

THE MANAGER AND THE BORN GLOBAL FIRM
– A STUDY ON THE RELATIONSHIP BETWEEN THE MINDSET OF THE
MANAGER AND COMMITMENT TO ACCELERATED INTERNATIONALIZATION
AND SUCCESS IN INTERNATIONAL MARKETS

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Track 2. Internationalisation process and international entrepreneurship

1.Introduction

Born Global companies are a special type of Small and Medium-sized Enterprises (SMEs) (Gabrielsson, Kirpalani, Manek, Dimitratos and Solberg , 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 firms that are born global 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, Madsen and Moen, 2007:1431).

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 a 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 a born global, and their success in the international markets.

The purpose of this paper 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. 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 the globalization forces mentioned above, or if it is a result of the mindset of the managers, in other words, their characteristics.

The paper will focus on a typology of commitment states to internationalization among managers in born global firms, developed by Freeman and Cavusgil (2007). We 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. We would also like to test whether these characteristics 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 managers in the Norwegian born global companies, 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 the 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?

The relevant literature on this topic is now presented and our main areas of focus, and on the basis of this, a conceptual framework on which the empirical research is based is developed. Then the hypotheses are presented before we describe the research methodology that has been applied to the research questions. The results are then analyzed and discussed before concluding remarks are made on the findings, as well as implications, limitations and suggestions for further research.

2. The characteristics of the manager and their commitment to internationalization

2.1. Introduction

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 the characteristics of top management (Bloodgood, Sapienza and Almeida, 1996), international networks (Oviatt and McDougall, 2005) and knowledge, and culture (Knight and Cavusgil, 2004). As pointed out above, a 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, 2006). In addition, unique resources have also been pointed out as crucial (Oviatt and McDougall, 1994).

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. 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 are probably already familiar with dealing with the 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.

2.2. Mindset of the founder and the management

Nummela, Saarenketo and Puumalainen (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 at 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, Jansen and Vinkenburg (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 seen as 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. Knight and Cavusgil's (2004) 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.

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. International experience of the founder and 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 is believed to increase the degree of internationalization (Reuber and Fischer, 1997)

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 Fischer (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, Shane and Oviatt (1994), who claim that delay in entering foreign markets can be detrimental. To become international early is also seen as particularly important for knowledge-based firms, since they need to develop international mechanisms to protect their commercial value from expropriation (Oviatt and McDougall, 1994). 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, has lived or worked abroad, though not invariably, but often these characteristics 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, Rialp and Knight (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 internationalization patterns, 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. The same did not find support for born globals being characterized as having a 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 and Enßlinger (2009), however, in their literature review refer 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, Kedia and Davies (2000), among others (Holtbrügge and Enßlinger, 2009:17).

3. Hypotheses

3.1 The characteristics of the manager and their relationship with commitment to internationalization

The major research question in this study 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:

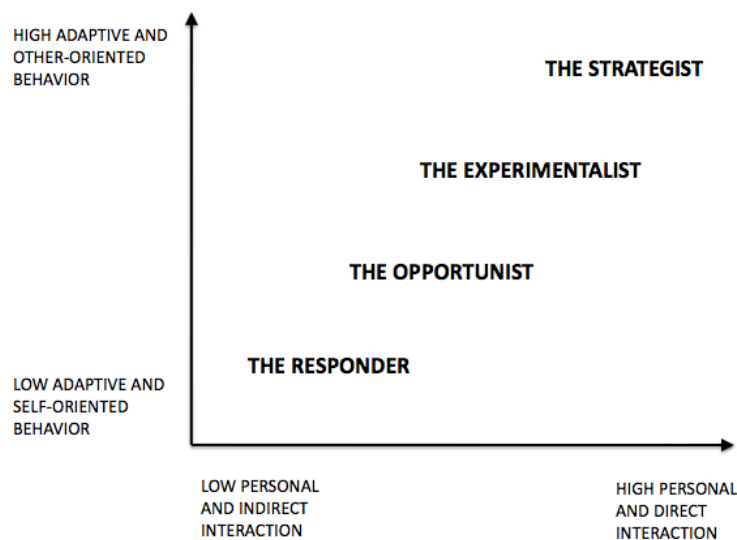


Figure 1: A Typology of the Four Entrepreneurial Attitudinal States (Approaches) for Accelerated Internationalization.

