

STOCKHOLM SCHOOL OF ECONOMICS

Department of Management & Organization

Master's Thesis in Entrepreneurship, 20 credits

The internationalization of small technological firms

- A study of perceptions, decisions & strategies of ten Israeli CEOs

Mats Isenberg

Stockholm, May 31st 2006

This Master's Thesis is submitted in partial fulfilment of the requirements for the degree of Master of Science in Economics and Business.

Opponent: Erica Carlsson

Supervisor: Professor Carin Holmquist

Stockholm School of Economics

Time & Place: Wednesday 31st of May 2006, 10:15 – 12:00 AM, Room C512

Abstract of Master's Thesis

Author: Mats Isenberg

Date: May 31st 2006

Title: The internationalization of small technological firms

– A study of perceptions, decisions & strategies of ten Israeli CEOs

International developments and an increased globalization are changing the settings for businesses around the globe. Small firms have both limitations in finances and experiences but are still able to compete in the international marketplace. Research on this area comes from a variety of fields but is mostly quantitative and focuses on one or a few parameters. There have been calls for a more explanatory holistic understanding of the internationalization of small firms. This thesis contributes to the field of international entrepreneurship by exploring the internationalization process of small firms from the perspective of the CEO. The contribution is reached by a two-step approach. First, the internationalization process for the CEO is mapped by a theoretical review. Secondly, the map is tested empirically by studies of ten CEOs of Israeli technological small firms.

The theoretical review showed a process which started with an *entrepreneurial orientation* which was followed by *strategic decision making* and resulted in the formation of the internationalization *strategy*. These stages were then influenced by a number of factors identified in theories and verified by the empirics. The empirical examination and second step showed a variety of characteristics behaviours in the identified stages and divided the ten studied CEOs in three types; *the Transformer* has extensive international experience and is hired as CEO to transform the firm for the international market. *The Explorer* is a technological innovator with international experience who explores his capabilities by founding his own firm. The last identified type is *the newcomer* who has no prior international business experience, just a technological innovation. He is testing his abilities by staying as the CEO and develops business capabilities incrementally.

Key Terms: International Entrepreneurship, Small firm internationalization, Strategy formation, Entrepreneurial Orientation, Strategic decision making

Acknowledgements

This thesis could only be completed with the help of a number of kind and supportive individuals.

I would like to start by thanking my supervisor professor Carin Holmquist who despite shortage in time backed me with her deep insights in the field of entrepreneurship as well as extensive knowledge of academic writing. Further, the empirics for the study depended on the participation of the ten Israeli CEOs who kindly offered their time and experiences for the study, thanks.

I am also very grateful for the individuals who made it possible for me to conduct the study in Israel. My gratitude goes to Ambassador Robert Ryberg, Second Secretary AnnaCarin Platon and the entire helpful staff at the Embassy of Sweden in Tel Aviv. Further highly appreciated assistance in Israeli came from Anna Tenstam-Lundvall at Colbar LifeSciences and Doctor Niron Hashai at Hebrew University.

Lastly, I would like to thank Lilach for supporting me during the whole process and always believing in me.

Mats Isenberg

Stockholm | May 17th 2006

Table of Content

1 INTRODUCTION	1
1.1 BACKGROUND.....	1
1.2 PROBLEM AREA.....	1
1.3 PURPOSE.....	2
1.4 DELIMITATIONS	3
1.5 DEFINITIONS	3
1.6 DISPOSITION	4
2 THEORETICAL REVIEW.....	5
2.1 CHOICE OF THEORIES.....	5
2.2 ENTREPRENEURIAL ORIENTATION	7
2.3 STRATEGIC DECISION MAKING	11
2.4 STRATEGY FORMATION	15
2.5 SUMMARY OF THEORIES & RESEARCH MAP.....	18
3 METHODOLOGICAL CHOICES	21
3.1 SCIENTIFIC APPROACH.....	21
3.2 RESEARCH METHOD	22
3.3 COULD THE CONCLUSIONS BE GENERALISED/ TRANSFERRED?.....	23
3.4 SELECTION OF STUDY OBJECTS.....	24
3.4.1 <i>Country selection</i>	24
3.4.2 <i>Industry selection</i>	26
3.4.3 <i>Firms selection</i>	26
3.4.4 <i>Interviewees selection</i>	27
3.5 CONSTRUCTION OF THE QUESTIONNAIRE	27
3.6 HOW THE INTERVIEWS WERE CONDUCTED.....	28
3.7 CHOICE OF PRESENTATION STRATEGY	29
4 PRESENTATION OF THE EMPIRICS.....	30
4.1 INTERVIEWEE & FIRM PROFILES.....	30
4.2 THE INTERNATIONALIZATION OF SMALL FIRMS	34
4.2.1 <i>The entrepreneurial orientation of the managers and the firms</i>	34
4.2.2 <i>Strategic decision making</i>	38
4.2.3 <i>Strategy formation</i>	41
4.2.4 <i>Pragmatic advices</i>	45
4.2.5 <i>Additional comments</i>	46
5 ANALYSIS.....	47
5.1 WHAT DOES THE EMPIRICS SAY?.....	47
<i>Three identified groups on the basis of prior international experience and role in the firm</i>	47
<i>Venture capital and its strategic implications</i>	49
<i>Attitude to certain markets</i>	50
<i>Entry mode</i>	50
5.2 RELATING TO THE THEORIES	52
Entrepreneurial Orientation	52
<i>The Innovator</i>	52
<i>Personal aim</i>	53
<i>Opportunity discovery</i>	53
<i>Risk taking</i>	54

Strategic Decision Making	55
<i>Planned strategy or broad vision</i>	55
<i>Chance events</i>	55
<i>CEO focus</i>	56
Strategy Formation.....	57
<i>Type of entrepreneur</i>	57
<i>Born globals</i>	58
<i>Entrepreneurial learning</i>	58
<i>Preparations</i>	59
5.3 DISCUSSION	60
6 CONCLUSIONS	67
6.1 CONTRIBUTIONS TO THE THEORY	70
6.2 FURTHER RESEARCH.....	71
REFERENCES.....	72
Articles.....	72
Books.....	75
Interviews.....	75
Additional interviews/discussions.....	76
Websites	76
APPENDIX 1: INTERVIEW QUESTIONS.....	77

FIGURES

Figure 1: Disposition of the thesis presented as five stages.

Figure 2: Conceptual Framework of Entrepreneurial Orientation.

Figure 3: Conceptual model with entrepreneurial orientation as a key performance antecedent in the international SME.

Figure 4: The international dimension of entrepreneurship.

Figure 5: Research map.

Figure 6: Construction of questionnaire.

Figure 7: Model of the internationalization process.

Figure 8: Model of the internationalization process for the Transformer.

Figure 9: Model of the internationalization process for the Explorer.

Figure 10: Model of the internationalization process for the Newcomer.

TABLES

Table 1: Characteristics of the studied firms.

Table 2: Prior international experience of the CEOs.

Table 3: Choice of entry mode.

Table 4: Choice of entry mode according to category.

1 INTRODUCTION

1.1 BACKGROUND

As globalisation combined with developments in telecommunication drastically reduced transportation cost of both materials and information, the settings and basic conditions for businesses and economic growth are changing. (Audretsch & Thurik, 2001) The field of entrepreneurship has along with this received more attention in studies of international business. Audretsch & Thurik (2001) describe the shift to be from the “managed economy” to the “entrepreneurial economy”. The challenge of today is not only to innovate and commercialise but also to quickly and efficiently exploit opportunities internationally. Large multinational companies (MNC) have operated internationally for years but an increasingly important group of companies is the small and medium sized enterprises (SMEs). These firms may also, despite their limited resources, compete successfully in the international arena (Oviatt & McDougall, 2005). SMEs internationalization is on the rise, especially from countries with advances in information and communication technologies (Liesch & Knight, 1999). SMEs drives innovations, quickly matches changes in market demand and can become the main engine in the economy and society (Szabó, 2002). Studies in international business have emphasized international experiences and motives of individuals (Mathews & Zander, 2004) or the intention of start up’s to act globally, called “born globals” (Hashai & Almor, 2004, Andersson & Wictor, 2003). What becomes not only of interest for the sole manager but for the whole economy is how well the internationalization process of SMEs is managed and how these firms become significant players on the global arena. My interest - and what I want to elaborate in this thesis – is the process of small firms’ internationalization.

1.2 PROBLEM AREA

The subject of small firms is often discussed within the field of entrepreneurship. Scholars are covering a variety of aspect of the small firms such as business creation, economic growth and internationalization. The aspect of small firms’ internationalization is also explored by scholars from the field of internationalization that illuminates the importance of small firms. A convergence of the two concepts gives a better understanding of the internationalization of small firms (Acs et. al., 2003). Some scholars explains the increasing importance of small firms on the international marketplace such as Oviatt & McDougall (1994) in “Toward a theory of international new ventures” or Audretsch & Thurik (2001) in “What’s new in the new economy?”.

Mathews & Zander (2004) created a new framework for internationalization called the International Entrepreneurial Dynamics. More specialized studies have investigated entrepreneurship in relation to strategy (Knight, 2001), performance (Lu & Beamish, 2001), information internalization (Liesch & Knight, 1999) and to foreign entry modes (Jones, 2001). Many researchers examine entrepreneurship by the attitudes of the management/firm while there are some recent efforts to shift focus from attitudes toward actual actions. (Wiklund, 1999; Berg & Holmquist, 2005) The focus of many current studies lies on the conditions, strategies or outcomes of internationalizing/internationalized SMEs. Knight's 2001, study of entrepreneurship and strategy paved the way for studies on a firm level where he elaborated about the international entrepreneurial orientation. A study of planned and unplanned strategies (Crick & Spence, 2005) further provides us with insight of the managers of internationalizing SMEs. Scholars have requested for studies with the individual decision maker in focus (Andersson et. al. 2004) as well as for studies of international entrepreneurship (Etemad, 2004). Jones (2001) requested for a more holistic approach in studies of international entrepreneurship. The studies from a management perspective are rather scarce and do not give a holistic picture of how managers perceive and handle the whole process of internationalization. For this reason, the aim of this thesis is to contribute to the field of international entrepreneurship on a management level.

1.3 PURPOSE

My interest for small firm internationalization combined with the aim to contribute to the field of international entrepreneurship and to respond to the request for a holistic approach directed me in the choice of purpose.

Purpose

The purpose of this master's thesis is to contribute to the academic field of international entrepreneurship by examining the internationalization process of small firms on an individual level. The thesis aims to provide a holistic view of the process and to give a better understanding of the individual managers and their role in the internationalization process. My intension is to reach this contribution with a two-step approach. The first step is to get an overview of the internationalization process for the individual manager through studies of current theories. The second step is to empirically compare this theoretical process with a number of cases. Hence, the purpose will be served through the two steps:

- 1) To map out the internationalization process for the individual manager through current theories
- 2) To empirically test the identified process to reach a better understanding of the manager's characteristics and decisions.

1.4 DELIMITATIONS

The thesis incorporates the process of internationalization for small firms. There is however a number of delimitations to further specify the scope of the study.

As the boundaries of the internationalization process could be perceived as vague, there is a need to explain what is included in the process for this study. The thesis focuses on the process from the foundation of the firm to the engagement in international operations. The final performance of the firm by chosen strategies and internationalization is therefore not considered. Further, the thesis aim to study the individual top manager responsible for the internationalization. Since the CEO has the overall responsibility of the firm's strategies, especially in a small firm, the studied manager is the CEO. The interest of the study is small firms but I felt that a more restricted selection had to be done to be able to interpret and compare the results. The study of small firms therefore became a study of one kind of small firm, which was chosen to be technological firms. Further motivation for this choice is presented in the methodological part.

The delimitations for the study:

- The studied process follows the firms from the foundation to the engagement with foreign markets
- The studied manager is the CEO of the firm
- The thesis focus on technological small firms

1.5 DEFINITIONS

A small firm – The number of employees is used as the main criteria by most scholars to determine the size of the firms. Studies on SMEs usually follow two different definitions; 0-250 employees or 0-500 employees. The scholars on small firms follow either the definition of the European Union which is 10-50 employees¹ (Andersson et. al., 2004; Wiklund & Shepherd, 2005)

¹ See http://europa.eu.int/comm/enterprise/enterprise_policy/sme_definition/index_en.htm

or other similar definitions. Jones (2001) include firms with 0-50 employees while Merz et. al. (1994) include firms with 0-500 employees. A number of the approached firms showed a readiness for international operations before they reach the number of ten employees. The study therefore includes firms with less than ten employees. My aim is however not to study firms with only one or two employees. The choice was therefore made to define a small firm for this thesis to have between 5-50 employees.

Born global – The concept of born globals was first coined in an Australian study and has then been used by a large number of scholars. The definition used for this thesis follow the definition used by Hashai & Almor (2004) where born globals are firms that expand into foreign markets and show international capabilities and performance, from or near their founding.

1.6 DISPOSITION

The academic process of serving the purpose goes through a number of stages. A five stage approach is presented below to clarify the different stages and how they connect to each other.

The process starts with a *theoretical review* of the relevant fields for internationalizing small firms. The chosen theories will be motivated for their specific relevance for the thesis. Next, the *methodological choices* are being discussed. Choices of research approach, data collection and empirical presentation are explained and motivated. The third stage is the presentation of the *empirical findings*. The findings are being presented according to questions from the questionnaire and are divided into categories identified in the theoretical review. The empirical findings are thereafter examined in the *analysis* which is divided into three parts; the first part assesses the empirics by itself to identify patterns or specific findings. The second part compares the empirical findings with the theoretically generated map while the last part discuss more freely and in depth. The discussion and results are then presented in the last stage of the thesis which is the *conclusions*.

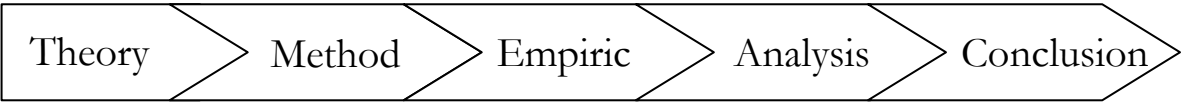
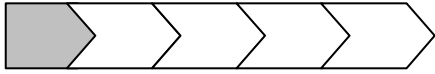


Figure 1: Disposition of the thesis presented as five stages.

2 THEORETICAL REVIEW



The theoretical review is the first stage of answering the purpose and is therefore crucial for the rest of the thesis. The choice of theories set the perspectives and forms the discussion in a specific direction. This part will therefore start with a chapter describing the theoretical alternatives and choices. The chosen theories are then presented and finally summarised. A research map is also created to illuminate the most central theories and to show the focus of the thesis.

2.1 CHOICE OF THEORIES

The review of the theories started with an examination of the three fields of entrepreneurship, strategy and internationalization. These fields are all huge and a number of criteria were imposed to sift out irrelative theories.

The criteria:

- The theories have to concentrate on small firms
- The theories have to focus on or describe the role of the individual manager
- The theories have to be based on studies on technological firms
- The theories have to have the perspective of internationalization

A number of search tools were used to seek for the theories. The tools that showed to be most useful were ABI Inform Global database (reached from SSE's library) of business and management publications and the academic search at Google (<http://scholar.google.com>). The theories were search for by using a number of key words such as; *internationalization, small firms, technological, hi-tech, entrepreneurial orientation, strategy formation and SME*. These words were used in different combination to locate theories which met the above stated criteria. The application of the criteria narrowed the search distinctly. The remaining theories were seldom found in books but rather in research articles in journals such as; *Journal of International Entrepreneurship, Strategic Management Journal, Journal of Small Business Management* and *Journal of International Management*. Some of the remaining theories were disqualified for this thesis because of their special context or that the studies were based on the performance of the firm (see delimitations). A few of the studies

on SMEs (Small and Medium sized Enterprises) defined this category as up to 500 employees and was therefore less useful for this study which focus on firms with 5-50 employees.

Some theories which did not meet all the set criteria were still chosen for the study. These theories have a broader approach and serve the purpose of giving a more overall picture of the internationalization.

The chosen theories come from all the three fields and represent the whole process of internationalization till the strategy formation. Initially, a number of theories which described the whole process were examined to create a general overview of the phenomena (Lumpkin & Dess, 1996; Knight, 2001). They both describe a process which starts with what they call an entrepreneurial orientation. The continued process is then influenced by a number of factors which influence the decision making of the managers. These strategic decisions evolve into the final internationalization strategy for the firm. Three stages of the process were hence identified; the entrepreneurial orientation where the characteristics of the firm and its managers set the capabilities of the firm, strategic decision making which is influenced by a number of factors and finally strategy formation which creates the final approach to the international marketplace.

Three identified areas of theories:

1. Entrepreneurial orientation
2. Strategic decision making
3. Strategy formation

The relevant theories were studied and categorised according to these three stages. A large number of theories on the concept of entrepreneurial orientation (among others: Miller, 1983; Merz et. al., 1994; Lumpkin & Dess, 1996; Wiklund & Shepherd, 2003 and Wiklund, 1999) were found while theories of strategic decision making came from more diverse fields. These theories bring more perspectives to the process and examine factors which influence the decision making such as the influence of proactive abilities of the CEO, the ability to utilize chance events and the ability to efficiently deploy resources. The theories on strategy formation many times categorize the firms or the managers. Theories on strategy formation described the concept of born globals, entry mode or internationalization preparations.

The presentation of the theories is divided by the three areas identified above. The first part, entrepreneurial orientation, examines theories within this field and relates them to the focus of this study which is internationalization and small firms. The next part, strategic decision making, look into the theories of entrepreneurial behaviour of the CEO of small firms. Finally, the part of strategy formation discusses how the orientation and the decisions actualize in the internationalization strategy.

