, “the responder”, “the opportunist”, “the experimentalist” and “the strategist” in the typology developed by Freeman and Cavusgil (2007), be identified among the Norwegian Born Global companies and their managers, and are they related to each other and to the commitment to internationalization, and is there a relationship between these characteristics and the international experience of the managers and the performance of the firm?*

This divides the research into three parts that will be examined:

- 1) Can the characteristics in the typology of Freeman and Cavusgil (2007) be identified among managers in Norwegian Born Global firms, and are they related to each other, and to commitment to internationalization?
- 2) Is there a relationship between the characteristics in the typology by Freeman and Cavusgil (2007) and international experience among managers?
- 3) Is there a relationship between the characteristics in the typology by Freeman and Cavusgil (2007) and the performance of the firm?

#### ***1.4 Structure of the thesis***

This thesis started out with an introduction to the topic Born Globals and a presentation of the research questions that it aims to answer. The second chapter presents the relevant literature on this topic and on the main areas of focus, and on the basis of this, the third chapter presents the conceptual framework on which the empirical research is based, and hypotheses are presented about what findings one may assume to obtain based on the previous literature. In chapter four the research methodology that has been applied to the research questions is presented and discussed.

In chapter five the results of the empirical research is presented and analyzed, and in chapter six a discussion on the research questions is held. Finally, in chapter seven, conclusions about the findings are presented, as well as implications and suggestions for further research.



## **2. Theoretical framework**

### ***2.1 Theories on internationalization of SMEs***

Since the 1970s, when research started to emerge on the topic of internationalization, the main research developed in two directions. On one hand, there are the Innovation-related models (I-model) (Bilkey and Tesar, 1977; Cavusgil, 1980, among others), which sees the decision to internationalize as an innovation to the firm and the focus is on the learning process that comes from the initiation of an innovation. On the other hand, the The Uppsala Internationalization Model (U-model) (Johanson and Vahlne, 1977) explains internationalization as a process of gradually increasing the commitment in international markets as a result of learning, and the development of internal assets, which increases from experience, and over time.

Both directions of theories are focused on larger and more mature firms, that are assumed to internationalize long after inception because building up resources, and especially increasingly gaining the knowledge and experience on the foreign markets is considered important. This reduces the risks and uncertainties about the foreign markets, which gives the firm incentives to increase their commitment to these markets (McDougall et al., 1994; Aspelund et al., 2008). These models explain the process of internationalization as a gradual and sequential stage process, where the degree of internationalization is a result of incremental commitment decisions based on the internal capabilities of the firms, and the perception of the risks in the foreign markets (Johanson and Vahlne, 1977). The Uppsala model in particular describes firms as going from non-exporters to experienced exporters sequentially with feedback from every stage to increase knowledge on experiences made in foreign markets (Johanson and Vahlne, 1977).

In this model the firms would internationalize into markets that they have knowledge on first, as these are more easily understood than markets they have less knowledge of or experience in. This reduces the uncertainty of internationalizing, and the firm would move on to more distant markets when experience and knowledge increases. This concept explains the market selection of the firm, and the term used for it by Johanson and Vahlne (1977), was “*psychic distance*” to markets.

Building experience in the domestic markets first is also expected in these models, as a requirement for internationalization. However, in the late 80s there were

signs of the internationalization processes of firms becoming more rapid, and the concept of leapfrogging was introduced (e.g. Knight and Cavusgil, 1996), which meant that stages in the original models of internationalization were skipped due to the knowledge and experience of the founder or the management of the firms. This allowed them to internationalize into markets further away, and not necessarily go to the markets most psychically close. In the 1990s several empirical studies emerged that showed signs of export behaviors that challenged the traditional models and their incremental processes, with examples of the Born Global firms, firms internationalizing from inception, without the required incremental experience and knowledge-acquiring assumed in the traditional theories (Rennie, 1993; Bell, 1995).

The traditional view has seen small and young companies, such as Born Globals, as having a disadvantage compared to larger and older firms as they lack the necessary skills and resources, as well as the experience and credibility that a domestic track record provides (Reuber and Fischer, 1997). This has put the Born Global firms somewhat in lack of a theoretical framework, as the traditional theories do fail to explain their internationalization patterns (McDougall et al., 1994). However, it has been established by empirical studies that youth and the lack of experience, financial, human, and tangible resources, no longer are major impediments to large-scale internationalization and global success (Knight and Cavusgil, 2004), thus other theoretical directions have been pursued to explain the internationalization of young and small companies. In the following these theories will be presented.

## ***2.2 Theories explaining Born Global internationalization***

### *2.2.1 Network theory*

This theory helps explain the internationalization of Born Globals that lack the traditional resources needed to internationalize, by underlining how they compensate for this by using networks and alliances with partners that control the resources that they need but do not have (Freeman et al., 2006). The process of internationalization is thus dependent on the firm's relationships with other firms or actors in the market. Networks may be of great importance to the success of small firms as they gain market knowledge and information that would not have been available to them without it. Thus, a network

can be considered an asset to small firms and this unique asset is also difficult to imitate by others (Sharma and Blomstermo, 2003).

For Born Global firms, networks are key assets as they help drive the internationalization process, they may determine the choice of international markets, and also the entry mode into international markets are often influenced by their network partners (Madsen and Servais, 1997). Born Global firms often rely on a single and unique product, and since this makes them vulnerable to competition they usually seek out network partners that complement their own competencies in the international markets. This allows them to develop strong and effective network relationships that may serve as a competitive advantage (Madsen and Servais, 1997; Oviatt and McDougall, 1994). Compared to the traditional theories, the use of network by small companies may help them skip stages in the process of internationalization explained by Johansen and Vahlne (1977), as resources, information and knowledge through second-hand experience through the firm's network partners are available much faster and more easily than if they were to be acquired through first-hand experience with international markets.

### *2.2.2 Resource-based view (RBV)*

This view considers other resources of a firm beyond the traditional and tangible resources, such as financial or organizational, or firm experience. Its focus is on firm-specific resources that can be characterized as intangible, such as the ability to be innovative, proactive, and risk taking, as well as having a global vision, an internationally experienced top management team, and international networks (Oviatt and McDougall, 2005). The claim is that such resources are unique and will lead to a competitive advantage in international markets (Oviatt and McDougall, 2005; Freeman and Cavusgil, 2007). These resources also help explain why young and small companies choose to internationalize rapidly. Their unique resources, which are often hard to imitate, are strong driving forces towards seeking out new markets for the firm's products.

The resources considered most important is knowledge, such as knowledge on international markets, business and operations (Knight and Cavusgil, 2004), as well as organizational capabilities. Knight and Cavusgil (2004) find that mindset of key people

in the firm, knowledge and organizational capabilities are linked to the performance of Born Global companies, and that the innovativeness in these companies makes them seek out particular types of knowledge, which drives the development of their organizational capabilities, which again support their early internationalization and their success in international markets (Knight and Cavusgil, 2004).

This perspective underlines sources of competitive advantage that can be tied to the individuals in the firm, and not necessarily to the firm itself. The traditional theories look at the characteristics of the firm, but this perspective supports a shift in the focus towards the key individuals in the firm, their mindset, characteristics, knowledge and experience. The traditional theories emphasized the gradual learning of the firm, and this gradual learning may still happen at the individual level, however, it may have started much earlier than at the time of establishment of the firm (Karlsen, 2007:26). The believe is that these factors, as well as the network, provide small companies with the means to skip stages in traditional models, and internationalize early after inception.

### 2.2.3 *International entrepreneurship*

International entrepreneurship is defined as “*the combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations*” (McDougall and Oviatt, 2000:903). This is a combination of two research directions, International Business on the one hand, and Entrepreneurship on the other. International business theories have traditionally focused on large multinational enterprises, while research within entrepreneurship has focused on the creation of ventures and the entrepreneur in small companies, within a domestic context. As a result, the combination of these two perspectives has turned into a focus on the entrepreneur in an international context. The focus has been on the role of the entrepreneur in companies such as Born Global, and on how their previous experiences and knowledge are turned into competitive advantages in international markets (Reuber and Fischer, 1997). Knight and Cavusgil (1996) see Born Global firms as entrepreneurial, and with their global mindsets, unique capabilities and competencies, they overcome the liability of newness in the process of internationalization. This perspective is important and could help to better explain the process of internationalization of the Born Global companies, by redirecting the focus away from

the company or organization per se, and onto the individuals within it. This is connected to the Resource-based view described above, as intangible assets such as the ability to be innovative, risk-taking and proactive are characteristics often held by entrepreneurs (McDougall and Oviatt, 2000) and the International Entrepreneurship perspective makes an effort to focus on both the resources of the entrepreneur and on this in an international business setting. Thus, when trying to explain the rapid internationalization of young firms, the characteristics of the key individuals, and their degree of an entrepreneurial mindset should be considered.

#### *2.2.4 Integrated theories*

There has been a call for a development of a theoretical foundation that closes the gap between the different theoretical orientations and their perspectives on firm behavior. Freeman and Cavusgil (2007) attempted to do this by developing theoretical explanations on the management of Born Globals and their attitudinal orientations to internationalization by integrating the network perspective and the resource-based view with international entrepreneurship (Freeman and Cavusgil, 2007:1).

As they explain it, according to the Uppsala-model, SMEs initial market locations will be psychically close, while the network perspective, on the other hand, suggests that psychic distance is irrelevant because entrepreneurs will follow their clients. Third, the international entrepreneurship perspective also suggests that the entrepreneurs being opportunity seeking, and their extensive use of network contacts, explain the direction of initial market selection. Finally, the resource-based view, which focuses on networks as firm assets, also predicts that market selection will be made on the basis of networks, not psychic distance (Freeman and Cavusgil, 2007:12).

The innovation models view internationalization as an innovation. Integrating this with the network perspective, which emphasizes knowledge building through external networks, and the resource-based view, which focuses on the internal development of a firm's knowledge and resources, Freeman and Cavusgil (2007) feel that the accelerated internationalization of smaller firms may be better understood (Freeman and Cavusgil, 2007:7-8). Based on the combination of these theoretical perspectives they have developed the typology of commitment states to accelerated internationalization among managers in Born Global companies, which describes their

attitudinal characteristics with regards to networks, knowledge and internationalization. This model will be discussed in depth in chapter three.

### ***2.3 Success factors of internationalization***

Successful early exporters are high performing and innovative and are likely to exploit chance opportunities that cross their path (Freeman and Cavusgil, 2007). As Freeman and Cavusgil (2007) present it, the factors that have been identified to underpin successful internationalization of SMEs, are characteristics of top management (Bloodgood et al., 1996), international networks (Oviatt and McDougall, 2005) and knowledge and culture (Knight and Cavusgil, 2004). As pointed out above, network is a crucial factor, which helps Born Globals succeed, as it is a source of resources for Born Globals to take advantage of without owning them. Studies have proved this to be an important success factor (Freeman et al., 2006). In addition, unique resources have also been pointed out as crucial (Oviatt and McDougall, 1994:53).

According to Knight and Cavusgil (2004), youth and lack of experience, as well as paucity of financial, human, and tangible resources, are no longer major impediments to the large-scale internationalization and global success of the firm (Knight and Cavusgil, 2004:137). One of the major reasons for this is the capabilities of people in the Born Global companies, such as the founder and the management (Madsen & Servais, 1997). Traditionally, size and age have been used as proxies for more accurate measures of internationalization capabilities, such as knowledge and experience about foreign markets (Reuber and Fischer, 1997), however, with regards to the Born Global firms, one may find that this knowledge and experience may still be present in a small and young firm, through key people, such as the founder, the entrepreneur or the managers. Crick and Jones (2000) found that several firms they studied were started by managers with experience operating in international markets, which they had gained from firms in which they were previously employed. This means they probably already are familiar with dealing with complexities of international markets and operations, and appreciate the risks of new international business. This knowledge and experience may substitute the lack of knowledge and experience of the Born Global company, per se. The global mindset of the entrepreneur has also been emphasized, as it is assumed to draw the company in an international direction from its founding (Freeman and

Cavusgil, 2007). These two factors, international experience and global mindset, will be explored further below.

### *2.3.1 Mindset of the founder and the management*

Nummela et al. (2004) show that a global mindset clearly has an effect on the internationalization of the firm. It affects the decision to commit more resources to foreign markets and probably also to set the internationalization objectives on a higher level (Nummela et al., 2004:59-60). Concepts with regards to this matter are partly overlapping in the literature, and they are diverse and ambiguous (Nummela et al., 2004). “Global orientation” refers to a positive attitude toward international affairs, commitment to international markets, international vision, and proactiveness. “International entrepreneurial orientation” refers to the behavioral elements of a global orientation and captures top management’s propensity for risk-taking, innovativeness, and proactiveness, which are basic dimensions of general entrepreneurship. “International orientation” refers to a range of psychological and demographic characteristics; managers with an international orientation have high tolerance for psychic distance, are well educated, internationally experienced, masters foreign languages, are less risk averse and resistant to change, and have a positive attitude toward internationalization (Nummela et al., 2004:53)

Dekker et al. (2005) also find that a global mindset is the most essential global leader quality, and requirements for this are international job experience, cross-cultural competencies, and leadership abilities (Dekker et al., 2005:15). Openness is also an essential factor for being a global leader; openness to the world and perceiving oneself as being part of the world, openness to worldwide business developments, global integration, and local autonomy within the multinational company, and people with different cultural backgrounds. This is called the individual global mindset (Dekker et al., 2005:16). Job experience is an influencing factor on intercultural communication, and is important for the way a global leader balances global and local strategic and structural issues, and how to manage a global work force. Expatriate assignments, traveling, and training on the job are especially important. An important factor is the knowledge of dealing with cross-cultural situations and business and organizational issues (Dekker et al., 2005:18).

According to Knight and Cavusgil (2004), international entrepreneurial orientation affects the choice of strategy that affects the performance in international markets (Knight and Cavusgil, 2004:129). At the organizational culture level, international entrepreneurial orientation reflects an innovation-focused managerial mindset. This appears to lead Born Globals to pursue a collection of strategies aimed at maximizing international performance. Their findings imply that international entrepreneurial orientation may be especially important to these firms because it appears to drive them to develop high-quality goods that are distinctive and technologically advanced, which, in turn, are associated with Born Global international success. (Knight and Cavusgil, 2004:136).

The entrepreneurial orientation, when combined with other resources and capabilities, such as strong marketing skills, allows the firms to see and exploit opportunities in foreign markets (Knight and Cavusgil, 2004). Knight and Cavusgil (2004) refer to Lumpkin and Dess (1996) who suggest that having an entrepreneurial orientation gives rise to certain “*processes, practices, and decision-making activities associated with successful entry into new markets*” (Knight and Cavusgil, 2004:129). They find support for international entrepreneurial orientation being related to global technological competence, unique products development, quality focus, and this is again related to performance in international markets (Knight and Cavusgil, 2004:135).

Freeman and Cavusgil (2007) present a typology of four different states of entrepreneurial commitment to accelerated internationalization by smaller firms, which reflect the strategies that senior managers might adopt for their Born Global companies (Freeman and Cavusgil, 2007:22). This model describes the differences in the mindsets of the managers, and how they lead to differences in commitment to internationalization. This typology is a proposal for further research to look at the importance of the mindset of the managers when studying internationalization processes of Born Global companies.

### *2.3.2 International experience of the founder and the management*

Reuber and Fischer (1997) explore the relationship between management’s international experience and the internationalization of SMEs. The management team’s international experience is found to be a mechanism to acquire the knowledge and



resources that Born Globals seem to lack, and that may help them succeed. This leads to two behaviors that affect the internationalization of the firm.

First, they are more likely to develop a relationship to foreign strategic partners, because the experience makes them more able to know, and attract and engage partners. They are also likely to have observed the advantage of these partnerships first hand, and thus to have in place a foreign business network, due to their international experience. In addition, they may have developed the skills needed to identify and negotiate with firms in a different culture. These partnerships are used to ease the entry into foreign markets, as they provide concrete critical resources; skills, financial resources, and more abstract resources, such as legitimacy and market power. This will increase the degree of internationalization (Reuber and Fischer, 1997:810)

Second, they are likely to delay less in obtaining foreign sales after start-up. This has also been argued by others to be beneficial for the degree of internationalization. Reuber and Fishcer (1997:811) refer to Brush (1993) who found that a longer domestic track record before obtaining foreign sales was not beneficial to levels of foreign sales, and McDougall et al., (1994), who claim that delay in entering foreign markets can be detrimental. To become international early is also particularly important for knowledge-based firms, since they need to develop international mechanisms to protect their commercial value from expropriation (Oviatt and McDougall, 1994:811). Reuber and Fischer (1997) refer to other studies of international experience that have found characteristics, such as foreign travel, languages spoken and whether someone in the management team was born, lived or worked abroad, though not invariably, predict propensity for or success in exports (Reuber and Fischer, 1997:809). The results of Reuber and Fischer (1997) support this, and Oviatt and McDougall (1994) also show that Born Global firms typically are founded by a team of individuals with international experience.

Rialp et al. (2003) have compared the findings in 27 studies and draws out the characteristics most usually regarded as critical determinant factors for newly-established, highly export-involved entrepreneurial firms, such as Born Globals, and which shape their internationalisation patterns (Rialp et al., 2002), by comparing them to non-Born Global companies. However, they found that most of these factors seem to be descriptive rather than determinant characteristics of this specific internationalization

process. The most determinant factor was the ‘*managerial global vision from inception*’ (Rialp et al., 2003:13), which was strongly present in the Born Global companies analyzed, and was not found in the non-Born Globals. The adoption of a *high value added product differentiation strategy* (Rialp et al., 2003:13) along with a *niche-focused, pro-active international strategy* (Rialp et al., 2003:13-14) were the only two other determinant factors resulting from the cross comparison of the chosen case-studies. They did not find support for Born Globals being characterized as having high degree of previous international experience of their entrepreneurs and managers, nor was high managerial commitment to the firm a determinant factor since all the firms met this condition. These results confirm the inconsistent empirical results regarding the importance of international experience among managers and founders of the Born Global firms. Holtbrügge (2009), however, in his literature review refers to several studies confirming that international experience is of importance and has a positive effect on the initiation of Born Global companies, such as Harveston et al. (2000), among others (Holtbrügge, 2009:17).

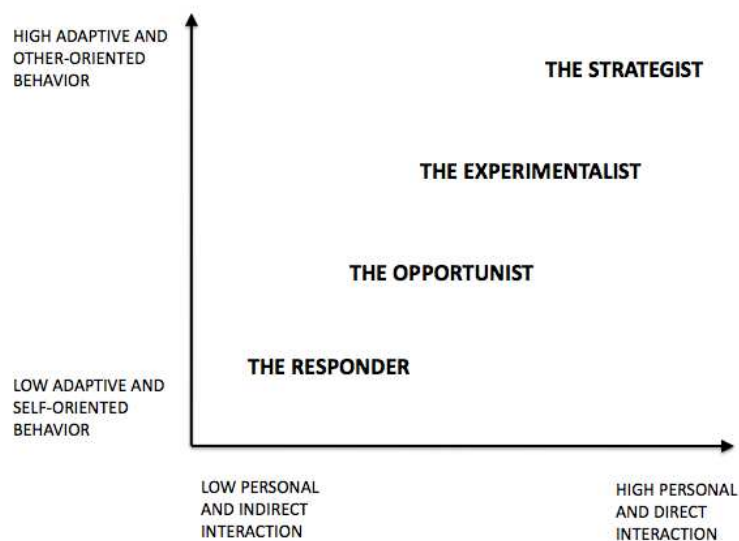
### **3. Conceptual framework and model**

Based on the theoretical background a conceptual framework for the further studying of the research questions is presented. Hypotheses on the relationships indicated in the research questions are developed in this chapter, and a preliminary model based on this framework is developed.

#### ***3.1 Hypotheses on the characteristics of the manager and their relationship with commitment to internationalization***

The major research question in this thesis is whether it is possible to identify the different characteristics that define the four commitment states in the typology by Freeman and Cavusgil (2007) among the managers in Norwegian Born Global companies.

The typology by Freeman and Cavusgil (2007) describes senior management's understanding of the phenomenon accelerated internationalization, and it presents four entrepreneurial attitudinal states or approaches for accelerated internationalization. It provides "*an integrated explanation of entrepreneurs that involve multiple, complex foreign networks and proactive, innovative, risk-taking entrepreneurial decision-making to internationalization, which are embedded in the intangible resources and capabilities of innovative organizations that specialize in knowledge-intensive high-tech products and/or processes*" (Freeman and Cavusgil, 2007:26). The two dimensions defining the different commitment states consist of the degree of adaptiveness and other-oriented behavior on one hand, and the degree of personal and direct interactions on the other hand. Freeman and Cavusgil (2007) present the model as follows:



**Figure 3.1: A Typology of the Four Entrepreneurial Attitudinal States (Approaches) for Accelerated Internationalization.**

Source: Freeman and Cavusgil (2007:22)

The states of commitment can be characterized as the strategic mind-sets of senior managers for accelerated internationalization of Born Globals. As the model shows, the commitment increases with the increasing degree of personal and direct interactions, and the increasing degree of adaptive and other-oriented behavior. This means that a “*responder*” has a low degree of commitment, while the “*strategist*” is the category with the highest degree of commitment in this model. However, all four states enhance internationalization, as the states are all identified among Born Global companies, only the pace differs (Freeman and Cavusgil, 2007:22).

With a lower degree of commitment the managers are “*more reactive, less adaptive, more self-oriented, more short term, and more risk averse*” (Freeman and Cavusgil, 2007:26), while with a higher degree of commitment, the managers are “*highly innovative, adaptive, proactive, and risk taking, desiring accelerated internationalization from inception based on long-term, other-orientated, collaborative partnerships, which ensure the comprehensive transfer of knowledge-intensive high-tech products and/or processes*” (Freeman and Cavusgil, 2007:26).

The “*responder*” and the “*opportunist*” internationalize more gradually, and sales are primarily being achieved in the domestic market. Further, accelerated internationalization is achieved more by serendipity and unsolicited orders, rather than proactive entrepreneurial mindset of the management. Their business relationships and the nature of their international interactions are more direct, less personal, and based more on organizational contacts (Freeman and Cavusgil, 2007:26-28). The senior managers in the “*experimentalist*” and “*strategist*” states have excellent, high-ranking, person-centered networks in lead foreign markets, but may not have participated personally in more than a few markets in previous employment, before setting up their smaller firms. A strong managerial commitment to internationalization is evident from the moment of inception, and these entrepreneurs act early after inception to seek out foreign contacts in lead markets and regions. The quality of technological innovation is a critical success factor in their accelerated pace of internationalization, as are their foreign network contacts, who are located through conferences, work, school, former employees, and government-funded programs (Freeman and Cavusgil, 2007:26-28).

International entrepreneurship is defined as “*the combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations*” (McDougall and Oviatt, 2000:903). From this, one can extract that an entrepreneur is innovative, proactive, and risk seeking in his or her behavior. Thus, the states of high commitment to internationalization, due to the nature of the characteristics defining it, can be said to be entrepreneurial. The characteristics defining the lower degree of commitment to internationalization can then be said to be less entrepreneurial. In addition, Freeman and Cavusgil (2007) described the states as the mindset of the manager, consisting of four different characteristics, and these characteristics can be said to overlap with the characteristics often described as a global mindset. Nummela et al. (2004) describe a global mindset as similar to a global orientation. Having a global orientation is reflected in the “*proactive and visionary behaviour of the manager in the preparedness to take risks in building cross-border relationships*” (Nummela et al., 2004:54). Also a global mindset has been defined to describe a manager's openness to and awareness of cultural diversity and the ability to handle it (Nummela et al., 2004). Based on this, Nummela et al. (2004) connects this concept to an international entrepreneurial orientation, as it includes elements that are

usually considered part of the international entrepreneurial orientation. The mindset of the manager in the model by Freeman and Cavusgil (2007) can thus be characterized as an international entrepreneurial orientation.

A state in this model is a detailed descriptor of the type of decision-making process of top management for accelerated market entry and how and why that process unfolds (Freeman and Cavusgil, 2007:32). The managers may switch from one state to another, non-sequentially, which is a strategic entrepreneurial move that responds to changes in the external environment. This is designed to protect profitability while maintaining the quality and integrity of network relationships (Freeman and Cavusgil 2007:32). Based on this one must make the assumption that whatever state is identified among senior managers, it is dependent on the time of identification, as it may change over time.

The model by Freeman and Cavusgil (2007), as shown above, visions an approximate linear relationship between four characteristics of the managers; adaptiveness, other-oriented behavior, personal interactions and direct interactions. As all four characteristics increase, so does the commitment of the managers to internationalize. Thus, commitment to accelerated internationalization is presented as a function of these characteristics. Based on the model, I propose the following hypotheses:

- H1a)** Adaptiveness and other-oriented behavior are highly positively correlated
- H1b)** Personal interactions and direct interactions are highly positively correlated
- H1c)** Adaptiveness and other-oriented behavior are highly positively correlated with personal and direct interactions
- H1d)** Adaptiveness, other-oriented behavior, personal and direct interactions are positively related to commitment to accelerated internationalization

### ***3.2 Hypotheses on the relationship between international experience and the characteristics of the manager***

Gleason et al. (2006) refer to Knight and Cavusgil (2004), and their findings that a key for successful Born Global firms is an international entrepreneurial orientation and a global vision from inception, and their studies reinforces this claim. They

continue stating that Born Global firms should be characterized by higher levels of international experience among the managers or the board of directors than purely domestic firms. They also argue that what is commonly referred to as a Born Global company, can be defined by being present in a broad range of markets, and having a broad range of activities across markets and borders. Thus the management team must possess many different competencies, such as managing international human resources, monitoring diverse foreign segments, including collaborative arrangements, and understanding local cultures and business traditions (Gleason et al., 2006:98). As described above, a global mindset and a global orientation, to a certain extent, overlap with the characteristics of the manager that has high degree of commitment to internationalization in the model of Freeman and Cavusgil (2007). It is natural to assume that since Gleason et al. (2006) found that a global orientation and international experience are both present among the managers in Born Global companies, there could be a relationship between the two. Thus, it is also likely there could be a relationship between the characteristics in the model by Freeman and Cavusgil (2007) and international experience.