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. Furthermore, 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 are believed to 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 managers with lower degree of commitment to internationalization can then be said to be less entrepreneurial. In addition,

Freeman and Cavusgil (2007) described the states as 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). 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). 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, we 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. The relationship between international experience and the characteristics of the manager

Gleason, Madura and Wiggernhorn (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 boarders. 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 individuals 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 allow managers to become aware of partners, and make them able to connect with them. Thus, internationally experienced managers are more likely to have in place a foreign business network (Reuber and Fischer, 1997). 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 increases. 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 of Freeman and Cavusgil (2007).

Based on this argument, despite some differences in empirical results (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. 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 is described as having 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

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 study aims to test:

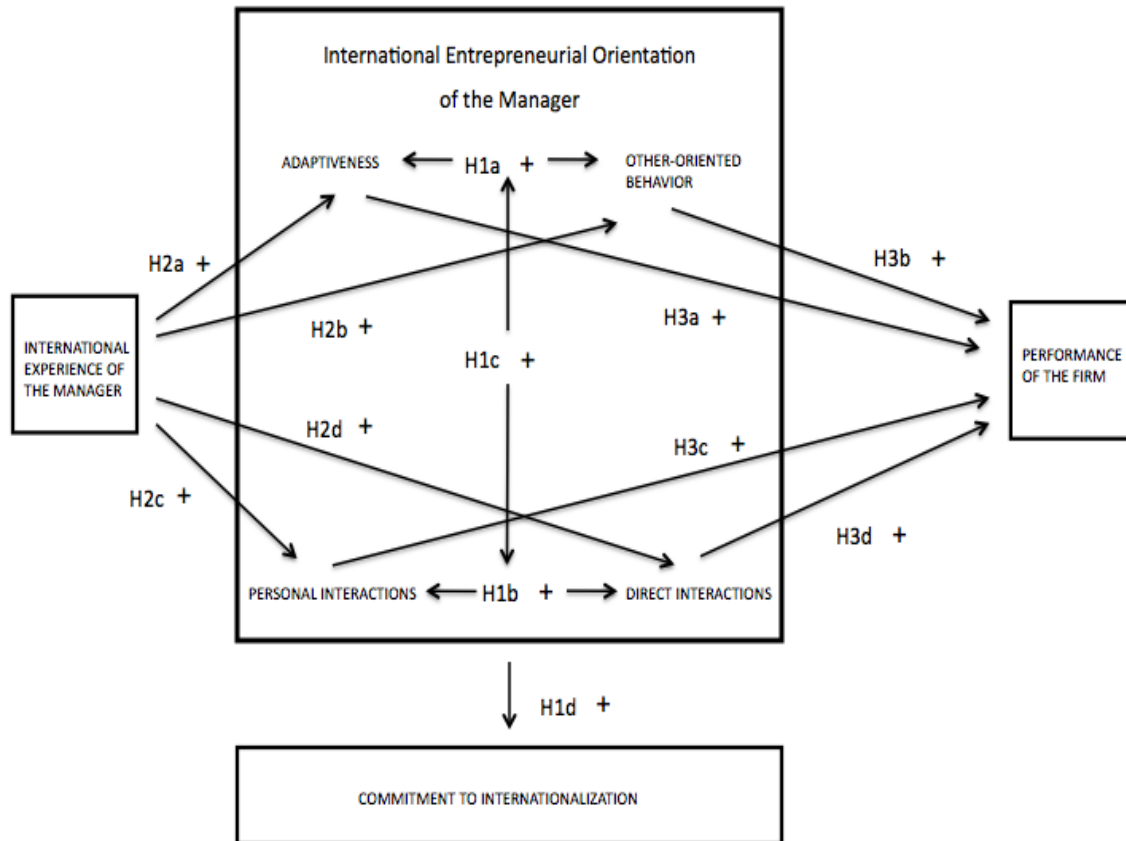


Figure 2: Research model on the relationship between the characteristics of the managers and their international experience, commitment to internationalization and performance of the firm

4. Data and method

4.1. Sample

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 the 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 the 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 57,9 %, 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.

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 made 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). 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.

Replicating the original sample is in many ways challenging as the original model was developed in an Australian context, and this study is carried out in a Norway. In addition, time and resources differ between the studies. This makes it necessary to moderately adjust the sampling, even if it may reduce the consistency to some extent. This is due to the fact that the requirements may be seen as too strict to be able to obtain a satisfactory sample in the Norwegian context.

First, when sampling from this population the boundaries need to be somewhat constrained with regards to time. 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 have had a role in the company's internationalization.