2.2 ENTREPRENEURIAL ORIENTATION

The entrepreneurial orientation is the starting point of the internationalization process and is mainly focused on firm or manager specific characteristics. These characteristics set the capabilities and the path for the following stages in the process. Scholars within the entrepreneurial field have identified the entrepreneurial orientation to be an important factor in the process of creating successful firms. The entrepreneurial orientation is also considered to be extra vital for small businesses (Lumpkin & Dess, 1996; Wiklund, 1999; Lee et. al., 2001). Most scholars (Miller, 1983; Merz et. al., 1994; Wiklund, 1999; Wiklund & Shepherd, 2003 & 2005) reflect on the entrepreneurial orientation from three dimensions; innovativeness, risk-taking and proactiveness. Lumpkin & Dess (1996) add the two dimensions of autonomy and competitive aggressiveness. The entrepreneurial orientation is a process and must be understood by more factors than just the orientation itself. Lumpkin & Dess (1996) draw up the conceptual framework of entrepreneurial orientation where the entrepreneurial orientation is followed by environmental and organizational factors which together determine firm performance. This is also empirical studied by Wiklund & Shepherd (2005) who determine environmental factors and financial resources to play significant roles. They argue that when the environment is stable and the financial resources are strong, the firm can utilize the entrepreneurial orientation and exploit opportunities more efficiently.

The importance of the entrepreneurial orientation in the internationalization of firms is discussed by Knight (2001) as a starting point for internationalizing small firms. Small firms adopt an entrepreneurial orientation that seeks to utilize the global economy. Knight (2001) emphasizes the three main dimensions mentioned above in his definition; *“Entrepreneurial orientation emphasizes innovation in the firm’s offerings and processes, risk taking, and a generally proactive approach to business”*. The international perspective is then added by national differences like culture, political systems and economies to the orientation. An organizational cultural is developed through the entrepreneurial

orientation which together with the national specific factors effect the internationalization of the firm.

Knight's (2001) **International Entrepreneurial Orientation** is associated with managerial vision, innovativeness and proactive competitive posture overseas. The orientation determines the firm's overall proactiveness and aggressiveness in its internationalization. The firm's willingness to engage in innovative, proactive, and risk-seeking behaviour is reflected in the orientation. These behaviours can result in the developing or enhancement of product and services, new administrative techniques or technologies for performing organizational functions. The orientation determines the entrepreneurial mind-set that is critical when launching foreign ventures. Entrepreneurial firms are more likely to create and activate strategies to improve its overall performance. The international entrepreneurial orientation is argued by Knight to be the driver of international strategies. The implications of the international entrepreneurial orientation are that it gives rise to proactive opportunity-seeking and problem-solving behaviour which tend to enhance the overall performance of the firm. The orientation allows managers to act entrepreneurial which enables them to be more responsive to changes in the external environment. The orientation is seen as the key driver of several strategic parameters that increases the chance of success.

The entrepreneurial orientation covers the whole firm and is mostly discussed as a factor for the success of the firm. Scholars (Merz et.al. 1994; Wiklund, 1999) emphasize the importance of relating the entrepreneurial orientation to the top managers in the firm. The entrepreneurial orientation has a strong impact of the CEO of the firm. Wiklund (1999) argues that the entrepreneurial orientation is constructed on CEO level by two components; the actions and the way-of-thinking. The component of actions derives from the actual entrepreneurial behaviour that follows the orientation. The other component reflects the mental orientation of a small business manger which is not put into action. The managerial style of the CEO is studied by Merz et. al. (1994) who identified four types of entrepreneurs. The research is however based on the relationship with growth and will therefore be discussed later in the theoretical chapter.

The focus on the CEO or the entrepreneur is characterised in the way Mathews & Zander (2004) describe the international entrepreneur. Mathews & Zander (2004) define their **International Entrepreneurial Dynamics**; *"...international entrepreneurial dynamics...is concerned with processes that extend across national boundaries, and with the existence of a set of unique opportunities and constraints that*

influences the nature and unfolding of the entrepreneurial process.” and states what orientation the CEO needs to utilize international opportunities. The international entrepreneurship bare resemblance to domestic entrepreneurship, but geographical distances and institutional differences impose special conditions for the discovery and exploitation of opportunities in the international arena.

Mathews & Zander (2004) emphasize the ability of the entrepreneur to discover new opportunities. Opportunities are discovered by individuals who distinguish a market imperfection and find a solution. Several individuals might see the same business settings but the entrepreneur is the one that can see the new opportunity. The ability of recognising an opportunity to be profitably is argued to be linked to prior experience and knowledge. In the international context, entrepreneurs that have been more geographical mobile have developed personal skills, knowledge and experience, as well as social networks that will offer additional skills and knowledge. The importance of this principle is that the internationalization does not start with the first engagement to a foreign market but instead with the opportunity seeking of the entrepreneur. Other scholars (Wiklund & Shepherd, 2003) discuss the discovery of opportunities as knowledge-based resources which is enhanced by an entrepreneurial orientation and is positively related to firm performance.

While most scholars only mention entrepreneurial orientation in a positive light, there are also some dangers with a too entrepreneurial orientation. Knight (2001) argues for the necessity of the management of internationalizing firms to strive for a balance in the orientation. The balance should carefully activate the international entrepreneurial orientation so that the benefits can be gained while avoiding potential excesses.

The dangers with a too entrepreneurial orientation which could be harmful for the firm:

- Extensive pioneering efforts
- Excessive risk taking
- Bold wide-ranging acts

The entrepreneurial orientation represents the basic conditions for a firm and the CEO to internationalize. The entrepreneurial orientation is however only the start of the process of internationalization which is far more complex (Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005; Knight, 2001). The entrepreneurial orientation has also been divided into six sub-

dimensions (Brown et. al., 2001) which are too detailed for this holistic approach. Lumpkin & Dess (1996) express the next stage by his conceptual framework where environmental factors and organizational factors influence the internationalization.

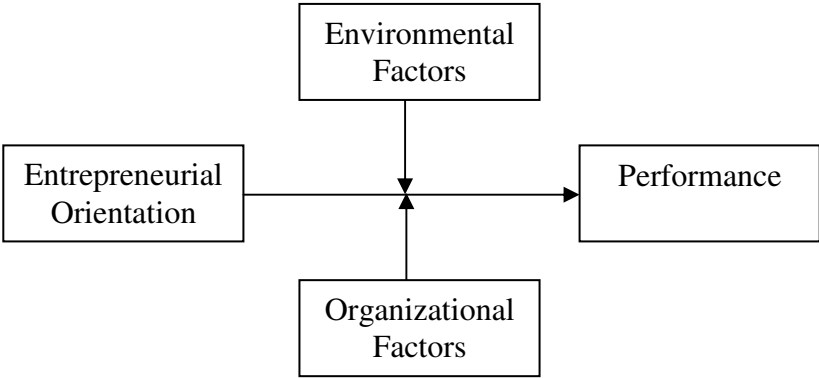


Figure 2: Conceptual Framework of Entrepreneurial Orientation by Lumpkin & Dess (1996).

Knight (2001) describes a process of decisions which lead to internationalization strategies. The strategies are divided into three categories; internationalization preparations, strategic competence and technology acquisition. It should however be put forward that Knight (2001) did not find a strong linkage between technology acquisition and international performance.

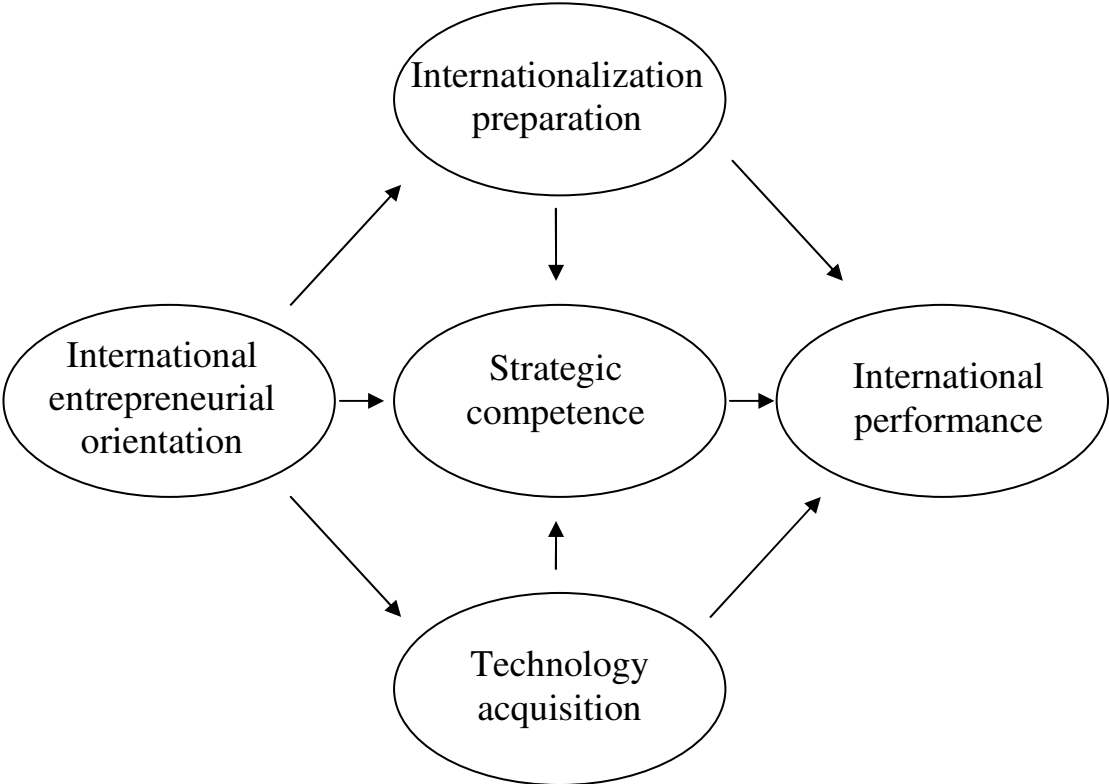


Figure 3: Conceptual model with entrepreneurial orientation as a key performance antecedent in the international SME by Knight (2001).

The next chapter follows the proposed processes of Lumpkin & Dess (1996) and Knight (2001). The chapter presents theories related to the strategic decision making that follow an entrepreneurial orientation.

2.3 STRATEGIC DECISION MAKING

The basic conditions of the manager and the firm are set in the entrepreneurial orientation and are followed by a number of decisions. These decisions are influenced by a number of factors important for the firm. This part encompasses how these factors are influencing and how the decision making is formed for different CEOs. While the theories on entrepreneurial orientation are rather gathered around the concept of entrepreneurial orientation, the theories on the strategic decision making comes from a wider range of fields. Some scholars have followed the process beyond the orientation and include factors which effect the strategic decision making (Lampkin & Dess, 1996; Knight, 2001; Mathews & Zander, 2004). Scholars who concentrate on the decision making but still include the orientation, which they call the international orientation, are Karagozoglu & Lindell (1998). They describe the orientation of small technological firms to foster opportunity-seeking rather than responding to international environmental threats. The authors also argue that a wide range of barriers for their selected firms represent the difficulties in attaining the unique resources that fit their desired international strategies. Given the limited resources of a small firm, technological firms prioritize on the most critical factor of the internationalization strategy. Kalantaridis (2004) found that the strategic behaviour of small firms does not differ significantly from medium sized and large firms. The only variation is that the strategic behaviour increases with the size of the firm because of more complex operations overseas.

A crucial factor in the decision making which drives the international growth of small firms is knowledge and knowledge creation (Yli-Renko et. al., 2001; Liesch & Knight, 1999). The study of Finnish technology-based new firms by Yli-Renko et. al. (2001) suggests that internal and external social capital influence the acquisition and creation of knowledge. A small firm could foster its social capital to enhance its knowledge base and international growth. Liesch & Knight (1999) emphasize the process of information internalizing for the creation of knowledge. The antecedent to small firms' internationalization is the ability to gather information and transform it to useful knowledge. Knowledge based resources could also be described as educational diversity of the managers and the firm's media exposure (Hayton, 2002). Relevant information for

internationalizing small firms many times comes from contacts and networks (Crick & Spence, 2004; Collinson & Houlden, 2005). The availability and use of existing contacts are important attributes in the internationalization. Managers' networks influence the managerial cognition and thereby the decision-making positively. Crick & Spence (2004) mean that existing networks could be used to further penetrate existing markets but are less useful when it comes to entering new markets. Firms can expand their networks to be useful, by word of mouth recommendations, by recruiting new managers with different network relationships or by government supported visits to markets with growth potential. The balance between expanding existing networks and finding new networks is important since the nature of the network influence the choices of both entry mode and foreign market (Moen et. al., 2004).

Mathews & Zander (2004) follow up their discussion of opportunity discovery with the question of resource deployment. While the entrepreneurial orientation render possibilities of opportunity discovery, the choices of resource deployment creates the internationalization. Crick & Spence (2004) discovered similar patterns on the manager's level where the development and use of resources pose as an important factor. Mathews & Zander (2004) argue that personal skills, knowledge and perceived support from social networks influence the decision to act on a discovered opportunity. The level of success in the marketplace depends on further coordination and continued redeployment of both internal and external resources, activities and routines. Internationalization has been described by the conventional approach as expansion of a home-built competitive advantage. The firms of today, which have an intension at their birth to internationalize, have another approach. These firms seek according to Mathews & Zander (2004) to leverage or gain access to disperse skills, knowledge and resources through their internationalization. They are also relying on international cooperative agreements, partnerships and joint ventures to increase their competitive edge without taking too high risks. International entrepreneurship does not have a domestic market as a base. The new business settings changed internationalization to be both push- and pull-oriented where multiple connections and opportunities of the global economy draw entrepreneurs and firms into involvement across national borders. Mathews & Zander (2004) definition of internationalization in the new business settings:

"...the entrepreneurial process of the firm's becoming integrated in international economic activities."

Crick & Spence (2004) continue the discussion of resource deployment on the manager's level and mean that firms can assist international growth by building a strong resource base. The experiences of the managers enable them to improve their international entrepreneurial skills and develop core managerial competencies. Through these competencies, managers could develop and act on "gut feelings" in specific situations. Firms that developed a strong base of financial and human resources have a wider range of possible foreign entry strategies.

Another factor on the manager level is serendipitous or chance events (Crick & Spence, 2004). Internationalization of small firms seldom follows a linear path. Managers perceive the process as episodic where external factors intervene and change the process. Many small firms can extend and withdraw their international operations in periods. Chance events such as changed exchange rates or contacts from foreign intermediaries can set in motion foreign ventures. Chance events are promoters of continued opportunity discovery.

The importance of individuals for the internationalization of small firms is stressed by Andersson (2000) who mean that the internationalization is not an ongoing process that can continue without individuals who favour an international strategy. Andersson et. al. (2004) also stress the importance of the CEO and identifies a number of factors who can explain the internationalization of small firms. The most important factor is the environmental dynamism experienced by the CEO. Another factor is the importance that the internationalization becomes an integral part of the firm's overall strategy. The internationalization needs resources and the focus of the CEO to be successful. The perspective of the CEO is also presented by Crick & Spence (2004). The authors work on **Entrepreneurial Decisions** shows a number of factors on the individual level. Strategic decisions in the internationalization process are made on different grounds. Earlier international experience has a large impact on choice of foreign entry mode and managers with an open attitude to international expansion will exploit international opportunities once these are identified. Entrepreneurial learning is seen as a key component in developing the firm's international strategy. Firms can either engage with the international market with a planned strategy or with a broad vision and shape the plan incrementally through entrepreneurial learning. Crick & Spence (2004) argues that because of the uncertain terrain of a foreign market, firms continuously encounter chance events. The individual mind-set of the managers determines if these events are perceived as problems or possible opportunities. A key factor to succeed with a foreign venture is appropriate managerial commitment. Firms can also recruit an executive with

the required experience, utilize contacts through networks, and investigate and utilize government support.

The main factors that influence the decision making (Crick & Spence, 2004):

1. The availability and use of existing contacts
2. The development and use of resources, broadly defined to include financial and managerial resources (experience)
3. Serendipitous (chance) events

There is a combination of factors in every decision to internationalization. These key triggers are seen by Crick & Spence (2004) to serve as explanations for the decision to internationalize. These triggers in combination with the managerial mind-set determine the performance of the foreign venture. The firm set up foreign ventures and the management act on serendipitous events. High performing small firms utilize entrepreneurial learning and have managers that can identify and exploit international opportunities.

Mathews & Zander (2004) discuss resource deployment as the most important area for strategic decisions in the internationalization. The discovered opportunities are developed and utilized by decisions on the firm's resources. An international dimension with three organizing principles was developed to explain the process of internationalization. While the discovery connects to the entrepreneurial orientation, the strategic choices are made on the resources and the competitive interaction deal with the firm on the international arena.

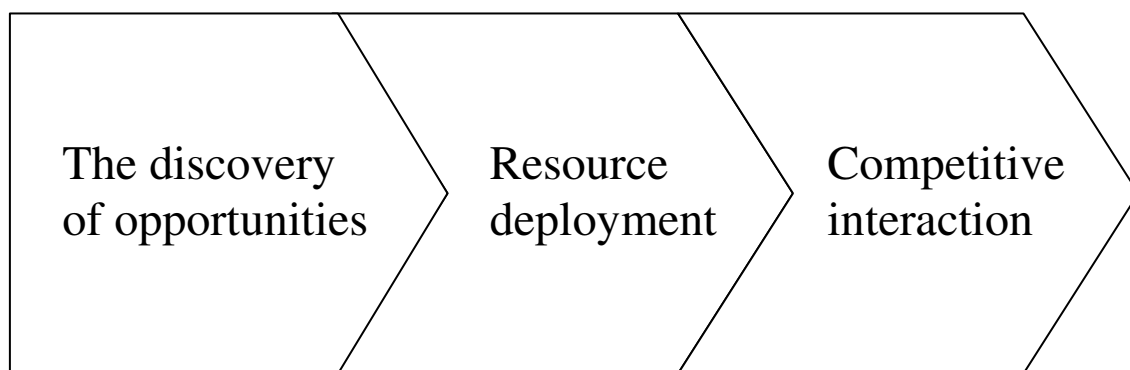


Figure 4: *The international dimension of entrepreneurship by Mathews & Zander (2004).*

The factors influencing the strategic decision making have been presented and are followed by the actual formation of the firm's internationalization strategies.