Nummela et al. (2004) propose the hypothesis that there is a positive relationship between the manager's experience and a global mindset, however, they only find partial support for this, since international work experience had a significant relationship with a global mindset, but education did not (Nummela et al., 2004:58). Also the work of Reuber and Fischer (1997), propose that internationally experienced key persons in the company are important for successful internationalization. As Dekker et al. (2005) state, a global mindset is essential for being a global leader, and international job experience and cross-cultural competencies are requirements for a global mindset. Cross-cultural competencies can be obtained through other international experiences, such as studying abroad, and travel, not only through international work experience.

International experience entails having knowledge of foreign markets and this is likely to decrease the perceived risk of entering these markets. It is also fair to assume that a person with international experience holds an international network, which has been developed through spending time in foreign countries, and this may also reduce the risks of international activities, as well as increase the flow of information and the availability of opportunities of international activities. Reduced risk-aversion is part of

having a global mindset, as well as it is a part of the characteristics that define high commitment to internationalization, according to Freeman and Cavusgil (2007). Therefore, international experience is assumed to be positively related to the characteristic of adaptiveness. Reuber and Fischer (1997) state that international experience allows managers to know partners, and are able to attract them and engage them. Thus internationally experienced manager are more likely to have in place a foreign business network (Reuber and Fischer, 1997:810). This is also a part of the characteristic of having highly personal and direct interactions with partners, as well as being other-oriented with regards to network contacts, as described by Freeman and Cavusgil (2007).

In addition, reduced psychic distance to foreign markets is likely to be a result if a person has spent time abroad, as the knowledge of foreign markets increase. A person that has spent much time abroad is also likely to be more open to change, compared to a person that has mostly stayed in the same environment throughout his or her career. These factors can be connected to having a global mindset and an international orientation, and it also highlights that international experience is likely to promote a more adaptive attitude. It is also likely that having international experience makes a person more open to international markets, and activities, and foreign people, thus, will not be reluctant to consider foreign markets when becoming part of a company. This may promote the proactiveness in seeking out international opportunities among managers, as well as the development of other-oriented network behavior. Proactiveness, adaptiveness, risk-taking, low psychic distance to markets, and an extensive foreign network is part of the characteristics of a manager with a high degree of commitment to internationalization, as described in the typology by Freeman and Cavusgil (2007).

Based on this argument, despite differences in finding empirical results for it (e.g. Nummela et al., 2004; Reuber and Fischer, 1997), it is assumed in this study that international experience will be positively related to the characteristics in the model by Freeman and Cavusgil (2007).

Based on this, the following hypothesis is proposed:

**H2a)** International experience is positively related to adaptiveness



**H2b)** International experience is positively related to other-oriented behavior

**H2c)** International experience is positively related to personal interactions

**H2d)** International experience is positively related to direct interaction

### ***3.3 Hypotheses on the relationship between performance and the characteristics of the manager***

As already mentioned, Gleason et al. (2006) found that the key for successful Born Global firms is an international entrepreneurial orientation and a global vision from inception. Nummela et al. (2004) propose that there is a positive relationship between a global mindset and the financial indicators of the international performance of the firm. This was supported since the firms with a global mindset had significantly more foreign partners and customers, and they derived a significantly larger portion of their revenue from foreign markets (Nummela et al., 2004:59), thus they have claimed that a global mindset may even be a prerequisite for successful internationalization. Having more foreign partners is a characteristic that is found among managers who have direct and personal interaction, as explained by Freeman and Cavusgil (2007). In addition, as discussed above, what Nummela et al. (2004) describe as a global mindset can be connected to the characteristics of adaptiveness, other-oriented behavior, as well as having personal and direct interactions. Therefore, there could also be a link between the characteristics in the model by Freeman and Cavusgil (2007) and performance of the firm.

Knight and Cavusgil (2004) also explain that an international entrepreneurial orientation will affect the choice of strategy adopted by the manager of a company, and this will again affect the performance in international markets (Knight and Cavusgil, 2004:129). The characteristics that define a high degree of commitment to internationalization in the model by Freeman and Cavusgil (2007) can be said to be quite similar to that of an international entrepreneurial orientation. This also supports a connection between these characteristics and performance.

In addition, the “*strategist*” state has excellent, high-ranking, person-centered networks in lead foreign markets (Freeman and Cavusgil, 2007:29-30). These characteristics are likely to be an advantage when engaging in international activities,

and will increase the degree of internationalization (Reuber and Fischer, 1997). It is also fair to assume that this should be related to a higher degree of performance in the international markets as these networks provide the Born Global with critical resources that they do not have.

Based on this, one can argue that it is interesting to look at the relationships between the different characteristics and the performance directly, and it is assumed that these characteristics will be positively related to performance. This argument is based on the discussion above, that the characteristics are part of an international entrepreneurial orientation and a global mindset, and that this, according to Knight and Cavusgil (2004), will affect the strategies the manager implements with regards to internationalization, and this will affect the performance of the firm.

Based on this discussion, the following hypotheses may be proposed:

**H3a)** Adaptiveness is positively related to performance in international markets.

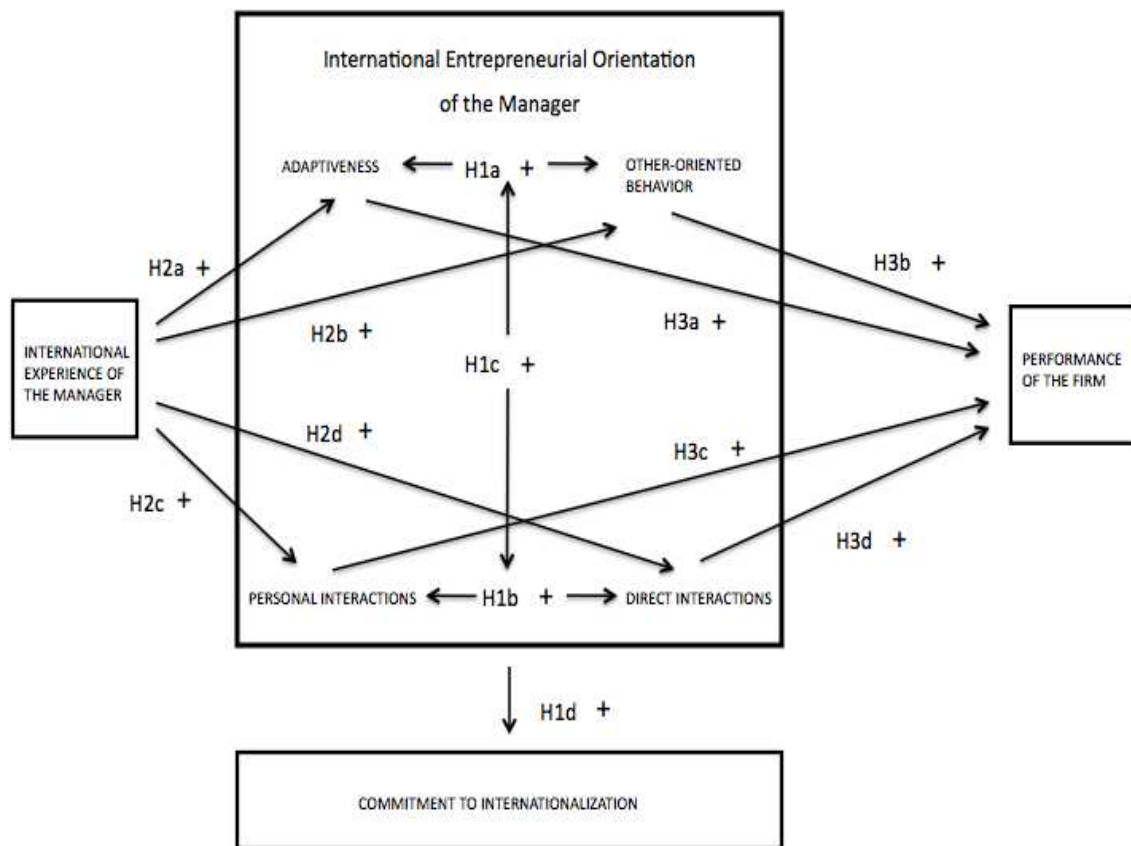
**H3b)** Other-oriented behavior is positively related to performance in international markets.

**H3c)** Personal interactions are positively related to performance in international markets

**H3d)** Direct interactions are positively related to performance in international markets

### ***3.4 Research model***

These hypotheses have led to the development of a preliminary model based on the hypotheses on the relationships between the different factors. This model illustrates the relationships that this thesis aims to study in a simple manner:



**Figure 2.3: Research model on the relationship between the characteristics of the managers and their international experience, commitment to internationalization and performance of the firm**

## **4. Research methodology**

### ***4.1 Research design***

The research design should reflect the research question, and it is the general plan of how to go about answering it. The design contains clear objectives for the research, it specifies the sources that data is to be collected from, and it considers the constraints with regards to accessing data, time, location, money, and ethical issues (Saunders et al., 2007:131). Since the objective of this research is to test a theory, the approach is a deductive one (Saunders et al., 2007:117). From this, it is clear that a quantitative approach is more beneficial as it allows for discovering patterns over a larger amount of cases. Case studies have traditionally been used in the research of Born Globals and their internationalization processes, however, this is due to the lack of theory, and thus a qualitative approach has been necessary in order to explore this field. In order to continue developing the findings in previous studies and contribute to the development of theory, the use of quantitative research may allow a broader perspective and an idea of whether the theory can be confirmed, or whether it can be rejected, and in need of further development or a change in direction. This study is thus a descriptive one (Saunders et al., 2007:134), as it is trying to identify the characteristics that are assumed to exist among the managers within a sample of firms. It also tries to identify in a descriptive manner the relationship between these characteristics and commitment to internationalization, international experience among the managers, and the performance of the firm.

In order to meet the criteria of a descriptive and quantitative research, the strategy is to carry out a survey. A survey typically answers who, what, where, how much and how many questions, and it can also indicate relationships between different factors, however, it will not, give any answer to causal relationships between these factors. Surveys are used to obtain larger amounts of data from a sizable population in a highly economical way (Saunders et al., 2007:138). One of the benefits of this type of data is that it easily allows for comparisons between cases and samples, as well as findings may be generalized and can be representative to a whole population, since the samples used are be larger than in the case of case studies and qualitative research. A copy of the survey used can be found in The survey.

It does, however, have its limitations, as it provides a wide range of information rather than in-depth answers, causal relationships or reasons for the answers given. This

may cause vital information to not be available to the researcher, as the questions asked may not allow for elaboration. It is then advisable to continue with a further in-depth study by using interviews in addition to a survey, and preferable based on the information gained through it. Also, the data obtained from a survey and the analysis and conclusions drawn from it will always depend upon statistics, and if, in this case, the typology were confirmed, one would recommend follow-up interviews in order to make sure that the respondents do in fact match the characteristics of the typology, and to confirm it further. A further, in-depth study, at this point in time is not feasible due to the limited time and resources available for this thesis.

This study is a cross-sectional study, as it will study a particular phenomenon at a particular time (Saunders et al., 2007:148). This is due to the time constraints that does not allow for a follow-up of the respondents at later times, as had been done in the original study that provided the typology. Controlling for a time effect on the outcome would be beneficial, especially when dealing with a concept such as commitment that may change over time and in different situations, thus the result from the survey may depend upon the time of inquiry. This is a major limitation of this study.

The design for the research determines the further process of operationalization of concepts, sampling and data collection methods, as well as the data analysis.

#### ***4.2 Operationalization***

Before a variable can be measured it must be operationalized. This means that concepts that are being studied must be defined in terms of something that is measurable. The main concepts to be operationalized are the two dimensions of the model of Freeman and Cavusgil (2007) that determine the attitudinal states of managers, and which category of commitment states they fall into. These must be operationalized in order to discover whether the different states exist and can be distinguished among managers. The operationalization of these concepts means to clarify the questions that need to be asked in order to determine whether a person has a degree of the characteristics that define the dimensions. Further concepts that must be operationalized are the concept of commitment to internationalization, international experience, and the concept of performance. In addition, certain control variables that will be used in the analysis must be operationalized.

Based on the extensive description of the different commitment states made by Freeman and Cavusgil (2007:23-25), where they describe four areas of characteristics in which the states of commitment differ, the two dimensions can be operationalized. The two dimensions consist of terms that appear to be summary terms and which are described in-depth in the article. Therefore, these descriptions can be used to both clarify and operationalize the terms that the two dimensions consist of. The operationalization is conducted by developing questions to which the respondents can answer whether he agrees or not, and is a result of the interpretation of the researcher. The characteristics are measured using a seven point Likert-scale, from totally disagree, disagree, partly disagree, neither disagree nor agree, - to partly agree, agree, and totally agree. These points are given a grade, from 1 to 7, and the higher the grade the higher degree of a characteristic a person has. Some of the questions developed are reversed, which means that they will be given an opposite grade of the others since agreeing to them measures a person's lower degree of a characteristic. This has been done in order to provide diversity among the questions, so that the respondents cannot corrupt the results by answering either agree or disagree to all questions, and it forces the respondents to carefully read the questions asked before answering (Saunders et al., 2007:372).

#### *4.2.1 Adaptiveness and other-oriented behavior*

One dimension in the model consists of the degree of adaptiveness and the degree of other-oriented behavior. This can be said to be the orientation of the manager, and whether he or she is ethnocentric or geocentric, thus it reflects the manager's attitude towards his or her surroundings.

Adaptiveness is related to how the manager relates to the external environment and to what degree he or she sees it necessary to adapt their behavior and their organization to it.

A manager with high adaptiveness is defined by:

- Proactively seeking opportunities in new markets, regardless of location
- Focusing on the needs of the market and the customers, and is willing to adapt products or processes

- Thinking that the world is the market, as the domestic market is considered too small and thinks internationalization is inevitable
- Having knowledge on internationalization from experience and networks
- Having knowledge about foreign markets
- Sacrifices short-term sales for long-term profits
- Being innovative and risk taking in actions related to new market activities
- Not being concerned with psychic distance when engaging in new market opportunities

A manager with low adaptiveness is defined by:

- Focusing on the current market and do not desire international activities
- Provides the same products to all customers in all markets
- Being risk averse in actions related to new market activities
- Focuses on psychically close markets if engaging in new market activities
- Sees the domestic market as sufficient to the company's business
- Having little knowledge of foreign markets
- Has a short-term approach to internationalization

This can be divided into four parts, that for the sake of clarity will be distinguished in the operationalization below. However, they are all interpreted as, and assumed to belong under the concept of “adaptiveness” in the model of Freeman and Cavusgil (2007). The four parts can be categorized as general adaptiveness, psychic distance, risk-taking behavior, and innovative orientation. The first part can be measured by to what extent the manager agrees or disagree with the following statements, where the grades will be given from 1=totally disagree to 7=totally agree:

1. *Our company continuously considers opportunities in foreign markets*
2. *Our domestic market offers sufficient business for our company*
3. *Our products always need to be adapted to new markets and/or new customers*
4. *We have a lot of knowledge of foreign markets*

5. *Internationalization is part of the long-term strategy of the company and is a necessity for our company to survive*
6. *Information and knowledge about internationalization has come from experience*
7. *Information and knowledge about internationalization has come through network contacts*

The second part is what one might call psychic distance to markets. This can be measured by asking the manager to state whether he or she prefers to enter markets that are perceived to be more similar to the home country or whether he or she is indifferent with regards to this. Agreeing to these questions means that one prefers markets to which the psychic distance is low, and this is not considered being adaptive. This means that the grades will be given from 1=totally agree to 7= totally disagree. Psychic distance can be measured by asking to what extent he or she agrees to the following questions:

1. *We give priority to foreign markets that have cultures that we have a lot of knowledge of*
2. *We do not enter foreign markets that are significantly different from our home market*
3. *We prefer markets that have similar cultures and business environments over markets that that are different even if those markets do not yield the highest potential for profits*
4. *Foreign markets that have different cultures and that we do not have extensive knowledge about represent a risk if we choose to enter them*

The third part can be called the degree of risk-taking behavior, and agreeing to the questions in this part means that one is considered risk averse, and this is not considered being adaptive. This means that the grades will be given from 1=totally agree to 7= totally disagree. With regards to internationalization, risk-taking behavior can be measured by whether he or she agrees with the following statements:



1. *Extensive knowledge of foreign markets is essential for grasping international opportunities*
2. *Internationalization strategies will take focus off the core business in the domestic market*
3. *We internationalize even if we risk to lose profit in the short run*
4. *We internationalize even if we risk to lose market shares in the domestic market*

The fourth part is the degree of innovativeness with regards to internationalization. Agreeing to the questions below means that one can be considered to have an innovative orientation, which is considered part of being adaptive. This means that the grades will be given from 1= totally disagree to 7=totally agree. This can be measured by asking the manager to state to what extent he or she agrees with the following statements:

1. *Internationalization is a learning process for our company*
2. *Improvisation is an important part of the internationalization process*
3. *We explore different approaches and strategies when engaging in new international activities*

The degree of other-oriented behavior refers to the way in which the manager behaves with regards to his or her network. An other-oriented manager is defined by:

- Having a long-term perspective with regards to network contacts
- Initiate innovative and collaborative behavior with competitors to help internationalization
- Building trust and acting reciprocally with actors in foreign networks
- Seeing foreign network relationships as mutually dependent
- Seeking to add value to their relationships
- An understanding that networks fosters learning and economic benefits and facilitates the management of resource dependencies.

A self-oriented manager is defined by:

- Using networks to gain information from contacts, but will readily switch customers or suppliers when they want
- Having an opportunistic and short-term perspective with regards to the network contacts
- Having a competitive instead of a collaborative behavior with regards to network contacts
- Not building up strong networks through reciprocal and trust
- Not seeing networks as a source of long-term learning and economic benefits

In the following questions, two of them, number six and nine, will measure self-oriented behavior, which means that the grades on these questions will be given from 1= totally agree to 7=totally disagree. Agreeing to the rest of the questions will mean one is considered other-oriented, which means that the grades will be given from 1= totally disagree to 7=totally agree. This orientation can be measured by asking the manager to what extent the manager agrees to the following statements:

1. *Our network contacts provide an excellent opportunity for long-term learning and development of our company*
2. *Our networks will provide economic benefits in the long run*
3. *Our network contacts would describe us as a resource to them as we offer information and our knowledge to them*
4. *Competitors are also part of our network*
5. *We provide our competitors with information*
6. *We aim to obtain as much information as possible through our networks at the lowest cost possible*
7. *We aim to provide as much information and knowledge as possible to our network partners*
8. *If we obtain information from a network contact we would try to repay the favor*
9. *If conditions change in our environment we would change to other network contacts if that is necessary to be competitive*

*10. Our network contacts would describe us as reliable contacts*

*4.2.2 Personal and direct interactions*

The other dimension of the model by Freeman and Cavusgil (2007) consists of the degree of personal interactions and the degree of direct interactions. This can be said to be the dimension regarding the nature of the networks and the manager's relationships with other firms, people, and markets.

A manager with personal interactions is defined by:

- Having friendship-based rather than one-off and transaction driven relationships
- Preferring close and problem-solving partnerships
- Having personal and friendly rather than reporting, organization contact types
- Proactively seeking out high-level decision-makers in key global firms in their industry
- Having person-centered networks and organization-centered networks abroad

A manager with low personal interactions is defined by:

- Preferring distant and transactional types of relationships that requires little awareness of others or maintenance to manage
- Not putting time and effort into building long-term key relationships
- Not seeking out high-level decision maker contacts in large key global firms in their industry
- Having few high-level contacts in foreign markets

The questions developed below measure the degree of personal interactions, which means that the grades will be given from 1= totally disagree to 7=totally agree. The exception is question one and two, which measure the degree of low personal interactions, which means that the grades will be given from 1= totally agree to 7=totally disagree. The interactions can be measured by asking the manager to state to what extent he or she agrees with the following statements:

- 1. We do not consider our network contacts as our partners or friends*

2. *We view our relationships with most of our network contacts as professional and focus is on the transaction of products or information*
3. *We spend much time and effort on maintaining our network contacts*
4. *Most of our network contacts would help us solve problems if asked without claiming compensation*
5. *We have several high-level decision-makers in global companies in our network*
6. *We have several high-level network contacts in foreign markets*
7. *Our most important network contacts are in key global firms within our industry*

A manager with direct interactions is defined by:

- Having a higher involvement in foreign markets with the use of joint manufacturing and offices in foreign markets without going through a gradual involvement process
- Developing network contacts directly in new and distant markets
- Their international interactions being based on direct contact with customers and suppliers in international markets
- Ability to enter multiple markets at the same time

A manager with indirect interactions is defined by:

- Having a lower involvement in foreign markets by using export or strategic alliances
- Their selection of markets being a result of unsolicited order from customers rather than direct contact with markets and customers
- Being inconsistent in their interactions with foreign customers and suppliers
- Their international interactions being based on exports and imports to and from international customers and suppliers in international markets.
- Gradually increasing involvement in new markets

The questions developed below measures the degree of indirect interactions, meaning that the grades will be given from 1=totally agree to 7=totally disagree. The

exception is question three, six and seven, which measures the degree of direct interactions, and which means that the grades will be given from 1=totally disagree to 7=totally agree. These interactions can be measured by asking the manager to state to what extent he or she agrees to the following statements:

1. *When entering a new international market we would rather use export or a strategic alliance than open an office or engage in agreements of joint manufacturing in those markets*
2. *When a new market opportunity arises we would rather develop network contacts through our existing domestic networks than making new contacts directly*
3. *If the opportunities exist, we would rather engage in multiple markets at once if that yields the higher potential for profit than gradually enter one at the time*
4. *By not engaging directly in international markets we reduce the risks of internationalizing*
5. *We usually learn about international opportunities because we are contacted by foreign customers or suppliers that wish to place order for our products*
6. *We are in contact with our foreign customers and/or suppliers on a regular basis*
7. *Contact with our foreign customers and/or suppliers is done directly and not through mediators or agents*

#### *4.2.3 International experience*

According to Harveston et al. (2000) it is most common to measure the degree of international experience by the amount of time a person has spent abroad. There are several reasons for why a person would spend time in a foreign country, however, mainly the time spent through work, studies, or traveling on business or vacation can be considered relevant in this context. Nummela et al. (2004) also measure international experience by the degree of work experience and international education. Reuber and Fischer (1997) base their measures of international experience on two questions,

whether any one in the management team had prior experience with either working or selling abroad. In accordance with this, however, with some moderations, I have chosen to operationalized international experience along with the questions developed Langeland and Pettersen (2009). These questions are also measured on a Likert scale, however, ranging and graded from 1 to 5, 1= Not at all, 2= Small extent, 3=Medium extent, 4=Large extent, to 5=Very large extent. Since time spent abroad can be hard to precisely quantify for a person, and it requires some effort to come up with a reliable amount, this scale simplifies this process for the respondent. The degree of international experience can be measured by asking questions regarding the extent to which the person has gained international experience through the following:

1. *Living and working abroad*
2. *Living and studying abroad*
3. *Working for an international company in Norway*
4. *Traveling through a previous job*
5. *Being in contact with foreign markets in other ways before engaging in the current company*

#### 4.2.4 Performance

Performance can be measured in two ways, either subjectively or objectively. Objectively refers to measuring performance quantitatively. Katsieka et al. (2000) find that export sales ratio is a common economic indicator of performance, while the most common non-economic measure is number of export countries. In this context these measures are not suitable for several reasons, first, because many companies that internationalize early on may not generate profit for several years. This may be even more pronounced in high-tech companies, such as the ones in this study, as the costs of developing the products are very high and might take many years to cover. Second, as companies are different in nature, for example in size and age, and the nature of their industries and their markets differ, thus it difficult to realistically compare objective measures of performance among companies. Subjective performance, which is more relevant here, refers to measuring whether managers think and feel they have accomplished what they sought to accomplish in the international markets. This allows

for a better comparison across companies, as it allows performance, or success, to reflect aspects such as the initial goals and ambitions for the international activities and the standards for performance set by the company before starting the internationalization process.