The definition used by Freeman and Cavusgil (2007) of an SME is a firm with less than 200 employees, and they also use Knight and Cavusgil's (2004) definition of born globals as "*a 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 a model by Oviatt and McDougall (1994). 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, we have chosen to focus on companies with fewer than 100 employees, instead of fewer than 200. As approximately 99,5% of Norwegian enterprises has fewer than 100 employees (SSB, 2009), the definition of fewer than 200 employees is somewhat large for the Norwegian born globals. Further, to choose only geographically focused firms limit 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 seen as 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. The requirement of the companies having a high-tech product or processes have been kept and applied to the sampling process.

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 Fast 50 lists, Dun & Bradstreet, Nordic Venture Network and Rising Stars of the North.

4.2. Measurements

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 1.

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 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.

4.3. Data analysis

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 measured the concept they were thought to measure. An important tool in this process is dimension reduction, for this purpose a Principal Component Analysis was used. This analysis combined the variables into underlying components based on their correlation with each other. These underlying factors were given names based on 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 was 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 are 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 are used in the analysis of the relationships between characteristics of the managers themselves, as well as between them and commitment, international experience, and performance. These analyses were conducted by looking at the correlation matrices, and by performing linear or logistic regression

between the different variables. The results of the technical analyses provided answers to whether the hypotheses were confirmed or not.

4.4. Construct validity

The validity of a research strongly depends on the operationalization of the constructs used. Construct validity is particularly important when using a survey as the researcher leaves it in the hands of the respondent alone to interpret the question asked. 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. The most important subgroups of validity to test for 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 was the convergent analysis. This was carried out by performing a Principal Component Analysis. In combination with a discriminant validity analysis, it ensures the convergent validity of the variables. Based on the convergent analysis, content, or face validity, was ensured by interpreting the results of the convergent analysis.

All variables were subject to the convergent validity analysis except the control variables, and the variables measuring the commitment to internationalization. They were 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. Results

5.1. Identifying underlying constructs among the variables

The KMO value for 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 is not considered high enough, thus they will not show in the output from the analysis. 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. 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 different factors can be defined as the characteristics of Other-oriented behavior, Personal interactions, Adaptiveness, Innovative orientation, and Risk taking behavior. These factors do only to a certain extent correspond to the four characteristics found by Freeman and Cavusgil (2007).

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), the characteristics found in the result from this analysis 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.

The KMO value for the variables measuring international experience 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 was carried out. 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. This makes up two new scales; international experience gained at home, and international experience gained abroad. The KMO value for the variables measuring performance is 0,665 and the Bartlett's test for Sphericity is significant. The result from the factor analysis 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. The discriminant analysis of the variables support the same structures that was found in the convergence analyses, thus the construct validity has been ensured.

5.2 Reliability analysis

Before scaling the variables, it is necessary to test whether the scales consistently measures the same thing, in other words, decide whether the scales are reliable. A good reliability test is the Cronbach's alpha, which provides an alpha value for the variables that are assumed to converge. 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. The results from the tests are presented below.

Table 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	

In the cases where scales show a low alpha value, 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 be optimal. 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.

5.2. Regression analyses

For the regression analyses in this study the use of a simple regression model is used. One exception is in the case of international experience, which has two components, thus a multiple regression model 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 (see table 2 below).

Table 2: Correlations

Hypotheses H1a H1b H1c					
Correlation		Adaptiveness	Innovative orientation	Risk-taking behavior	Other-oriented behavior
Adaptiveness	Correlation coefficient Significance				
Innovative orientation	Correlation coefficient Significance	0.42 ** 0,00			
Risk-taking behavior	Correlation coefficient Significance	0,04 0,80	0.26 * 0,05		
Other-oriented behavior	Correlation coefficient Significance	0.28 * 0,04	0.39 ** 0,00	0.24 * 0,08	
Personal interactions	Correlation coefficient Significance	0.34 * 0,01	0.41 ** 0,00	-0,02 0,89	0.36 ** 0,01

In both the regression analyses and the correlation analyses a requirement for significance level is set at 0,10. 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, Olsson and Silkoset, 2004). 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 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.

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 table 3 below.