2.4 STRATEGY FORMATION

The internationalization process is defined by the delimitation by starting with the foundation of the firm and end with the engagement with foreign markets. The entrepreneurial orientation and the strategic decision making have been described and the remaining stage is where the actual internationalization strategy is formed. The orientation and the taken decisions lead to the choice of how and when to approach foreign markets. Scholars have identified different types of entrepreneurs which will lead their firms in different ways (Andersson, 2000; Merz et. al. 1994). Whether the firm adopts a push, pull or restructuring approach is according to Andersson (2000) related to which type of entrepreneur the CEO is. Three types of entrepreneurs were identified; the marketing entrepreneur, the technical entrepreneur and the structure entrepreneur. *The marketing entrepreneur* is working to fill a demand for a market need. He is very creative in the development of efficient channels and branding and less interested in the physical product. The behaviour is proactive and he continuously searches for new markets and ways to expand the firm. New markets are chosen actively, many times by personal preferences and networks. *The technical entrepreneur's* main interest is technology. He focuses on the product and the production development. Internationalization is not the main interest but he will venture overseas if the customers are there. The choice of new markets to penetrate is not made deliberately by the entrepreneur. The entrepreneur follows inquiries that he receives from customers overseas. *The structure entrepreneur* forms a strategy on the corporate level. He operates in mature industries and develops new business ideas from restructuring of companies and industries. The internationalization is not a separate goal but a consequence of the overall strategy. He prefers acquisitions and mergers as entry modes to new markets. An earlier grouping of entrepreneurs consisting of the four groups; focused entrepreneurs, unfocused entrepreneurs, survivor entrepreneurs and adventurist entrepreneurs was made by Merz et. al. (1994). The groups were however identified in relation to sales and are therefore more difficult to relate to the strategy formation process.

Knight (2001) illustrates the importance of developing the strategic competence along with the internationalization. Management skills that guide the decisions in key strategic functions – R&D, quality product development, marketing, and distribution – are described as the strategic competence. A firm tries to enhance and improve the strategic competence to maximize the gains of their international venture. This competence is especially important for international operations where a foreign market involve various challenges not present in the home market. An important factor in the deployment of resources in the international context is which pathway the

entrepreneur chooses (Mathews & Zander, 2004). By experience, entrepreneurs and firms create knowledge and skills about certain ways of accessing and coordinating resources, activities and routines. Limited managerial resources and geographical distances promote or discourage certain pathways of deploying the resources.

The choices of entry mode are also discussed in the relation to internationalization (Jones, 2001; Rasheed, 2005; Zahra et. al., 2000) and the characteristics of the firm (Hashai & Almor, 2004). Jones' (2001) study of the internationalization decisions and processes in small firms found that most small firms initiate their internationalization with trade-related activities, i.e., importing and exporting. The study also found that almost half of the firms include value chain activities other than trade in their first steps of their internationalization. The characteristics of born globals and internationalization are studied by Hashai & Almor (2004) who show that the internationalization of born globals may be characterised by gradual increased commitments to foreign markets. Born globals are firms that expand into foreign markets and show international capabilities and performance, from or near their founding. The study included a number of Israeli knowledge intensive born globals and showed the following internationalization sequence: 1) the firm starts with exports to physically close foreign markets; 2) subsequently, greenfield marketing subsidiaries are established in these markets; 3) finally, firms engage in a variety of expanding activities and penetrate new markets. A similar but more detailed process is described by Gankema et.al. (2000). Firms could also be categorized by the timing of internationalization; born globals, early internationals and late internationals (Aspelund & Moen, 2005). The difference of instantly globalizing firms and gradually globalizing firms are studied by Harveston (2000). His study shows differences in risk tolerance and technology intensity between born globals and gradually globalizing firms. Knight & Cavusgil (2004) explain how born globals with their global vision succeed by quickly create a fundamental base of international experience and knowledge. More in-depth studies of entry modes include FDI, exports and alliances (Lu & Beamish, 2001). A study of Finnish ICT-companies (Information & Communication Technologies) shows the rapidity of internationalization which shows a correlation between a large number of partners and a slow internationalization (Nummela et. al., 2004). The study is however not solely on small firms and therefore not fully relevant.

The firm's preparedness of the internationalization is another factor which influences the formation of the strategy (Knight, 2001; Karagozoglu & Lindell, 1998). The internationalization preparation is according to Knight (2001) an importance part of the formation and success of the

strategy. Before venturing overseas, firms can prepare the internationalization by conducting market research, committing resources to international marketing operations and adopting product or services to suit conditions overseas. International market research is uncertain and difficult but it usually improves the chances for success. While standardization often is a part of an international strategy there are many times small modifications to be done on the firm's products or services. This is more important for small firms that might not have the financial backup for a prolonged or failed entry process. Karagozoglu & Lindell (1998) found in their study that a majority of their studied firms were not prepared enough for the internationalization. The virtual world of digitalized information is significant for a small technological firm's ability to prepare for the internationalization (Berry & Brock, 2004).

Technology acquisition was included by Knight (2001) in his conceptual model (*figure 3, page 10*) as an important strategy for the internationalization. To compete successfully on the international market, a firm needs to have superior products and/or processes and be able to quickly innovate and respond to changing conditions on the foreign market. The management can acquire technologies that increase their innovation capabilities or increase their level of automation. As mentioned before, Knight (2001) did however not find a strong linkage between technology acquisition and international performance as proposed in the model.

Mathews & Zander (2004) complete their international dimension of entrepreneurship with the concept of competitive interaction. All firms ultimately meet competitors when exploiting a new business opportunity. In the international context there are biases that influence the choices of the entrepreneur. The nature of competition is influenced by historical, institutional and cultural biases that create differences for firms. The biases are observed in the reliance upon external or internal skills and resources. When competitors meet in the international marketplace, the competitive conditions are set by the pathways of resource deployment. Competition in the new kind of firms is mostly being between firms with different historical, institutional or cultural heritage. Firms that been exposed to the international business environment that same way and end up competing with each other will therefore compete with their different ways of entry point and pathways of resource deployment. Andersson et. al. (2004) add to the strategy formation theories by showing that there are different factors which affect a firm to go abroad and which affect a firm to continue and grow once on the international marketplace.

Both Lumpkin & Dess (1996) and Knight (2001) include firm performance in their discussion and relate this to the entrepreneurial orientation and the strategic decision making. Firm performance is however a later stage in the internationalization. Firm performance is therefore not included in this research and will not be discussed further (*see delimitations*).

2.5 SUMMARY OF THEORIES & RESEARCH MAP

The theories from the fields of internationalization, strategy and entrepreneurship present a clear process of the internationalization of small firms. The theories points out a process which starts with an orientation which is influenced by a number of factors in the decision making and results in the formation of the firm's internationalization strategy.

The entrepreneurial orientation of the CEO and the small firm is seen as fundamental for the success of the internationalization. The importance of the concept for this specific study is the importance of the orientation for the whole process of internationalization. The two theories that stand out and point out this relationship are Lumpkin & Dess (1996) and Knight (2001). Lumpkin & Dess (1996) are mapping the process through their Conceptual Framework of Entrepreneurial Orientation (*figure 2, page 10*) while Knight (2001) show the same process but with clearer focus on the internationalization perspective (*figure 3, page 10*). A number of focus areas within this part are summaries below:

- Innovativeness
- Personal aim of the CEO
- Opportunity discovery
- Risk taking

The strategic decision making that follows have been described to contain many elements. The decisions are influenced by information and knowledge creation, networks, and resource deployment. A theory that represents this is Mathews & Zander's (2004) International Entrepreneurial Dynamics which shows the steps from the discovery of an opportunity through decisions on resources to competitive interaction on the international arena (*figure 4, page 14*). A central theory to understand the nature of the decisions is Crick & Spence (2005) where three areas are highlighted; the availability and use of contacts, the development and use of resources and chance events. The focus areas for the strategic decision making:

- Planned strategy versus broad vision

- Chance events and use of contacts
- The CEOs focus of resources

Mathews & Zander (2004) and Knight (2001) examine the strategy formation but many theories in this area have focused on categorizing firms and entrepreneurs for their specific traits. Focus areas for the strategy formation:

- Type of entrepreneur
- Born global?
- Entrepreneurial learning
- Internationalization preparations

The research map which is based on the most central theories was created to highlight the focus of the study and the theories relevant to this study. The process of small firms to internationalize is based on an entrepreneurial orientation and developed by choices of experience and chance to develop the firm and its resources in specific ways. Strategies for the internationalization are then formed and the possibilities and readiness of the firm is being tested by the challenges of the international marketplace. An explanatory model is created by combining the central theories mention above. The three stages as described by the research model:

- 1) Entrepreneurial orientation, includes the discovery of opportunities
- 2) Strategic decision making include choices of resource deployment and actions of top managers
- 3) Strategy formation, includes the competitive interaction on the international market

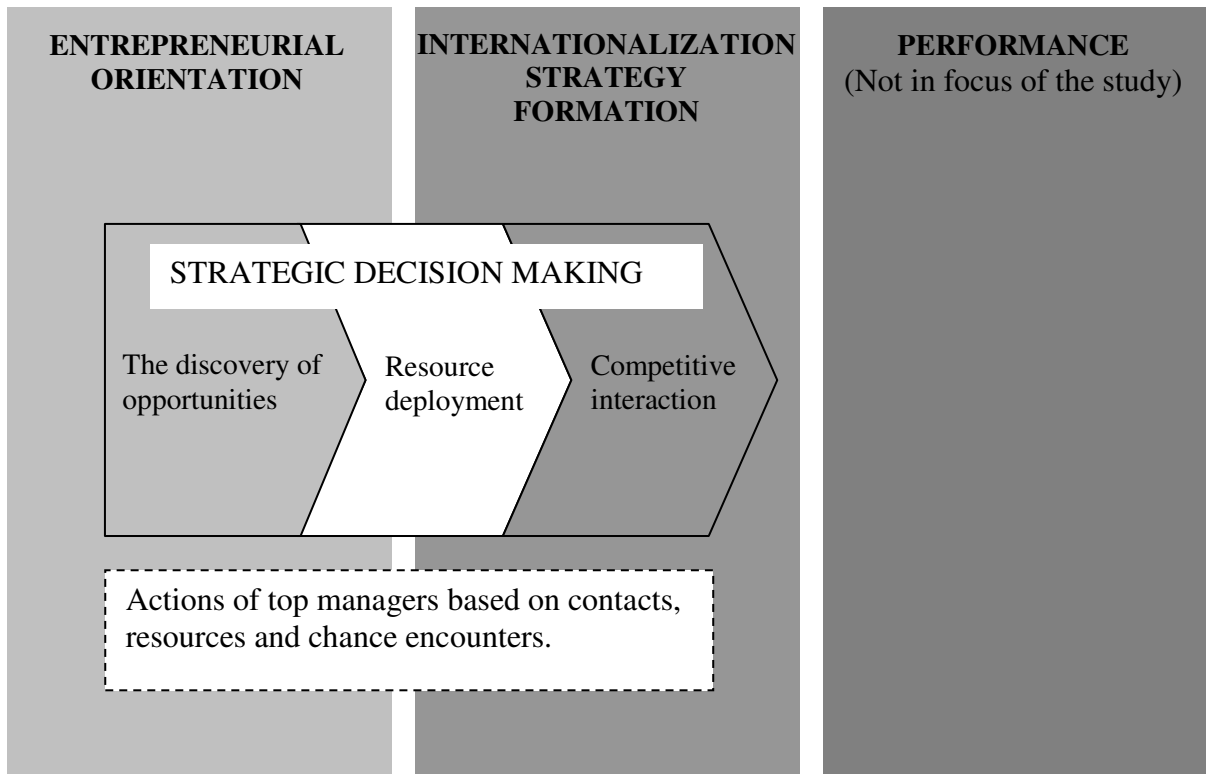
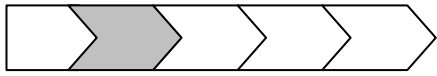


Figure 5: Research map based on Lampkin & Dess, 1996; Knight, 2001; Mathews & Zander, 2004 and Crick & Spence (2005).

The central process which starts with the entrepreneurial orientation through strategy formation to performance is taken from Lampkin & Dess (1996) and Knight (2001) while the entrepreneurial orientation and the strategy formation are linked together by Mathews & Zander's (2004) theory. An addition to the strategies on strategic decision making is made by Crick & Spence (2005).

3 METHODOLOGICAL CHOICES



The chapter aims to explain the methodological choices and why these are preferred for answering the purpose of this specific thesis. Choices of scientific approach and research method are described and motivated. A clear description of how the data was collected and analyzed is also provided to clarify the quality of the empirics.

3.1 SCIENTIFIC APPROACH

The scientific approach by the researcher needs to be specified to understand the work process of a research and the usefulness of the conclusions. The scientific approach is formed by the author's epistemological view of knowledge and the purpose of the study. It is of importance to clarify to oneself and the reader with what approach the study is conducted. (Patel & Davidson, 1994, s.23)

Patel & Davison (1994, s.27) describe the two central approaches, positivism and hermeneutics, by four dimensions of the research; 1) the research's purpose and nature of the searched knowledge, 2) the research object, 3) the researcher's approach and 4) the methodology. The purpose is to provide a better understanding of the individual CEO and their choices which means patterns of human behaviour. The behaviours and experiences of the CEO need to be collected and analysed. My perspective of subjectivity versus objectivity is that subjectivity could be used creatively to better understand why something happens. To strive for some kind of objectivity could however make it easier to see specific patterns or conclusions. The most important in researching subjectively is nevertheless to continuously revising oneself to understand why certain comprehensions and interpretations are made. The researched objects are the experiences of CEOs mediated through conversation and expressions which clearly demand high level of understanding. While my own approach to research is based on subjectivity the initial method is to review the current theories on the field to map the process. A closer look on the nature of the theories reveals that most of them are quantitative with a positivistic approach. These theories stand as the base for the first step of serving the purpose which is the mapping of the internationalization process. The scientific approach is by the theories and the first step of the purpose based on a positivistic approach while the second step where the theories are tested

empirically is influenced by a hermeneutic approach. This could also be said to be the aim of the thesis and what the contributing of the thesis to the field of international entrepreneurship is. A phenomenon which is studied positivistic by parts of the process is here illuminated by a hermeneutic touch where the parts are put together and understood in the light of each other. The thesis do not have a clear positivistic or hermeneutic approach but rather used hermeneutic tools to create a better understanding of a positivistic studied phenomenon. The aim is to better understand the individuals' perspective and at the same time create a better understanding of the process as a whole instead of a series of parts.

The hermeneutic approach is concerned with the understanding of the whole, where the meaning of a part only could be understood in relation to the whole. (Alvesson & Sköldbberg, 1994, s.115) The approach aims to create an understanding of the parts which will together give a better understanding of the whole. (Patel & Davidson, 1994, s.26) The use of the approach is further explained by Patel & Davidson (1994, s.26) to be appropriate to understand other humans and our own life situation through manifestations of human life in written texts, human actions and expressions. Alvesson & Sköldbberg (1994, s.316) mean that the hermeneutic approach suits studies where focus lies on interpretation and reflections of the researcher rather than on obtaining "true" facts. The study's centre of attention is understandings where the reasonable interpretation is neither subjective nor objective. (Alvesson & Sköldbberg, 1994, s.167) The researchers pre-understanding of the subject and involvement in the process of interpretation are seen as assets and not as obstacles. The researcher could use his understanding as a tool in the interpretation. (Patel & Davidson, 1994, s.27)

The hermeneutic approach is seen as extra relevant for research which is based on interviews for two reasons; first by illuminating the dialogue that creates the interview texts and secondly by mapping the process where the interview texts are interpreted. (Kvale, 1997 s.49) Observe thereby the difference between studies of a text and an interview text. The hermeneutic approach is affecting the interview text in both the creation and interpretation by being a part of both. (Kvale, 1997, s.50)

3.2 RESEARCH METHOD

The choice of a qualitative or a quantitative research came rather clear after forming the purpose of the study. The aim to understand how the process looks like implicates a process of in-depth

analysis and interpretation of human behaviour and actions. The scientific approach of hermeneutics in the second step proposes a study which is focused on interpretation and reflection rather than a search for objective facts. The holistic perspective of the thesis which intend to encompass the whole process of internationalization also connect with the hermeneutic view that all parts must be related to the whole to be understood. This thesis is trying to recognize the different parts of the internationalization to form a better understanding of how the whole process is perceived by the firms CEOs. The qualitative study is described by Kvale (1997, s.67) to refer to the type or sort of something instead of the size or amount which the quantitative study refers to. The method for serving the purpose of this thesis is for stated reasons chosen to be a qualitative study by interviews.

The method of using theory and empirics are by most scholars described by the two extremes of induction and deduction. A deductive method is formed by current theories where a hypothesis is created. This theory-generated hypothesis is thereafter verified or falsified by tests with empirics from a case. The deductive method starts with the studies of the research object where the researcher explores the subject without roots in theories. The researcher forms a new theory from the collected empirics. (Patel & Davidson, 1994, s.21) A combination of the two methods, abduction, is described by Alvesson & Sköldberg (1994, s.42) to better incorporate understanding. The methods start point is, as the inductive method, with the empirics. The method is however not rejecting theoretical concepts and thereby shows more resemblance to the deductive method. The analysis could for example be combined with, or be anticipated by, studies of current theories. The theories are not used as a mechanic application on certain cases but rather as a source of inspiration for the discovery of patterns which generate understandings. The process of research takes place by an alternation between (current) theories and empirics which are re-interpreted successively along the process. (Alvesson & Sköldberg, 1994, s.42)

3.3 COULD THE CONCLUSIONS BE GENERALISED/ TRANSFERRED?

A common critique to conclusions from qualitative studies, as compared to quantitative studies, is that they are difficult or problematic to generalise from. This issue is however argued by Alvesson & Sköldberg (1994, s.39) to depend on the epistemological standpoint. It depends on what one mean with generalisation. There are no reasons to accept a generalisation which only

shows regularities on the surface. Only a statistical study could show such relationships and be valid for generalisation.