Nummela et al. (2004) also argue for taking a holistic approach to performance since within the mindset of the manager, the international activities are seen as one activity, and thus general and overall performance measures are preferred rather than specific measures of individual activities (Nummela et al., 2004:55). This supports the use of subjective measures for performance, as they will be a result of the idea of the manager and will not be influenced by examples of incidents that were outside the control of the company, or results of specific unsuccessful activities, that may not reflect the complete picture. According to Katsikeas et al. (2000), measures such as managers' satisfaction with overall export performance, perceived export success, and being able to meet one's export objectives are appropriate for measuring subjective performance. Based on this, and on the subjective performance measures used in the study by Nummela et al. (2004:64), as well as Cavusgil and Zou (1994) and Olsson and Solberg (2009), performance can be operationalized by asking to what extent the respondent agrees or disagrees to the following questions, which will be graded on a seven point Likert-scale, from 1=totally disagree, 2=disagree, 3=partly disagree, 4=neither disagree nor agree, to 5=partly agree, 6=agree, and 7=totally agree:

1. *The international activities in our company have been successful*
2. *The international activities have had a positive effect on the profitability of the company*
3. *The growth in international markets have been satisfactory*
4. *The goals of the company in international markets have been achieved*

#### 4.2.5 Commitment to internationalization

The use of pace as a measure of commitment to internationalization, is a result of an assumption that if key individuals or managers in the companies are committed to internationalization they are likely to implement strategies early on that will take the company into international markets early on. As Freeman and Cavusgil (2007) describe

it, states of commitment can be characterized as the strategic mind-sets of managers for accelerated internationalization. Nummela et al. (2004) measure commitment to internationalization on the basis of statements regarding the managers' behavior related to international activities, such as whether the key individuals are willing to take the company to the international markets, whether they use a lot of time planning international operations, and whether they see the whole world as one big market place (Nummela et al., 2004:55). Translating this into quantitative measures, one reaches the traditional measures of pace, such as market commitment in terms of the amount of resources committed to a foreign market or size of investments within a certain time period (Madsen and Servais, 1997:569). Oviatt and McDougall (2005) measure commitment, as a part of the concept of pace of internationalization, by how quickly the percentage of foreign revenue increases (Oviatt and McDougall, 2005:541). They also mention scope and initial entry as part of the pace, which, based on the measures used by Nummela et al. (2004), also can be considered a result of commitment to internationalization. In this study I choose to use quantitative measures for commitment; export share within three years, years after establishment that internationalization was initiated, and the scope of the foreign markets.

*Export share* can be measured by asking the following question: Approximately what percentage of the company's revenue came from sales outside of Norway three years after establishment? Three years is used because it is a common cut-off point that has been used to define Born Global companies (Knight and Cavusgil, 1996; Madsen et al. 2000).

*Number of years after establishment that internationalization was initiated* indicates the commitment by measuring how early after inception the company ventured abroad.

*Number of continents*, which is operationalized by asking whether the company is present in one continent, two continents, or three or more continents, refers to the scope. This reflects whether the company sees the whole world as its marketplace, thus it corresponds to the subjective measure used by Nummela et al. (2004) described above. The respondents will also be provided with the opportunity to state the exact continents they are present in.



These factors all relate to the willingness to take the company to international markets, as well as spending time and effort on planning for international operations, as well as seeing the whole world as a marketplace, as described by Nummela et al. (2004).

#### 4.2.6 Control variables

Control variables are variables that may have an effect on the relationships between the characteristics of the managers and the performance of the firm. These factors must be controlled for to be able to isolate the effects of variables that are of interest.

*Size* of the company is a relevant control variable as it may affect the variable of performance, since it is believed that a larger company may perform better. Thus it is important to check for this to be able to isolate the relationship between the managers' characteristics and the performance. This can be operationalized by asking about the number of employees, and the size of the revenue of the company. Number of employees is also an important control variable to make sure the companies is fit the requirement of less than 100 employees. This respondent will be given the alternative of less than 10, between 10 and 50, and between 50 and 100.

*Age* is also a relevant control variable as older firms may have managers that have become more committed to internationalization over time as they have developed more experience and knowledge in international markets and thus, for example, have become less risk averse to foreign activities. Thus, it is believed that older firms may perform better in international markets than very young firms, and this must be controlled for when looking at the relationship between managers' characteristics and performance. This can be measured by asking when the company was established. This is also a control variable to make sure the company is fits the requirement of being established after 1990.

*Product or process characteristics* are also important to check for, as it is important to see that all the companies do in fact belong to the same category and offer a product that is knowledge-intensive and high-tech. This can be measured by asking an assessment of the technology level of their product or process, on a scale from 1 to 5, where 1 is low and 5 is high.

#### ***4.6 Sampling***

The foundation of a good survey and strong results to base conclusions on is a good sample. A sample is a part of the whole population, which can be characterized a representative for this population. Since this study focuses on testing a model developed by Freeman and Cavusgil (2007), it is natural that the sample used should to a great extent replicate the sample used in their study. This makes it necessary to put some restrictions on the sampling of the respondents, which makes the sample in this study a non-probability sample (Saunders et al., 2007), also called criteria-based sampling. This obviously limits the randomness factor, and means that the findings in this study cannot be generalized to the whole population of Born Global companies in Norway. However, one can argue that it will be generalized to the Born Globals that fit the sampling criteria, which will be described and discussed below.

As mentioned above, when testing a theory that has not yet been tested, in order to obtain results that are in fact comparable to the ones in the original model, one should try to follow their steps in sampling. Then further research could test whether the theory applies to a wider range of samples of Born Global companies. This is in many ways challenging as the original model was developed in an Australian context, and this study in a Norwegian one. In addition, time and resources differ between the studies. This makes it necessary to moderately adjust the sampling if the requirements are too strict, even if it may reduce the consistency to some extent.

First, when sampling from this population the boundaries need to be somewhat constrained with regards to time. In the study by Freeman and Cavusgil (2007), they have included firms that were established as early as in the 1960s, two out of three of these also have over 100 employees, which is understandable due to the age of the company. If this study was of qualitative character such as theirs, these types of companies could have been included, however, since the quantitative character of this study limits the control of the respondents and their answers, including them could create unreliable data and information. Limiting the time frame will therefore be necessary. First of all, this will provide a more homogenous sample, as environmental factors and developments may be said to be relatively stable. In addition, including companies that were established far back in time could make it difficult to obtain

reliable information, mainly since the key individuals that may have had significant impact on the company from the start may not be available anymore. Looking at firms that were established after 1990 and up until today would be reasonable, as it would be possible to contact people that has a had a role in the company's internationalization. It was also in the early 1990s that the concept of Born Global companies emerged, thus this is a good cut-off point for the sampling.

The definition used by Freeman and Cavusgil (2007) of an SME is less than 200 employees, and they also use Knight and Cavusgil's (2004) definition of Born Globals as "*business organization that from or near their founding seek superior IB performance from the application of knowledge-based resources to the sale of outputs in multiple countries and establish an international presence within three years of inception*" (Freeman and Cavusgil, 2007:8-9). Their sample is also characterized by mainly consisting of geographically focused start-ups, with reference to the model by Oviatt and McDougall (1994). This allows them to focus on the pace of the internationalization rather than the scope of the SME's dispersion, which they claim to be the major distinguishing characteristic of Born Globals (Freeman and Cavusgil, 2007:10). In their study they also focus on companies with a knowledge-intensive high-tech product or process or service, which is a typical Born Global firm characteristic.

With regards to number of employees, I have chosen to focus on companies with fewer than 100 employees, instead of fewer than 200. As approximately 99,5% of Norwegian enterprises have fewer than 100 employees (SSB, 2009), the definition of fewer than 200 employees is somewhat large for the Norwegian Born Globals. Freeman and Cavusgil (2007) only have two companies that have more employees than 100, and the rest have fewer than 60 employees in their sample, which may relieve the lack of consistency in the sampling between the two studies.

Further, whether a company is geographically focused limits the quantitative study of Born Global companies in Norway, as it would restrict the potential sample size considerably. It can also be argued that the geographically focused start-ups are not the "true" Born Global companies, as one should expect a global company to be present in more than one continent at the same time (Karlsen, 2007, Gleason et al., 2006). Thus this requirement is also excluded from the sampling in this study. This would also allow

for testing the theory on a wider range of Born Global companies, even if it could cause discrepancy with regards to the results obtained by Freeman and Cavusgil (2007).

With regards to defining a Born Global company and applying this to the sampling, according to Freeman and Cavusgil (2007), the company should have an international presence within three years of inception. Several others have also set the limit of at least 25% of the total revenue of the firm coming from international sales within three years of founding for defining a Born Global company (Knight and Cavusgil, 1996; Knight, 1997). This limit has not been included in the study of Freeman and Cavusgil (2007), thus this is not a crucial point in the sampling. Whether they are present in international markets within three years of inception, has been included as control question, as it would be time consuming to obtain this information from the companies, and has not been a requirement to check for when conducting the sampling. Instead, the focus has been to secure that the company is engaged in international activities.

To sum up, the focus when including companies in the sample has been on factors such as year of establishment, number of employees, and whether the company is engaged in international activities. The requirement of the companies having a high-tech product or processes have been kept and applied to the sampling process. As this is information that is normally available on companies' websites, and due to the time and resource limitations of this study, it is reasonable to base the sampling on that. The disadvantage of this procedure is that companies may have to be excluded after responding to the survey due to a mismatch with other requirements, such as the presence of an early internationalization within three years. It should also be noted that companies that have been acquired is not included.

The Internet is the main source of information on companies in order to develop the sample, and websites such as Kompass.no and Nortrade.com have been the most valuable sources of information, as well as Deloitte's Fast50 lists, Dun & Bradstreet, Nordic Venture Network and Rising Stars of the North. These sites have been helpful, however limited, as they do not provide information on the complete set of companies in Norway. The procedure of obtaining the sample has been to go through the lists of companies that have appeared as a result of a searches on technology related terms in these databases, and obtained their websites and acquired the information of whether the

product is high-tech, whether they are engaged in international activities, whether they have fewer than 100 employees and year of establishment. Also as there are no databases available on this particular type of firms that can provide complete lists of them, the magnitude of the population is not known, thus the aim of the sampling has been to obtain a sample as large as possible in order to ensure a high response rate and more reliable results.

#### ***4.7 Data collection and analysis***

The data obtained in this study is primary data that has been collected through a survey developed in this paper, and this data is supported by secondary data obtained through the research done by Freeman and Cavusgil (2007). This combination of sources of information is believed to increase the reliability of the results and conclusions drawn from the analysis of the primary data.

A survey is used to collect the data as it provides a wide geographical reach. The survey is also most efficiently and effectively conducted electronically, as regular mailing would, not only take much longer, but is also likely to give a lower response rate. A standard email was sent to the different firms with an introduction of myself and the project and its aim, and with a link to the survey. Those companies that did not provide contact information to key employees on their websites were contacted by email and asked to provide such information and the survey was then sent to the person they thought most suitable. A reminder was sent one and two weeks after the initial request to participate in the research to those that had not yet responded.

In the data collection I used QuestBack as a tool to gather the data, which was made available through Oslo University College. This tool was used to create and to distribute the survey. It is obvious that this is both time-efficient for the researcher and more convenient for the responder. Pre-testing of the survey was done to colleagues in order to ensure that the questions asked were clear and understandable and feedback provided guidance on the improvements necessary.

Analysis of the data after it had been collected entailed the use of statistical methods with the help of SPSS, statistics software. The aim of the work that was done prior to the data collection was to create a broad measurement of the characteristics of the managers in the companies. An important part of the data analysis was to determine

whether the broad range of variables in fact measure the concept they were thought to measure. An important tool in this process is dimension reduction, more concretely an analysis commonly referred to as factor analysis, though more precisely a Principal Component Analysis was used. This will, however, be referred to as a factor analysis in the following chapters. This analysis will combine the variables into underlying components based on their correlation with each other. These components will also be referred to as factors in following chapters. These underlying factors were given names based the variables included in them, and on what the combination of these variables explain. If the variables match the combination of variables in the theory they are based on, and thus the assumptions made in the operationalization of concepts and what variables belong to each concept, the factor analysis will provide four factors that can correspond to adaptiveness, other-oriented behavior, personal interactions and direct interactions. This procedure is part of the validity analysis of the results. When factors have been extracted and made sense of, a test for the reliability of them will be conducted and also a test for their distributions, that preferably should be approximately normal. When the variables have passed the test of validity and reliability they may be scaled into a single measure in concurrence with the factors they belong to, and the final scale was a result of taking the average of all the items, or variables, in the scale. When the scales have passed the normality tests they may be used in the analysis of the relationships in between characteristics of the managers themselves, as well as between them and commitment, international experience, and performance. These analyses will be conducted by looking at the correlation matrices, and by performing linear or logistic regression between the different variables. The results of the technical analyses will provide answers to whether the hypotheses are confirmed or not.

#### ***4.8 Research credibility***

One cannot know whether one has the right answer to the question, however, to every extent one should reduce the possibility of getting the wrong answer (Saunders et al., 2007:149). This means that securing the reliability and the validity of the research is crucial, as it reduces the possibility of the wrong answer to the research questions.

#### *4.8.1 Reliability*

Reliability of research concerns the extent to which the techniques used to collect data and the analysis procedures will provide you with consistent findings. If the results are reliable, it means that using the same measures will give the same results on another occasion, and that other observers may reach the same observations. In other words, it means that there is transparency in how sense was made from the data (Saunders et al., 2007:149). The researcher has made all efforts throughout this paper to account for and explain the steps in the procedures of collecting and analyzing the data. In addition, steps taken throughout the process of analyzing the data, as will be seen in chapter five, will provide tests for the reliability of the results from the analysis.

A threat to the reliability of this study could be the subject or participant error, which means that respondents may answer differently at different times. This is a real threat to this study as the measurement of degree of commitment, as well as performance, may be subject to this type errors as it may depend on such things as at what point in the internationalization process the firm is. This would ideally be dealt with by doing a time series study of the respondents and measure their degree of commitment at different points in time to see if they are consistent. However, due to the time limits of this study that is not possible. This is important to have in mind when interpreting the results. Second, problems that may arise due to subject or participant bias, observer errors and biases that is related to the observer's presence are met by the use of the electronic survey where answers cannot be traced back to the respondents. Information will be given and emphasized about the complete anonymity of the respondent, as well as the responses will be quantified and thus not be subject to interpretation by the researcher (Saunders et al., 2007:149-150).

#### *4.8.2 Validity*

The validity of a research deals with whether one measures what one says one is measuring, and whether the findings are really about what they appear to be about (Saunders et al., 2007). The validity of a research strongly depends on the operationalization of the constructs used. This is called construct validity, and is particularly important when using a survey as the researcher leaves it in the hands of the respondent alone to interpret the question asked, thus it is crucial to have questions that

provide answer that do in fact mean what we think they mean. Having a clear idea of what the different commitment states really mean has been crucial for this work and basing the operationalization on the findings in the article by Freeman and Cavusgil (2007) has helped increase the construct validity in the research. The use of literature and previously developed construct operationalization also provides increased validity. Still, one may encounter a situation where questions and their answers do not provide the expected results, and this may not be known until after the data has been collected. It is therefore important to test for validity, which will be done in chapter 5.

Internal validity with regards to a quantitative research is concerned with the ability of the questions asked to measure what the researcher intended them to measure (Saunders et al., 2007). This will be dealt with in a construct and a content validity analysis in the following chapter. External validity, which is generally referred to as generalizability, is concerned with whether you can generalize the results to other cases. Since this is a quantitative study that aims to describe a relatively large sample, it is likely to assume that the results may be generalized to other setting where companies fulfill the requirements and assumptions made about them in this study, which were described above when discussing the sampling. This does, however, also depend on the sample size and a large sample is preferred in order to make sure it is representative for the population. External validity will also be somewhat limited, as the sample is a non-probability sample because it is a result of criteria based sampling. As stated above, it can however be said to be representative for high-tech Born Globals in Norway, which fit the requirements set in this study. A random sample has not been obtained mainly due to the lack of a sample frame. The sampling has, however, been thoroughly carried out as efforts have been put into the mapping of Born Global companies and determining which ones would match the requirements set by Freeman and Cavusgil (2007) based on their cases.



## **5. Data analysis and results**

### ***5.1 Data collection and sampling***

Due to the lack of complete databases with lists of companies and their characteristics, the searches had to be conducted in alternative ways. The researcher thought it was important to do a thorough study of the companies beforehand in order to avoid wasting the time of respondents that were not suitable for my study. To obtain the necessary information before including a company in the sample, the researcher had to visit the company's website and search for my criteria, such as year of establishment and number of employees, whether they were international and whether their product could be considered high-tech. This was quite extensive work and resulted in 182 companies that were contacted. From these, 119 companies provided the information of key people that could be represented on the mailing list for my survey. After three rounds of reminders, 8 decided to decline the survey, and 69 answered. From the 69 who answered, only 56 met the requirements of less than 100 employees and exports within the first 6 years, and one was excluded for incomplete information.

This is a response rate of 37,9 %, which is a relatively high rate, even if the final sample size is somewhat unsatisfactory, and will place restrictions on the credibility of the results and the conclusions drawn from statistics applied to these data.

The collection of the data was conducted by sending emails to the contact addresses of the potential companies, or directly to CEO, founder or similar key persons in the company, when their contact information was provided. It was important to make sure that the person answering the survey was a person that had been central in the internationalization process of the company, which was made clear in the emails sent. As always, it would be beneficial with a higher response, however, the reason for the relatively low response rate is to some extent understandable. The appropriate respondents are key people in small companies, thus the time available to answer the survey could be limited, and many failed to answer in the first round. A reminder was sent one and two weeks after the initial contact date in order to obtain more answers, however, with little luck. The emails sent to the general contact people in companies also did not generate as many answers as hoped. A reminder was sent a few days later to those who did not answer, which did provide some more answers. Some informed me that they did not have consistent international activities or they were not international.

Some answered that at they would forward my email and get back to me if anyone was interested, and some answered they simply did not have time for my survey. From some I also received the response that the email had been considered Spam in their inbox in the first round, and that they often receive emails such as mine that are not real and just a way to obtain information. This may have been a major setback for the response rate as it is highly likely that this has happened with many of the emails I sent out, however, it is hard to avoid. The emails I sent can be found in Appendix 1. A selection of feedback from the companies I contacted can be found in Appendix 3.

The process of obtaining the data was challenging and time consuming, and even if it can be argued that it should have been possible to obtain a larger sample, due to the lack of time and resources, in the end, it was necessary to settle with this sample.

## ***5.2 Descriptive statistics of the respondents***

Due to the thorough sampling, most of the respondents to the survey were within the pre-set boundaries for the sample qualities. A summary of the descriptive statistics can be found in Table 5.2.1 below. The respondents that have been included were established after 1990 up until 2008, with the average year of establishment being in 2000. The numbers of employees in the companies were all under 100, with only 7,3% having over 50 employees, and the majority, 50,9%, had between 10 and 50, and 41,8% having fewer than 10 employees. This shows that a relatively high percentage of the firms were quite small, having fewer than 10 people. This could be related to the high-tech and knowledge-intensive nature of their products or processes, and their relatively low age.

The revenue of the companies varied between 0 to the maximum of 250 million NOK, the average being approximately 30 million, however the mode is about 10 million. The reason for the minimum being 0 is due to one respondent's answer, which could be explained by the fact that this company was established as late as in 2008, thus the number may not be available or they have not yet generated any revenue.

The technology level of the companies varied between a value of 4 and 5, on a scale of 1 to 5, with an average of 4,71, which is very high. Only 1 company described its technological level as 3. This shows that almost all the companies have high-tech

products, processes or services, which is consistent with the companies used in the study of Freeman and Cavusgil (2007).

Among the companies, 60% were present in three continents or more, approximately 18,2% were present in only one continent, and 21,8% in two continents. All respondents became international within six years, 63,6% became international within the first three years, and 36,4% between three and six years after establishment. The average export percentage within three years were approximately 32%.

**Table 5.2.1: Descriptive statistics of the respondents – distribution**

	Export percentage within three years	Technological level	Year established	Annual revenue
<b>Mean</b>	32.09	4.71	2000.84	29897872.73
<b>Minimum</b>	0	3	1990	0
<b>Maximum</b>	100	5	2008	250000000
<b>Mode</b>	0	5	2002	10000000

**Table 5.2.2: Descriptive statistics of the respondents - frequency**

	Number of continents			Year of first international activity after establishment		Number of employees			Technological level		
	1	2	3 or more	1-3 years	3-6 years	0-10	10-50	50-100	3	4	5
<b>Frequency</b>	10	12	33	35	20	23	28	4	1	14	40
<b>Percent</b>	18.2	21.8	60	63.6	36.4	41.8	50.9	7.3	1.8	25.5	72.7

### **5.3 Classification of respondents**

Freeman and Cavusgil (2007) classified their respondents as geographically focused start-ups, with reference to the model of Oviatt and McDougall (1994:59) of types of International New Ventures (see model in chapter 1). This meant that they had many activities coordinated across national borders, but the activities involved few countries. In addition, they used companies that were all international within the first three years after establishment.

The respondents in my study can however be classified a little differently. Due to the relatively high average value of the international sales of the companies, it is fair to assume that most of them have many activities coordinated across the borders, as is the same for the companies in the study of Freeman and Cavusgil (2007). However, when looking at the number of countries involved, the majority of the companies in my study do on the contrary, have, not only several countries, but also several continents over which they coordinate their activities. 45 of the Born Global firms were present in more than one continent, 33 out of these were present in three or more continents (see Table 2). This means that they are rather global, which does not correspond with being geographically focused. This means that, with reference to the model of Oviatt and McDougall (1994:59), the companies are more likely to correspond to what they call Global Start-ups.

In addition, on the dimension of pace of the internationalization, which is not included in the model of Oviatt and McDougall (1994), but which Freeman and Cavusgil (2007) characterize their companies by, the classification of the respondent in my sample differs. Specifically, in terms of year after establishment when first international activity was initiated, the sample of respondents in my study includes companies that were not international until after three and within six years after establishment. In addition, most of the companies in my sample did not have a very high percentage of international sales within three years.

However, since all of the companies included were international within six years, which can still be characterized as relatively early. Freeman and Cavusgil (2007), state that it is common for Born Globals to become international between two and six years, and it also seems that even the companies that became international after three years are all fairly global today. Based on this it can be argued that they did have an intention to be international from inception. This can be seen by a cross tabulation of year after establishment when the first international activity was initiated and the number of continents the company is present at (see Appendix 4). Even so, this also does show that the ones that established themselves internationally within three years are more global today than the ones who internationalized within six years, 23 versus 10, respectively, are present in three or more continents, in percentage this is 65,7% against 50%, respectively.

However, when looking at the percentage of international sales within three years, it seems those who have a low percentage of sales internationally are still fairly global today, with respect to the ones who have a high percentage of international sales early. More than 50% of the respondents who are present in more than 3 continents today had less than 50% of sales internationally within the first three years (see Appendix 4). This means that in this sample, becoming highly global could be more related to being international within three years, and not necessarily to the amount of sales generated from international activities. This can be explained by the fact that high-tech products may not generate sales as fast, as they may take long to be fully developed, while the companies may be present in international markets without actually generating sales until the product is ready for market. This is also part of the argument for including companies that were not international within the first three years, but rather within the first six years. The nature of high-tech products may require development and testing which may take longer than for low-tech products, thus this also affect the pace of the establishment in any market and the generating of sales, both domestically and internationally. This argument is somewhat supported by the fact that among the ones who internationalized within three years a higher percentage had a lower technological level than among the ones who internationalized later on, however, the differences are not very large (see Appendix 4).

Despite the discrepancy between the sample used by Freeman and Cavusgil (2007), it can be argued that a more diverse sample of companies such as this would be more representative for high-tech companies, and this could provide tests and conclusions about the typology developed by Freeman and Cavusgil (2007) over a broader range of companies. Thus it also allows for comparing different types of Born Global companies to see whether there are differences between them, which gives a more thorough insight than only looking at one homogenous group. Having differences in the pace of the internationalization may allow for a better testing of whether there is a relationship between different characteristics of managers and their commitment to internationalization.

This does, however, also pose some difficulties, as the testing of this typology has not yet been done, and therefore it should to a large extent be based on a sample as similar as possible to the one in the original article for it to be able to test it as

accurately as possible. The difficulty of obtaining a large enough sample and also retrieving enough responses has made it necessary to accept the sample as it is, despite the fact that it does not quite replicate the sample used in the original study. The major constraint on both time and resources has made this a necessary compromise in my study.

### *5.3.1 Average values for the different types of Born Globals*

Since the sample includes a more varied range of respondents, it is interesting to take a look at the average values for the different firms. Among the companies that internationalized three years after inception, 31,4 % had annual revenue above the average of the whole group (which was approximately 30 million NOK), while among the ones that internationalized within six years, 40% were above average (see Appendix 4). These numbers are of course affected by the age of the company, and where in the process of internationalization the company is. However, the difference in percentage is not too large, despite the age differences.

Among the companies that internationalized within six years, 85% were established between 1998 and 2003, while among the ones that internationalized within three years were more evenly distributed on all years, with the period with a largest concentration, of 26,7%, being between 2004 and 2005 (see Appendix 4).

The ones that internationalized early on are smaller, in terms of employees, with about 50% having less than 10 employees, compared to the 25% among the ones that internationalized within six years. The majority, of 70%, of the companies that internationalized within six years had between 10 and 50 employees, compared to the 40% of the ones that internationalized within three years (see Appendix 4).

## **5.4 Validity analysis**

### *5.4.1 Construct validity*

*“Validity is the extent to which the indicators “accurately” measure what they are supposed to measure”* (Hair et al., 1995:641). Construct validity in the context of this research deals with how accurately the measures are, i.e. the questions asked to the respondents, in measuring the theoretical latent constructs they are designed to measure; adaptiveness, other-oriented behavior, personal interactions, and direct interactions., as

well as international experience and performance. When construct validity is present one may be confident that an item of measure that has been obtained from the sample actually represents a true score that exists in the population (Hair et al., 2006). According to Hair et al. (2006), there are four subgroups of construct validity; face validity, convergent validity, discriminant validity and nomological validity (statistical conclusion validity). The most important in the context of this research, is the convergent and the discriminant validity, as well as the face validity.

The first analysis to be conducted is the convergent analysis, which will test whether the items load on the factors that they are supposed to load on, and what questions measure the same things. This will be carried out by performing a Principal Component Analysis, and as discussed earlier it will be referred to as a factor analysis. In combination with a discriminant validity analysis, this will ensure the convergent validity of the variables. Based on the convergent analysis, content, or face validity, will be ensured by interpreting the results of the convergent analysis.