Table 3: Hypotheses testing

Hypothesis	Variables		Regression output			Effect		Support for hypothesis
	Dependent	Independent	Coefficient	P-value	R-squared	Predicted	Actual	
H1d	Export within 3 years	Adaptiveness	5,661	0,193	0,081	+	+	partly supported
		Innovative orientation	-6,471	0,237		+	-	
		Risk-taking behavior	-2,311	0,541		+	-	
		Other-oriented behavior	0,798	0,897		+	+	
		Personal interactions	9,313	0,028		+	+	
	Number of continents	Adaptiveness	0,354	0,114	0,121	+	+	
		Innovative orientation	-0,331	0,237		+	-	
		Risk-taking behavior	0,307	0,116		+	+	
		Other-oriented behavior	-0,199	0,528		+	-	
		Personal interactions	0,537	0,014		+	+	
	First year of international establishment	Adaptiveness	0,274	0,272		+	+	
		Innovative orientation	0,494	0,098		+	+	
		Risk-taking	-0,006	0,978		+	-	

		behavior Other-oriented behavior Personal interactions	0,083 0,296	0,799 0,212		+	+	
H2a	Adaptiveness	International experience home International experience abroad	0,133 0,07	0,436 0,546	-0,06	+	+	partly supported
	Innovative orientation	International experience home International experience abroad	0,102 0,057	0,56 0,488	-0,019	+	+	
	Risk-taking behavior	International experience home International experience abroad	-0,071 -0,007	0,704 0,956	-0,035	+	-	
H2b	Other-oriented behavior	International experience home International experience abroad	0,229 0,089	0,071 0,289	0,056	+	+	partly supported
H2c	Personal interactions	International experience home International experience abroad	0,452 0,184	0,094 0,007	0,163	+	+	supported
H3a	Performance	Adaptiveness Innovative orientation Risk-taking behavior Adaptiveness (with control variables) Innovative orientation (with control variables) Risk-taking behavior (with control	0,267 0,153 0,098 0,298 0,167 0,084	0,034 0,309 0,405 0,032 0,284 0,501	0,064 0,001 -0,005 0,031 -0,039 -0,053	+	+	partly supported

		variables)						
H3b	Performance	Other-oriented behavior	0,401	0,015	0,089	+	+	supported
		Other-oriented behavior (with control variables)	0,387	0,024	0,041			
H3c	Performance	Personal interactions	0,296	0,014	0,092	+	+	supported
		Personal interactions (with control variables)	0,294	0,02	0,048			

5.3. Testing of research question 1: H1a, H1c, H1d

- **H1a:** Adaptiveness and other-oriented behavior are highly positively correlated

When testing hypotheses that include the adaptiveness characteristic, three factors; adaptiveness, innovative orientation, and risk-taking that were identified 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 table 2). 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.

- **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 table 2). 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 cannot 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 that 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 international activity, 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 table 3).

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 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 table 3). This means that this hypothesis is only partly supported.

5.4. Testing of research question 2: H2a, H2b, H2c

- **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 shows 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 table 3). 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 table 3). 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 table 3). Thus, this hypothesis is supported.

5.5. Testing of research question 3: H3a, H3b, H3c

- **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 table 3) 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 table 3). 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 table 3). This hypothesis is supported.

Table 4: 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. 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 table 4). 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, conclusions and implications

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.

The first part of the research question can be answered by the results from the factor analysis, which shows 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 did not pass the convergence analysis and thus were excluded from further analyses. 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 could 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 original qualitative study (Freeman and Cavusgil, 2007). 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. Better measures on adaptiveness could also have strengthened this factor.

Based on the method in this study solely, it can be concluded that no strong evidence was found of the 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, 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.

When answering the two final research questions we make use of the five characteristics identified as central among the key individuals in the born global companies in this 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 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 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 and abroad,

may have an effect on the nature of the network, and on the network behavior of the managers in this sample.

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 within 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 as one travel through work or has 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 (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 question 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, the results show that there is a positive relationship between the characteristic adaptiveness, other-oriented behavior, 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, 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 in turn leads to 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 as a necessity to survive, the willingness to enter multiple markets at once if that yields a higher profit potential than 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 question one, other factors are also likely to have an effect on performance, such as environment, industry and competition.

6.4. 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 paper 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 travelling through work or other contact with international market before becoming a part of the 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.

6.5. Implications for 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 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 a better understanding of the managers in the Norwegian high-tech born global companies.

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 this 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. The globalization forces may also 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.

One impediment to further development of the model by Freeman and Cavusgil (2007) was the challenge to see clearly 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. The research made here 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 the process of internationalization of the born global companies, and also on the 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.

6.6. Implications for the future managers of Born Global companies

Based on this study it appears that 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. 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 networks, 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 networks are a highly valuable resource to these companies, as they may assure, in the name of their own good reputation, the quality of an innovative product.

6.7. Limitations

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. 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 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 study.

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 make use of new measures 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 as a born global.

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Appendix 1 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*