A generalisation or transfer of qualitative conclusions could however be useful in a knowledge realistic perspective which acknowledges hidden mechanisms that affect the regularities on the surface. Generalisations of qualitative studies are, by this perspective, both possible and desirable. (Alvesson & Sköldbberg, 1994, s.40) The generalisation could be useful within the same domain as the studied phenomena. This study could therefore in first hand be applied to similar firms which are small technological Israeli firms. Even though the studied firms are relatively homogeneous the studied factors and process could be argued to be similar for firms outside their own domain. The internationalization is a challenge met by many small firms in the world. Firms from all over the world begin to see the possibilities with the international market and are facing the stage of internationalization. This is also reflected in the theories which are collected from many parts of the world. So, while the generalisation could be directly applied to similar firms, they are also useful for transfer to other small firms which are not technological and not Israeli. The level of usefulness must be assessed subjectively by the level of similarities between the studied firms and the target for the generalisation or transfer.

The knowledge realistic perspective allows the existence of non-observable hidden patterns which match the method of abduction that aims to find such patterns. Alvesson & Sköldbberg (1994, s.40) continues by explaining that this kind of generalisation should not be seen as a direct application of the truth but rather like a metaphor from which we can learn something about other firms or another phenomena.

3.4 SELECTION OF STUDY OBJECTS

The selection of study objects for the empirics raised a number of questions. *Where the study should be conducted? Should any specific industry be targeted? And which firms and individuals should the study involve?* The selection is here presented as a four steps funnel including the selection of; the country, the industry, the firms and the interviewees.

3.4.1 Country selection

An internship at the Embassy of Sweden in Tel Aviv initiated the idea to conduct the study in Israel and not in Sweden. The decision to do so was taken after a closer study of the Israeli

economy which encouraged me to conduct the study in the country. Israel has a relatively small internal market with a GDP of US\$139 billion and a population of approximately 7 million. The corresponding figures for Sweden are; US\$ 267 billion and 9 million. (CIA, World Factbook²). The country has a large number of firms in the technological industry and is also characterized by a huge immigration flow. The most recent wave of immigration contained nearly 700 000 immigrants coming from the former Soviet Union between 1989 and 1996 (Israel Ministry of Foreign Affairs). The Israeli government reacted by establishing industrial parks and financial support to promote entrepreneurship and new business creation.

There are also a number of country specific conditions which make entrepreneurship, business creation and internationalization extra important for Israel and Israeli firms. Internationalization of Israeli firms must have a more distinct and direct strategy because of the political situation in the Middle East region. Israel has barely any trading with its geographical neighbours (Lebanon, Syria, Jordan and Egypt) and must therefore seek more geographically distant markets like the US, EU and the Far East. The main trading partners of Israel are: US, Belgium and Hong Kong (CIA, World Factbook³). The geographical distance to the international market forces Israeli firms to invest more resources and time in the internationalization. These specific conditions make Israeli companies highly relevant and interesting objects to study.

A study of small firm internationalization is suited to be conducted in Israel for the following reasons:

- The Israeli economy is characterised by a high degree of small firms which provide a good base for selection of firms and managers to study.
- The main trading countries of Israeli firms are geographically distant which increases the efforts in terms of cost and time for small Israeli firms to internationalize. This forces the managers to more carefully consider their strategy and invest more in their international strategy which makes the phenomenon more distinct and therefore easier to study.
- The entrepreneurial forces in Israeli are very strong and are reinforced by governmental initiatives and the Israeli culture which promotes risk-taking. The high level of innovations and entrepreneurial activity could be benchmarked to other countries.

² The numbers of population and GDP are estimates for 2005. GDP figures are calculated with purchase power parity.

³ The main trading countries are from 2004 figures.

The possibility to conduct the study in Israel was encouraged and supported by the Embassy of Sweden in Tel Aviv and foremost Second Secretary and Commercial Attaché AnnaCarin Platon. The employees at the embassy gave me advises on the Israeli business and economy which was crucial for the study. I was also able to use the embassy's resources and take time off from the internship for interviews. A local expert on entrepreneurship was contacted for further assistance to understand the country specific features of Israel. Dr. Niron Hashai at the Jerusalem School of Business Administration, Hebrew University agreed to assist me and functioned as an extra academic supervisor who guided me with his insights of the Israeli economy and firms. He also provided me with knowledge how to approach and interpret Israeli top managers to get the best results of the interviews.

3.4.2 Industry selection

For comparability between the different interviews a rather uniform group of firms was necessary. A selection of an industry was therefore vital to find a group of somewhat homogeneous firms. Initially, the choice was made to concentrate on the technological industry. This choice was taken for two reasons; first, many of the theories on entrepreneurship and internationalization focus on technological firms (Karagozoglu & Lindell, 1998; Yli-Renko et. al., 2001; Knight, 2001; Hayton, 2002; Berry & Brock, 2004). Secondly, the technological industry has grown significantly in Israel and stands today as one of the most important industries for exports (Israeli Ministry of Foreign Affairs). The technological industry is however large and diverse and a more narrow division was necessary. The electronics and software industries were finally chosen because of the success of Israeli firms in these industries.

3.4.3 Firms selection

The firms were selected from the database of Israel Association of Electronics and Software Industries. The association was created to assist these industries and its 57,200 employees. The member firms of the association represent almost the entire industries and showed sales of \$15,800 billion in 2004 (www.iaei.org.il).

The total number of members in the Association of Electronics and Software Industries is 253 firms.⁴ This number was reduced by a number of criteria to suit the study. First, only privately owned and independent firm (no subsidiaries) were considered; secondly, only firms which

⁴ Members of the association as of December 2005.

followed the thesis' definition for a small firm (5-50 employees) were interesting; finally, the corporate headquarter had to be in Israel for access to the top management. I further added the criteria that the headquarters had to be in the centre of the country (Tel Aviv & Jerusalem and nearby cities) because of limitations in time and costs.

Of the 253 member firms, 13 remained relevant after applying the search criteria. Of these 13 firms only three turn down the invitation to be included in the study.

The final selection of firms came hence down to ten firms which are located in Jerusalem, Tel Aviv, Holon and Rosh Haayin.

3.4.4 Interviewees selection

The delimitation stated earlier that the study only involves the CEO of the chosen firms. Hence, only the CEOs of the firms were approached. All the CEOs of the selected ten firms approved to be interviewed. While arriving at one of the firms, the CEO had cancelled the interview and suggested the director of hardware projects instead. The decision was taken to go on with the interview and use the data for the empirics after hearing the description of the firm and its top management. The interviewee had co-founded the firm together with two friends of which one now serves as the CEO. The three of them holds different titles in the firm but have a joint responsibility and influence of the firm.

3.5 CONSTRUCTION OF THE QUESTIONNAIRE

The questionnaire must enclose the complete process of internationalization since the aim is to empirically cover the whole process. The process and its different stages were identified in the theoretical review which concluded the process with a research map. The questions in the interview are divided into two parts, first, a couple of basic questions about the interviewee and the firm. Secondly, 15 questions constructed from the theoretical part were covering the three stages of entrepreneurial orientation, strategic decision making and strategy formation. Questions 1-4 cover the entrepreneurial orientation, questions 5-8 the strategic decision making while questions 9-15 cover the strategy formation. The complete questionnaire is to be found in appendix 1, page 77-78. The second part of the thesis is of a semi-constructed nature where the 15 questions stands as the skeleton of the interview where clarifications, follow up questions and deeper discussion complemented and formed the answers to the questions.

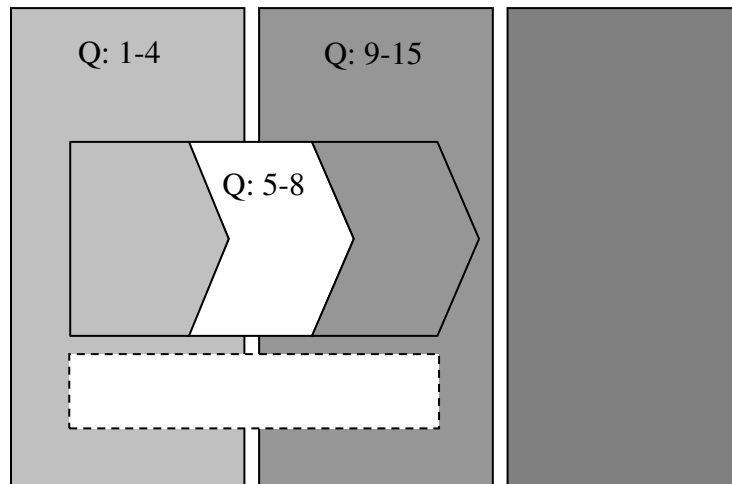


Figure 6: Construction of questionnaire.

The questions were first constructed from the theories and then checked with Dr. Niron Hashai to verify the academic relevancy. The questions were then tested during an interview with a top manager of an internationalizing Israeli firm. The interview was structured as a discussion to review and improve the questions and the data was not included in the empirics. The top manager was the executive vice president and head of commercialization at Colbar LifeSciences Mrs. Anna Tenstem-Lundvall. Mrs. Tenstem-Lundvall is a Swedish manager who was recruited to the firm in 2004 to lead the firm's internationalization. I found the session very rewarding since she provided me with important insight of both Israeli firms as well as the process of internationalization while she also understood my perspective and background.

3.6 HOW THE INTERVIEWS WERE CONDUCTED

A description of how the interviews were conducted is here presented to clarify under which conditions the empiric was created. The interviewer has an active role in the qualitative method of interviews were the empiric is created as a cooperation between the interviewer and the interviewee.

The time and space of the interviews are of significance since the interaction between the interviewer and the interviewee influence the outcome of the interaction. The interviews were almost all conducted at the interviewees offices because of two reasons; first, it saves them time and second, they felt confident in their own environment. Depending on the capabilities of their respective offices, the interviews were either conducted in their room or in a meeting room.

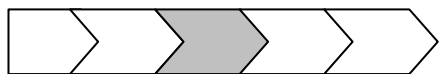
The interview technique which was used follow six phases described by Kylén & Vestlund (1980, s.35) as the funnel technique. The first phase, warm-up, aims to acquaint myself with the interviewee and explain the purpose of the study. The second phase, open story, begins with an open question like opinion towards entrepreneurship where the interviewee can talk rather freely. The third phase which is called the specifying is the longest phase where questions covering the whole repertoire is asked, complemented and discussed. The answers are then controlled in the fourth phase, control, by clarifying answers or testing contradictory information. The control is followed by the round off phase where easy complemented question are asked. The last phase, completion, the value of the interview is put forward and the purpose is once again emphasized. Some of the interviewees were also contacted again where clarifications or additional information was needed. The interviews were held between late December 2005 and early February 2006 and lasted between 60-90 minutes each.

3.7 CHOICE OF PRESENTATION STRATEGY

There are a number of strategies that could be used to present the empirics from interviews to the reader. The chosen strategy should agree with the researcher's scientific approach and the chosen method for the study. Nylén (2005, s.70) describe four different strategies based on ontological and epistemological standpoints. The four strategies are; the united case description, the autobiographic story, the fragmented puzzle and the unique conversation. The united case description, which was chosen for this thesis, aims to present the empiric as a united entirety based on a logical structure. The cases are described with the voice of the empiric compared from the voice of the researcher. A clear picture of the studied phenomena is presented through the cases by a diligent use of quotes. The empirics are created by the interactions between the researcher and the interviewee but are presented as pure as possible. The idea is instead that the empirics are presented to prepare the following analysis where the researcher's voice and interpretations becomes more salient.

The presentation is relatively structured and aims to show the phenomena neutrally for further interpretations and reflections in the analysis. It is important in this strategy to report quotes and describe the phenomena neutrally and thorough. The epistemological ambition is to present a meaningful whole which is attained with varied grades of focus on details versus overview. (Nylén, 2005, s.70)

4 PRESENTATION OF THE EMPIRICS



In this chapter, the empirics for the study are presented. The chapter starts with a description of the interviewees and the firms which they represent. The empirics of the internationalization of small firms are then divided into the three focus areas identified in the theoretical part; the entrepreneurial orientation of the firms and the managers, the strategic decision making and finally the strategy formation. Two additional parts were also added; the first one contains pragmatic advices from the interviewees. The advices show what is considered by the interviewees to be the crucial part of the process. The last part includes additional comments from the interviewees which do not fit in the three focus areas mentioned above.

4.1 INTERVIEWEE & FIRM PROFILES

The empirics start with a short presentation of the interviewees and their firms to introduce the reader to the studied objects.

Drew Tick, Founder & CEO, Code Red Ltd.

Code Red Ltd. develops secure management solutions for the wireless networks market. The firm was founded in 2002 and has five employees which two are in top management. The internationalization took place in 2004 through distributors and agents. Code Red Ltd. is an independent firm without support of venture capital. Drew Tick is the founder and CEO of the firm and has prior start-up experience from the IT-sector.

Seth Yacobson, CEO, Zamir Recognition Ltd.

Zamir Recognition Systems Ltd. develops systems for licence plate recognition. The firm was founded in 1993 and employs 12 which three are the top management. The firm made some tests overseas in 1996 but internationalized for real in 2000 through national distributors and a sister firm in the states. The firm has no venture capital funding. Seth Yacobson who is born Swedish was recruited as the firm's CEO in 1998.

Oded Kafri, Founder & CEO, Varicom Communications Ltd.

Varicom Communications Ltd. develops products for transport, compression and storage of voice, data and fax. Started in 1999, the firm now employs 12 which three are in the top management. The firm internationalized in 2002 with a project in Senegal and has since then worked internationally with collaborators and partner firms. The firm uses no venture capital for its growth. Dr. Oded Kafri is the CEO of the firm which he founded himself. He worked, prior to the foundation, with R&D in a large Israeli firm.

Yair Maryanka, Founder & CEO, Yamar Electronics Ltd.

Yamar Electronics Ltd. develops automotive semiconductor solutions. The firm has six employees which one is the top management. Started in 1994, the internationalization began in 1996 with direct sales to customers in Japan. Yair Maryanka is the CEO of the firm which he founded after coming home from Japan where he worked for a large Israeli company. Maryanka is developing the firm without venture capital funding.

David Reznik, Founder & CEO, A.D.I. Video Technologies Ltd.

A.D.I. Video Technologies Ltd. develops solutions of processing MPEG2 international standards and other digital video media. The company was founded in 1999 and employs 18 which three are in the top management. The first international operation was through a partnership with a larger firm in 2000. The firm has investment and cooperation with a venture capital firm. David Reznik is the founder and CEO of the firm.

Bentsi Ben-Atar, co-Founder & Hardware projects director, Websilicon Ltd.

Websilicon Ltd. develops applications for element and network management systems. The company was founded by three friends in 1998 and employs today 16. The top management consists of the three founders. The firm sold internationally in 2000 through imbedded products. The firm has no venture capital. Bentsi Ben-Atar is one of the three friends who founded the firm and hold the position as Hardware projects director. The founders' friendship and technological know-how was developed while serving together in the Israeli Defence Force.

Yuval Dovev, CEO, Commil Ltd.

Commil Ltd. developed technologies and products that enable access to IP infrastructure using mobile handsets and devices. The firm was founded in 2000 but filed for close down in

December, 2005. At the decision of closure, the firm employed 25 where six were in the top management. The first international operations were conducted in 2003. They worked internationally through an employee in the US, R&D agreements in Italy and through partnerships. The firm received venture capital. Yuval Dovev has both international experience as well as experience from a number of start-ups and was hired as CEO in 2004 after working for the firm as a consultant for one year.

Mandel Norman, Founder & CEO, PowerNet Ltd.

PowerNet Ltd. develops automated network system for video and audio. The firm, which was founded in 1999, now employs eight which two are in the top management. They internationalized in 2001 and are now working internationally through cooperation and partnerships. The firm does not use venture capital. Mandel Norman is the firm's founder and CEO.

Rafi Ben-Atar, co-Founder & CEO, MainNet Communications Ltd.

MainNet Communications Ltd. develops solutions for communication through power lines. Founded in 1999 the firm now employs 25 in Israel and an additional 29 in partly owned subsidiaries overseas. The top management consists of six employees. They internationalized in 2000 with direct sales and are now active internationally through partnerships and partly owned subsidiaries. The firm has investments from a number of venture capital funds. Rafi Ben-Atar is one of the co-founders and the current CEO of the firm. He worked prior to the foundation of MainNet together with the other co-founders at a large Israeli company.

Moty Shemesh, Founder & CEO, OfficeCore.com Ltd.

OfficeCore.com Ltd. develops solutions for mobile services including SMS and Field Force Management for internal personnel management and Customer Relationship Management. The firm has 16 employees which three are in the top management. It was founded in 2000 and they had their first international presence in 2004 through partnerships and distributors. The firm is developing without venture capital. Moty Shemesh is the founder and CEO of the firm.

The general characteristics of the firms are presented in a table to give an overview of, and comparison between, the studied firms.

CEO & Company	Empl.	Top mgn.	Year of start up	Year of internationalization	Entry mode
Drew Tick Code Red Ltd.	5	2	2002	2004	Distributors & agents
Seth Jacobson Zamir Recognition Systems Ltd.	12	3	1993	2000	Sister company, distributors & partnership
Oded Kafri Varicom Communications Ltd.	12	3	1999	2002	Collaborations & partners
Yair Maryanka Yamar Electronics Ltd.	6	1	1994	1996	Direct sales
David Reznik A.D.I. Video Technologies Ltd.	18	3	1999	2000	Partnership
Bentsi Ben-Atar Websilicon Ltd.	16	3	1998	200?	Imbedded products
Yuval Dovev Commil Ltd.	25	6	2000	2003	Direct & through bilateral agreements
Mandel Norman PowerNet Ltd.	8	2	1999	2001	Co-operation & partnerships
Rafi Ben-Atar MainNet Ltd.	25	6	1999	2000	Direct sales, partnerships & subsidiaries
Moty Shemesh OfficeCore.com Ltd.	16	3	2000	2004	Partnership & distributors

Table 1: Characteristics of the studied firms.

Some additional facts are also presented to further explain the characteristics of the firms:

Number of employees in the firms:

The number of employees range from 5 to 25 with an average of 14 (14,3).

Size of the top management:

The comprise of 1 to 6 managers with an average of 3 (3,2).