All variables will be subject to the convergent validity analysis except the control variables, and the variables measuring the commitment to internationalization. They are not subject to validity issues as variables such as year of establishment, income, and the like, can be said to be fairly accurate in what they are supposed to measure and not subject to major interpretation by the respondent and thus not easily misunderstood. The validity and reliability of the results regarding these factors have been secured by targeting CEOs, founders, or managers, who are considered to be the most suitable informants with regards to the knowledge and information on issues regarding internationalization in the company.

#### *5.4.2 Convergence analysis of the variables measuring the characteristics of the managers*

First, the different questions measuring the characteristics of the managers have been given names based on what they were assumed to measure from the operationalization of the concepts. A list of the variables with their names and the question belonging to them can be found in Appendix 5. These names of the variables will be used when referring to them throughout the following analyses. In addition, the questions that have been reversed in their wording have been recoded.

Second, an investigation of the individual Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) values (Hair et al., 1995:365) and the values of the communalities of the different variables, which describes the amount of variance the variables share with the other variables in the analysis, and the distributions of the individual measures, showed that the variables presented below have been removed from further analyses. Some were removed due to their low values of KMO ( $<0,25$ ), while some were removed due to their distribution being highly skewed, or due to their communality values being lower than 0,7 (see Appendix 6). In addition to the objective values above, a subjective judgment on the combination of these values was used. This led the following variables to not be considered measuring what they were assumed to measure when developing the questions (see Appendix 5):

- Personal interactions: Personal\_1, Personal\_2
- Direct interactions: Direct\_2, Direct\_4, Direct\_6 and Direct\_7
- Adaptiveness: Adaptiveness\_1, Adaptiveness\_3, Adaptiveness\_8, Adaptiveness\_9, and Adaptiveness\_14,
- Other-oriented behavior: Other\_orient\_6 and Other\_orient\_8,
- Psychic distance: Adapt\_psych\_1 and Adapt\_psych\_3

The low values of these variables can be explained by the fact that the questions were posed in an inaccurate or unclear manner that has led them to be interpreted and answered in different ways by different respondents. Some (such as Adapt\_psych\_3) may also be said to be somewhat long and intricate and difficult to grasp if the person answering did not take the time to think it carefully through. Further, some questions (such as Personal\_2, Adaptiveness\_1, Adaptiveness\_9) can also be assumed to be true for any person and thus the answers provided may not differentiate much among the respondents, as it is natural for all to be positive towards it regardless of the situation and the characteristics of the manager. The remaining variables have been included in the factor analysis.

For a factor analysis to be suitable a KMO value greater than 0,6 would be preferred, however, greater than 0,5 is necessary as well as the Bartlett's test for Sphericity should be significant (Hair et al., 1995:366). It should also be noted that a



small sample, such as this, does not necessarily provide a good factor solution, however, some have noted that a minimum requirement is 50 observations (Eikemo et al., 2007) ), or a requirement of five observations per variable. Due to this, in combination with a sufficiently high KMO value, a factor analysis has been chosen for the convergence analysis, and the rotated solutions have been obtained using Varimax rotation in SPSS. It is considered a necessary step in order to test the variables that were developed to measure underlying constructs, as they were based solely on this researcher's knowledge and interpretations.

When conducting the factor analysis it is also necessary to determine how many factors will be extracted, and based on Kaiser's criterion any factor with an Eigenvalue of 1,0 or more is retained. The Eigenvalue represents the amount of the total variance explained by this factor (Hair et al, 1995:365). Criticism of this method of extraction (Pallant, 2005) is that it may retain too many factors. Thus, in addition, the Scree plot of the factors is investigated and according to Pallant (2005) it is natural to extract factors up until the point where the plot changes shape and starts moving horizontally to the right. The KMO of the factor analysis is 0,610, and the Bartlett's test for Sphericity is significant, thus, a factor analysis is appropriate and can be carried out on the remaining variables. Variables with loadings lower than 0,4 have been excluded, as it not considered high enough, thus they will not show in the output from the analysis. This gives the following factor structure result, with nine extracted factors that account for 77% of the variance:

**Table 5.4.1: Convergence analysis of variables measuring the characteristics of managers**

	Component								
	1	2	3	4	5	6	7	8	9
Other_orient_2	.825								
Other_orient_1	.753			.382					
Adaptiveness_7	.741								
Other_orient_3	.741			.307					
Personal_3	.628					.389		.386	
Adaptiveness_psych_4	-.474		.386		.343				.407
Personal_6		.891							
Personal_5		.891							
Personal_7		.801							
Adaptiveness_6		.549	.361		.328				-.364
Other_orient_5			.813			.300			
Direct_3			.721					.317	
Other_orient_4	.355		.720						
Adaptiveness_5			.467		.324				
Adaptiveness_12				.890					
Adaptiveness_13				.739					
Other_oreint_7	.339		.396	.563			-.363		
Adaptiveness_2					.769				
Adaptiveness_11					.613			.342	
Adaptiveness_10	.307				.546			.432	
Adaptiveness_4		.479	.356		.488				
Other_oreint_10						.861			
Personal_4						.699			
Direct_5							.790		-.329
Direct_1						-.326	.740		
Other_orient_9								-.843	
Adaptiveness_psych_2									.915

In the table above, the variables with high loadings are marked with a light gray, while the variables with too low loadings are marked with a dark gray. When interpreting the factors, any variable loading less than 0,5 on any variable are excluded from further analysis, as 0,5 and higher is considered practically significant (Hair et al., 1995:385). If variables load on several factors, they are kept if the difference is less than 0,1 between the highest loading and the other loadings.

The results of the factor analysis (see Table 5.4) shows that the following variables were not loading significantly on any single factor, but instead had relatively low loadings on several of the factors: Adapt\_psych\_4 and Adaptiveness\_4. The variable Adaptiveness\_5 does not have a loading over 0,5, however, it is quite close to 0,5, and since the difference between the highest loading and the other is larger than 0,1, it is kept as it makes theoretical sense for it to belong with the other variables loading on that factor. A few other variables also have loadings close to 0,5, however, the difference between these loading and the ones on other factors are not larger than 0,1, thus they are not kept for further analysis. The Scree plot (see Appendix 7), shows that the first five factors are located before the plot changes to a relatively horizontal line. This means that only the five first factors are kept for further analysis. This leaves out the following variables from further analysis as well: Other\_orient\_9, Other\_orient\_10, Personal\_4, Direct\_1. Direct\_5, and Adapt\_psych\_2.

Based on this analysis, five factors have been identified among all the variables and are the basis for determining whether there is a pattern among the respondents that can correspond to the pattern of characteristics among managers in the theory of Freeman and Cavusgil (2007). The five extracted factors explain only approximately 58% of the variance, however, they represent the clearest pattern among all the variables. In the following these factors are presented with their representative questions, and with names they have been that are considered to be appropriate due to the nature of the questions that load on them:

- **Factor 1: Other-oriented behavior**

- Other\_orient\_2: *Our networks will provide economic benefits in the long run*
- Other\_orient\_1: *Our network contacts provide an excellent opportunity for long-term learning and development of our company*
- Adaptiveness\_7: *Information and knowledge about internationalization has come through network contacts*
- Other\_orient\_3: *Our network contacts would describe us as a resource to them as we offer information and our knowledge to them*
- Personal\_3: *We spend much time and effort on maintaining our network contacts*

- **Factor 2: Personal interactions**
  - Personal\_6: *We have several high-level network contacts in foreign markets*
  - Personal\_5: *We have several high-level decision-makers in global companies in our network*
  - Personal\_7: *Our most important network contacts are in key global firms within our industry*
  - Adaptiveness\_6: *Information and knowledge about internationalization has come from experience*
- **Factor 3: Adaptiveness**
  - Other\_orient\_5: *We provide our competitors with information*
  - Direct\_3: *If the opportunities exist, we would rather engage in multiple markets at once if that yields the higher potential for profit than gradually enter one at the time*
  - Other\_orient\_4: *Competitors are also part of our network*
  - Adaptiveness\_5: *Internationalization is part of the long-term strategy of the company and is a necessity for our company to survive*
- **Factor 4: Innovative orientation**
  - Adaptiveness\_12: *Internationalization is a learning process for our company*
  - Adaptiveness\_13: *Improvisation is an important part of the internationalization process*
  - Other\_orient\_7: *We aim to provide as much information and knowledge as possible to our network partners*
- **Factor 5: Risk-taking behavior**
  - Adaptiveness\_2: *Our domestic market offers sufficient business for our company*
  - Adaptiveness\_10: *We internationalize even if we risk to lose profit in the short run*
  - Adaptiveness\_11: *We internationalize even if we risk to lose market shares in the domestic market*

#### *5.4.3 Content validity of the variables measuring the characteristics of the managers*

Content validity is also referred to as face validity, which is concerned with whether the content of the items or variables are consistent with the theoretical definition of the construct they are supposed to measure. This is based on the researcher's judgment. The importance of face validity is based on the fact that selection of the items to be included in a scale for measuring a latent construct should not only be a result of empirical issues but should also be a result of theoretical and practical considerations (Hair et al., 2006:136). This type of validity is ensured when interpreting the components that results from the factor analysis. Since many of the measurement used in this analysis have not been tested before, as this research is based on a theory that has not yet been quantitatively tested, content validity cannot be completely ensured after solely a convergent analysis, as the assumption that items measures a certain latent construct is based solely on this researcher's interpretation of the latent constructs, which is only based on descriptions in the article by Freeman and Cavusgil (2007). A discussion around content validity is therefore necessary.

The variables that the first factor consists of are clearly a picture of a manager's other-oriented behavior. Managers that score highly on these questions are other-oriented in their behavior towards their network contacts as they have a long-term orientation towards them and thus spend much time maintaining the relationships. This is a result of their idea that network contact will provide benefits in the long run, and as a result their network contacts view them as reliable, and as a resource as well. This is consistent with the assumed description of the characteristic of other-oriented behavior from the operationalization of this concept.

The first variables that load on the second factor are also clear in that they are all related to the type of network that the managers have. A manager that scores highly on these questions has a network that consists of key individuals in key markets within the relevant industry. This indicates that their interactions with network partners are of a personal character. The last variable refers to how knowledge about internationalization has come about for the manager. It could be rather unclear why this question would load on the same factors as questions related to what types of network partners the managers have, however, it could be explained by the fact that experience is a relatively personal way to acquire knowledge and information, and it is likely that this experience is related

to have fairly personal interactions with these network partners. Looking at the value of the loading, this question does load somewhat lower than the others and could have been excluded, however, even if it is not as obvious and clear as the other variables, it can be interpreted in favor of being kept within this factor.

The third factor consists of variables that clearly relate to adaptiveness in the sense that internationalization is considered necessary and a part of the long term strategy of the firm, as well as realizing that a broader and more open perspective on network is necessary in order to adapt to new situations and a rapidly changing environment, thus competitors are included as part of the network and someone whom are also provided information. This factor measures a long term and open-minded attitude among the managers, and the question regarding entering multiple markets at the same time if that yields a higher potential for profit can also be interpreted as bold and adaptive behavior, where the managers sees it necessary to take risks to adapt to the market conditions of the company.

The fourth factor represents variables that also can be said to measure adaptiveness. However, in this context it measures the innovative orientation of the managers, which is characterized by the view of the internationalization process as a learning process for the company, as well as the realization that improvisation is necessary to adapt in the best possible way to new markets and to the new process the company is going through. This is necessary, as mentioned in the literature review, for small companies that become international without the traditional resources of large companies. The last question regarding the aim to provide as much information as possible to network contacts is not as clear as to why it belongs with the other two variables. At a closer look it can, however, be interpreted as a way to adapt to new conditions and new markets, as network contacts usually are a crucial resource to the Born Global company, and providing information to the them may serve to strengthen the ties to the network and in this way strengthen the position of the company in new business environments throughout the internationalization process. This may also be characterized as an innovative orientation as well as an adaptive attitude compared to traditional ideas of retaining information within the company and in this way building a competitive advantage. For a high-tech company one would assume intellectual property was to be protected from other, however, innovative approaches are necessary

for Born Global companies, such as sharing information, to create allies through network in order to be competitive against larger companies in the same market. As discussed when operationalizing the concept of adaptiveness, an innovative orientation was assumed to be part of the characteristic of being adaptive, however, these results show that this is not the case in this sample, based on the questions asked in this study, as innovative orientation seems to be a separate construct, and thus a separate characteristic.

Factor five clearly measures the risk-taking attitude of the managers, as the question regarding whether the domestic market offers sufficient business for the company (which is reversed, meaning a manager that highly agrees with it will be given a low score, and opposite), reflects the degree to which the managers see it as necessary and unavoidable to internationalize as the home market is insufficient. The other two questions measures risk-taking in the sense that the managers, most likely due to the situation in the home market, sees it necessary to take the risks of losing both market share and short-term profit loss in order to internationalize. As discussed above with regards to innovative orientation, when operationalizing the concept of adaptiveness, risk-taking was also assumed to be part of the characteristic of being adaptive. However, these results show that this is not the case in this sample, as it, based on the questions asked in this study, seems to be a separate construct, and thus a separate characteristic from adaptiveness.

The five factors above will be tested for reliability and if this test is passed they will in the following analyses be used as scales, and their relationships with each other as well as with commitment to internationalization, international experience and performance, will be investigated further in chapter 5.6 where the hypotheses previously developed will be tested. This means that, despite the fact that they do not correspond to the four characteristics that were assumed to exist based on the model by Freeman and Cavusgil (2007), they will be used in the further analyses as a replacement for the originally assumed characteristics. This has implications for the testing of the hypotheses, and for the hypotheses including the characteristic of adaptiveness, the three factors above; adaptiveness, innovative orientation, and risk-taking behavior will be used as a substitution for this concept. In addition, the lack of a factor with variables

that could explain the characteristic of direct interactions, the hypotheses that include this characteristic will not be tested.

#### 5.4.4 Convergence analysis of international experience and performance

The variables measuring both international experience and performance have been given names to represent them, and their names with corresponding question can be found in Appendix 5. The KMO value for the variables measuring international analysis is only 0,535, however, the Bartlett's test for Sphericity is significant. The low KMO can be defended (Hair et al., 1995), and a factor analysis can be carried out (see Table 4). The reason for doing a convergence analysis is that it is interesting to see the degree of international experience, thus scaling the variables when measuring this is preferable. The result shows that the variables measuring international experience load on two different factors. The first factor deals with international experience that has been obtained abroad, while the second factor deals with international experience that has been obtained while remaining at home. International experience from working in an international company does not load significantly on either factor, thus it is excluded from further analysis. The variable for international experience gained by traveling through work, loads heavily on both factors, but the difference between the loadings exceeds 0,1, thus this variable is not ignored, but kept for the further analysis. This makes up two new scales: international experience gained at home, and international experience gained abroad.

**Table 5.3.2: Convergence analysis of variables measuring international experience**

	Component	
	1	2
Intl_exp_worklive	.802	
Intl_exp_studylive	.791	
Intl_exp_workintlcomp	.397	
Intl_exp_othercontact		.863
Intl_exp_travelwork	.485	.705

The KMO value for the variables measuring performance is 0,665 and the Bartlett's test for Sphericity is significant, thus a factor analysis could be carried out. The result shows that all the variables measuring performance load significantly on only



one factor, thus they will be used as one scale for further analysis, referred to as just performance.

**Table 4.4.3: Convergence analysis of variables measuring performance**

	Component
	Total Performance
Performance_4	.902
Performance_1	.850
Performance_3	.841
Performance_2	.747

*5.4.5 Content validity of international experience and performance*

Two different factors were extracted when conducting a convergent analysis on the variables measuring international experience. One variable, international experience gained through working for an international company, did have a high enough loading on any of the two factors. The first factor, which was named international experience gained abroad, had the variables studying and living abroad and working and living abroad loading on it. The second factor had the variables contact with foreign markets through work and other contact with foreign markets. This factor was named international experience that has been obtained while being at home. It makes theoretical sense that these are two distinguished factors as contact with a foreign country while living and working in one’s home country, and contact with a foreign country while actually living in it has substantially different effects on the knowledge that one might gain on this market and what kind of experiences one might encounter. Thus it makes sense to distinguish between these two types of international experience in further analysis. If these different variables are combined into two different scales one may see the effect of different types of experience on the characteristics of the managers.

Only one factor was extracted from the convergent analysis on the variables measuring performance, which supports the fact that they all measure the same latent

construct, in this case, performance, as expected. These measures may be combined into one scale if they pass the reliability analysis.

#### 5.4.6 Discriminant validity analysis

Discriminant analysis investigates whether a construct is truly distinct from other construct, and if discriminant validity is present there is evidence that a construct is unique (Hair et al., 2006). Factor analysis is used to test the validity, and the requirements are the same as for the convergence analysis. When conducting the analysis the variables that did not pass the convergence analysis are excluded.

The discriminant analysis of the variables measuring the characteristics of the managers, are presented in Table . The KMO value is 0,646 and Bartlett's test for Sphericity is significant. The result shows that almost all variables load on the same factors as in the convergence analysis. The variable *Other\_orient\_7*, which measures the question: *We aim to provide as much information and knowledge as possible to our network partners* loads on both adaptiveness and innovative orientation, while the highest loading is on the factor innovative orientation, which is the same as in the convergence analysis. It makes sense that this can be related to adaptiveness as well, since it to a certain extent deals with adapting to the demands of having network partners as sharing information and knowledge is considered important to maintain a good network relationship. The variable *Adaptiveness\_5*, which measures the question: *Internationalization is part of the long-term strategy of the company and is a necessity for our company to survive*, now loads higher on the factor risk-taking behavior than the adaptiveness factor, which it loaded the highest on in the convergence analysis. This makes sense as the other questions regarding risk-taking behavior also deals with having a long-term perspective since risks in the short run are overlooked for a long-term profit. The loading on the factor adaptiveness is still fairly high, and this variable is kept as part of this factor, despite the high cross loading.

**Table 5.4.4: Discriminant analysis of the variables measuring the characteristics of the managers**

	Component				
	Other-oriented behavior	Personal interactions	Adaptiveness	Innovative orientation	Risk-taking behavior
Other_orient_2	.835				
Other_orient_3	.815				
Other_orient_1	.742				
Adaptiveness_7	.715				
Personal_3	.700				
Personal_6		.913			
Personal_5		.889			
Personal_7		.802			
Adaptiveness_6		.545			
Other_orient_5			.849		
Direct_3			.774		
Other_orient_4			.686		
Adaptiveness_12				.893	
Adaptiveness_13				.705	
Other_oreint_7			.490	.566	
Adaptiveness_10					.737
Adaptiveness_11					.722
Adaptiveness_2					.619
Adaptiveness_5			.483		.533

The discriminant analysis for international experience shows a KMO value of 0,541, and a significant Bartlett’s test for Sphericity. The result, which is shown in Table , shows the same as in the convergence analysis, thus discriminant validity is ensured. A discriminant validity analysis is not necessary on performance, since all variables load on only one factor, thus the discriminant validity analysis will give the same result as the convergence analysis.

**Table 5.4.5: Discriminant analysis of variables measuring international experience**

	Component	
	International experience home	International experience abroad
Intl_exp_studylive	.841	
Intl_exp_worklive	.811	
Intl_exp_othercontact		.863
Intl_exp_travelwork		.747

**5.5 Reliability analysis**

Before scaling the variables that have shown to load on the same factor, it is necessary to test whether the scales consistently measures the same thing, in other words, decide whether the scales are reliable. *“Reliability is a measure of the internal consistency of the construct indicators, depicting the degree to which they “indicate” the common latent (unobserved) construct”* (Hair et al., 1995:641). A good reliability test is the Cronbach’s alpha, which provides an alpha value for the variables that are assumed to converge. Reliability is a necessary condition for validity, though it is not sufficient. Unidimensionality, which has been shown through the convergence analysis in the above sections, is also necessary to ensure before testing for reliability, as the Cronbach’s alpha test assumes that it exists (Hair et al., 1995:641). Thus based on the previous factor analyses the Cronbach’s alpha test is conducted on the variables, and according to Hair et al. (1995), it is common to use the value of 0,7 as threshold for reliability. They do, however, state that this is not absolute, and a lower value may be accepted in some cases depending on the type of research (Hair et al., 1995:641). Based on this, the aim in this research is to obtain a Cronbach’s alpha value above a minimum of 0,6, however, as large as possible, without losing too many variables.

**Table 5.5.1: Reliability analysis of scaled items: Cronbach's Alpha and inter-tem correlation**

Scale	Alpha	Inter-item correlation
Adaptiveness	.746	0,347
Innovative orientation	.738	
Risk-taking behavior	.638	
Other-oriented behavior	.857	
Personal interactions	.846	
International experience home	.493	
International experience abroad	.601	
Performance	.854	

The test results show that all scales have an alpha value above 0,7, except international experience gained at home. According to Pallant (2005) it is not unusual to find quite low alpha values, such as 0,5, on scales that with few items (less than 10 items), which is the case here. In these cases one may also investigate the inter-item correlations for these items. According to Briggs and Cheek (1986), the range between 0,2 to 0,4 of inter-item correlation is assumed to optimal. The inter-item correlation between the two variables in the scale of international experience gained at home, has a value of 0,347, which is within the range and the scale may then be kept for further analyses.

Based on this analysis, all the scales passed the test of internal consistency, and thus may be considered reliable, and are therefore kept for further analyses.

### **5.6 Testing of the hypotheses**

For the analyses in this study the use of a simple regression model is used, since most of the hypotheses refer to only one independent and one dependent variable. One exception is in the case of international experience, which has two components, thus a multiple regression model with these two factors as independent variables is used. Another is in the case of the variable measuring year after establishment that the company initiated its first international activity. This is a binary variable, thus a logistic regression is used.

Testing of the first three hypotheses has been conducted by the use of a correlation matrix. In both the regression analyses and the correlation analyses a

requirement for significance level is set at 0,10, which means that a p-value of less than 0,1 will be considered significant, which means that in 90% of all cases the established relationships will be true. Further, the adjusted R squared will be investigated rather than the regular R squared, as they may differ significantly with small sample size, which is the case here, and the adjusted one is more appropriate in the case of a small sample (Gripsrud et al., 2004). The R squared is a measure of the explanatory power of the model, that is, how much of the variance in the dependent variable is explained by the independent variable. It may vary between 0 and 1, and the higher it is, the more explanatory power. The F-value may also be investigated and compared to the critical F-value at a 0,10 significance level, which is 2,68. An F-value beyond the critical value will support the rejection of the null hypothesis. The null hypothesis in the regression models will always be that there is no relationship between the variables. This if the p-value is no larger than 0,1, there is only a 10% chance of getting a certain result if the true situation in the population is that there is no relationship between the variables. The regression coefficients will also be interpreted in the analyses. They are indicators of the change in the dependent variable when the independent variable changes by one unit, given that the relationship is significant.

The correlation coefficient measures the degree of association between two variables, and may vary between  $-1$  and  $+1$ . If the correlation is positive it means that high values of one variable are associated with high values of the other, and low values are associated with low values of the other. Negative correlation coefficients are the inverse of this, that a high value of one variable is associated with a low value of the other variable.

In the following, the most important values of the regression analyses are presented and discussed, and a detailed overview of the output of the analyses can be found in Appendix 8.

### *5.6.1 Test for normal distribution*

An approximate normal distribution is a prerequisite for testing of hypotheses, as it is a necessary condition for most multivariate techniques, such as regression analysis. Checking for multivariate normalities is done in order to see how variables behave in relation to each other, and there are two ways to investigate whether variables may be

deviating from normality; looking at the amount of kurtosis and the amount of skewness. These values explain the shape of the distribution, kurtosis explains the size of the peak, and skewness explains how the shape of the distribution of values deviates from symmetry around the mean value (Hair et al., 1995). When testing the scales for normal distribution, it is obvious that as small values as possible is the best, however, what is said to be acceptable levels of kurtosis and skewness, is that the values are within the maximum range of an absolute value of 2, while preferably, to be good values, they should be within the absolute values of 1 (Schumacker and Lomax, 1996).

**Table 5.6.1: Skewness and Kurtosis of scaled items**

Scale	Skewness	Kurtosis
Adaptiveness	-.789	.726
Innovative orientation	-1.080	.858
Risk-taking behavior	-.675	-.234
Other-oriented behavior	-.607	.627
Personal interactions	-1.237	1.019
International experience home	-.607	.197
International experience abroad	.394	-1.010
Performance	-.645	.104

As seen from the table above, all the scales show acceptable values, within the acceptable values of 2, even if international experience abroad and personal interactions show mediocre values of a little above the absolute value of 1 on kurtosis, and both personal interaction and innovative orientation show mediocre values on skewness. It is still considered acceptable, if not good, so these scales are kept for further testing of hypotheses. The fact that the kurtosis values are mostly positive is evidence of the distribution being more peaked than a normal distribution, and the skewness values being mostly negative indicates that there are more values in the distributions that are higher than the mean values than there are values that are lower than the mean.

#### 5.6.2 Testing of research question 1: H1a, H1b, H1c, H1d

- **H1a:** Adaptiveness and other-oriented behavior are highly positively correlated  
As mentioned above, when testing hypotheses that includes the adaptiveness characteristic, the three factors; adaptiveness, innovative

orientation, and risk-taking that were obtained through the convergence analysis will be tested, since they originally were assumed to belong to the characteristic of adaptiveness. Based on the correlation matrix we find significant correlation between the factor adaptiveness and innovative orientation of 0,415, between adaptiveness and other-oriented behavior of 0,280 and between innovative orientation and other-oriented behavior of 0,385 (see Appendix 8). The factor risk-taking behavior does not correlate significantly with any of the other factors. All the correlations are relatively low, especially the one between the factor adaptiveness and other-oriented behavior. Correlation above 0,6 is said to be strong correlation, while between 0,3 and 0,6 is considered moderate, and less than 0,3 is weak (Gerber and Finn, 2005). Thus we can conclude that there is no support for this hypothesis.