Venture capital funding:

YES - Rafi Ben-Atar, Yoval Dovev, Reznik

NO - Shemesh, Norman, Bentsi Ben-Atar, Maryanka, Kafri, Yacobson, Tick

Founder or co-founder as current CEO:

YES - Rafi Ben-Atar, , Reznik, Shemesh, Norman, Bentsi Ben-Atar, Maryanka, Kafri, , Tick

NO - Yuval Dovev, Yacobson

4.2 THE INTERNATIONALIZATION OF SMALL FIRMS

4.2.1 The entrepreneurial orientation of the managers and the firms

1. How would you describe entrepreneurship and do you perceive yourself to be an entrepreneur?

While entrepreneurship is easiest recognised by the achievements of individuals, the perceptions of the same seem to be more diverse. All the interviewed individuals in this study lead small technological firms on international markets and could by that be seen as entrepreneurs. The diversity of entrepreneurship became apparent in the answers to the question how they perceive both themselves and the term entrepreneurship. The interviewees emphasized their own personality as well as different stages and parts of the firm. The most common description was the ability to see an opportunity and to create a firm to utilize this opportunity. Maryanka, Dovev, Norman, Rafi Ben-Atar and Shemesh all describe entrepreneurship as a drive to create something new. An entrepreneur is actively seeking solutions to problems and then figure out how to turn this into a business.

“I think that the two main points is; first to vision and see the market, the needs and the solution and at the same time think about competitor and your specific niche. Second, is to establish and get sales or get people to do it for you. You need to both see and to do.”

Moty Shemesh, CEO, OfficeCore Ltd.

Yacobson refers to the development of the firm in relations to the level of entrepreneurship. The firm is described as a “late bloomer” and the entrepreneurship of the firm is perceived to be higher now than in the firm’s earlier years. A more social aspect was described by Bentsi Ben-Atar who described the personal price of being an entrepreneur and the responsibility he feels toward his family and his employees. He also talks about the complete process for a start-up where entrepreneurship includes both the technical innovation and the creation of a money generating business. This point is also emphasised by most of the other interviewees.

“In 1994, I received the first Cebit award (exhibition in Hannover) for a little utility to send data via a fax machine. Many people told me then that I would not be a millionaire but a billionaire, but today that invention is worth more or less nothing. Why? You can send data with data. This is why it is important to understand the markets. Today I see myself more as a businessman.”

Oded Kafri, CEO, Varicom Communications Ltd.

2. How can you describe the difference between domestic and international entrepreneurship?

All studied firms are targeting international markets. The interviewees do however have dissimilar attitudes towards an international perspective of entrepreneurship. Tick, Kafri, Maryanka, Dovev and Norman do not experience any difference in domestic and international entrepreneurship. The specific opportunity determines if they are operating outside Israel or not but the entrepreneurship itself does not differ.

“... as I said in the beginning, there are no domestic entrepreneurs in high tech, everyone that want to develop something in Israel, immediately have to think about exports, so there is no like domestic entrepreneur.”

Mandel Norman, CEO, MainNet Communication Ltd.

On the other hand are the interviewees that experience a clear difference between being an entrepreneur on the domestic market versus the international market. This difference is however perceived differently. Reznik perceives the difference in being connected to the different phases of the firm’s development. In the domestic stage, his efforts were more technical and the focus was to present the product as qualitative and better than others’. In the international stage, the focus is much more on making agreements and finding right partners. Bentsi Ben-Atar, Rafi Ben-Atar and Shemesh perceive the difference to be on a cultural level. They regard different

mentality, procedures, traditions, language and expectations to pose new challenges for them as international entrepreneurs. The business itself is rather similar but you have more factors to take into consideration and you have to be able to understand other cultures and styles.

3. Do you and the rest of the top management have prior international experience?

International experience is naturally of importance in developing a firm for the international market. Out of the interviewees, four had no prior international business experience while the rest had experiences on various levels. Tick is born American and Yacobson is born Swedish. They both moved to Israel over 20 years ago but their origin has provided them with international networks and a familiarity of another culture. The top management around Yacobson all had international experience where the two others were born Americans. Dovev have experience from the UK where he studied and worked as a consultant. Through his work as a consultant he also travelled and worked a lot in a number of other countries. Dovev also brought a person with international experience to the top management in his firm. Maryanka have experience from Japan where he lived and worked for a couple of years. Both Norman and Rafi Ben-Atar gain international experience from working with international sales and marketing in larger Israeli companies. Rafi Ben-Atar explained how he and the two other founders all came from the same company where they had all been exposed to international business.

Reznik, Bentsi Ben-Atar, Shemesh and Kafri all claimed to have no prior international business experience. Bentsi Ben-Atar and his co-founders all served in the same unit in the Israeli Defence Force and started the firm after the military service finished. Reznik had no international experience himself but complemented the top management with an internationally experience person who was hired as a part of the investment from a venture capital fund.

Prior international experience	
YES	Tick – born and raised in the United States
	Yacobson – born and raised in Sweden
	Dovev – studied and worked in the UK
	Maryanka – lived and worked in Japan
	Norman – worked in international sales and marketing
	Rafi Ben-Atar – worked in international sales and marketing
NO	Reznik, Bentsi Ben-Atar, Shemesh, Kafri

Table 2: Prior international experience.

4. Was there an intention from the founding of the firm to internationalize and what opportunity had been discovered?

The technology industry in Israel is very export orientated. A majority of start ups in Israel have the intension of quickly going international and could therefore be defined as born globals. This characteristic of the Israeli technology industry was reflected in the interviews. All interviewees expressed that the intension of the founders was to target international markets. The domestic market in Israeli is too small and isolated for technological firms. While the intension was similar, some of the interviewees explained the importance and use of the domestic market. Shemesh started his firm through projects on the domestic market and then followed the customers to the international markets. Tick, Yacobson, Maryanka and Reznik described the use of the domestic market as a test bed for their products. The products could be tested on a couple of customers or partner-firms but the sales on the domestic market small and therefore insignificant.

“From the ‘get go’ you have to understand that you are international. You know from day one that it will be an international company. We started in the domestic market but it was more to prove the technology. The most important part is the original idea and the idea obviously has to be of an international nature.”

Drew Tick, CEO, Code Red

Bentsi Ben-Atar and his cofounders had the intension to target the international market from start but still started domestically and waited relatively long time before shifting most of their efforts to the international market. The reason for this was funding since they perceive international ventures as risky and costly. Only when they were growing and had descent revenues on the domestic market did they shift to the international market. Dovev who came to the firm after its initial years of operation worked solely on the international market. Norman, Rafi Ben-Atar and Kafri described the company to act internationally from the beginning without testing it on the domestic market.

The discovery of the opportunities is described to be strongly influenced by the technological industry in Israel. All products offered by the studied companies are technological and most of the ideas have sprung out of some kind of technological development. Kafri was working with research for a large Israeli company when he discovered that he could commercialize one of his innovations. Bentsi Ben-Atar and his cofounders served at the same unit in the Israeli Defence

Force when they teamed up and decided to start a firm. Rafi Ben-Atar was developing a technology within another company in Israel when the opportunity was discovered. The company he worked for did not want to invest in this technology so Rafi Ben-Atar and two of his colleagues started their own company. The one discovery that was most influenced by international circumstances was made by Maryanka who saw a specific need for Japanese car manufacturers while working for an Israeli company in Japan. Dovev and Yacobson came to their companies after the discovery of the opportunity. They were hired to bring international experience to the firm and push the internationalization. Dovev explained that he was “...used to take decision as a consultant or as an entrepreneur. This is my third company, to work with entrepreneurs to develop their companies to the international market”. The discoveries of opportunities for the studied firms have most often sprung from technological development in other companies. The characteristics of the Israeli technological industry force the technological development to be made with international markets in mind.

4.2.2 Strategic decision making

5. What are the main focus areas for your entrepreneurial efforts?

The efforts of the top management determines in what direction the firm is heading. The studied firms are all in some stage of their internationalization which is considered as an important part for the survival of the firm. Despite this, the efforts by the top management in respective firm differ notably. Most of the interviewees express an increasing importance of focusing on marketing and sales. The developments of the technologies were all conducted in Israel whereas many of the firms went to international markets straight away. By this, the internationalization coincided with the commercialization. Both Tick and Kafri mean that they are putting most of their efforts on marketing and sales but still feel that the technology is the most fun part and the core of the company. Tick expresses the technological development as much more exciting: “Sitting in a room with smart people and brainstorming. It is so great not to be limited by reality.” Kafri described his efforts to be of a businessman but that the R&D is still the heart of the company. Kafri feel that maybe he is not the man to develop the company internationally: “Look, maybe it should be different, but I am a technologist by background and that might be a problem. But the company is mine and it will work after my vision and my style.” Maryanka, Norman and Reznik explain how the entrepreneurial efforts have been on both the technology side as well as the marketing side. The efforts are to develop the technology in accordance to the market demands. The importance is to develop the “right” products instead of the “best” ones. Rafi Ben-Atar describes how his efforts started on developing the technology to then shift to marketing and now be largely on creating

good partnerships. Yacobson and Dovev spend most of their time to develop the firms' strategies and marketing. They point out the importance for the internationalization of putting a lot of efforts on internal communication and efficiency. Yacobson want to develop a clearer organisation where the marketing department obtains more importance. In Dovev's vision of transforming the firm to be market driven, he tries to create a liaison between the marketing department and the technology developers. Bentsi Ben-Atar put efforts on the internationalization but admits that the company has a careful approach. They are still putting much effort on domestic customers. Shemesh describes an even more cautious approach. He tried to internationalize earlier but had limited success. At the moment, Shemesh feel that *"...international sales and marketing is only for professionals. But we have to give it a budget and management focus, and we are getting better and better."*

6. Were you confronted by chance events and do you perceive these as problems or opportunities?

While all interviewees experienced chance events, some described these as opportunities while some described them more as problems or obstacles. Tick, Yacobson, Bentsi Ben-Atar, Kafri and Norman explains how contacts and meetings continuously lead to new opportunities. Their marketing and sales can shift quickly after a meeting on a conferences or a talk with a contact. Maryanka and Shemesh explain that chance events most often are generated from their customers and partners. Shemesh have found new markets through following their partners in Israel. They started cooperation in Israel and then also in Turkey after the partner suggested cooperation also there. Maryanka means that chance events mostly include developments of the technology on request from customers. Reznik and Rafi Ben-Atar experience most of the chance events to be problems or obstacles. Reznik encounter chance events all the time but perceive most of them as problems. Rafi Ben-Atar perceives the chance events as obstacles but sees them as a part of the entrepreneurial experience.

"First of all, I would call most of them obstacles. In the beginning, we had problem with regulations where we had to work differently in different countries. These kinds of problems or obstacles are what new start ups are facing all the time, but this is what makes life interesting, otherwise it would be too boring."

Rafi Ben-Atar, CEO, MainNet Communications Ltd.

Chance events posed vital both treats and opportunities for Dovev. The technology in their industry was changing at the same time as they surprisingly got a request from Korea. Dovev saw the technology change as a threat and the new demand as an opportunity. The customer in Korea generated good revenues but the technology change created big problems for the future of the firm. Dovev chose to follow the opportunity of the chance event which gave a good profit in the short term but showed to be damaging in the longer run where they had the wrong technology.

7. In what stage of the internationalization process and in what function of the firm are you most willing to take risks?

The willingness to take risks is relatively high for all the interviewees. Many of them are founders and have taken both a personal and a financial risk with their firms. Kafri invested large amounts of his own money per month in the beginning and considered every morning if he should continue or not. The willingness to take risks during the further development of the firm is on the other hand more diversified. Maryanka and Tick experienced the start and technological development to pose the biggest risks. Maryanka was not sure how good their products would work on the market. Tick felt more freedom in the development part where he also could take larger risks. Yacobson, Reznik, Bentsi Ben-Atar, Shemesh and Dovev perceive marketing and sales to pose the biggest risks for their firms. Reznik and Bentsi Ben-Atar feel very comfortable with their technologies and products but perceive a big risk in how to sell them.

“I think that the... I will say something that might sound a bit cocky, but we are not building a rocket ship or missiles here. It's considered a high tech area but it's not the products that are difficult for us, we can tackle the technical aspect, but we don't know how to sell it.”

Bentsi Ben-Atar, CEO, Websilicon Ltd.

There were no financial risks for Shemesh in the technological development since this was financed by domestic customers. The risks for Shemesh lay in sales and especially international sales where bigger uncertainties pose bigger challenges. Dovev also emphasise the uncertainties and understanding of markets to be the most risky for his firm. Yacobson who internationalize through distributors mean that the risks lay in the choice of distributors. There are many of them but the quality and use of them vary significantly.

8. Is there a risk of acting too entrepreneurial?

The technological development is where Shemesh feels that there is a risk of being too entrepreneurial. Shemesh say that there are no risks of being too entrepreneurial with partnerships. The development of the technology is however more important to control. He wants to create new products and develop them to be the best even though it might not be what the customers want. The importance is not to strive for perfection but to develop the products that will generate the most money. Both Reznik and Rafi Ben-Atar mention the importance of holding back entrepreneurial efforts when it comes to penetrate new markets. They mean that however good the products are you need to make sure that the market is ready for them. Rafi Ben-Atar explains how the company was too early to a market and therefore had to make extra assumptions and educate the market which took a lot of resources.

4.2.3 Strategy formation

9. What preparations were made before the internationalization?

Regarding the preparations for the internationalization, the marketing was described by Tick to be the key issue. While the technology is more or less set after the development stage, the important part is to adjust the marketing to the international markets. *“The worst you could get is a product that could be for everyone.”* The preparations were to create a product and its marketing to suit the international markets. Dovev, who came to the firm when it already had approached international markets, felt that a lack of preparations for the internationalization was a part of the problem that limited the firm’s potential. He felt that the firm had not successfully transformed from the developing stage to the commercialization stage. The firm had not acknowledged the importance of changing to a market driven firm with efforts on sales and marketing which is needed on the international markets.

“You need to understand that a start up is really just in development. Until you have your first customer you don’t have a product, even if people say that they have a product. But believe me, if they don’t have a customer they don’t have a product. A product is not a product unless it is being sold on the market.”

Yuval Dovev, CEO, Commil Ltd.

Reznik raised the issue of standards as the main task of preparations for their internationalization. They had the intention of going to international markets but did not know which markets to target yet. North America, Europe and Japan many times adopt different standards. Because of

the uncertainty of standards, the biggest preparations were to develop the products to fit all the standards and make it work on all foreign markets. Reznik also hired two people with international experience to the staff. One of them was a part of the investment of a venture capital fund and the other was a sales manager from one of their customers. The preparations that were done by Rafi Ben-Atar were to inform the market of the firm and their products. Presentation material was carefully formed and the firm joined a number of international forums for their industry. They also went to a number of international exhibits like Cebit in Hannover. Norman means that there were no special preparations for the internationalization. The firm had the intension to be international from the start so every effort in the development of the firm was already done with the international markets in mind.

10. What was the strategy: a clear plan or a broad vision?

When it comes to the internationalization strategy, Maryanka, Dovev, Rafi Ben-Atar and Reznik are very clear in what they are doing. Maryanka is targeting the Germany market and then plan to expand to Japan. Dovev's strategy was to find a partnership with a global vendor. The firm did not have enough resources to penetrate new markets on it's own so they needed the marketing and sales channels of a large partner. Rafi Ben-Atar creates local partnerships in selected markets along with partly owned subsidiaries in Germany and the US. The customers are well defined and the future plan is rather clear. Reznik talks about the possibilities for their technology in their plans. He has a clear plan for the next 2 years how to develop the firm in accordance to their technology. He also has some plans for 5 years but say that those will be modify with changes in the technology.

With a strategy that is a bit less fixed are Tick, Norman and Kafri. They develop a general plan that is open for many possibilities. They target some markets but are ready to shift all the efforts to other markets. Norman had to change his strategy considerably after changes in regulations while Tick and Kafri mention new opportunities as the main triggers to change their strategies.

"I take opportunities as they come. I have a vision about how markets will develop but the sales are based on opportunities as they come. I would go to any market..."

Oded Kafri, CEO, Varicom Communications Ltd.

Other interviewees with an open plan are Yacobson, Shemesh and Bentsi Ben-Atar. Yacobson say that they "sell where they can sell" while Shemesh think about what they can offer and how the

demand look like. Bentsi Ben-Atar follows their customers and tries to sell where they can. They focus on what they can offer and try to find the best market for their products. He however says that they started with markets where the culture resembles the Israeli culture: *“We first try to target countries with a similar mentality as Israel, such the Mediterranean countries like Turkey, Italy, Spain and Greece which all are hot blooded”*.

11. Was the strategy of internationalization often reviewed and changed?

When it comes to reviewing and changing the internationalization plan, Maryanka and Dovev express confidence in their plans. Maryanka explain that they are very persistent in their strategies while Dovev only make small adjustments. Reznik on the other hand have a structured review every 3 months where they conclude what customers said and if they should do some changes. Rafi Ben-Atar expresses the importance of knowing what is happening on their markets.

“Well, when you work in the international market, if you are not aware of market changes and are able to adapt your strategies, you might find yourself out of the market. You need to have sensors. We discuss with sales people and representatives continuously. Every year we have sales meetings with all the sales managers all around the world.”

Rafi Ben-Atar, CEO, MainNet Communications Ltd.

12. Did the strategy leave room for experimentation and trial and error tactics?

Most of the interviewees said that they do not experiment that much or using that much of a trial and error tactic. Yacobson stand out by explaining how they are all the time trying new things: *“...the technology is there, but it is all about to find the best use of it.”* Dovev mean that their strategy is prohibiting experimentation but mention that they are planting a lot of seeds. They are planting seeds of relationships in many parts of the world and when one starts to work, all energy goes there. Dovev express together with Kafri, Reznik and Rafi Ben-Atar that the main reason not to experiment is limited resources. As a small firm they can not afford to fail. Dovev even described the whole venture as a trial and error or a *“trial and hopefully not error”*.

13. Did the process of internationalization follow the plan?

Most interviewees are dissatisfied with the speed of their internationalization. Maryanka thought that it would go much faster but is instead developing slowly but steadily. Rafi Ben-Atar had a good development in the beginning but changes in regulations slowed down the process

considerably. Shemesh is very disappointed by the internationalization but feel that they can go slow because of the success they experience on the domestic market.

14. Do you have any procedures to collect information or learn from mistakes?

The attitudes toward mistakes and learning from them are quite different. Maryanka claim that they do not care about mistakes: *“We don’t care about mistakes, we do them anyway but we try to minimize the effects of the mistakes.”* Rafi Ben-Atar on the other hand talks about procedures and how to make corrective actions. He calls the procedures *“Questioning”* or *“Event analysis”* where they analyse mistakes and try to improve their actions. Kafri recall learning from competitive situations as important for future actions. They had some problems competing with larger players in Portugal which changed how they pursuit foreign markets. Yacobson stresses the importance of learning the market by your self since there is no information in magazines about new markets.

15. Have the internationalization changed your attitude towards entrepreneurship?

Some of the interviewees claimed that the process of internationalization has changed their attitude toward entrepreneurship. Still, the majority of them feel that the internationalization is a part of the venture and they knew what to expect. Yacobson and Kafri perceive the entrepreneurship to be the same. It does not matter what you sell or where you sell, entrepreneurship is about taking risks and building business. Dovev reflected on his own personality and say that he never thought of Israel’s borders as his. He started working on the international scene and do not really see a difference in being an entrepreneur on the domestic versus the international scene. Shemesh mean that his attitude toward entrepreneurship has not change but the understanding of the international business have increase. He means that much bigger resources are needed when you operate internationally. The internationalization is something that needs management focus and a lot of financial resources to be successful.

Maryanka, Reznik and Bentsi Ben-Atar all say that their attitude towards entrepreneurship has changed with the internationalization process. Maryanka mentions that there has been a major change for entrepreneurial opportunities which has its implications for the modern international entrepreneur. He feels that entrepreneurs on the international scene have a much better position today. The big manufacturers of today are not solely relying on their supplier but are also listening to entrepreneurs. The manufacturers could then push their suppliers to imbed solutions from the entrepreneurs. This creates many opportunities for entrepreneurs but also greater challenges. The entrepreneur has to learn how to act internationally and be prepared to take the

solutions wherever in the world it is needed. Reznik on the other hand emphasises the importance of changing the management. The stages of internationalization and quick changes in the international markets call for continuously new perspectives and in-puts. Internationally you have to be fast to adapt and to find the best way for the company. Bentsi Ben-Atar lifts forward the presentation of the company as a key difference on the international market. On the international market you have to have another approach then on the domestic market. Of importance is to show that the firm is serious and stable.

4.2.4 Pragmatic advices

16. What would be your advice to an inexperienced entrepreneur in the internationalization process?

Tick – As a new entrepreneur, its easy to follow all opportunities but this will cost in training and time. It is also very important with choice of partners and distributors, they are crucial.

Yacobson – My advice is to not just run after the quick money but instead to put a lot of efforts to find a strategic partner to work with.

Kafri – A good entrepreneur should understand that raising a lot of money is not always very good. It's good when you are strong, but the most important is to start with building the business and then go for external investments.

Maryanka – Do it by your self, don't trust others, there are no short cuts. Many people are relying on other people to take the decisions.

Reznik – There are so many problems, first technical and then investments. You have to have a good team that covers all the problems, both the technical and the cash flow and then the management and marketing.

Bentsi Ben-Atar – The most important is to find a mentor. We saw it in the local market, experience means a lot. Some pit holes and some mistakes that we did on the way could have been avoided. Now we are working with such a mentor. The second advice is to be prepared for the high personal price you have to pay. We are all modern slaves; we work long hours and are always available to our customers

Dovev – Get someone local to represent you. What ever country you work in, you need to find a local representative. First you need to find the opportunity, but once you have found an opportunity, don't pursue it on your own, find a local representative. The representative should be a business developer not in distribution or sales. The second advice would be to use your networks. The international network is the key to international entrepreneurship, and if you don't have one, buy one.

Norman – You have to hire someone with experience in marketing. You can't run worldwide from the start, you don't have the resources. Often in high tech, the development is very fast so you have to run.

Rafi Ben-Atar – First of all, you need someone with international experience. I would not count only on advises. You should take some with years of successful international experience. He needs to show that he managed something on the international market. A start-up can't afford to fail.

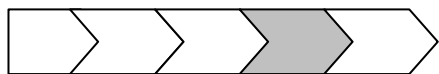
Shemesh – When you go abroad its important to have at least one big customer at your home market. Your foreign customers will ask you if you already sold on your home market.

4.2.5 Additional comments

Dovev mentioned the special challenges of being recruited as the CEO of a small entrepreneurial firm. The technological founders stayed in the firm and had naturally a strong influence and power in the firm. The top management for example was a bit big since they had to find titles and positions for the founders like chief technological officer and chief scientist. The strong influence of the founders can pose difficulties for the new CEO who has the role of changing the firm.

Norman explained the Israeli way-of-thinking by telling a short story: *"It was during a tour with the Israeli export institute. A guy from another firm came to me and asked me to help him with his tie. Everyone knows that for an official event you need to put a tie, but for some Israelis, this is not natural. This shows you the Israeli mentality. He knows that he does not know that much of marketing, but he is jumping into the water. Whatever Israelis are doing, they think that it is great. Not everyone on the other side like this attitude, but it can work"*.

5 ANALYSIS



This chapter aims to present the analysis of the thesis. The chapter is divided into three parts. The first part presents the analysis solely from the empiric where a grouping of the firms is identified. The grouping will thereafter be used as a structure to understand the rest of the analysis. In the second part, the empiric is analysed in relation to the theories of the study. Last, the conclusions from the previous two parts are discussed more freely and in-depth.

5.1 WHAT DOES THE EMPIRICS SAY?

The CEOs of the studied firms show a mix of characteristics and choices. An initial grouping is needed to clarify different characteristics and trait of the CEOs. The grouping is made by the most significant difference observed in the empirics which is the prior international experience and role in the firm. The following analysis is thereafter structured around these groups where similarities and deviations are highlighted and discussed.

Three identified groups on the basis of prior international experience and role in the firm

The founders of small technological firms many times stay in charge of the firm as CEO for many years. This was the case for most of the studied firms where only two of the interviewees were hired to the firm after its foundation. The majority (eight out of ten) had started their firms with a technology and then stayed as CEO with responsibility for the complete development of the firm. Four of these meant that they had no previous international experience. While all interviewees described similar attitudes to the importance of the international market, the actions of the CEOs without international experience differed from the rest. This group of leaders has international intensions but have to learn the characteristics and ways of the international market along with the development of their firms. The CEOs with international experience who founded their own firms also learn during the development but they are familiar with international business and know what to expect when expanding to foreign markets. On the other hand is Dovev whose role is to transform the firm to meet the international challenges. He has international experience and got recruited to the firm in the stage of internationalization.

Yacobson also have a similar role in his firm and expresses similar actions in his management. The levels of international experience and role in the company give us three distinctive groups:

- A. The CEOs with international experience and the role of transforming the company for the international market (Dovev, Yacobson)
- B. The CEOs with international experience that are developing their own companies (Tick, Maryanka, Norman, Rafi Ben-Atar)
- C. The CEOs without international experience that are developing their international experience along with the development of their firms (Reznik, Bentsi Ben-Atar, Shemesh, Kafri)

The prior international experience and the role in the firm both have an impact on the decision making. The CEOs of group A. come to their firm with international experience and are expected to lead the firm into the international markets. As their role prescribes, they promote a strategy for the internationalization and then work hard to realize it. A major part of their work is to transform the firm internally to fit the internationalization. The CEOs in group A. have the expectations of an international manager and since the aim is to transform the firms these managers are called *the Transformers*. The CEOs of group B. are founders or cofounders of their firms and has also international experience. They all know what it takes to operate on the international market and they have developed their firms with this in mind. Their role as founders of their firms leads them to a more overall responsibility than the CEOs in group A. They are the foundation of the firm and are able to expand internationally more carefully. Their role is not solely on the internationalization but on all aspects of the firm. The CEOs of group B. have both business experience from their respective fields and from the international marketplace and are now exploring their possibilities with their own founded firms. These managers are hence called *the Explorers*. The role of the CEOs in group C. is of survival and long term development of the firm. They might be able to secure survival and development on the domestic market but due to lack of international experience they are fumbling in the internationalization. The CEOs in this group are called *the Newcomers* since they are new players on the international marketplace.

The international experience and role in the firms stand out as an important factor for the internationalization of the firms. This basic feature influences the behaviour and is reflected in all stages of the firm's development. The entrepreneurial orientation, the strategic decision making

and the strategy formation are all influenced by these factors. This categorisation is therefore chosen to guide the reader through the analysis. Similarities and deviations are analyzed according to the three identified groups;

- A. *the Transformers*: Dovev, Yacobson
- B. *the Explorers*: Tick, Maryanka, Norman, Rafi Ben-Atar
- C. *the Newcomers*: Reznik, Bentsi Ben-Atar, Shemesh, Kafri

Venture capital and its strategic implications

All the firms have international versatile technologies and business ideas. Some of the CEOs express that they have to go internationally to survive (Maryanka, Dovev) while some are seeing internationalization as the only way to expand (Shemesh, Bentsi Ben-Atar). All of the interviewees have mentioned that financial resources have a big impact on strategic decisions. An important decision of the management of small technological firm is therefore whether or not to receive investments from venture capitalists. Extra financial inputs from a venture capital fund could boost the internationalization and allow the management to expand more rapidly. Venture capital also means selling out a part of the firm which has its effects on the personal level of the founders.

Out of the interviewees, only three are working in firms that have investments from a venture capital fund (Rafi Ben-Atar, Dovev, Reznik). Of interest is that they represents all of the identified groups; *Transformer*, *Explorer* and *Newcomer*. All of them express that the money from the venture capital is essential for their internationalization. They would target international markets even without venture capital but the extra finances are allowing them to go more rapidly. *The Newcomer* is the only one of these without prior international experience. The solution for his firm was to hire a marketing VP with international experience to lead the internationalization. The hired manager comes from the venture capital company and is a part of the investment. In this way the firm got someone with international experience to capitalize on the extra financial resources. Venture capital can support the managers in an area that is tough for an expanding small firm which is the limitation of resources. The change of ownership and involvement of external wills brings however new challenges and issues of personal aims and plans of the founders.

The majority of the studied CEOs did not want venture capital for personal reasons. They are driven by the thought of creating and developing their own firms as they please. By this, they have total control of the firm but they will not be able to expand as quickly as the firms with external financing. The choice is most often on a personal level and their aspiration for the future.

Attitude to certain markets

Israel does not have a natural trading partner which leads to a diversity of targeted market of the interviewees. While the European Union is the biggest trading partner, many Israelis feel stronger bonds with the North American market. In the last couple of years also the Asian markets have been more attractive for Israeli firms. The studied firms have expanded to a number of markets including the United States, Germany, Spain, Korea, India, Mexico, the United Kingdom and many more. The specific industry in which the firm operates obviously influences the direction of expansion but also factors like experience and attitude play a significant role in the decision.

Dovev (*Transformer*) prefers the European market while Maryanka (*Explorer*) explain how the German market is the leader in his field. Shemesh (*Newcomer*) would like to work in Scandinavia since his roots are in Sweden. Bentsi Ben-Atar (*Newcomer*) prefers the Mediterranean Sea countries for the similarities of the cultures while Kafri (*Newcomer*) promotes the US for the attitude of entrepreneurship. The attitude of the CEO towards certain markets clearly determines the expansion route for the company. The attitude some times derives from earlier business experience but maybe more often from a general attitude towards a specific market or culture.

Entry mode

Small firms have a number of possible choices and paths to expand to foreign markets. The studied firms show a variety of entry modes such as: direct sale, sister company, subsidiary, partnership, cooperation, imbedded products and distributors. A common and popular strategy is to find large partner firms which help them penetrating new foreign markets. This strategy allows them to reach foreign markets without taking too big financial risk themselves. Many of the studied firms do not only choose one entry mode but instead try a number of entry modes simultaneous.

The interviewees specify their entry mode choices as following:

Entry mode	CEO
Direct sales	Maryanka, Dovev, Rafi Ben-Atar
Subsidiary/Sister company	Yacobson, Rafi Ben-Atar
Distributors/Agents	Tick, Yacobson, Shemesh
Partnerships/Collaboration	Yacobson, Kafri, Reznik, Dovev, Norman, Rafi Ben-Atar, Shemesh
Imbedded products	Bentsi Ben-Atar

Table 3: Choice of entry mode.

According to the three identified groups:

Category	Entry mode
<i>Transformers</i>	Direct sales, Subsidiary/Sister company Partnerships/Collaboration,
<i>Explorers</i>	Direct sales, Subsidiary/Sister company, Distributor/Agents, Partnerships/Collaboration,
<i>Newcomers</i>	Distributors/Agents, Partnerships/Collaboration, Imbedded products

Table 4: Choice of entry mode according to category.

The two CEOs that chose to use many entry modes simultaneous are Yacobson (*Transformer*) and Rafi Ben-Atar (*Explorer*). They enter new markets in three different modes. On the next level with two different entry modes are Dovev (*Transformer*) and Shemesh (*Newcomer*). On the level of one chosen mode are Norman, Tick (*Explorers*), Kafri, Reznik and Bentsi Ben-Atar (*Newcomers*). Entry modes have different characteristics and level of risk. The entry modes in table 3 are sorted by financial investment and risk. The entry modes of direct sales and subsidiary/sister company demand a larger investment and have therefore larger financial risks. The inherent risk of the entry mode decrease as you go down in the table above. Generally the less risky entry modes have been chosen by *the Newcomers* while the more risky entry modes have been chosen by *the Transformers*.

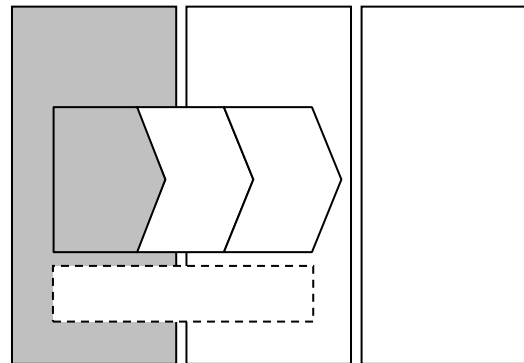
5.2 RELATING TO THE THEORIES

In this part, the empiric is analyzed and compared with the chosen theories on entrepreneurship, internationalization and strategy. The part is divided according to the three different parts identified in the research map (entrepreneurial orientation, strategic decision making and strategy formation) which are focusing on a number of areas described in the theoretical summary.

Entrepreneurial Orientation

The Innovator

The entrepreneurial orientation in these small firms is strongly influenced by the founder and the CEO. The industries in which the studied firms operate are technological and the CEOs are in most cases also the founder. Of the ten studied companies, only two had a CEO that was not also the founder (*the*



Transformers). The international entrepreneurial orientation is described in the theory by Knight (2001) to be associated with managerial vision, innovativeness and proactive competitive posture overseas. The innovativeness is also one of the accepted dimensions of the entrepreneurial orientation (Lumpkin & Dess, 1996). The *Transformers* contribute to their firms with innovativeness in the international business development and are thereby complementing the technological innovativeness of the founders. The other eight of the interviewees have led the initial technological development in their firms and could be seen as innovative when it comes to the technological development of their firms. The question is how this innovativeness could be changed to innovativeness in the business development in the firm. Will the firm be as innovative when it comes to marketing, sales and distribution? First, the visions of the CEO reveal some of the intentions. They all describe a vision where they create something new and present a new solution on the market. While they all emphasize the whole process of technological development, commercialization and internationalization there is also a strong will to also create it yourself. The second point is that while they put more efforts on marketing and sales activities, the personal interest somewhat stays with the technological part of the firm. This was especially obvious in the case of Kafri (*Newcomer*) and Tick (*Explorer*) who described the technological development to be the most fun and interesting part of the process.

The requirements on the CEO change from being a technology innovator to become a business innovator. *The Transformers* have been recruited for this specific reason whereas the question stays more unclear for *the Explorers* and especially for *the Newcomers*.

Personal aim

The managerial vision described by Knight (2001) is also influenced by the personal aim of the CEO. *The Explorers* and *the Newcomers* have started from scratch and built their firms with a financial risk and a personal price. An attitude which was found in most of these CEOs was that they started their firm out of joy of having their own firm and be their own boss. The most important for them was to keep the firm themselves instead of a development which is as fast and efficient as possible. The aim of *the Transformers* on the other hand is to bring their international experience to the firm and quickly develop the firm to be successful on the international marketplace.

The aim of the CEO influences the willingness to take risks and determine the focus of the top management. *The Explorers* and especially *the Newcomers* who are the founders of their firms are less willing than *the Transformers* to take risks that could endanger the survival of the firm.

Opportunity discovery

Entrepreneurs with international experience will, according to Mathews & Zander (2004), have easier to discover international viable opportunities than entrepreneurs without international experience. The studied individuals have very diverse backgrounds but have all discovered international opportunities. Almost half of the interviewees do not have any international business experience at all (*the Newcomers*). All the firms in the study had technologies and products for the international market. The international experience did not have a crucial impact on the ability to discover international opportunities even though it could have made it easier. The exception who discovered his opportunity by international experience is Maryanka (*Explorer*). He discovered his idea while working for an Israeli company in Japan. What all interviewees mentioned was that you have to think internationally as a technological firm in Israel, even if you never put your feet outside the country. Many of the technologies was just sprung out of cutting edge technological development which could be implemented anywhere in the world. The discovery was thereby coming from a development in a technology rather than from a specific

demand in the international market. The international experience had a small impact on the discovery itself but more on the development of the company.

International opportunities for the studied firms derived from technological development, not from international experience.