- **H1b:** Personal interactions and direct interactions are highly positively correlated  
Not tested.
- **H1c:** Adaptiveness and other-oriented behavior are highly positively correlated with personal and direct interactions

The correlation matrix shows that personal interaction has a significant positive correlation with adaptiveness, with a coefficient of 0,337, with innovative orientation, with a coefficient of 0,411, and with other-oriented behavior, with a coefficient of 0,357 (see Appendix 8). These correlations are also relatively low. Personal interaction does not, however, correlate with risk-taking behavior. This means that the hypothesis is not supported.

- **H1d:** Adaptiveness, other-oriented behavior, personal and direct interactions are positively related to commitment to accelerated internationalization

Since the correlations between the five factors were only low to medium, a multiple regression can be used to test this hypothesis, however a logistics model must be used to test the relationship between the characteristics and the year of establishing the first international activity. This is due to the fact the



exact number of years is not available, the only information available is whether they internationalized between 1-3 years or between 3-6 years after inception. Since companies that internationalized after six years have been excluded from this sample, this makes the variable a binary variable. When using a logistics regression model, the results must be interpreted differently from a regular multiple regression model.

The only significant relationship found from the logistics regression is between innovative orientation and year of first establishment internationally, which has a coefficient of 0,494, with a p-value of 0,098. This means that increasing innovative orientation with one unit will mean that the chances of being part of group 1, which is international within three years increases by 49,4 % compared to being part of group 0, which internationalizes later than three years (see Appendix 8).

The significant relationships from the multiple regressions are between the variable personal interaction on export percentage after three years, with a coefficient of 9,313 with a p-value of 0,028, and personal interactions and number of continents with a coefficient of 0,537 and a p-value of 0,014. The factors adaptiveness and risk-taking behavior also showed a close to significant relationships with number of continents, with a coefficient of 0,354 and 0,307, and p-values of 0,114 and 0,116 respectively. This is barely above the limit set at 10%, however they are not accepted (see Appendix 8). This means that this hypothesis is only partly supported.

### *5.6.3 Testing of research question 2: H2a, H2b, H2c, H2d*

- **H2a:** International experience is positively related to adaptiveness

As mentioned above, when testing a hypothesis that includes the factor adaptiveness, the test has three parts. In this case, the relationship between, adaptiveness, innovative orientation and risk-taking behavior will be tested on their relationship with international experience. The result of this test show that the null hypothesis is kept and the alternative hypothesis is not supported, which means there are no significant relationships between the two international experience factors and any of the factors of the characteristics of adaptiveness,

innovative orientation and risk-taking behavior (see Appendix 8). Thus, this hypothesis is not supported.

- **H2b:** International experience is positively related to other-oriented behavior

The test shows a coefficient of 0,229 for international experience at home, with p-values of 0,071. This means that international experience at home is significant at the 0,1 level. The F-value is 2,614 and significant at 0,1 level with a p-value of 0,083. The adjusted R squared is 0,56 which is fairly high, and which means that the two independent variables account for about 56% of the variance in the variable other-oriented behavior (see Appendix 8). Thus, this hypothesis is partly supported.

- **H2c:** International experience is positively related to personal interactions

The test shows a coefficient for international experience abroad of 0,184 and for international experience at home of 0,452, and p-values of 0,094 and 0,007 respectively. Both of these are significant at the 0,1 level and the F-value of 6,246 is also significant at 0,05 level with a p-value of 0,004. This means that we reject the null hypothesis and the alternative hypothesis is supported. The adjusted R squared is 0,163, which means that the two independent variables account for about 16% of the variance in the variable personal interactions (see Appendix 8). Thus, this hypothesis is supported.

- **H2d:** International experience is positively related to direct interactions  
Not tested.

#### *5.6.4 Testing of research question 3: H3a, H3b, H3c, H3d*

- **H3a:** Adaptiveness is positively related to performance in international markets

For the factor adaptiveness, it shows a coefficient of 0,267, with a p-value of 0,034, which is significant at both a 0,05 and 0,1 level. The F-value is 4,711, which is also significant with the p-value 0,034. The adjusted R squared of 0,064, which is low, tells us that the factor adaptiveness only accounts for 6,4 % of the total variance in the performance variable. For the variables innovative

orientation, and risk-taking behavior there are no significant relationships to performance (see Appendix 8). As a result only the factor adaptiveness has a significant effect on performance, and thus this hypothesis is only partly supported.

- **H3b:** Other-oriented behavior is positively related to performance in international markets

The test shows a coefficient of 0,401, with a p-value of 0,015, which is significant at a 0,05 level as well as at the required 0,1 level. The F-value is also outside the critical value at 6,295, and it is significant. This means that we reject the null hypothesis and our alternative hypothesis is supported that there is a relationship between other-oriented behavior and performance. The adjusted R squared is only 0,089, which means that only 8,9 % of the variance in performance is explained by other-oriented behavior (see Appendix 8). This hypothesis is supported.

- **H3c:** Personal interactions are positively related with performance in international markets

The test for this hypothesis showed a coefficient of 0,296 with a p-value of 0,014, which is significant at a 0,10 level as well as on a 0,05 level. This means that the null hypothesis can be rejected. The F-value is also outside the critical value, at 6,456, and it is significant. The adjusted R square value is low, only 0,092, which means that personal interactions only accounts for a 9,2% of the variance in the performance variable (see Appendix 8). This hypothesis is supported.

- **H3d:** Direct interactions are positively related to performance in international markets

Not tested.

5.6.5 Summary of results for hypotheses tested

**Table 5.6.2: Results from the hypothesis testing**

Hypothesis	Predicted effect	Actual effect	Support for hypothesis
H1a	+	+/ns	not supported
H1b	+	nt	not tested
H1c	+	+/ns	not supported
H1d	+	+/ns	partially supported
H2a	+	ns	not supported
H2b	+	+/ns	partially supported
H2c	+	+	supported
H2d	+	nt	not tested
H3a	+	+/ns	partially supported
H3b	+	+	supported
H3c	+	+	supported
H3d	+	nt	not tested

ns = not significant, nt = not tested

5.6.6 Control variables

Testing for control variables is particularly important when measuring relationships concerning performance. This is because it is assumed that performance is related to size and age of the company. First, it is likely that older firms may have more resources than younger firms, thus they may perform better. Number of employees and the size of the company with regards to revenue, may also indicate that the company is large and has more resources, thus this is likely to affect the performance of the company. Since international experience and the managers' characteristics are both measured at an individual level and not a firm level, controlling for size and age on the relationships between them is not necessary.

The results show that when age, size in terms of revenue, and size in terms of number of employees, are accounted for, no new significant relationships occur. The variables measuring size and age do not have a significant effect on performance. In addition, the effects of adaptiveness, personal interactions and other-oriented behavior on performance are still significant, however the p-values are somewhat higher, and the coefficient somewhat reduced, except for adaptiveness, where the opposite occurred, with a slightly higher p-value and a coefficient slightly larger (see Appendix 8). This

means that size and age do not reduce the effects of the characteristics of the manager on performance, and thus performance is not necessarily a result of age and size.

## 6. Discussion of the research questions

### 6.1 Research question 1

Research questions one states: *Can we find the characteristics in the typology of Freeman and Cavusgil (2007) among managers in Norwegian Born Global firms, and are they related to each other, and to commitment to accelerated internationalization?* This question has three parts, first, it deals with whether the characteristics can be identified, second, whether these characteristics are related to each other, and then finally, whether they are related to commitment to accelerated internationalization.

Based on the analysis in chapter five, the first part of the research question can be answered by the results from the factor analysis, which show underlying constructs that only partly can be said to match the characteristics indicated in the model of Freeman and Cavusgil (2007). This result is, however, based on the operationalization of these constructs, and as shown in the analysis, many of the questions asked had to be dropped from further analysis. This could be explained by them being either unclear or irrelevant, or questions that naturally has only a yes or only a no as an answer to them, regardless of what kind of person one may be, and one's mindset. Another reason for the many dropped questions could also be a result of poor translation into Norwegian, as many concepts are developed in English and a translation may not always be understood as clearly as they should. Thus, an idea could be to carry out a quantitative research in the same environment as the qualitative study. This may also reduce misinterpretations that could be subject to cultural differences. Many questions also loaded on several different factors, and this could also indicate that the factors they described could have sub-dimensions to them. In particular, further research should develop better measurements on the direct interactions of managers, which could not be clearly identified in this study, as well as to an extent on their personal interactions. More good measures on adaptiveness could also have strengthened this factor.

As a result, there are statistical and methodological limitations to this study that may have had a significant effect on the results. Another limitation of this study is the relatively small sample, which could be criticized with regards to the statistical procedures conducted. The larger the sample, the greater the ability to generalize as the possibility of measurement errors are eliminated. This goes in favor of testing the

model, and testing of the construct measurements, in a larger environment, where a large sample can be generated more easily. This could provide stronger and maybe even somewhat different results. The sample used in this research also differed from that of Freeman and Cavusgil (2007), as they included a few larger firms (up to 200 employees), while the sample of the Norwegian Born Globals had a relatively high portion of companies with even less than ten employees. Also, the sample included companies that international later than the ones included in their sample.

Therefore, it is not necessarily true that the characteristics in the model of Freeman and Cavusgil (2007) cannot be distinguished among the managers in Norwegian Born Global companies, however, based on the method in this study solely, it can be concluded that no strong evidence was found of the clear characteristics and a clear relationship between them as was described in the article of Freeman and Cavusgil (2007). What can in fact be found from the analysis of the data obtained in this study, and based on the questions asked in the survey, are five factors that can be distinguished among the managers in the sample. These factors consist of variables that can be said to measure a manager's adaptiveness, other-oriented behavior, innovative orientation, risk-taking behavior, and personal interactions. This result can be said to partly match the description made by Freeman and Cavusgil (2007), however, not to the full extent.

The second part of the research question deals with the testing of whether the characteristics that were distinguished among the managers are related to each other. This part of the research question is dependent on the results from the first part, and since the exact characteristics that were identified by Freeman and Cavusgil (2007) were not found, the answering of the next parts of the first research question, as well as of the next two research questions will be carried out using the characteristics that were in fact identified in this study. Even if the names of the characteristics found in this study match the ones used in the model by Freeman and Cavusgil (2008) one must be careful to not confuse the content of the characteristics from this study with the content of the original characteristics. One must be clear that in the following, when it is referred to adaptiveness, other-oriented behavior, and personal interactions, these characteristics are measured by the questions described in the previous chapter.

When testing H1a (see chapter 5.6.2), on whether adaptiveness and other-oriented behavior are positively related to each other, it was necessary to look at the

relationship between several characteristics, as innovativeness and risk-taking was assumed to belong to the same underlying construct as the characteristics that was identified in this study and named adaptiveness. The original idea based on the article of Freeman and Cavusgil (2007) was that the characteristic “adaptiveness” was thought to be one construct, which included the ability to be innovative in the internationalization process, as well as being risk-taking. However, from the analysis in chapter five, it was apparent that this was not the case among the managers in this sample, or in any case, it can be said that the “adaptiveness” construct may have sub-dimensions to it, that have been distinguished in this study to be separate constructs. Thus they are treated as separate characteristics, however, when testing the hypotheses they have been considered to belong to the overall characteristic of “adaptiveness”, as assumed in the previous chapters, and specifically in the operationalization chapter. Thus when testing hypotheses that assumed relationships between the “adaptiveness” characteristic and other characteristics, these three separate characteristics have been used instead of one.

When testing H1a, the result was that, first of all, a significant correlation between adaptiveness, and innovative orientation was found, however, it was relatively low. Second, there was a significant correlation between adaptiveness and other-oriented behavior, which was very low. Third, a somewhat larger correlation between innovative orientation and other-oriented behavior was found. Risk-taking behavior did not have a significant correlation with any of the other characteristics. This is not enough evidence to support the relationships indicated in the model of Freeman and Cavusgil (2007), which visions a model with a vertical dimension consisting of “adaptiveness”, in this case, adaptiveness, innovative orientation, and risk-taking behavior, and other-oriented behavior. This naturally means they should be highly correlated, which I do not find evidence for based on the analysis of my sample of managers.

Since no factor was found to indicate a characteristic of direct interactions among the managers in this sample, H1b on the relationship between personal and direct interactions could not be tested, as well as H1c on the relationship between personal and direct interactions and “adaptiveness” and other oriented behavior could only partly be tested. The results from testing H1c show that personal interactions are positively correlated with the characteristics adaptiveness, innovative orientation, and



other-oriented behavior. The correlations are relatively low, thus this is not enough evidence to support the relationships indicated in the model by Freeman and Cavusgil (2007), of an almost linear relationship between all these characteristics.

The original model, suggests that a manager would either have a high degree of all the characteristics, or a lower degree of all of them, and that they should increase and decrease in relation to each other. This indicates that there should be a high correlation between all the characteristics identified through the analysis in chapter five. This is not what was found to be the case, and the answer to the second part research question one is that the characteristics identified among the managers of Norwegian Born Global companies cannot be said to be related to each other.

The results also show that risk-taking is not in any way related to the other characteristics. This is an interesting observation, as one could assume, based on International Entrepreneurship literature, that risk-taking is an important factor in being entrepreneurial (e.g. Oviatt and McDougall, 2005). According to the integrated international entrepreneurship theory, an international entrepreneur is generally risk-taking, proactive and innovative, which results in commitment to the rapid internationalization of the Born Global company (Freeman and Cavusgil, 2007; Anderson and Evangelista, 2006). Based on this, risk-taking should at least be related to an innovative orientation, and as Freeman and Cavusgil (2007) suggest that all the characteristics they describe are entrepreneurial attitudes, it should be related to the other characteristics as well. However, as discussed above, the results may be affected by the limitations of poor variables and a small sample size.

The third, and final part of research question one, is testing to see whether the characteristics identified are related to commitment to accelerated internationalization, as suggested by Freeman and Cavusgil (2007) in their model. In this study the measures commitment is the traditional measures of pace. When looking at the results from the testing of H1d the significant relationships found were, first of all, the positive relationship between the personal interactions and export percentage after three years. This is understandable, as the characteristic of personal interactions is measured by what types of network contacts the manager has in foreign markets, and it is natural that the more high-ranking network partners in key global companies within one's own industry one has, the easier the establishment of sales in new markets will be, as these

contacts may provide access to information, and knowledge as well as further network contacts in the specific market (Freeman et al., 2006). Freeman et al. (2006) point out that the use of large players in key markets can provide help to develop visibility and credibility in the market, as well as providing knowledge on customers and suppliers in the foreign market (Freeman et al., 2006:45). This is also consistent with literature that underlines the use of network by managers in Born Global companies as a way to overcome major constraints, such as lack of knowledge and financial resources, to rapid internationalization (Knight and Cavusgil, 2004, Reuber and Fischer, 1997). Freeman et al. (2006) suggest that having extensive personal contacts is a strategy to overcome such constraints, and my results show a confirmation of their proposed hypothesis of an important positive relationship between the personal network of a manager and the pace of internationalization. Second, a significant relationship was found between personal interactions and number of continents. This is also explained by the fact that managers with more high-ranking network contacts in key markets may be drawn to several markets depending on their network contacts and where they are present. Researchers have previously pointed out that network contacts may determine market selection decisions (Crick and Jones, 200; Sharma and Blomstermo, 2003).

Third, the relationship between years after inception that the first international activities were initiated and innovative orientation shows that an increasing degree of innovative orientation leads to more likeliness to be part of the group that internationalized within three years after inception. This is consistent with the idea of the connection between an international entrepreneurial orientation and the early internationalization of the firm, as suggested by Freeman and Cavusgil (2007).

Many of the models in the analysis have a low explanatory power, which is normal with a single regression between two factors, as it means other factors that could explain the variance in the dependent variable were not included in the model. This is however a necessary compromise when studying a limited research question that deal with the mindset of managers. It is natural to assume that other factors, such as environment, industry, competition and the like, could influence the pace of internationalization of the firm.

When answering the two final research questions I make use of the five characteristics identified as central among the key individuals in the Born Global

companies in my study; adaptiveness, innovative orientation, risk-taking behavior, other-oriented behavior, and personal interactions. The two final research questions will investigate the relationship between these characteristics and the international experience of the manager and between them and performance in international markets.

## **6.2 Research question 2**

Research question two states: *Is there a relationship between the characteristics in the typology by Freeman and Cavusgil (2007) and international experience among the managers?* The first hypothesis is, as above, a test of several relationships, since the testing here is based on the characteristics that were in fact identified among the managers in the Norwegian Born Global companies, instead of the exact characteristics in the model of Freeman and Cavusgil (2007).

The significant relationships that were found when testing the hypotheses H2a, H2b, and H2d (see chapter 5.6.3), show that there is a positive relationship between other-oriented behavior and international experience gained at home, that is, contact with international markets through work and/or other contact with foreign markets. There is also a positive relationship between international experience gained both at home and abroad, and personal interactions, however, in this case the international experience gained at home has a stronger effect on personal interactions than the one gained abroad. These results show that international experience, both at home or abroad, may have an effect on the nature of the network, and on the network behavior of the managers in this sample.

As mentioned above, personal interactions consist of measures regarding high-ranking contacts in key global companies within the company's industry. Thus, this connection to international experience abroad can be explained by the opportunities to develop a network that exist in the process of gaining international experience. Managers that have worked abroad may have met people through their career that were or are now key individuals within key companies. In addition, it could also be that while studying abroad one might meet people with the same interests as oneself, and that later turn out to be key individuals with in an industry of shared interest. It could also be that the managers are situated in the Born Global company precisely because of who their contacts are, and that the company is a result of a good network. With regards to

international experience gained at home, it may indicate that travel through work, and probably in this way being in contact with foreign customers and suppliers, has a significant effect on the development of key network contacts. These relationships confirm the idea of Reuber and Fischer (1997) that the managers with international experience are more likely to develop a relationship to foreign strategic partners, and have in place a foreign business network.

Other-oriented behavior is measured by the attitudes the manager has towards the network contacts. The fact that international experience at home has a significant effect on this behavior can be explained by the fact that through travel through work or other contact with foreign markets the manager develops the understanding of need for long term relations to network partners in order to be able to use them as a resource to overcome the constraints of being a small company that lacks resources and knowledge on international markets, as described by Freeman et al. (2006). The results found here cannot completely be compared to the results of Nummela et al. (2004) who found that international education did not have an effect on the global mindset of the manager, since in this study education and work experience were combined into one factor of international experience. They can however be said to confirm the propositions of Nummela et al. (2004) of the relationship between international experience and a global mindset, which other-oriented behavior could be considered a part of.

### **6.3 Research question 3**

Research question three states: *Is there a relationship between the characteristics in the typology by Freeman and Cavusgil (2007) and the performance of the firm?* This is a questions which is often considered the most interesting, at least for future managers, as it indicates something about what characteristics a successful manager might have.

When testing H3a, H3b, H3c (see chapter 5.6.4), the results show that there is a positive relationship between the characteristic adaptiveness and performance, as well as between the characteristic other-oriented behavior and performance, and between personal interactions and performance. The control variables that were used on these hypotheses were size, in terms of number of employees and the size of the annual revenue, and the age of the company. These are factors that may have an effect on the

performance of the company, as generally it is assumed that older companies perform better, as well as more resources such as employees and large revenue is likely to facilitate the expansion in international markets, and thus the performance. After controlling for these variables, all three factors, adaptiveness, other-oriented behavior, and personal interactions are still significant.

Surprisingly, risk taking behavior, or an innovative orientation, have not been found to have an effect on performance. This is contrary to the propositions of Knight and Cavusgil (2004), which consider these traits to be part of an international entrepreneurial orientation, and which is thought to enhance performance in international markets. Again, it is important to remember the limitations of the operationalization of these constructs, and that the variables measuring these characteristics may not correspond to the measures used by other researchers. Thus strong conclusions should not be made, however, this is an indication, which can be considered in further research on these characteristics.

The positive relationship between personal interactions and performance can be explained by the same reasons stated above to explain the relationship between this characteristic and commitment to internationalization. Having high-ranking network partners in key global companies within the relevant industry facilitates the internationalization process for a young and small company such as a Born Global company, by providing resources such as knowledge, and they may provide access to key markets at a low cost through collaborative arrangements (Freeman et al., 2006). It is natural that this will positively affect the performance of the company in the foreign markets. It is also clear that having other-oriented behavior, as discussed above, is positive with regards to the development of the relationships with one's network contacts, which is necessary in order to make use of them as a facilitating resource in the internationalization process. Thus the managers that are other-oriented may have better relationships with their network contacts and in this way benefit more from them, which turns into better performance in the international markets.

The characteristic of adaptiveness consists of whether the manager sees internationalization as part of the long-term strategy of the firm, and a necessity to survive, the willingness to enter multiple markets at once if that yields a higher profit potential then gradually entering one at the time, as well as seeing competitors as part of

their network. These are characteristics that are related to what others have defined as a global mindset (Nummela et al., 2004). The fact that this is related to subjective performance is not consistent with findings by Nummela et al. (2004), as they did not find support for a global mindset being related to subjective performance measures. However, they may have used different measures than the ones used here when operationalizing a global mindset, and this may reflect the inconsistent findings. In addition, subjective performance can be influenced by the current situation of the company, the environmental situation, and not necessarily reflect the overall performance, and it could change over time. This can also explain differences in results.

Even if the relationships that were found when testing these hypotheses were significant, they do, however, not explain much of the variation in performance. This means there are other factors that have not been included in this study that may also have effects on performance. This means that one can say that a mindset consisting of the characteristics of being adaptive, other-oriented and having personal interactions, will positively affect the performance, however, not exclusively, as other factors should be included to obtain a complete picture of how to be successful. As discussed under research questions one, performance may also be a result of factors, such as environment, industry and competition, which will have an effect on performance. These factors are beyond the scope of this thesis.

## **7. Conclusion**

### ***7.1 Main findings***

The main purpose of the study has been to help develop theory on the characteristics of the managers in the Norwegian Born Global firms, and more specifically the contribution of this thesis is to provide attempts to develop good measures for the dimensions in the model of Freeman and Cavusgil (2007). A key part of this study has been to develop questions that may measure the characteristics; adaptiveness, other-oriented behavior, direct and personal interactions, and by doing this to find evidence as to whether one can consistently distinguish different managers along these characteristics. These questions were developed based on a thorough review of the descriptions of the typology provided in the article of Freeman and Cavusgil (2007).

This study found five characteristics that could be identified among the managers or key individuals in high-tech Born Global companies in Norway; adaptiveness, innovative orientation, risk-taking behavior, other-oriented behavior, and personal interactions. These characteristics only partly comply with the dimensions in the model of Freeman and Cavusgil (2007), and no evidence was found of a strong correlation between them, as indicated by the original model. Thus, the aim to replicate the results from their study was not completely met.

The latter part of the study was dependent on the first part, and the results from trying to identify the characteristics, and thus the result of the first part laid some constraints on the results of the next parts. As a result of this, a few hypotheses were not tested, as well as the hypotheses that were tested were based on the characteristics identified among the managers in the Norwegian Born Global companies, not the original characteristics that Freeman and Cavusgil (2007) proposed.

An additional purpose was to investigate the relationship between these characteristics and the actual commitment to internationalization. The connection between the characteristics found in this study and the commitment to internationalization, as measured by percentage of international sales within three years, number of continents, and how long after inception they established themselves in international markets, was not as clear as indicated by Freeman and Cavusgil (2007). Personal interactions, a characteristic consisting of having high-ranking network partners in key global markets within the relevant industry, was found to have a positive

impact on the percentage of sales in international markets within three years, as well as on the number of continents that the company is present in. Having an innovative orientation to internationalization was found to increase the likeliness of the company internationalizing within three years after inception.

Furthermore, this study looked at the relationships between the characteristics that were identified and the degree of international experience of the managers, and the performance in foreign markets. The results show that managers having international experience obtained at home, such as traveling through work or other contact with international market before becoming a part of this company, had a higher degree of other-oriented behavior and personal interactions. International experience obtained at abroad, such as working or studying abroad, also had a positive effect on personal interactions.

When looking at the relationship between the characteristics of the managers and performance, the findings show that adaptiveness, personal interactions and other-oriented behavior have a positive effect on performance. Even when controlling for size in revenues, size in terms of number of employees and age of the company, these characteristics have a significant effect.

## **7.2 Implications**

### *7.2.1 Contribution to theory*

Despite the fact that this study does not find clear indications of the same characteristics that Freeman and Cavusgil (2007) found, it has been able to identify five different characteristics among of the managers of Norwegian high-tech Born Global companies that can describe their attitudes towards areas related to their rapid internationalization processes. These characteristics describe how the managers in this sample differ with regards to their attitudes towards their network partners, i.e. their other-oriented behavior, their adaptiveness, innovative orientations, and risk-taking behavior. They also describe how they differ with regards to the nature of their network, i.e. personal interactions. This is a positive contribution to better understanding of the managers in the Norwegian high-tech Born Global companies.

An important focus with regards to Born Global companies, is on the managers or key individuals in these companies, as has been emphasized in International Entrepreneurship literature. This theoretical approach sees the entrepreneur as an



important factor in the companies that internationalize early after inception. As the manager, or the entrepreneur, is a key competitive asset in these firms, it is important to focus the research contributions on to the role the manager plays, and what characteristics a successful manager in these firms might have. This study has provided insight on the characteristics of some managers in Norwegian high-tech Born Global companies, and how some of these characteristics are related to performance and to the pace of the internationalization process. In addition, it has showed connections between the managers' previous international experiences and their characteristics. This is a good foundation for further research on this area.