Risk taking

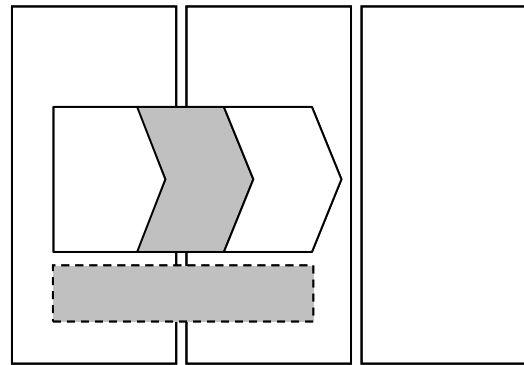
The dimension of risk taking is important for the entrepreneurial orientation (Lampkin & Dess (1996). The willingness to take risks characterizes the firms and individuals with an entrepreneurial orientation. The interviewees were rather diverse in the opinion on risk-taking. Most of the interviewees perceive the marketing and sales to be the most risky parts for the firm. Many of the founders are very confident with their technologies but are less convinced of how the market will perceive them. Two of *the Explorers* (Maryanka and Tick) who felt that the technology development was the most risky part expressed confidence in the selling of the products but were less sure if the developed products would fit the customer in a desired way. The interviewees had more similar thought when it comes to the risk of being too entrepreneurial. A balance of the entrepreneurial orientation is according to Knight (2001) vital for the internationalizing firm. The technological development is where the risk of being too entrepreneurial is by far the biggest. The interviewees mean that the technological development has to be limited after the initial development stage. When the technology is developed there is no longer need for as costly development ventures. The main task for the CEOs is to limit the developers to not continue develop the perfect product but rather the best suitable products for their customers. The risk is that the firm develops a too costly product for the market.

All interviewees experience that developing a small firm internationally is a risky venture. *The Explorers* felt more confident with the marketing and sales than with their technologies.

Strategic Decision Making

Planned strategy or broad vision

The decisions for the internationalization are strongly influenced by the approach of the top management. Crick & Spence (2004) described this by the choice of either having a planned strategy or a broad vision. A planned strategy is implemented and thereafter altered to be successful while the broad vision shapes



the plan incrementally through entrepreneurial learning. The interviewees who claimed to have a clear plan represent all three categories of managers. Dovev (*Transformer*), Rafi Ben-Atar (*Explorer*) and Reznik (*Newcomer*) have a planned strategy and are relatively clear about how to develop their firms. A fourth CEO, *the Explorer* Maryanka, also has a planned strategy. His opportunity sprung from a specific need in the car industry and he is very clear about what has to be done to make the firm successful. On the other side of the scale with a broad vision are Yacobson (*Transformer*), Shemesh and Bentsi Ben-Atar (*Newcomers*). These managers do not have a planned strategy but instead tries to find new ways or markets for their products. The three remaining CEOs Tick, Norman and Kafri are two *Explorers* and one *Newcomer*. These have strategies but are very flexible and could easily switch strategy or go to a broader perspective periodically.

The choice of having a planned strategy is spread across the three categories. The tendency of having a broad vision is stronger for *the Newcomers*.

Chance events

The path for a new small firm is seldom linear and clear. The efforts of a firm could change from a discussion on a fair or because of new legislation. This uncertainty and changes are described by Crick & Spence (2004) as chance events which could generate both opportunities and obstacles. How the CEO perceive these events and how these are handled are of importance for the firm's ability to adapt and develop. Seven of the interviewees described contacts with networks, customers or partners to generate new opportunities. They saw these events as possibilities to expand to a new market or trying their products for another use. These seven are from all the groups but of interest are the remaining three interviewees. Reznik (*Newcomer*) and Rafi Ben-Atar (*Explorer*) experience most of the chance events to be problems or obstacles. They had an idea of what was going to happen and this was disturbed by unexpected events that influenced the firm.

They however took rather easy on the changes and Rafi Ben-Atar saw these events as natural for a start-up firm. The third of these three is Dovev (*Transformer*) who describe chance events as both opportunities and threats. He encounters chance events continuously and changes the firms according to what is happening.

All interviewees encounters chance event. A majority (seven) perceive chance events to be positive while three of the interviewees perceive them as problems or obstacles. These three represents all of the groups; *Transformers*, *Explorers* and *Newcomers*.

CEO focus

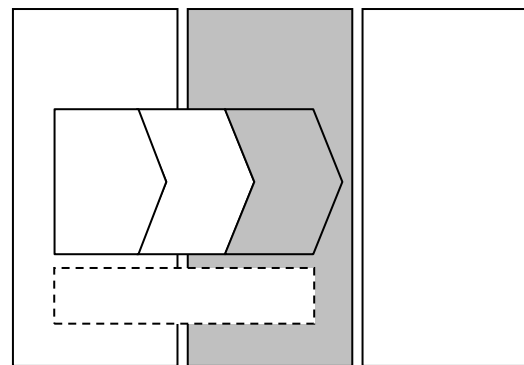
The aim of this study is to understand the internationalization on an individual level. The importance of the CEO is stressed by Andersson (2000) and Andersson et. al. (2004) who highlight the importance of support from individuals. The internationalization need appropriate attention by the CEO and the top management and must be integrated in the overall strategy of the firm. Maryanka, Norman, Rafi Ben-Atar (*Explorers*) and Reznik (*Newcomer*), who are mainly *Explorers*, explained how the technological development and the business development have been the two focus areas for their efforts. They focus more on the technological side in the initial stage but are now more focused on developing the business in the best way. The two focus areas are constant but with varied attention according to the developing stage of the firm. Also Tick (*Explorer*) and Kafri (*Newcomer*) mention the swift of focus from the technological development to the business development. They do however also express their personal preference of the technological development and that the technology is the core of the firm. The two *Newcomers* Shemesh and Bentsi Ben-Atar have a careful approach to the internationalization. Bentsi Ben-Atar mean that they are still focusing a lot on their domestic customer but that more and more attention is put on the international operations. Shemesh tried to internationalize earlier on his own but did not succeed. Now he has a very careful approach and tries to internationalize together with a partner or a domestic customer. The revenue comes from domestic customers so the focus is mainly on these. The two *Transformers* spend most of their time on developing the firm's strategy and marketing. Dissimilar to *the Explorers*, *the Transformers* also put a lot of efforts on the internal communication and efficiency.

The focus of the CEO is rather different for the three groups. *The Explorers* focus on both the technological development and the business development with various strengths according to the stages of the firm. *The Newcomers* show similar traits but tend to stay on the technological side because of personal preference or inexperience of internationalization. *The Transformers* focus on the strategy and the marketing but also a lot on internal factors.

Strategy Formation

Type of entrepreneur

The formation of the strategy is influenced by the type of entrepreneur the CEO is. Andersson's (2000) classified three types of entrepreneurs who approached the international marketplace in different ways; the marketing entrepreneur, the technical entrepreneur and the structure entrepreneur. None of



the firms in the study operations in mature industries and develops new ideas from restructuring which characterize the structure entrepreneur. *The Transformers* show similar traits as the marketing entrepreneur where their main focus is business development and efficiency with less interest in the physical products. They are continuously choosing new markets, often by personal preference and networks. On the other side are *the Newcomers* who have developed their firms from a technological innovation. The idea has many times come from working in R&D for another company or from their service in the army. *The Newcomers* could be described as technical entrepreneurs whose main interest is the technology. Internationalization is triggered by a need to reach overseas customer and they follow inquiries from overseas customers to new markets. *The Explorers* show similar characteristics with both the marketing entrepreneur and the technical entrepreneur. They have a technical background and technical competence but have founded their firms from an experienced need on the international market.

The characteristics of the marketing entrepreneur match the CEOs in the study called *the Transformers*. The technical entrepreneur show most similarities with *the Newcomers* while no match was found of the structure entrepreneur. *The Explorers* show characteristics which are a mix of the marketing and the technical entrepreneur.

Born globals

The timing of the internationalization is described by many scholars by the concept of born globals. These firms expand to foreign markets and show international capabilities and performance from or near their founding. Hashai & Almor (2004) describe the process to start with export, then marketing subsidiaries and finally a variety of expanding activities. The great variety of entry modes of the firms makes it easier to analyze the firms according to the more general categorization of Aspelund & Moen (2005) as; born globals, early internationals and late internationals. *The Newcomers* Bentsi Ben-Atar and Shemesh are the ones who internationalize relatively late. They both had international intension but started to develop the business on the domestic market. Yacobson (*Transformer*) described his firm as a “late bloomer” with a late internationalization. His own role in the firm has however had an international focus from the start. The firm has to be separated from the CEO also in the case of Dovev. His role has been international from the start while the early development of this firm is more unclear. Early internationals who test their products on the domestic market first and then internationalize early are Tick, Maryanka (*Explorers*) and Reznik (*Newcomer*). They have no intensions to focus on the domestic market but conduct tests and received feed back from domestic customers to learn about the best way to target customers overseas. Norman, Rafi Ben-Atar (*Explorers*) and Kafri (*Newcomer*) internationalized right from the start without the domestic market or test on domestic customers and are therefore categorized as born globals.

The timing of the internationalization is here categorised in three categories. The late internationals are all *Newcomers* while the early internationals have a majority of *Explorers*. *The Explorers* also hold most positions for the born globals. The timing of *the Transformers* firms is unclear. The approach from *the Transformers* themselves is however international from the start.

Entrepreneurial learning

The formation of the strategy and the initial competitive interaction overseas are important inputs for the continued development of the strategy. Both Knight (2001) and Mathews & Zander (2004) emphasize the importance of learning from and developing the strategy. Most of the interviewees had not reflected on structured procedures to learn from their internationalization and their experiences. They learn themselves from overseas operations but do not actively document or discuss their experiences. Maryanka (*Explorer*) mentioned that they do not care about mistakes. They make them anyway but try to limit the negative effects of the

mistakes. Kafri (*Newcomer*) described a competitive situation which they learned from but showed no signs of systematic learning from the internationalization. Yacobson (*Transformer*) emphasized the importance of learning from the market yourselves since that is the only way to have enough information about the market. The only CEO who described a structured way of learning from their international operations was *the Explorer* Rafi Ben-Atar. They called the procedures questionings or event analysis where the involved individuals met to discuss what had happened and what they could learn from the situation.

The interviewees showed a lack of interest in developing structured procedures to learn from and discuss experiences from their internationalization. The individual CEOs learned from the process but showed limited efforts to analyze and spread their experiences. Only one CEO, an *Explorer*, described systematic procedures to analyze and learn from their internationalization.

Preparations

The preparations are an important part of the formation of the strategy. Knight (2001) mentions market research, international marketing and adoption of products as ways to prepare for internationalization. The two *Explorers* Tick and Rafi Ben-Atar mean that the marketing of their firms and products is the most important preparation. Rafi Ben-Atar also mentioned the importance of market research and analysis before expanding to a new market. The firm of Rafi Ben-Atar was developing cutting edge technology and tried to sell this new technology to a foreign market. The customers were not ready to adopt the new technology and the sales for Rafi Ben-Atar went below expectations. Reznik (*Explorer*) mean that the issue of standard was the main preparations for their internationalization. Reznik's issue with standards is also connected with the nature of technological firms with advanced technologies. The industries in which these firms are acting have many times not concluded which standard to follow. The standards are set by committees which consist of major players in respective industry. Some of the studied firms are involved in the setting of standards but more often have to follow what the bigger players are deciding. Dovev (*Transformer*) came to the firm when it was already active internationally but felt that a lack of preparations was one of the weaknesses of the firm. This supports Karagozoglu & Lindell (1998) who mean that a majority of small firms lack proper preparations. Norman (*Explorer*) on the other hand mean that they did not have any specific preparations for the internationalization since the aim always been to act on the international market.

The preparations for the internationalization tend to be a forgotten aspect for most interviewees. The CEO that focused on preparations was *the Explorers* and they had prepared through marketing, market research and standardisation.

5.3 DISCUSSION

The analysis is completed with a discussion which tries to understand and connect the patterns and results from the two earlier parts of the analysis.

Entrepreneurial orientation

Innovation is important for all entrepreneurial firms and all the studied firm possesses some kind of technical innovation. A firm does however need other competences of innovativeness to be successful on the market. The change from a technological to a business innovator stands as the main challenge for the internationalization. *The Transformers* have, as their name implies, as their foremost task to transform their firms to become international capable firms. This issue does however pose a big challenge for *the Explorers* and especially *the Newcomers*. They are the technological founders and it is not certain that they have the capabilities, competence or will to change their personal role to become a business innovator. The challenge to change the innovation also connects to the personal aim of the CEOs. As the question of innovativeness, the CEOs who are founders (*Explorers & Newcomers*) have more sentimental reasons to prioritize survival over expansion. They have founded the firm and worked hard to realize their own idea. The fact that they prioritize long term survival tends to decrease their willingness to take big risks. The venture itself is risky and they do not want to risk losing their firm. *Transformers* on the other hand have expectations from the owners and the board to develop the firm quickly. The aim is therefore to bring new competence and new perspective to the firm and make changes. The change imposed by *the Transformers* many times means investments and expansion which include risk-taking. They are for this reason more willing to quickly try a new strategy and take more risks.

How the opportunities of the firms had been discovered was more difficult to analyse according to the three groups. Disagreeing with the theory, the opportunity discovery in the studied firm sprung from technological development rather than international experience. Most of the CEOs had worked for Israeli companies or the IDF (Israeli Defence Force) where the opportunity was discovered from cutting edge development. The realization of the ideas international potential

later on is more influenced by the international experience but not the discovery. One factor in this could be the limited domestic market combined with the high level of technological development in Israel. There is an over supply of technological firms and new start-ups need to target international markets to stand a chance.

The risk-taking is a constant issue for the CEOs of small technological firms. All interviewees express that it is a risky venture to develop a small firm internationally. The question is therefore where the CEOs perceive the most risk internally for the firm. The perception of risks was relatively similar. One pattern could be seen was that *the Explorers* felt more confident with the marketing and sales than with their technologies. Otherwise the difference lay in what the CEOs feel confident with. All studied firms have technological products that must fit their customers and markets. The ones that perceive their technologies to be good see the marketing and sales to be the largest risks. The ones who perceived the technological development part to be the most risky expressed a confidence when it came to marketing and sales. They felt that their products are good but they do not know if they will fit with the plans of their possible customers. Where the CEOs see the biggest risks for their firms shows what they perceive as the key area for success. The area with the biggest risks is also the area where it is important to succeed. If the marketing and sales are the areas with most risks then the efforts must be focused on working with customers and how to sell the products. The risk of being too entrepreneurial reflects the need to transform the firm to be more market driven after the initial development stage. The initial stage has to allow the developers to be very entrepreneurial in the technological development. The focus must then shift to the marketing and sales where it becomes most important to be entrepreneurial. The speed and the success of the internationalization depends on the ability of the management to efficiently transform the whole firm and then focus on the relevant parts of the development.

Strategic decision making

The decision to have a planned strategy or approaching the international markets with a broad vision showed at first a rather mixed result. The CEOs with a planned strategy came from all the three categories. One of them had discovered the idea through a specific need in the car industry in Japan while the three remaining had another factor in common. They are the three firms with venture capital funding. The involvement from an external part could possibly promote a more structured organization and more clear view on the development. They are all clear about how they want to develop the firm and have structured plans for the future. Two of the three CEOs

with a broad vision are *Newcomers* and the broad vision seems to be influenced by their inexperience of the international marketplace. They have a vision but need some experience and tests to determine how they could expand in the most successful way. The third CEO with a broad vision Yacobson (*Transformer*) also tries different markets and use of their products but seems to be more structured in his testing. The choice of venture capital funding shows some specific features of the CEOs. While they are focused and clear about their plans they still feel that limited financial resources hinder them from trying too many new approaches and markets. The question of venture capital funding creates opportunities but also new challenges for a small firm. Extra financial resources can boost internationalization and allow the firm to try more markets. The same investment also weakens the founders' position in the company and changes the ownership. The changed structure of the company calls for roles to be redefined and more opinions to be considered. The external financing often comes in the stage of internationalization and calls for a rapid and successful expansion. The CEO has to accept and get into the new role of leading the firm to the objectives of not only himself but also the investors.

Another factor which connects to venture capital funding is the attitude toward chance events. The three interviewees who are less positive to chance events are from different categories but are the same three who have a planned strategy and venture capital funding. The attitude toward chance events are not determined by experience or role in the firm but instead by the nature of their strategy. All changes to a planned strategy are seen as problems while the CEOs with a broad vision experience the chance events very differently. These CEO have only their vision and need chance events to guide their development and their future. So while chance event stands as problems for the CEOs with venture capital and a planned strategy (one *Transformer*, one *Explorer* and one *Newcomer*) the same events help the CEOs with a broad vision to form their development and direction.

The management attention or focus of the CEO is rather differentiated between the three groups. *The Explorers* describe the focus to be on both the technical side and the business side of the firm. The balance between these is determined by the development of the firm. The focus is more on the technical side in the beginning of the development to then shift to be mainly on the business side. Of importance is the fact that they discuss the balance and constant presence of the technical and the business side of the firm. *The Newcomers* show similar attitudes but tend to talk and focus more on the technical side. They do not, as *Newcomers*, have the international experience and could therefore feel more insecure about the business side in the international

marketplace. Another explanation could be that they seem to be more interested in the technical development. Their passion is with the technology, not the marketing or sales. Hence, the tendency to focus on the technological development comes from inexperience or personal preference. *The Transformers* on the other hand are focusing on the business side where the strategy and the marketing are of core interest. They are less involved in the technological development and instead put all their efforts on developing the business structure. By this, their focus is also on internal issues where they try to work with communication between departments or making the firm more market-driven. The technology was already in the firm when they arrived and the technological competence is there. What they offer the firm is business competence and international experience.

Strategy formation

The three groups were easily described by the types of an internationalizing entrepreneur; the marketing entrepreneur, the technical entrepreneur and the structure entrepreneur. While none of the CEOs showed resemblance with the structure entrepreneur, *the Transformers* were easily identified with the marketing entrepreneur. Their firms already sit with the technological know-how and the transformers are recruited for their marketing and business competence. The choice of markets by personal preference partly matches with the attitudes of *the Transformers*. The market preference comes from their international experience and general attitudes to certain regions. This selection of markets by personal preference is natural but could also create problems for the firms. The markets which might be the most logical in terms of industry and customers could be overseen or the expansion could become much more costly because of distance issues. On the other hand, working with a market or culture which one does not like or know could generate cultural problems and misunderstandings. *The Newcomers* showed rather different characteristics and could easily be identified with the technical entrepreneur. While some of them still had attitudes towards different markets, their choice of expansion was mainly based on inquiries from overseas customers. They have a technical background and are most enthusiastic about the technological development. They go international because of the need to reach a larger number of customers. The main issue for these managers is if they should continue develop the firm by themselves or if they should sell it and start to develop a new technology. Their core competence is the technology, not business development. This is the point of time for *the Newcomers* where some continue and develop skills similar to *the Explorers* and some hand over the position as CEO to a *Transformer*. *The Explorer* themselves show characteristics which are a mix of the two types. They have a technical background but have been exposed to the

international marketplace and its opportunities. The discoveries have still been pushed by technological development in Israel but these have been complimented by the knowledge and experience from other markets. They are eager to explore both the technical innovation but also their own capabilities as an international player.