The aim of Freeman and Cavusgil (2007) when developing their typology was to integrate different theoretical perspectives on the accelerated internationalization of Born Global firms. By doing this, they aimed to explain how commitment to accelerated internationalization differs among managers, and that this can be explained by both International Entrepreneurship theory, network theory, resource-based theory and the innovation models. The results of my research can to an extent be explained by these perspectives, as network theory and the resource-based view may support the fact that the nature of the network of the managers is connected to the rapid internationalization of the firm, and that this network may also be seen as a unique resource to the company, and thus it is also connected to performance in international markets. This study does not, however, find strong relationships between entrepreneurial attitudes, such as innovative orientation or risk-taking behavior, and the commitment to rapid internationalization, nor to the performance of the company. The only relationship found is between the innovative orientation and the likeliness of internationalizing within three years after establishment rather than between three and six years. This does not mean that the entrepreneurship theory should be dismissed in the context of the Born Global company. It is just an indication that the characteristics of an entrepreneur may be more significantly related to other parts of the Born Global phenomenon, like the establishment of innovative companies, with innovative ideas. Then it could possibly be that the globalization forces have more explanatory power on the necessity of rapid internationalization, or other characteristics of the managers have more effect on success once the internationalization process has been initiated.

Viewing internationalization as an innovation for the company does not completely comply with the findings in this study, as that would indicate that the innovative orientation and the risk-taking behavior should be connected to the pace of the internationalization, since these are characteristics that are likely to be connected to dealing with and developing innovations. The reason for this could be related to the role of the networks, and the information supply from them to the managers, which makes internationalization more common and not an innovation. In addition, international experience among the managers, especially through working abroad, could have an effect on whether internationalization is an innovation. Despite the fact that the company is young and internationalization is an innovation to the company, it is not necessarily an innovation to the manager.

The results from this study have however confirmed prior assumptions of the network being a key asset for Born Global companies, as it provides them with resources and the knowledge that they may lack on foreign markets. Even if these findings are based on a limited sample and methodological constraints, and thus should only be considered as indication and not facts, they do provide a contribution to the foundation of further research on the area.

Freeman and Cavusgil (2007) identified four different states of commitment among managers in their case study, and based on the characteristics of these managers and their attitudes to main areas concerning internationalization, they developed a model proposing that managers differ with regards to adaptiveness, other-oriented behavior, personal interactions and direct interactions. Given that the categories of commitment states to internationalization exist, one must be able to define the dimensions on which they differ. The contribution of my research has been to help in the development of the dimensions on which the different states are identified. Based on the descriptions of the states and the given dimensions this research has made an effort to identify key aspects of these dimensions, and to operationalize them. The contribution of this research has mainly been its effort to further develop an idea that there are different states of commitment to internationalization among managers in Born Global companies, and along what dimensions these commitment states differ.

One impediment to the further development of the model by Freeman and Cavusgil (2007) was challenge to clearly see the connections between the very detailed

descriptions of the different types of managers they described, and the dimensions they summarized the characteristics of these different types into in their model. Hence, it was complicated to put content into the characteristics, or the dimensions, that Freeman and Cavusgil (2007) presented in their model. They made very good descriptions of the different categories of managers, but for a model, as they proposed, to exist it is crucial to clearly define the underlying dimensions that these categories differ along. It has been difficult to carry out a quantitative study to test whether the categories per se exist among managers in Norwegian Born Global companies. It was necessary to operationalize and put content into the dimensions on which they are assumed to differ first. This challenge may require more expertise, and also more of varied perspectives, than what could come out of one single person as my self. Even so, I believe the research made in this thesis is a start on the future completion of this typology of managers' commitment states towards accelerated internationalization.

There is by now quite a bit of research on process of internationalization of the Born Global company, and also on mindset per se, but not in-depth on the content of the mindsets, and research has yet to discover whether there are certain attitudinal states that managers find themselves in throughout the process of internationalization, and whether they may change along the way. A mindset is a continuously developing concept. It would therefore be interesting to continue the research on this area.

### *7.2.2 For the future managers of Born Global companies*

Based on this study it appears three central characteristics could be considered important for managers of high-tech Born Global companies in Norway; adaptiveness, other-oriented behavior and having personal interactions. These factors are positively related to performance in international markets. It is also interesting to note that different types of international experience are positively related to these characteristics, even if it cannot be stated with certainty about the causal relationship between them. Managers or founders of high-tech Born Global firms, or of firms that are newly established, who realize that internationalization is on the doorstep, could consider these characteristics, and evaluate one's own mindset in relation to them.

The realization that network, and network behavior in particular, is continuously mentioned in literature and also found in this study to have a positive effect on both

performance and pace, should be noted by managers in companies like these. The Born Global companies in this study are in a situation where they have a high-tech product, which is unique and offers something entirely new. There is a liability of newness in that customers do not necessarily know how the product works and are unable to evaluate the quality and the value of the product, and quality is not always assured until after the customer has bought and tested the product. This is where network is a highly valuable resource to these companies, as they may provide, in the name of their own good reputation, the quality of an innovative product. Network contacts in high-ranking key global companies, within the relevant industry

Even if this study does not find clear indication for a the value of having an international entrepreneurial orientation, previous studies show that this can be an important asset for the company, and managers that aim to take their companies global could take this into consideration. If one allows for a mindset and a person's orientation to be continuously developing, as argued for in this paper, and by Freeman and Cavusgil (2007), managers can find themselves with the power to change their mindsets and orientations and thus also change the outset for their companies.

### ***7.3 Limitations and suggestions for further research***

The operationalization of the concepts in the model by Freeman and Cavusgil (2007) was challenging, as they are concepts that are difficult to measure quantitatively. They are highly complex concepts and cannot be measured directly since they have many dimensions. This challenge is a major limitation of this research as all results are based on the correctness of the measures of these concepts. Many of the questions developed before carrying out the survey had to be eliminated due to what can be assumed to be inappropriate operationalization of the concepts. This leaves it for further research to better develop questions measuring the dimensions. This could possibly be carried out by the use of literature from other fields of studies, such as psychology, which can be tied to these concepts or concepts closely related to these, and base questions to measure the underlying construct on the ones used in that literature. It can be assumed that a more solid result could have appeared if more questions that were appropriately defined had been included, and the result could have turned out

differently. Another possible direction would be to conduct more qualitative research on the model and its dimensions before another quantitative study is conducted. Carrying out a quantitative study in the same environment as where the original model was developed could also limit some of the constraints due to translation and interpretation of concepts. In addition, the fact that the environment for Norwegian companies could differ from the environments for companies from other countries, and in particular Australia, which was used in the study of Freeman and Cavusgil (2007), is also likely to have an effect on commitment to accelerated internationalization. A study in a larger environment where a more sizable sample frame is available and thus a more representative sample can be generated could also provide stronger and even different results. In this study the sample differed to a certain extent from the sample in the original study, and this could also have contributed to the discrepancy between the results in this study compared to the one of Freeman and Cavusgil (2007).

The lack of a good sample frame, and the strict sampling requirements to be fulfilled by the researcher, are the main reasons for the somewhat reduced external validity. However, it has been a necessary compromise for the sake of the research on this new field. This means that the results must be used with caution, and further testing is without a doubt necessary in order to get a clearer picture of this area. There is a need for new perspectives, but this is a start in the development towards a typology of commitment states to accelerated internationalization among managers in Born Global companies.

There is also the limitation of the fact that the factors identified and described in this study only accounts for a limited part of a manager's mindset, and it is likely to believe that additional factors of the mindset, as well as general factors in the company, or in the environment of the company, may affect the performance and the commitment to internationalization, which were beyond the scope of this thesis.

Future research should also test this model on managers in low-tech Born Global companies, and the hope is that further development of this model and the theory by Freeman and Cavusgil (2007) could in fact lead to a complete typology on managers' commitment to accelerated internationalization. It is also an interesting, and in my opinion, a necessary development within the theory on the mindset of the managers, that a focus is obtained which allows for the mindset to change throughout the

internationalization process. This is to an extent what Freeman and Cavusgil (2007) is trying to do, as they state that the managers may move between the states of commitment as a result of the situation they are in.

This study also indicates that it is not enough to look at export share, in terms of sales within three years, as it could be argued that it can be hard to generate sales for a high tech company. This study included companies that did not internationalize until between three and six years, and as a result, one can see that they became highly global even if they did not have a high percentage of sales within the first three years, thus this alone may not necessarily be a good measure for commitment to internationalization for high-tech companies.

This brings us back to the discussion of the Born Global phenomenon, and the lack of agreement on a single definition of the term. Freeman and Cavusgil (2007) used companies that were geographically focused start-ups, and it could be argued, as others before me have (Karlsen, 2007; Gleason et al., 2006), that these companies are not necessarily global. They may be international, and have a relatively large percentage of international sales, even within three years, however, unless they can claim several continents, it is hard to accept that the term global is being used for these types of companies. It is therefore recommended for future research to take in use new measurements when studying these companies, and also look at the market dimension and how many continents the companies are present in within three years, as done by Karlsen (2007), when classifying a company.

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## Appendices

### *Appendix 1 Emails sent to potential respondents of the survey*

1) Hei,

Mitt navn er Kamilla Nerbø og jeg skriver masteroppgave ved Universitetet for Miljø og Biovitenskap (UMB) på Ås, og i den forbindelse er jeg interessert i informasjon fra nøkkelpersoner i deres bedrift (ex: CEO, gründer, adm.dir., e.l.) som har eller har hatt en sentral rolle bedriftens internasjonalisering.

Oppgaven handler om internasjonalisering av små og mellomstore bedrifter i Norge, og spørsmålene vil dreie seg om bedriftens internasjonale aktiviteter og nøkkelpersoners tanker rundt dette. Jeg har utarbeidet et spørreskjema som jeg ønsker å sende til en nøkkelperson i deres bedrift, og derfor ønsker jeg kontaktinformasjon til den dette måtte være, dersom det er mulig.

Denne undersøkelsen er veldig viktig for mitt arbeid og jeg ville satt svært stor pris på deres hjelp!

På forhånd tusen takk for hjelpen!

Med vennlig hilsen

Kamilla Nerbø

2) Hei,

I forrige uke sendte jeg dere en e-post (se under) hvor jeg spurte om det ville være mulig å få kontaktinformasjon om nøkkelpersoner i deres bedrift som jeg kan kontakte i forbindelse med min masteroppgave.

Jeg hadde satt veldig stor pris på deres hjelp siden dette er helt avgjørende for at jeg skal få den informasjonen jeg trenger til oppgaven min!

På forhånd tusen takk!

Med vennlig hilsen

Kamilla Nerbø

3) Hei,

Mitt navn er Kamilla Nerbø og jeg skriver nå masteroppgave ved Universitetet for Miljø og Biovitenskap (UMB) på Ås, og i den forbindelse ønsker jeg å be deg om å svare på en undersøkelse jeg har utarbeidet i forbindelse med oppgaven min.

Oppgaven handler om internasjonalisering av små og mellomstore bedrifter i Norge, og spørsmålene vil dreie seg om bedriftens internasjonale aktiviteter og deres tanker rundt dette.

Formålet med oppgaven er å bidra til teoriutviklingen relatert til bedrifter som internasjonaliserer tidlig etter oppstart, og resultatene vil kunne være av stor nytte for mange bedrifter som er eller som ønsker å bli internasjonale.

Denne undersøkelsen er veldig viktig for mitt arbeid og jeg ville satt svært stor pris på om du tok deg til å svare på den!

Undersøkelsen er selvfølgelig anonym og informasjonen vil kun bli brukt i min oppgave.

Her finner du en link til Questback og spørreskjema:

<http://web.questback.com>

På forhånd tusen takk for hjelpen, og skulle det være noen spørsmål i forhold til dette er det bare å ta kontakt med meg!

Med vennlig hilsen

Kamilla Nerbø  
Tlf: XXXX  
E-mail: [XXXX](mailto:XXXX)

## *Appendix 2 The survey*

Internasjonalisering av små og mellomstore bedrifter

Denne undersøkelsen dreier seg om internasjonalisering av små og mellomstore bedrifter og ønsker å finne ut mer om nøkkelpersoner i disse bedriftene.

Spørsmålene dreier seg derfor om bedriftens internasjonale aktiviteter og nøkkelpersonens erfaringer og holdninger i forhold til dette.

Spørsmål 1

Når ble bedriften etablert?

Spørsmål 2

Omtrent hvor mange ansatte har bedriften?

Velg alternativ

Under 10  
Mellom 10 og 50  
Mellom 50 og 100  
Over 100

Spørsmål 3

Omtrent hvor stor årlig omsetning har bedriften (oppgitt i tusen NOK)?

Spørsmål 4

Omtrent hvor stor prosentandel av bedriftens totale omsetning kom fra salg utenfor Norge etter 3 år?

Spørsmål 5

I hvilke markeder er bedriften tilstede?

Norge  
Skandinavia  
Europa  
Nord-Amerika  
Sør-Amerika  
Afrika  
Asia  
Oceania

Spørsmål 6

Hvor mange kontinenter er bedriften tilstede på?

1  
2  
3 eller flere

Spørsmål 7

Hvordan kan det teknologiske nivået på bedriftens produkter eller tjenester beskrives?

1 Lavt 2 3 4 5 Høyt

Spørsmål 8

Hvor lenge etter etablering ble første internasjonale aktivitet startet opp?

Velg alternativ

1-3 år  
3-6 år  
over 6 år

Spørsmål 9

I hvilken grad har du tilegnet deg internasjonal erfaring gjennom  
Ikke i det hele tatt /Liten grad /Middels /Stor grad /Veldig stor grad

å jobbe og bo i utlandet?

å studere og bo i utlandet?

reising i forbindelse med jobb?

å jobbe for en internasjonal bedrift i Norge?

kontakt med utenlandske markeder på andre måter enn ovennevnte før oppstart av bedriften?

#### Spørsmål 10

Hvor enig er du i følgende påstander?

Helt uenig /Uenig /Delvis uenig /Hverken uenig eller enig /Delvis enig /Enig/Helt enig

- Vi leter stadig etter nye muligheter i internasjonale markeder
- Det er nok muligheter i hjemmemarkedet vårt til tilfredsstillende oss
- Det er alltid nødvendig å tilpasse våre produkter til nye markeder og/eller nye kunder
- Vi har mye kunnskap om internasjonale markeder
- Internasjonalisering er en del av vår langsiktige strategi og er helt nødvendig for at vår bedrift skal overleve
- Informasjon og kunnskap om internasjonalisering har vi fått gjennom erfaring på dette området
- Informasjon og kunnskap om internasjonalisering har vi fått gjennom våre nettverkskontakter

#### Spørsmål 11

Hvor enig er du i følgende påstander?

Helt uenig /Uenig /Delvis uenig /Hverken uenig eller enig /Delvis enig /Enig/Helt enig

- Utstrakt kunnskap om utenlandske markeder er essensielt for å kunne gripe internasjonale muligheter
- Internasjonaliseringsstrategier vil ta fokuset bort fra kjernevirksomheten i hjemmemarkedet
- Vi internasjonaliserer selv om vi risikerer å få økonomiske tap på kort sikt
- Vi internasjonaliserer selv om vi risikerer å tape markedsandeler i hjemmemarkedet
- Internasjonalisering er en læringsprosess for vårt firma
- Improvisasjon er en viktig del av internasjonaliseringsprosessen
- Vi utforsker ulike tilnæringer og strategier når vi engasjerer oss i nye internasjonale aktiviteter

#### Spørsmål 12

Hvor enig er du i følgende påstander?



Helt uenig /Uenig /Delvis uenig /Hverken uenig eller enig /Delvis enig /Enig/Helt enig

- Vi prioriterer utenlandske markeder som har en kultur som vi har mye kunnskap om
- Vi går ikke inn i markeder som er veldig forskjellige fra vårt hjemmemarked
- Selv om et marked som har svært ulik kultur og forretningsforhold fra vårt hjemmemarked representerer de største mulighetene for salg vil vi heller velge markeder som er tilnærmet like vårt hjemmemarked
- Det vil være for risikofylt å gå inn i utenlandske markeder som har en annen kultur og et annet forretningsmiljø enn hjemmemarkedet, og som vi ikke kjenner godt til

### Spørsmål 13

Hvor enig er du i følgende påstander?

Helt uenig /Uenig /Delvis uenig /Hverken uenig eller enig /Delvis enig /Enig/Helt enig

- Våre nettverkskontakter gir oss en enestående mulighet for langsiktig læring og utvikling av vårt firma
- Våre nettverk vil gi oss økonomiske fordeler på lang sikt
- Våre nettverkskontakter vil beskrive oss som en ressurs for dem fordi vi tilbyr dem informasjon og vår kunnskap
- Konkurrenter er en del av vårt nettverk
- Vi tilbyr våre konkurrenter informasjon
- Vi prøver å oppdrive så mye informasjon som mulig gjennom våre nettverk til lavest mulig kostnad
- Vi prøver å formidle så mye informasjon og kunnskap som mulig til våre nettverkskontakter
- Hvis vi har innhentet informasjon fra våre nettverkskontakter vil vi forsøke å gjengjelde denne tjenesten
- Hvis tilstander i våre omgivelser endres vil vi skifte ut nettverkskontakter hvis det er nødvendig for å være konkurransedyktig
- Våre nettverkskontakter vil beskrive oss som pålitelige kontakter

### Spørsmål 14

Hvor enig er du i følgende påstander?

Helt uenig /Uenig /Delvis uenig /Hverken uenig eller enig /Delvis enig /Enig/Helt enig

- Vi anser ikke våre bedriftsrelevante nettverkskontakter som partnere eller venner
- Vi ser på våre forhold til våre nettverkskontakter som profesjonelle forhold som har fokus på transaksjoner av produkter eller tjenester
- Vi bruker mye tid og ressurser på å opprettholde og bevare våre nettverkskontakter
- De fleste av våre nettverkskontakter vil hjelpe oss å løse problemer hvis de blir bedt om det
- Vi har flere nettverkskontakter i høytstående posisjoner i viktige globale firma

- Vi har flere høytstående nettverkskontakter i utenlandske markeder
- Våre viktigste nettverkskontakter er i globale nøkkelbedrifter innen vår industri

#### Spørsmål 15

Hvor enig er du i følgende påstander?

Helt uenig /Uenig /Delvis uenig /Hverken uenig eller enig /Delvis enig /Enig/Helt enig

- Vi foretrekker indirekte involvering (eksport/strategisk allianse, e.l.) fremfor direkte involvering (åpne eget kontor/avtaler om felles produksjon, e.l.) i nye internasjonale markeder
- Når en ny markedsmulighet oppstår vil vi heller utvikle nettverkskontakter gjennom eksisterende nettverk enn å opprette nye kontakter direkte med aktører i det aktuelle markedet
- Når mulighetene eksisterer vil vi gjerne gå inn i flere markeder på en gang hvis dette vil gi høyere potensiell inntjening enn å gå inn i ett marked om gangen
- Vi engasjerer oss ikke direkte i et internasjonalt marked for å redusere risiko knyttet til å internasjonalisere
- Vi får vanligvis kjennskap til internasjonale muligheter ved at vi blir kontaktet av utenlandske kunder som ønsker å kjøpe våre produkter eller tjenester
- Vi er i kontakt med våre utenlandske kunder og/eller leverandører jevnlig
- Kontakten med våre utenlandske kunder og/eller leverandører er direkte og går ikke gjennom mellommenn eller agenter

#### Spørsmål 16

Hvor enig er du i følgende påstander?

Helt uenig /Uenig /Delvis uenig /Hverken uenig eller enig /Delvis enig /Enig/Helt enig

- De internasjonale aktivitetene våre har vært suksessfulle
- Våre internasjonale aktiviteter har vært lønnsomme for bedriften
- Vi er fornøyde med veksten i de internasjonale markedene
- Vi har nådd de målene vi satt for de internasjonale markedene

### *Appendix 3 Emails received with response from people contacted*

Hei

Beklager, men dette har jeg ikke mulighet til å være med på

Best regards / Med vennlig hilsen  
Managing Director

Hei Kamilla,

Vi har for tiden svært mye å gjøre og har dessverre ikke anledning til å bidra til din oppgave.

mvh  
XXX

Vi er inne i en hektisk periode nå og har derfor ikke tid til deg.

Hei Kamilla.

Beklager sen tilbakemelding. Vi får en del tilsvarende henvendelser som tilsynelatende kan se ut som studentoppgaver, men som har et helt annet formål. Det var derfor vi var litt tilbakeholdne med å respondere. Du kan sende spørreskjemaet til meg så skal jeg svare på det eller alternativt sende de til rett person.

Ha en fin dag.

XXX | VP Marketing |

Hei !

Beklager Kamilla, fant din e post i spam mailen.  
Dessverre er vi nok ikke rette bedrift til å kunne hjelpe deg.

Lykke til videre !

Best Regards,  
Admin Officer

## Appendix 4 Crosstabulations

### Years after establishment of first international activity \* Number of continents

#### Crosstabulation

			Number of continents			Total
			1	2	3 eller flere	
<b>Years after establishment of first international activity</b>	1-3 år	Count	5	7	23	35
	3-6 år	Count	5	5	10	20
Total		Count	10	12	33	55

### Years after establishment of first international activity \* Number of employees

#### Crosstabulation

			Number of employees				Total
			0	Under 10	Mellom 10 og 50	Mellom 50 og 100	
<b>Years after establishment of first international activity</b>	1-3 år	Count	1	17	14	3	35
	3-6 år	Count	0	5	14	1	20
Total		Count	1	22	28	4	55

### Years after establishment of first international activity \* Technological level

#### Crosstabulation

			Techn_level			Total
			3	4	5 Høyt	
Yrs_first_estab	1-3 år	Count	1	9	25	35
	3-6 år	Count	0	5	15	20
Total		Count	1	14	40	55

Percentage of export within 3 years \* Number of continents

Crosstabulation

		Number of continents			Total
		1	2	3 eller flere	
Percentage of export within 3 years	0	6	5	6	17
	2	0	0	1	1
	5	1	0	1	2
	10	0	1	2	3
	15	1	0	1	2
	20	0	1	1	2
	24	0	0	1	1
	30	0	2	3	5
	35	1	0	1	2
	40	0	2	2	4
	50	0	0	2	2
	60	1	0	1	2
	70	0	0	1	1
	75	0	0	1	1
	80	0	1	4	5
	90	0	0	1	1
	95	0	0	1	1
	99	0	0	1	1
	100	0	0	2	2
Total		10	12	33	55

## *Appendix 5 List of variables and their questions*

Adaptiveness (Adapt\_1 to Adapt\_14):

1. Our company continuously considers opportunities in foreign markets
2. Our domestic market offers sufficient business for our company
3. Our products always need to be adapted to new markets and/or new customers
4. We have a lot of knowledge of foreign markets
5. Internationalization is part of the long-term strategy of the company and is a necessity for our company to survive
6. Information and knowledge about internationalization has come from experience
7. Information and knowledge about internationalization has come through network contacts
8. Extensive knowledge of foreign markets is essential for grasping international opportunities
9. Internationalization strategies will take focus off the core business in the domestic market
10. We internationalize even if we risk to lose profit in the short run
11. We internationalize even if we risk to lose market shares in the domestic market
12. Internationalization is a learning process for our company
13. Improvisation is an important part of the internationalization process
14. We explore different approaches and strategies when engaging in new international activities

Psychic distance (Adapt\_psych\_1 to Adapt\_psych\_4):

1. We give priority to foreign markets that have cultures that we have a lot of knowledge of
2. We do not enter foreign markets that are significantly different from our home market

3. We prefer markets that have similar cultures and business environments over markets that are different even if those markets do not yield the highest potential for profits
4. Foreign markets that have different cultures and that we do not have extensive knowledge about represent a risk if we choose to enter them

Other-oriented (Other\_orient\_1 to Other\_orient\_10):

1. Our network contacts provide an excellent opportunity for long-term learning and development of our company
2. Our networks will provide economic benefits in the long run
3. Our network contacts would describe us as a resource to them as we offer information and our knowledge to them
4. Competitors are also part of our network
5. We provide our competitors with information
6. We aim to obtain as much information as possible through our networks at the lowest cost possible
7. We aim to provide as much information and knowledge as possible to our network partners
8. If we obtain information from a network contact we would try to repay the favor
9. If conditions change in our environment we would change to other network contacts if that is necessary to be competitive
10. Our network contacts would describe us as reliable contacts

Personal interactions (Personal\_1 to Personal\_7):

1. We do not consider our network contacts as our partners or friends
2. We view our relationships with most of our network contacts as professional and focus is on the transaction of products or information
3. We spend much time and effort on maintaining our network contacts
4. Most of our network contacts would help us solve problems if asked without claiming compensation

5. We have several high-level decision-makers in global companies in our network
6. We have several high-level network contacts in foreign markets
7. Our most important network contacts are in key global firms within our industry

Direct interactions (Direct\_1 to Direct\_7):

1. When entering a new international market we would rather use export or a strategic alliance than open an office or engage in agreements of joint manufacturing in those markets
2. When a new market opportunity arises we would rather develop network contacts through our existing domestic networks than making new contacts directly
3. If the opportunities exist, we would rather engage in multiple markets at once if that yields the higher potential for profit than gradually enter one at the time
4. By not engaging directly in international markets we reduce the risks of internationalizing
5. We usually learn about international opportunities because we are contacted by foreign customers or suppliers that wish to place order for our products
6. We are in contact with our foreign customers and/or suppliers on a regular basis
7. Contact with our foreign customers and/or suppliers is done directly and not through mediators or agents

International experience:

- Intl\_exp\_worklive: *Living and working abroad*
- Intl\_exp\_studylive: *Living and studying abroad*
- Intl\_exp\_workintlcomp: *Working for an international company in Norway*
- Intl\_exp\_travelwork: *Traveling through a previous job*



- Intl\_exp\_pthercontact: *Being in contact with foreign markets in other ways before engaging in the current company*

Performance (Performance\_1 to Performance\_4):

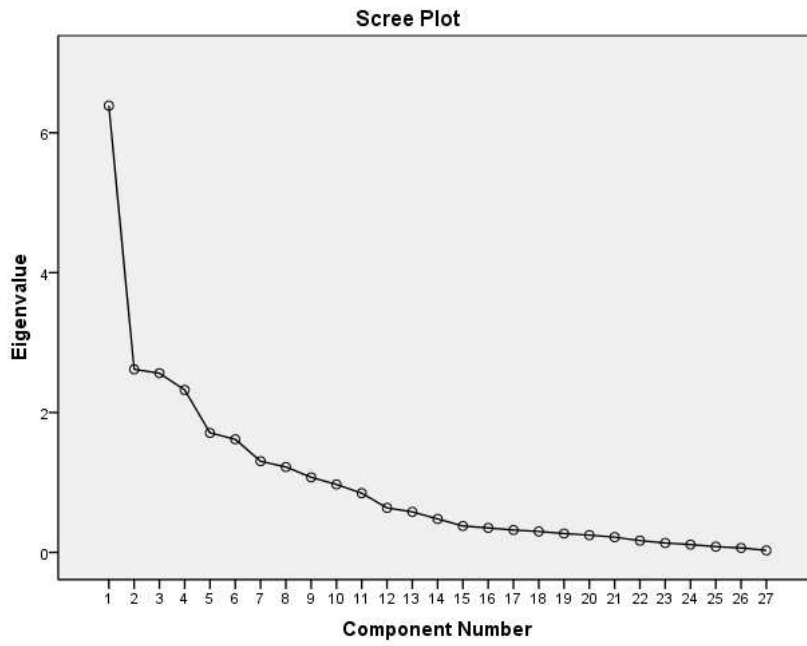
1. *The international activities in our company have been successful*
2. *The international activities have had a positive effect on the profitability of the company*
3. *The growth in international markets have been satisfactory*
4. *The goals of the company in international markets have been achieved*

**Appendix 6** *Communalities and Anti-image matrix for all variables*

	Communalities		Anti-image
	Initial	Extraction	Correlation
Adaptiveness_1	1.000	.807	.466
Adaptiveness_2	1.000	.715	.405
Adaptiveness_3	1.000	.720	.225
Adaptiveness_4	1.000	.747	.276
Adaptiveness_5	1.000	.801	.313
Adaptiveness_6	1.000	.774	.564
Adaptiveness_7	1.000	.731	.451
Adaptiveness_8	1.000	.600	.199
Adaptiveness_9	1.000	.733	.098
Adaptiveness_10	1.000	.784	.521
Adaptiveness_11	1.000	.829	.434
Adaptiveness_12	1.000	.787	.265
Adaptiveness_13	1.000	.741	.426
Adaptiveness_14	1.000	.692	.337
Adaptiveness_psych_1	1.000	.715	.206
Adaptiveness_psych_2	1.000	.796	.218
Adaptiveness_psych_3	1.000	.862	.174
Adaptiveness_psych_4	1.000	.774	.456
Other_orient_1	1.000	.859	.547
Other_orient_2	1.000	.804	.554
Other_orient_3	1.000	.816	.606
Other_orient_4	1.000	.736	.437
Other_orient_5	1.000	.814	.233
Other_orient_6	1.000	.665	.376
Other_oreint_7	1.000	.862	.619
Other_orient_8	1.000	.691	.562
Other_orient_9	1.000	.755	.316
Other_oreint_10	1.000	.778	.368
Personal_1	1.000	.703	.531
Personal_2	1.000	.796	.456
Personal_3	1.000	.823	.434
Personal_4	1.000	.802	.479
Personal_5	1.000	.887	.303
Personal_6	1.000	.903	.347
Personal_7	1.000	.830	.513
Direct_1	1.000	.829	.356
Direct_2	1.000	.759	.297
Direct_3	1.000	.804	.293
Direct_4	1.000	.689	.299
Direct_5	1.000	.815	.372
Direct_6	1.000	.757	.487
Direct_7	1.000	.576	.084

Extraction Method: Principal Component Analysis.

*Appendix 7 Scree plot*



**Appendix 8 Testing of hypotheses**

*Hypothesis H1a*

**Correlations**

			Adaptiveness	Innovative_orientation	Risk_taking	Other_oriented_behavior
Spearman's rho	Adaptiveness	Correlation Coefficient	1.000	.415**	.036	.280*
		Sig. (2-tailed)	.	.002	.795	.038
		N	55	55	55	55
		<hr/>				
	Innovative_orientation	Correlation Coefficient	.415**	1.000	.261	.385**
		Sig. (2-tailed)	.002	.	.054	.004
		N	55	55	55	55
		<hr/>				
	Risk_taking	Correlation Coefficient	.036	.261	1.000	.241
		Sig. (2-tailed)	.795	.054	.	.077
		N	55	55	55	55
		<hr/>				
	Other_oriented_behavior	Correlation Coefficient	.280*	.385**	.241	1.000
		Sig. (2-tailed)	.038	.004	.077	.
		N	55	55	55	55
		<hr/>				

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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

*Hypothesis H1b*

Not tested.

*Hypothesis H1c*

**Correlations**

			Adaptive ness	Innovativ e_orientat ion	Risk_taki ng	Other_ori ented_be havior	Personal _interacti ons
Spearman' s rho	Adaptiveness	Correlation	1.000	.415**	.036	.280*	.337*
		Coefficient					
		Sig. (2-tailed)	.	.002	.795	.038	.012
		N	55	55	55	55	55
Innovative_orient ation	Innovative_orient ation	Correlation	.415**	1.000	.261	.385**	.411**
		Coefficient					
		Sig. (2-tailed)	.002	.	.054	.004	.002
		N	55	55	55	55	55
Risk_taking	Risk_taking	Correlation	.036	.261	1.000	.241	-.018
		Coefficient					
		Sig. (2-tailed)	.795	.054	.	.077	.894
		N	55	55	55	55	55
Other_oriented_ behavior	Other_oriented_ behavior	Correlation	.280*	.385**	.241	1.000	.357**
		Coefficient					
		Sig. (2-tailed)	.038	.004	.077	.	.007
		N	55	55	55	55	55
Personal_interac tions	Personal_interac tions	Correlation	.337*	.411**	-.018	.357**	1.000
		Coefficient					
		Sig. (2-tailed)	.012	.002	.894	.007	.
		N	55	55	55	55	55

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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

*Hypothesis H1d*

Multiple regression of relationship between characteristics and percentage of exports within three years:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.408 <sup>a</sup>	.166	.081	32.097

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.408 <sup>a</sup>	.166	.081	32.097

a. Predictors: (Constant), Other\_oriented\_behavior, Risk\_taking, Adaptiveness, Personal\_interactions, Innovative\_orientation

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10059.977	5	2011.995	1.953	.102 <sup>a</sup>
	Residual	50480.568	49	1030.216		
	Total	60540.545	54			

a. Predictors: (Constant), Other\_oriented\_behavior, Risk\_taking, Adaptiveness, Personal\_interactions, Innovative\_orientation

b. Dependent Variable: Pctexport\_3yrs

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.644	33.030		-.050	.961
	Risk_taking	-2.311	3.755	-.086	-.615	.541
	Innovative_orientation	-6.471	5.408	-.189	-1.197	.237
	Adaptiveness	5.661	4.292	.193	1.319	.193
	Personal_interactions	9.313	4.110	.332	2.266	.028
	Other_oriented_behavior	.798	6.128	.021	.130	.897

a. Dependent Variable: Pctexport\_3yrs

Multiple regression of relationship between characteristics and number of continents:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.450 <sup>a</sup>	.202	.121	1.64161

a. Predictors: (Constant), Personal\_interactions, Risk\_taking, Adaptiveness, Innovative\_orientation, Other\_oriented\_behavior

**ANOVA<sup>b</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	33.478	5	6.696	2.485	.044 <sup>a</sup>
	Residual	132.049	49	2.695		
	Total	165.527	54			

a. Predictors: (Constant), Personal\_interactions, Risk\_taking, Adaptiveness, Innovative\_orientation, Other\_oriented\_behavior

b. Dependent Variable: Nbr\_continents

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.019	1.689		-.011	.991
	Adaptiveness	.354	.220	.231	1.610	.114
	Innovative_orientation	-.331	.277	-.185	-1.197	.237
	Risk_taking	.307	.192	.219	1.599	.116
	Other_oriented_behavior	-.199	.313	-.099	-.636	.528
	Personal_interactions	.537	.210	.366	2.557	.014

a. Dependent Variable: Nbr\_continents

Logistic regression of first establishment in international market:

Within three years = 1, between three and six years = 0

Adaptiveness and Year of first establishment in international market:

**Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	1.228	1	.268
	Block	1.228	1	.268
	Model	1.228	1	.268

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	70.875 <sup>a</sup>	.022	.030

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup> Adaptiveness	.274	.249	1.204	1	.272	1.315
Constant	-.716	1.188	.363	1	.547	.489

a. Variable(s) entered on step 1: Adaptiveness.

Innovative orientation and Year of first establishment in international market:

**Omnibus Tests of Model Coefficients**

	Chi-square	df	Sig.
Step 1 Step	2.888	1	.089
Block	2.888	1	.089
Model	2.888	1	.089

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	69.215 <sup>a</sup>	.051	.070

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup> Innovative_Orientatio n	.494	.299	2.732	1	.098	1.639
Constant	-1.994	1.564	1.626	1	.202	.136

a. Variable(s) entered on step 1: Innovative orientation.

Risk-taking behavior and Year of first establishment in international market:



**Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	.001	1	.978
	Block	.001	1	.978
	Model	.001	1	.978

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	72.102 <sup>a</sup>	.000	.000

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)	
Step 1 <sup>a</sup>	Risk_taking	-.006	.227	.001	1	.978	.994
	Constant	.591	1.166	.257	1	.612	1.805

a. Variable(s) entered on step 1: Risk taking behavior.

Other-oriented behavior and Year of first establishment in international market:

**Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	.065	1	.799
	Block	.065	1	.799
	Model	.065	1	.799

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	72.038 <sup>a</sup>	.001	.002

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)	
Step 1 <sup>a</sup>	Other_oriented_behavior	.083	.325	.065	1	.799	1.086
	Constant	.119	1.753	.005	1	.946	1.126

a. Variable(s) entered on step 1: Other\_oriented\_behavior.

Personal interactions and Year of first establishment in international market:

**Omnibus Tests of Model Coefficients**

		Chi-square	df	Sig.
Step 1	Step	1.589	1	.208
	Block	1.589	1	.208
	Model	1.589	1	.208

**Model Summary**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	70.514 <sup>a</sup>	.028	.039

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

**Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup> Personal_interactions	.296	.237	1.559	1	.212	1.345
Constant	-.958	1.242	.596	1	.440	.384

a. Variable(s) entered on step 1: Personal\_interactions.

### *Hypothesis H2a*

International experience and Adaptiveness:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.147 <sup>a</sup>	.022	-.016	1.15312

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.531	2	.765	.576	.566 <sup>a</sup>
	Residual	69.144	52	1.330		
	Total	70.675	54			

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

b. Dependent Variable: Adaptiveness

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.027	.671		6.003	.000
	Intl_exp_abroad	.070	.114	.084	.608	.546
	Intl_exp_home	.133	.170	.109	.786	.436

a. Dependent Variable: Adaptiveness

International experience and Innovative orientation:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.136 <sup>a</sup>	.018	-.019	.98730

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.949	2	.474	.487	.617 <sup>a</sup>
	Residual	50.687	52	.975		
	Total	51.636	54			

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

b. Dependent Variable: Innovative\_orientation

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.687	.574		8.162	.000
	Intl_exp_abroad	.057	.098	.082	.587	.560
	Intl_exp_home	.102	.145	.097	.699	.488

a. Dependent Variable: Innovative\_orientation

International experience and Risk-taking behavior:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.055 <sup>a</sup>	.003	-.035	1.27155

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.256	2	.128	.079	.924 <sup>a</sup>
	Residual	84.076	52	1.617		
	Total	84.331	54			

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

b. Dependent Variable: Risk\_taking

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	5.275		
	Intl_exp_abroad	-.007	.126	-.008	-.055	.956
	Intl_exp_home	-.071	.187	-.053	-.381	.704

a. Dependent Variable: Risk\_taking

*Hypothesis H2b*

International experience and Other-oriented behavior:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.302 <sup>a</sup>	.091	.056	.84371

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.722	2	1.861	2.614	.083 <sup>a</sup>
	Residual	37.016	52	.712		
	Total	40.737	54			

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.722	2	1.861	2.614	.083 <sup>a</sup>
	Residual	37.016	52	.712		
	Total	40.737	54			

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

b. Dependent Variable: Other\_oriented\_behavior

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.272	.491		8.704	.000
	Intl_exp_abroad	.089	.084	.143	1.071	.289
	Intl_exp_home	.229	.124	.246	1.843	.071

a. Dependent Variable: Other\_oriented\_behavior

### *Hypothesis H2c*

International experience and Personal interactions:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.440 <sup>a</sup>	.194	.163	1.09095

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.868	2	7.434	6.246	.004 <sup>a</sup>
	Residual	61.889	52	1.190		
	Total	76.757	54			

a. Predictors: (Constant), Intl\_exp\_home, Intl\_exp\_abroad

b. Dependent Variable: Personal\_interactions

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
				Beta		
1	(Constant)	3.021	.635		4.761	.000
	Intl_exp_abroad	.184	.108	.215	1.707	.094
	Intl_exp_home	.452	.161	.354	2.813	.007

a. Dependent Variable: Personal\_interactions

### *Hypothesis H2d*

Not tested.

### *Hypothesis H3a*

Adaptiveness and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.286 <sup>a</sup>	.082	.064	1.03511

a. Predictors: (Constant), Adaptiveness

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.048	1	5.048	4.711	.034 <sup>a</sup>
	Residual	56.787	53	1.071		
	Total	61.834	54			

a. Predictors: (Constant), Adaptiveness

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
				Beta		
1	(Constant)	3.817	.595		6.411	.000
	Adaptiveness	.267	.123	.286	2.170	.034

a. Dependent Variable: Total\_performance

Innovative orientation and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.140 <sup>a</sup>	.020	.001	1.06952

a. Predictors: (Constant), Innovative\_orientation

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.209	1	1.209	1.057	.309 <sup>a</sup>
	Residual	60.625	53	1.144		
	Total	61.834	54			

a. Predictors: (Constant), Innovative\_orientation

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	4.275		
	Innovative_orientation	.153	.149	.140	1.028	.309

a. Dependent Variable: Total\_performance

Risk-taking behavior and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.115 <sup>a</sup>	.013	-.005	1.07302

a. Predictors: (Constant), Risk\_taking

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.812	1	.812	.705	.405 <sup>a</sup>
	Residual	61.022	53	1.151		
	Total	61.834	54			

a. Predictors: (Constant), Risk\_taking

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.583	.601		7.623	.000
	Risk_taking	.098	.117	.115	.840	.405

a. Dependent Variable: Total\_performance

### *Hypothesis H3b*

Other-oriented behavior and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.326 <sup>a</sup>	.106	.089	1.02118

a. Predictors: (Constant), Other\_oriented\_behavior

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.565	1	6.565	6.295	.015 <sup>a</sup>
	Residual	55.269	53	1.043		
	Total	61.834	54			

a. Predictors: (Constant), Other\_oriented\_behavior

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.925	.867		3.375	.001
	Other_oriented_behavior	.401	.160	.326	2.509	.015

a. Dependent Variable: Total\_performance

### *Hypothesis H3c*

Personal interactions and Performance:



**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.330 <sup>a</sup>	.109	.092	1.01980

a. Predictors: (Constant), Personal\_interactions

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.715	1	6.715	6.456	.014 <sup>a</sup>
	Residual	55.119	53	1.040		
	Total	61.834	54			

a. Predictors: (Constant), Personal\_interactions

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	3.544		
	Personal_interactions	.296	.116	.330	2.541	.014

a. Dependent Variable: Total\_performance

### *Hypothesis H3d*

Not tested.

### *Testing with control variables*

Adaptiveness and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321 <sup>a</sup>	.103	.031	1.05326

a. Predictors: (Constant), Age, Annual\_revenue, Adaptiveness, Nbr\_employees

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.366	4	1.592	1.435	.236 <sup>a</sup>
	Residual	55.468	50	1.109		
	Total	61.834	54			

a. Predictors: (Constant), Age, Annual\_revenue, Adaptiveness, Nbr\_employees

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	3.480		
	Adaptiveness	.298	.135	.318	2.206	.032
	Nbr_employees	.092	.282	.056	.326	.746
	Annual_revenue	2.912E-9	.000	.111	.637	.527
	Age	-.005	.037	-.018	-.127	.900

a. Dependent Variable: Total\_performance

Innovative orientation and performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.196 <sup>a</sup>	.038	-.039	1.09057

a. Predictors: (Constant), Innovative\_orientation, Age, Annual\_revenue, Nbr\_employees

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.367	4	.592	.498	.738 <sup>a</sup>
	Residual	59.467	50	1.189		
	Total	61.834	54			

a. Predictors: (Constant), Innovative\_orientation, Age, Annual\_revenue, Nbr\_employees

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.098	.957		4.282	.000
	Nbr_employees	.183	.289	.111	.636	.528
	Annual_revenue	5.409E-10	.000	.021	.119	.906
	Age	-.023	.038	-.087	-.616	.541
	Innovative_orientation	.167	.154	.153	1.084	.284

a. Dependent Variable: Total\_performance

Risk-taking behavior and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.157 <sup>a</sup>	.025	-.053	1.09827

a. Predictors: (Constant), Risk\_taking, Age, Annual\_revenue, Nbr\_employees

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.525	4	.381	.316	.866 <sup>a</sup>
	Residual	60.309	50	1.206		
	Total	61.834	54			

a. Predictors: (Constant), Risk\_taking, Age, Annual\_revenue, Nbr\_employees

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.627	.728		6.360	.000
	Nbr_employees	.150	.296	.091	.506	.615
	Annual_revenue	-2.168E-10	.000	-.008	-.048	.962
	Age	-.023	.038	-.086	-.603	.549
	Risk_taking	.084	.123	.098	.678	.501

a. Dependent Variable: Total\_performance

Other-oriented behavior and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.334 <sup>a</sup>	.112	.041	1.04809

a. Predictors: (Constant), Other\_oriented\_behavior, Annual\_revenue, Age, Nbr\_employees

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.910	4	1.727	1.573	.196 <sup>a</sup>
	Residual	54.924	50	1.098		
	Total	61.834	54			

a. Predictors: (Constant), Other\_oriented\_behavior, Annual\_revenue, Age, Nbr\_employees

b. Dependent Variable: Total\_performance

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	2.974		
	Nbr_employees	.103	.280	.062	.369	.714
	Annual_revenue	1.140E-12	.000	.000	.000	1.000
	Age	-.015	.036	-.057	-.416	.679
	Other_oriented_behavior	.387	.166	.314	2.325	.024

a. Dependent Variable: Total\_performance

Personal interactions and Performance:

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.344 <sup>a</sup>	.118	.048	1.04423

a. Predictors: (Constant), Personal\_interactions, Annual\_revenue, Age, Nbr\_employees

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.313	4	1.828	1.677	.170 <sup>a</sup>
	Residual	54.521	50	1.090		
	Total	61.834	54			

a. Predictors: (Constant), Personal\_interactions, Annual\_revenue, Age, Nbr\_employees

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.313	4	1.828	1.677	.170 <sup>a</sup>
	Residual	54.521	50	1.090		
	Total	61.834	54			

a. Predictors: (Constant), Personal\_interactions, Annual\_revenue, Age, Nbr\_employees

b. Dependent Variable: Total\_performance

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.658	.729		5.017	.000
	Nbr_employees	.050	.282	.030	.177	.861
	Annual_revenue	9.699E-10	.000	.037	.224	.824
	Age	-.023	.036	-.088	-.649	.519
	Personal_interactions	.294	.122	.327	2.412	.020

a. Dependent Variable: Total\_performance

## Appendix 9 Survey raw data result

### Survey Questions

Question Number	Question Text
1	Når ble bedriften etablert
3	Omtrent hvor mange ansatte har bedriften?
4	Omtrent hvor stor årlig omsetning har bedriften (oppgitt i tusen NOK)?
5	Omtrent hvor stor prosentandel av bedriftens totale omsetning kom fra salg utenfor Norge etter 3 år?
6.a	Norge
6.b	Skandinavia
6.c	Europa
6.d	Nord-Amerika
6.e	Sør-Amerika
6.f	Afrika
6.g	Asia
6.h	Oceania
7	Hvor mange kontinenter er bedriften tilstede på?
8	Hvordan kan det teknologiske nivået på bedriftens produkter eller tjenester beskrives?
9	Hvor lenge etter etablering ble første internasjonale aktivitet startet opp?
10.a	å jobbe og bo i utlandet?
10.b	å studere og bo i utlandet?
10.c	reising i forbindelse med jobb?

10.d	å jobbe for en internasjonal bedrift i Norge?
10.f	kontakt med utenlandske markeder på andre måter enn ovennevnte før oppstart av bedriften?
11.a	Vi leter stadig etter nye muligheter i internasjonale markeder
11.b	Det er nok muligheter i hjemmemarkedet vårt til tilfredsstille oss
11.c	Det er alltid nødvendig å tilpasse våre produkter til nye markeder og/eller nye kunder
11.d	Vi har mye kunnskap om internasjonale markeder
11.e	Internasjonalisering er en del av vår langsiktige strategi og er helt nødvendig for at vår bedrift skal overleve
11.f	Informasjon og kunnskap om internasjonalisering har vi fått gjennom erfaring på dette området
11.g	Informasjon og kunnskap om internasjonalisering har vi fått gjennom våre nettverkskontakter
12.a	Utstrakt kunnskap om utenlandske markeder er essensielt for å kunne gripe internasjonale muligheter
12.b	Internasjonaliseringsstrategier vil ta fokuset bort fra kjernevirksomheten i hjemmemarkedet
12.c	Vi internasjonaliserer selv om vi risikerer å få økonomiske tap på kort sikt
12.d	Vi internasjonaliserer selv om vi risikerer å tape markedsandeler i hjemmemarkedet
12.e	Internasjonalisering er en læringsprosess for vårt firma
12.f	Improvisasjon er en viktig del av internasjonaliseringsprosessen
12.g	Vi utforsker ulike tilnærminger og strategier når vi engasjerer oss i nye internasjonale aktiviteter
13.a	Vi prioriterer utenlandske markeder som har en kultur som vi har mye kunnskap om
13.b	Vi går ikke inn i markeder som er veldig forskjellige fra vårt hjemmemarked
13.c	Selv om et marked som har svært ulik kultur og forretningsforhold fra vårt hjemmemarked representerer de største mulighetene for salg vil vi heller velge markeder som er tilnærmet like vårt hjemmemarked
13.d	Det vil være for risikofylt å gå inn i utenlandske markeder som har en annen kultur og et annet forretningsmiljø enn hjemmemarkedet, og som vi ikke kjenner godt til
14.a	Våre nettverkskontakter gir oss en enestående mulighet for langsiktig læring og utvikling av vårt firma
14.b	Våre nettverk vil gi oss økonomiske fordeler på lang sikt
14.c	Våre nettverkskontakter vil beskrive oss som en ressurs for dem fordi vi tilbyr dem informasjon og vår kunnskap
14.e	Konkurrenter er en del av vårt nettverk
14.f	Vi tilbyr våre konkurrenter informasjon
14.g	Vi prøver å oppdrive så mye informasjon som mulig gjennom våre nettverk til lavest mulig kostnad
14.h	Vi prøver å formidle så mye informasjon og kunnskap som mulig til våre nettverkskontakter
14.i	Hvis vi har innhentet informasjon fra våre nettverkskontakter vil vi forsøke å gjengjelde denne tjenesten
14.j	Hvis tilstander i våre omgivelser endres vil vi skifte ut nettverkskontakter hvis det er nødvendig for å være konkurransedyktig

14.k	Våre nettverkskontakter vil beskrive oss som pålitelige kontakter
15.a	Vi anser ikke våre bedriftsrelevante nettverkskontakter som partnere eller venner
15.b	Vi ser på våre forhold til våre nettverkskontakter som profesjonelle forhold som har fokus på transaksjoner av produkter eller tjenester
15.c	Vi bruker mye tid og ressurser på å opprettholde og bevare våre nettverkskontakter
15.d	De fleste av våre nettverkskontakter vil hjelpe oss å løse problemer hvis de blir bedt om det
15.e	Vi har flere nettverkskontakter i høytstående posisjoner i viktige globale firma
15.f	Vi har flere høytstående nettverkskontakter i utenlandske markeder
15.g	Våre viktigste nettverkskontakter er i globale nøkkelbedrifter innen vår industri
16.a	Vi foretrekker indirekte involvering (eksport/strategisk allianse, e.l.) fremfor direkte involvering (åpne eget kontor/avtaler om felles produksjon, e.l.) i nye internasjonale markeder
16.b	Når en ny markedsmulighet oppstår vil vi heller utvikle nettverkskontakter gjennom eksisterende nettverk enn å opprette nye kontakter direkte med aktører i det aktuelle markedet
16.c	Når mulighetene eksisterer vil vi gjerne gå inn i flere markeder på en gang hvis dette vil gi høyere potensiell inntjening enn å gå inn i ett marked om gangen
16.d	Vi engasjerer oss ikke direkte i et internasjonalt marked for å redusere risiko knyttet til å internasjonalisere
16.e	Vi får vanligvis kjennskap til internasjonale muligheter ved at vi blir kontaktet av utenlandske kunder som ønsker å kjøpe våre produkter eller tjenester
16.f	Vi er i kontakt med våre utenlandske kunder og/eller leverandører jevnlig
16.g	Kontakten med våre utenlandske kunder og/eller leverandører er direkte og går ikke gjennom mellommenn eller agenter
17.a	De internasjonale aktivitetene våre har vært suksessfulle
17.b	Våre internasjonale aktiviteter har vært lønnsomme for bedriften
17.c	Vi er fornøyd med veksten i de internasjonale markedene
17.d	Vi har nådd de målene vi satt for de internasjonale markedene

## Survey Responses

Answer number	1	3	4	5	6.a	6.b	6.c	6.d	6.e	6.f	6.g	6.h
1	2008	2	0	80	1	1	1	1	1	0	0	0
2	2002	4	50-60	50-70%	1	1	1	0	1	0	1	0
3	1995	2	20000000	0	1	0	0	0	0	0	0	0
4	1994	1	5000000	15	1	1	1	1	1	0	1	0
5	2002	1	>7000000	0	0	0	1	0	0	0	0	0
6	2003	2	45000000	70	1	1	1	1	1	1	1	0
7	1998	2	50000000	30	1	1	1	1	1	1	1	1
8	2004	1	100000	0	1	0	1	1	0	0	0	0
9	2005	1	3000000	5	1	1	0	0	0	0	0	0
10	2001	1	100000000	30	1	1	1	1	0	0	1	0
11	2005	2	60000000	80%	1	0	1	1	0	0	0	1
12	2006	1	7500000	40%	1	1	1	1	1	0	1	0
13	2004	2	80 000000	80 %	1	1	1	1	0	0	1	1
14	1999	2	23000000	80	1	1	1	1	1	1	1	0
15	1999	2	10000000	0	1	0	1	1	0	0	1	0
16	2000	2	41000000	30%	1	1	1	0	0	0	1	0
17	2005	1	10000000	80%	1	0	1	0	1	0	1	0
18	2000	2	25000000	0	1	1	1	1	1	1	1	1
19	1996	2	26000000	0	1	1	0	0	0	0	0	0
20	1998	1	1500000	15	1	1	1	0	0	0	0	0
21	1999	1	0	0	0	0	1	0	0	0	0	0
22	2000	2	20000000	30	1	1	1	1	0	1	0	0
23	2002	2	51083000	24%	0	0	1	0	0	0	1	0
24	2000	3	65000000	10%	1	1	1	1	0	1	1	0
25	2002	2	6000000	0	1	0	1	1	1	1	1	1
26	2005	2	23900000	30	1	1	1	0	1	0	0	0
27	1997	2	38 000000	60%	1	1	1	1	1	1	1	1
28	2002	2	33000000	40%	1	1	1	1	1	0	1	1
29	1999	2	40000000	0	1	0	0	1	0	0	0	0
30	2003	1	23 000000	2	1	1	0	0	1	0	0	0
31	1997	1	15000000	35	1	1	1	1	1	1	0	1
32	1999	3	50000000	0	1	1	1	0	0	0	1	0
33	1996	2	21000000	30	1	1	1	0	0	0	0	0
34	2002	2	80 000000	90%	1	1	1	1	0	1	1	1
35	1991	4	300 mnok	vet ikke	1	0	0	0	1	0	0	0
36	1999	1	7 000000	60	1	1	1	1	0	0	1	0
37	2007	1	4500000	0	1	0	0	0	0	0	0	0
38	1993	2	10 000000	10	1	0	1	0	0	0	0	0
39	2005	2	3 Mill NOK	100 pct	0	0	1	1	1	0	1	0
40	1999	3	NOK 250 mill	0%	1	1	0	0	0	0	0	0
41	1997	2	9000000	0	1	0	1	0	0	1	0	0
42	1995	2	18000000	5 %	1	1	1	1	1	0	1	1
43	2002	2	11500000	0%	1	1	0	0	0	0	0	0
44	1990's	1	6 000 000 NOK	0%	1	1	1	1	1	0	0	0
45	2004	2	7300000	10	1	1	1	1	1	0	1	0
46	2004	1	17000000	2000	1	0	1	0	0	0	1	0
47	2003	1	8000000	40%	1	1	1	1	0	0	1	0



48	2000	2	10 000000	0	1	1	1	0	0	0	0	0
49	2003	1	3200000	35	1	0	1	0	0	0	0	0
50	2002	2	12000000	0	1	1	1	1	0	0	0	0
51	1998	2	50000000	0	1	1	1	1	1	1	1	1
52	1992	1	5000000	0	1	1	1	1	0	0	0	1
53	1994	3	75 mill NOK i 2003 - selskapet er nå solgt og integrert i et annet.	40%	1	1	1	0	0	0	1	0
54	2005	3	120 000000	75 prosent	1	1	1	0	1	0	1	1
55	1979	3	300000000	50%	1	0	1	1	1	0	1	0
56	2001	1	2000000	0	1	0	0	1	0	0	0	0
57	2002	1	8000000	100%	1	1	1	1	0	0	1	0
58	1992	4	269 MNOK i 2009	70	1	1	1	1	1	1	1	1
59	1998	1	14000000	50	1	1	1	1	1	1	1	1
60	1998	2	20000000	95%	1	1	1	1	1	0	1	0
61	1997	2	45 000000	50%	1	1	1	1	1	0	1	0
62	1996	2	8500000	0	1	0	1	1	0	0	0	0
63	Juli 1993	1	4500000	0	1	1	1	0	0	0	1	0
64	1996	2	60 000000	20 prosent	1	0	1	0	1	0	1	0
65	2007	1	2300000	Har ikke eksistert i 3 år ennå, men det vil være en betydelig andel	1	1	1	1	1	0	1	0
66	2005	1	3000000	0	1	0	1	0	0	0	0	0
67	2004	1	10000000	10	1	1	1	0	0	0	1	0
68	2006	1	1000000	99%	1	1	1	1	1	1	1	1
69	2003	2	60.000	20%	1	1	1	1	1	0	0	0

Answer number	7	8	9	10.a	10.b	10.c	10.d	10.f	11.a	11.b	11.c	11.d	11.e	11.f	11.g
1	2	5	1	5	1	5	5	2	2	1	4	7	7	7	4
2	2	2	1	4	1	4	2	1	3	4	5	4	5	4	4
3	1	4	3	3	1	2	2	3	4	6	6	5	4	4	4
4	3	5	1	1	1	2	1	1	7	2	4	5	6	6	5
5	1	5	3	1	1	3	1	5	5	1	5	6	7	7	7
6	3	4	1	3	1	5	3	4	7	2	7	6	7	5	5
7	3	5	1	1	1	3	5	2	6	3	7	5	6	6	4
8	2	5	2	1	1	5	5	2	7	1	7	6	7	5	6
9	3	5	1	4	4	4	4	4	7	1	7	5	6	6	6
10	3	5	1	2	2	5	5	5	7	3	7	5	7	6	5
11	3	4	2	2	3	5	4	2	6	2	6	5	7	6	5
12	3	4	1	4	2	5	2	4	7	2	6	7	5	6	5
13	3	5	1	5	1	5	3	3	7	1	3	6	7	6	5
14	3	4	1	5	5	4	4	2	7	2	7	6	6	6	6
15	3	5	2	5	1	4	1	4	7	1	7	7	7	6	6
16	2	5	1	5	5	4	4	1	7	1	5	5	7	6	5
17	3	5	1	5	5	5	5	4	5	5	6	6	7	6	6

18	3	5	2	1	1	5	3	3	7	1	5	6	7	6	6
19	1	5	3	5	5	5	5	4	7	6	7	4	6	5	3
20	1	5	1	1	1	4	1	4	6	2	5	5	6	6	5
21	1	4	1	1	3	4	3	3	6	2	4	3	6	6	4
22	3	5	1	5	5	5	1	5	7	1	7	5	7	7	7
23	3	4	1	1	1	1	3	1	7	1	5	5	6	5	6
24	3	5	1	1	1	5	3	3	7	2	6	6	6	6	5
25	3	5	2	5	1	4	3	1	7	1	7	5	7	6	4
26	2	4	1	3	4	5	5	3	7	2	6	4	7	5	6
27	1	5	1	5	5	5	5	3	7	1	7	7	7	7	7
28	2	5	2	5	1	5	5	3	7	5	6	6	6	6	4
29	2	5	2	5	5	4	1	1	7	2	7	6	6	6	5
30	3	4	2	1	1	4	1	4	6	5	6	3	3	5	5
31	3	5	1	1	1	3	2	2	6	2	6	5	7	7	3
32	2	4	3	1	1	4	1	3	7	2	5	4	7	5	5
33	1	4	3	3	1	3	4	4	7	1	7	5	6	6	6
34	3	5	2	1	5	5	5	4	6	2	6	6	6	6	6
35	2	4	3	5	1	5	5	4	7	4	7	7	7	6	6
36	3	5	1	5	2	5	5	5	7	1	7	6	7	7	2
37	1	5	1	4	2	4	4	4	5	5	5	4	6	6	5
38	1	4	3	2	3	4	4	2	3	6	7	2	3	2	6
39	3	5	1	5	5	5	5	5	5	3	5	7	7	6	7
40	1	5	2	4	1	4	3	4	5	3	2	4	3	5	5
41	2	5	2	4	5	4	4	2	7	3	6	7	7	6	6
42	1	5	1	3	1	5	1	5	7	4	6	5	5	7	5
43	1	5	2	2	5	3	1	1	4	3	6	4	7	5	5
44	1	5	2	5	5	5	1	2	7	2	7	5	1	5	2
45	3	5	1	1	1	4	4	5	7	1	5	6	7	6	5
46	2	5	1	3	1	5	5	5	7	4	5	4	7	6	4
47	3	4	2	2	2	2	2	4	6	1	6	5	7	6	6
48	1	5	2	1	1	3	1	2	4	3	6	3	6	4	4
49	1	4	1	2	4	4	1	5	6	3	6	5	3	5	6
50	2	4	2	1	3	4	5	1	7	1	7	5	5	5	4
51	3	5	2	1	1	3	5	3	7	4	7	6	6	6	6
52	3	5	1	1	1	5	1	5	7	2	7	6	6	6	6
53	2	4	1	4	4	5	5	2	7	2	7	6	7	7	7
54	3	3	1	4	4	4	4	4	6	2	6	5	6	6	5
55	2	4	3	2	2	5	4	4	7	1	6	3	7	4	4
56	2	5	3	4	4	4	4	3	5	1	4	3	7	6	5
57	3	5	1	2	1	5	5	1	7	1	7	7	7	7	1
58	3	5	3	2	1	5	5	2	7	1	6	6	6	6	6
59	3	5	1	3	1	3	3	3	6	4	7	5	7	5	4
60	3	5	2	4	1	5	3	5	7	1	6	5	7	6	6
61	3	5	1	4	1	5	4	3	7	2	5	6	6	6	4
62	2	5	1	1	1	5	3	3	7	2	7	5	6	6	6
63	2	5	3	4	1	4	3	4	7	5	6	6	7	6	6
64	3	4	2	1	1	3	5	4	7	3	7	6	7	6	5
65	3	4	1	5	2	4	5	3	7	2	6	6	7	6	6
66	1	5	2	2	1	4	1	3	7	1	6	4	7	4	4
67	2	5	1	3	1	4	4	3	4	3	7	5	6	3	3

68	3	4	1	3	3	4	2	4	6	2	6	6	6	6	5
69	3	5	1	1	1	4	4	1	6	4	6	5	6	6	6

Answer number	12.a	12.b	12.c	12.d	12.e	12.f	12.g	13.a	13.b	13.c	13.d
1	6	2	2	2	2	2	6	5	4	3	2
2	5	3	4	4	3	5	2	5	5	5	3
3	6	5	2	1	2	4	4	5	7	6	7
4	6	5	6	5	7	4	6	3	2	4	2
5	7	5	7	7	7	5	7	6	6	3	3
6	6	2	6	5	6	6	6	4	2	2	2
7	6	5	6	4	5	5	6	2	2	5	2
8	7	1	6	2	5	5	6	5	2	3	6
9	6	4	6	6	6	6	6	6	5	2	2
10	6	6	6	5	6	6	5	6	3	5	6
11	7	4	3	2	5	5	5	3	2	2	2
12	6	5	6	6	6	7	7	5	3	5	5
13	6	1	7	6	4	4	5	6	1	2	1
14	7	5	2	2	6	6	7	5	3	3	3
15	7	4	7	5	5	3	5	4	2	2	2
16	4	2	7	5	6	6	6	6	2	3	2
17	5	5	5	5	5	5	7	4	2	1	5
18	6	1	6	6	6	6	6	5	2	3	3
19	7	7	7	2	6	2	6	7	7	6	6
20	4	2	6	4	6	6	6	4	4	4	4
21	6	2	6	4	6	6	6	5	6	4	4
22	6	5	5	1	4	5	7	5	5	3	6
23	6	2	5	4	4	4	5	4	4	5	4
24	6	2	7	6	6	7	5	5	6	6	6
25	5	1	7	4	6	6	5	2	1	1	1
26	6	2	6	4	6	6	6	4	1	1	5
27	7	1	7	7	7	4	7	5	6	2	2
28	7	1	6	2	6	5	7	2	5	1	5
29	6	1	3	3	5	6	6	6	4	2	2
30	6	2	2	2	5	4	4	4	2	2	2
31	2	2	7	7	6	4	6	6	5	4	5
32	6	2	2	2	5	3	5	6	6	3	4
33	7	3	5	5	7	6	6	4	5	5	5
34	6	2	6	4	2	2	6	5	5	3	4
35	7	5	5	2	5	3	6	5	3	4	4
36	5	6	7	5	7	7	5	1	7	1	1
37	5	5	5	5	6	6	6	5	4	3	2
38	7	5	3	1	6	3	4	5	6	5	6
39	7	2	6	6	6	7	7	3	2	2	2
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41	7	1	5	6	6	6	7	6	2	3	2
42	6	5	7	5	6	7	5	5	2	4	2
43	7	5	6	3	7	5	5	7	2	5	5
44	5	2	1	2	3	2	5	7	2	1	2

45	6	2	6	6	4	3	7	2	2	1	2
46	6	1	1	1	6	7	4	4	4	4	4
47	6	2	6	6	6	5	5	3	3	2	2
48	6	5	4	5	5	3	6	6	5	2	5
49	5	2	3	2	4	6	5	6	6	6	6
50	7	2	7	3	7	5	7	7	3	3	5
51	5	3	5	7	5	5	5	6	4	4	4
52	7	2	2	2	6	4	4	5	4	4	4
53	6	3	5	5	7	6	7	5	6	3	3
54	7	3	5	5	5	5	6	5	3	3	3
55	6	3	6	3	4	3	6	3	3	3	3
56	6	1	7	4	6	4	4	6	3	3	2
57	6	1	1	1	7	6	7	2	1	1	1
58	6	2	7	2	6	7	7	4	4	1	4
59	6	2	3	4	5	5	3	3	3	5	5
60	6	6	6	6	6	6	4	4	2	2	2
61	7	2	4	4	5	6	6	5	5	2	2
62	5	1	4	4	6	6	6	6	6	2	1
63	7	4	5	4	6	6	6	5	3	2	3
64	7	7	7	4	4	4	7	5	1	1	1
65	7	2	7	6	6	6	7	7	2	4	2
66	6	2	6	3	6	5	5	3	2	2	2
67	5	1	7	1	4	1	7	4	1	1	1
68	6	2	2	2	6	4	6	6	5	4	5
69	6	2	4	4	6	3	6	4	5	4	5

Answer number	14.a	14.b	14.c	14.e	14.f	14.g	14.h	14.i	14.j	14.k
1	3	3	3	5	5	6	5	5	6	6
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3	4	6	6	5	4	6	4	6	5	7
4	5	5	4	1	4	6	5	5	6	6
5	3	5	4	4	2	6	6	4	6	7
6	7	7	7	3	2	6	5	6	6	6
7	5	5	6	5	6	5	5	2	6	6
8	7	7	6	7	5	7	5	6	6	7
9	6	6	6	6	5	6	6	6	6	6
10	5	6	6	2	3	6	6	6	7	6
11	6	6	6	5	3	6	5	4	5	5
12	5	6	6	6	4	6	5	6	6	6
13	5	6	4	4	1	6	3	4	6	4
14	6	6	6	6	5	6	6	6	6	6
15	5	5	5	3	3	6	5	6	5	6
16	6	5	6	2	2	6	5	7	6	7
17	7	7	7	6	2	7	7	7	7	7
18	6	6	6	2	2	6	6	5	5	5
19	5	5	4	5	3	6	6	6	6	6
20	5	5	6	4	2	4	6	6	6	6
21	5	5	6	2	2	6	5	6	6	6
22	7	7	7	6	6	7	6	7	6	7

23	6	6	4	2	2	4	4	4	4	6
24	7	5	6	4	1	7	5	4	4	6
25	5	5	4	3	5	6	4	5	6	6
26	6	6	5	4	1	5	5	4	7	6
27	7	7	7	6	6	7	7	7	7	7
28	6	6	6	5	2	6	4	5	6	5
29	4	5	5	3	3	5	4	4	6	6
30	5	5	5	2	1	4	4	4	6	6
31	4	5	5	2	2	4	5	6	6	6
32	5	5	5	5	5	6	5	5	6	7
33	6	6	6	4	4	7	4	7	4	6
34	5	6	6	6	2	6	3	5	6	6
35	5	5	5	6	4	7	5	5	6	6
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39	6	6	6	6	2	2	6	6	6	6
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41	6	7	6	6	6	7	6	7	6	6
42	6	5	6	5	5	4	6	5	5	6
43	5	5	6	2	2	5	5	6	6	6
44	2	5	3	2	1	1	3	2	2	7
45	5	6	5	5	4	5	5	6	5	6
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53	6	6	7	5	4	6	6	6	7	6
54	5	5	5	3	2	5	5	6	6	5
55	5	5	5	3	2	5	6	6	6	6
56	6	6	6	3	5	6	6	5	5	6
57	5	5	5	5	5	6	6	6	6	7
58	5	6	4	5	5	7	4	4	7	4
59	5	5	4	3	2	4	5	4	5	5
60	6	6	6	6	2	4	6	6	6	6
61	5	6	6	4	3	5	5	6	6	6
62	6	5	5	5	5	5	5	5	4	6
63	6	6	6	6	6	6	5	7	6	6
64	4	7	6	4	2	4	4	6	4	6
65	7	7	7	6	6	7	7	7	4	6
66	5	6	5	5	5	5	5	5	5	6
67	1	4	5	1	4	4	5	4	7	7
68	5	5	5	5	5	6	5	5	5	5
69	5	5	5	3	2	6	6	4	4	6

Answer number	15.a	15.b	15.c	15.d	15.e	15.f	15.g
1	1	5	3	5	6	6	4
2	4	5	4	5	5	5	5
3	2	4	5	3	5	4	4
4	5	5	5	6	2	2	2
5	2	7	7	7	7	7	7
6	2	3	6	6	7	7	6
7	2	6	6	6	6	5	7
8	3	6	6	6	5	5	4
9	1	6	6	6	1	1	1
10	5	6	5	6	5	5	6
11	3	3	6	5	6	6	6
12	3	3	6	6	5	5	4
13	2	6	4	4	4	6	4
14	2	3	6	6	6	6	7
15	3	5	5	5	5	5	5
16	2	6	5	6	6	6	6
17	2	5	6	6	7	7	7
18	2	4	4	4	6	6	6
19	6	6	5	6	4	2	5
20	3	5	5	5	2	2	5
21	3	5	3	3	2	2	2
22	1	6	7	7	6	6	7
23	6	6	4	4	2	2	2
24	3	7	6	6	7	7	7
25	5	6	3	5	2	2	2
26	6	6	6	5	6	6	6
27	1	7	6	7	4	5	7
28	4	6	5	5	6	6	6
29	5	4	4	6	6	6	5
30	4	5	5	4	5	3	4
31	2	6	5	5	4	6	6
32	3	5	5	5	3	4	3
33	5	3	5	5	5	5	2
34	2	6	6	6	6	6	2
35	3	3	6	6	6	6	6
36	6	7	5	7	6	7	5
37	2	6	6	6	5	5	5
38	2	6	6	6	6	6	6
39	2	6	6	6	6	6	6
40	3	5	5	6	5	4	2
41	2	6	6	6	6	6	5
42	4	3	6	5	6	5	5
43	3	5	6	5	6	5	5
44	2	2	2	6	5	5	5
45	2	2	6	6	6	6	6
46	2	4	3	4	6	6	6
47	5	5	6	6	3	3	3

48	5	5	3	4	2	4	1
49	1	6	6	6	4	4	4
50	1	7	7	6	6	6	3
51	2	6	6	6	4	4	7
52	1	6	6	6	6	6	6
53	2	6	6	6	5	6	6
54	3	5	4	5	5	5	6
55	3	5	5	6	3	4	2
56	3	5	5	5	3	5	3
57	1	1	6	6	6	6	6
58	2	7	6	6	6	6	6
59	4	5	4	5	5	5	4
60	2	6	6	6	6	6	6
61	4	6	5	6	4	4	2
62	2	6	3	5	6	6	6
63	4	6	6	6	6	6	6
64	2	4	5	5	5	5	4
65	2	3	6	6	7	7	5
66	4	5	5	6	5	5	3
67	3	7	5	5	1	1	1
68	3	5	5	6	6	6	5
69	4	6	6	6	5	5	4

Answer number	16.a	16.b	16.c	16.d	16.e	16.f	16.g	17.a	17.b	17.c	17.d
1	5	5	6	1	5	6	6	7	4	5	6
2	5	5	5	5	4	4	4	3	6	5	5
3	6	5	2	4	4	4	5	5	6	5	4
4	4	2	5	2	5	5	3	3	5	4	2
5	3	3	5	6	6	6	4	6	5	6	3
6	2	3	4	2	5	7	6	5	6	4	5
7	5	5	6	5	7	6	3	5	3	5	3
8	6	5	5	2	3	5	3	6	4	6	6
9	4	5	5	2	2	6	6	5	6	5	5
10	6	3	5	5	6	5	6	5	5	2	2
11	2	4	5	4	4	6	6	6	6	5	5
12	6	2	6	4	5	7	3	7	6	6	6
13	1	2	5	2	4	7	2	7	6	5	5
14	5	3	6	5	5	7	2	7	7	6	6
15	6	5	5	3	4	6	4	5	5	3	3
16	2	3	4	2	2	7	3	6	6	5	5
17	6	6	6	6	5	5	3	6	6	6	5
18	3	4	4	4	5	6	6	6	7	5	5
19	7	4	1	4	4	4	4	3	3	3	3
20	2	3	2	6	5	5	6	5	5	3	3
21	6	6	6	1	5	6	6	2	2	2	2
22	5	4	5	1	2	7	7	6	7	5	5
23	6	6	5	4	5	6	6	5	5	5	3
24	7	7	4	5	5	5	2	5	6	5	5
25	1	2	6	7	5	6	7	5	7	6	5

26	3	3	6	6	4	7	3	5	5	5	5
27	7	5	5	6	6	7	1	7	7	7	7
28	2	3	3	1	2	7	7	5	6	5	5
29	4	3	6	4	5	6	6	6	6	6	6
30	3	3	2	3	5	6	6	5	6	3	2
31	6	3	4	2	4	5	7	5	7	3	2
32	5	5	4	4	5	5	5	7	7	7	5
33	6	5	3	5	6	5	6	6	6	6	5
34	3	6	6	2	3	6	3	5	5	6	5
35	5	5	3	4	5	7	7	6	6	6	5
36	1	6	6	1	2	7	7	7	7	6	5
37	5	4	5	3	3	6	6	3	3	2	2
38	4	3	5	6	5	6	7	6	6	3	5
39	2	2	6	2	6	6	3	7	7	7	5
40	2	2	2	2	2	6	6	5	5	6	5
41	6	5	6	5	5	7	7	6	7	6	6
42	1	3	6	4	7	6	7	6	6	6	6
43	3	6	2	4	5	6	6	3	3	3	3
44	4	2	1	2	7	6	2	6	6	4	3
45	2	2	5	2	3	7	7	6	6	6	5
46	6	6	6	6	6	6	4	5	6	3	3
47	4	3	6	2	5	5	2	5	4	2	2
48	4	4	1	1	5	5	1	3	3	2	1
49	6	6	2	5	5	7	7	7	7	6	5
50	7	2	5	5	3	7	7	6	5	6	5
51	7	7	7	4	6	6	6	6	6	5	5
52	6	4	6	2	6	6	4	6	6	4	4
53	5	3	5	3	4	7	5	6	6	5	5
54	3	3	3	3	3	6	3	6	6	5	5
55	2	3	6	1	3	5	4	5	5	4	3
56	4	4	3	2	5	6	6	5	4	4	6
57	7	2	7	1	7	4	3	7	7	5	5
58	1	5	4	5	2	7	6	6	5	6	5
59	5	5	5	4	6	6	5	6	6	5	5
60	4	4	6	4	6	6	7	4	4	4	3
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63	3	4	5	3	5	6	6	5	5	5	4
64	2	4	5	3	5	5	3	5	5	5	5
65	6	4	5	2	4	6	4	7	7	7	7
66	5	3	5	4	3	4	5	4	5	4	4
67	6	4	6	4	7	5	4	7	7	2	4
68	6	4	5	4	5	6	6	6	6	3	3
69	5	5	5	4	3	6	4	5	5	4	5