The timing of both the commercialization and the internationalization has its traces in the mindset of the CEOs. To what extent the firms were born globals was determined by a classification of the timing of internationalization. Half of *the Newcomers* were classified as late internationals because of their relatively late expansion to international markets. They had an international aim but started on the domestic market and continued to international markets after developing more skills and knowledge about their business and capabilities. The commercialization was made on the domestic market where a customer base was created. The decision to commercialize on the domestic market and wait a bit with the internationalization could easiest be explained by a careful approach or the unfamiliarity of foreign markets. Some of these firms are also developing their business closely with partners or in alliances. They are selling their products imbedded in other products and use other companies' marketing and distribution channels. The timing of internationalization could vary with this approach but the firm is not determining its development solely itself. Half of *the Explorers* were classified as early internationals while the other half was classified as born globals. The early internationals target international markets from the start but are delaying the internationalization a bit by conducting tests and getting feed back from domestic customers. The domestic operations are not full commercialization but should be seen more as preparations for the internationalization to decrease the probability of failure on uncertain foreign markets. The limited resources and the fact that a small firm can not afford to fail promotes an approach of testing on the domestic market where the costs are lower. The born globals however are comfortable with directly trying their products on foreign markets. They commercialize and internationalize as soon as their products are ready. The first steps are to identify and approach the most relevant market right from the start. This approach is also adapted by *the Transformers*. Their firms might however have had another approach and could therefore not be identified by their timing to foreign markets.

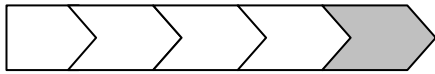
Despite the goal of becoming international, some of the firms are hindered or delayed in their internationalization. The international experience is very important in this matter since commercialization easiest takes place where the customers and the market are known and familiar. CEOs with no international experience (*Newcomers*) find it easier to start on the domestic

market and only later try foreign markets. Another factor which has an impact on the commercialization is the financial strength of the firm. Foreign markets require larger financial investments and therefore also larger risks. The commercialization stage is rather ambiguous and small firms can most often not afford to fail. A commercialization directly to the most interesting market could be very profitably but also mean a great financial risk. The probability of an international commercialization increases if the firm can stand one or two failures without going out of business. The last factor to determine the timing of the commercialization is the products specific features. The features could relate to either the technological development, the function of the products or the distribution of them. The technological development of the products could be done with domestic customers who keep the firm on the domestic market. Technological solutions are many times also dependent on other solutions or products. The products could be sold as imbedded in other products or as complement to several other suppliers. How the products fits in the total solution and how the products are being sold therefore determines what markets will be the first to approach. The last issue is of the distribution of the products. Alliances and partnerships make more and more sense for small firms with limited financial resources. Through these co-operations, a small firm can use synergies and reach more markets with the same resources. An important consideration is that once own strategies and plans for commercialization could be changed by the partners. Small firms could start co-operating with a domestic partner and then follow this partner to other markets. A strategy of starting with a strong domestic partner could open up a very good and cost efficient path to other markets.

The entrepreneurial learning was described by the theories to be an important factor in the internationalization. The interviewees showed a lack of interest in developing structured procedures to leverage the entrepreneurial learning. They often described how they learned themselves but not how this knowledge could be shared with the rest of the firm. They indicated that the procedures would take too much time or that the relevant experiences and knowledge was transferred informally. The exception was one *Explorer* who systematically transferred experiences and knowledge through what he calls questionings or event analysis. The preparations were another aspect that had limited attention from the CEOs. The group which stood up and prepared the firm for the internationalization as described in the theories was *the Explorers*. Some of them had identified the need of proper preparations and conducted market research or focused on standardisation issues. The rest of the firms could be divided into two groups; the groups which consider themselves international (*Transformers* and some *Explorers*) and

the group which internationalization is pulled by customers (*Newcomers*). The first group explains that there are no preparation since the firm is created or handled as an international right from the start. The preparations are hence imbedded in the structures of the firm. The second group on the other hand have a more passive internationalization where the directions and possibilities are created from inquires from foreign customers.

6 CONCLUSIONS



The conclusions part sums up the results from the analysis and presents them as they serve the purpose of this study.

Purpose

The purpose of this master's thesis is to contribute to the academic field of international entrepreneurship by examining the internationalization process of small firms on an individual level. The thesis aims to provide a holistic view of the process and to give a better understanding of the individual managers and their role in the internationalization process. My intention is to reach this contribution with a two-steps approach. The first step is to get an overview of the internationalization process for the individual manager through studies of current theories. The second step is to empirically compare this theoretical process with a number of cases of managers. Hence, the purpose will be served through the two steps:

1. To map out the internationalization process for the individual manager from current theories
2. To empirically test the identified process to reach a better understanding of the manager's characteristics and decisions

Step one:

The internationalization process for CEOs of small technological firms was mapped from comparing current theories and verifying this with empirics. The theories show a three stage approach of the process; **the entrepreneurial orientation, strategic decision making and strategy formation**. Each stage is influenced by a number of factors which determine how to proceed. These factors were verified to the empiric and stand out as important for the CEOs in the internationalization. Innovativeness, personal aim of the CEO, opportunity discovery and risk-taking influence the entrepreneurial orientation while the choice of a clear plan or broad vision, chance events and CEO focus influence the strategic decision making. Finally, the type of entrepreneur, how born global the firm is, internationalization preparations and procedures for entrepreneurial learning influence the strategy formation stage. On top of these factors, further patterns and attitudes that influence the process was found in the empiric. The international

business experience & role of the CEO influence together with the choice of using venture capital funding and attitudes to certain markets the process.

The stages of the process with their influencing factors together provide an overview of the process and serve the first step of the purpose which is to provide a general overview of the internationalization process for CEOs of small technological firms.

The process of internationalization for CEOs of small technological firms

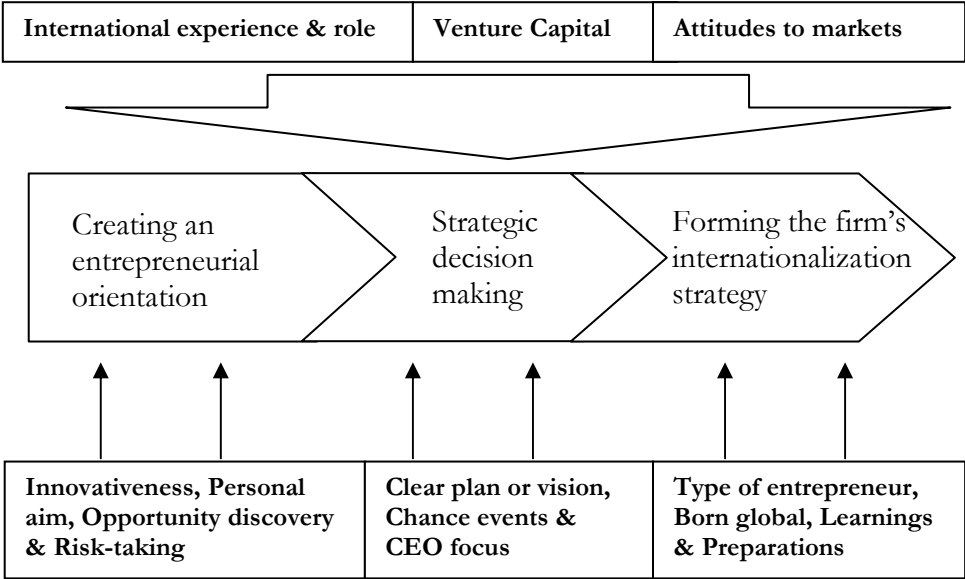


Figure 7: Model of the internationalization process.

Step two:

While the model above gives an overview of the process, it does not provide a deep understanding of the process for the individual CEO. The hermeneutic approach with empirical testing showed a variety of characteristics and behaviours of the CEOs. The process of internationalization is explained further by presenting the process for three groups which were identified in the empirics. These three groups show different characteristics of the CEOs and show how the process of internationalization is perceived by the CEOs. The three groups were identified by the most significant difference which is the prior international experience and role in the firm. The grouping and the description of the three types of CEOs provide a better understanding on how the internationalization is perceived and handled by the CEOs. The three groups or types of CEOs are; *the Transformers*, *the Explorers* and *the Newcomers*.

Below is a description of the characteristics of respective group:

The process of internationalization for the *Transformer*

The Transformer is not the founders of his firm but instead recruited to realize the firms’ vision of becoming an international player. He has extensive international experience and takes the role of transforming the firm. He develops clear plans for the international process as well as the future and focus on internal restructuring. The most important task is to change the firm to be able to tackle international challenges. Employees are hired and departments are created. *The Transformer* is a marketing entrepreneur who constantly searches international markets to exploit opportunities and further develop the firm.

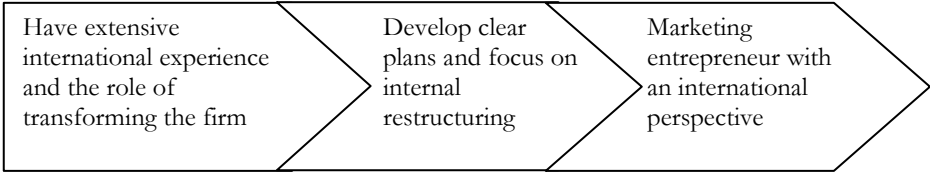


Figure 8: Model of the internationalization process for the Transformer.

The process of internationalization for the *Explorer*

The Explorer is a technological innovator who has some international experience. He saw an opportunity on the international market and started his own firm to explore his capabilities as both a technological innovator as well as an international business man. He develops his firm with constant consideration of both the technology and the business development. He is a mix of a technical and a marketing entrepreneur and internationalize as a born global or an early international.

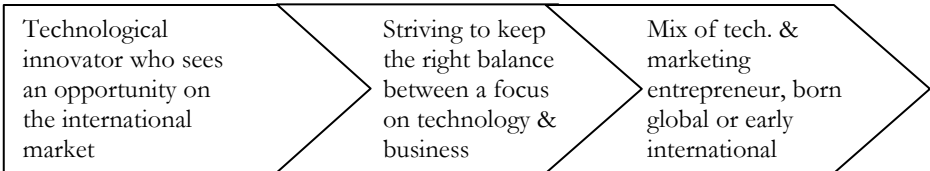


Figure 9: Model of the internationalization process for the Explorer.

The process of internationalization for the *Newcomers*

The Newcomer is a technological innovator who lacks prior international business experience but sits on an innovation and a dream of managing his own firm. He develops the firm with an open vision and the internationalization is triggered by inquires from overseas customers and chance

events. *The Newcomer* is a technical entrepreneur who learns about international markets and strategies incrementally and internationalize as late internationals.

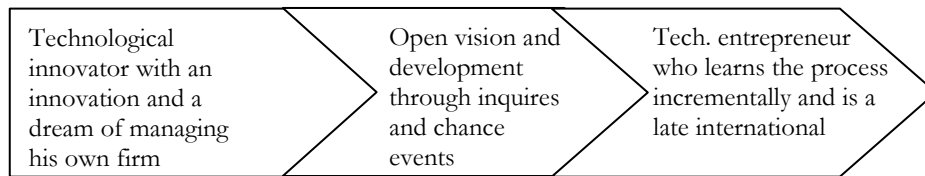


Figure 10: Model of the internationalization process for the Newcomer.

The purpose of the thesis is hence served by the two steps; first, a general map was created to show the complete internationalization process from the CEO’s perspective. Secondly, the theoretical map was tested empirically to receive more insight into the decisions and strategies of the studied CEOs. This resulted in the grouping of three types of CEOs which describe the process for different CEOs.

6.1 CONTRIBUTIONS TO THE THEORY

The contributions from this master’s thesis are to the field of international entrepreneurship. The focus of developing a holistic view of the internationalization process on the individual level provides insights of the behaviour of small firm managers and their possibilities and limitations. The many quantitative studies linking certain parameters together are here connected and compared with the individual experiences of the CEOs of small technological firms. The contribution was possible through a theoretical review and a hermeneutic approach to the phenomenon which was mainly researched by positivistic views. The hermeneutic approach makes it possible to see the process as a whole instead of many parts and also to see patterns behind actions. The conclusion could be used both to see new links between different parts but also to delve deeper into the understanding and perceptions of the CEO. The mapping of the process gives an understanding of how the different factors and decisions of the CEOs connect to each other and what this means for the international development of the firm. The understanding of the decision was further explored by the empirical testing which gives a deep understanding how the internationalization process is perceived individually. The three groups of CEOs who were identified in the empirics give a deeper understanding of the characteristics of these individuals and their choices. The choice of incorporating theories from three fields; entrepreneurship, strategy and internationalization gave the focus of the study extra inputs and explains the process from more perspectives.

6.2 FURTHER RESEARCH

The mapping of the internationalization process and the identification of different CEOs provide numerous possibilities for future research. This thesis used theories from three different academic fields which could be studied separately to provide further insight to the subject. The holistic view of the internationalization process was delimited by excluding the actual performance of the firm's international ventures. This obviously leaves room for relating the findings from this thesis to the performance of such firms. How do the three groups respectively function on the international market and how are their aims of survival versus expansion influencing the performance?

Further research could be conducted on any of the influencing factors or the relationship between them. How can the choice of venture capital funding be understood by the personal characteristics of the CEO? Another interesting approach would be to examine what qualities are needed to successfully shift from a technological innovator to a business innovator.

REFERENCES

Articles

- Acs, Z., Dana, L-P. & Jones, M. V. (2003) "Towards new horizons: the internationalization of entrepreneurship", *Journal of International Entrepreneurship*, 1, 1, pg. 5-12.
- Andersson, S., Gabrielsson J., and Wictor I., (2004) "International activities in small firms: Examining factors influencing the internationalization and export growth of small firms", *Canadian Journal of Administrative Science*, 21, 1; ABI/INFORM Global pg. 22
- Andersson, S., (2001) 'The internationalization of the firm from an entrepreneurial perspective', Stockholm: Entrepreneurship and Small Business Research Institute (ESBRI)
- Aspelund, A. & Moen, Ø. (2005) "Small international firms: typology, performance and implications", *Management International Review*, vol. 45, pg. 37-57.
- Audretsch, D. & Thurik (2001), "What's New about the New Economy? Sources of growth in the Managed and Entrepreneurial Economies", *Industrial and Corporate Change*, 10(1), pp. 267-315
- Berg, H. & Holmquist, C. (2005) "Entrepreneurial action as a driving force in SME internationalization"
- Berry, M. M. J. & Brock, J. K-U. (2004) "Marketspace and the internationalization process of the small firm", *Journal of International Entrepreneurship*, 2, pg. 187-216
- Brown, T. E., Davidsson, P. & Wiklund, J. (2001) "An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behaviour", *Strategic Management Journal*, 22, 10, pg. 953
- Collinson, S. & Houlden, J. (2005) "Decision-making and market orientation in the internationalization process of small and medium-sized enterprises", *Management International Review*, vol. 45, 4, pg. 413-436
- Crick, D. & Spence, M. (2005) "The internationalization of 'high performing' UK high-tech SMEs: A study of planned and unplanned strategies", *International Business Review*, vol. 14, Issue 2, pg. 167-185
- Etemad, H. (2004) "Internationalization of small and medium-sized enterprises: A grounded theoretical framework and an overview", *Canadian Journal of Administrative Sciences*, 21, 1, pg. 1

- Gankema, H. G. J., Snuif, H. R. & Zwart, P. S. (2000) "The internationalization process of small and medium-sized enterprises: a evaluation of the stage theory", *Journal of Small Business Management*, 38, 4, pg. 15
- Hashai, N. & Almor, T. (2004) "Gradually internationalizing born global firms – An oxymoron?", *International Business Review*, 13(4), pg. 465-483.
- Harveston, P. D. (2000) "Synoptic versus incremental internationalization: an examination of 'born global' and 'gradual globalizing' firms", Dissertation for Doctor of Philosophy degree, University of Memphis, Memphis
- Hayton, J. C. (2002) "The effect of intellectual capital on entrepreneurial orientation in high technology new ventures" Dissertation for Doctor of Philosophy degree, Georgia State University, Atlanta, Georgia
- Jones, M. (2001) "First steps in internationalisation: Concepts and evidence from a sample of small high-technology firms", *Journal of International Management*
- Kalantaridis, C. (2004) "Internationalization, strategic behaviour, and small firm: a comparative investigation" *Journal of Small Business Management*, 42, 3, pg. 245-262
- Karagozoglu, N. & Lindell, M. (1998) "Internationalization of small and medium-sized technology-based firms: An exploratory study" *Journal of Small Business Management*, vol. 36, Iss. 1, pp. 44-59
- Knight, G., (2001) 'Entrepreneurship and strategy in the international SME', *Journal of International Management*, vol. 7, issue 3, Autumn, 155-171.
- Knight, G. & Cavusgil, T., (2004) "Innovation, organizational capabilities, and the born-global firm" *Journal of International Business Studies*, vol. 35, Iss. 2, pg. 124
- Lee, C., Lee, K. & Pennings, J. M. (2001) "Internal capabilities, external networks, and performance: a study on technology-based ventures", *Strategic Management Journal*, 22, 6/7, pg. 615-640
- Liesch, P. W., and Knight, G. A. (1999) "Information internationalization and hurdle rates in small and medium enterprise internationalization", *Journal of International Business Studies*, 30 (1): pp. 383-394
- Lu, J. & Beamish, P. (2001) "The internationalization and performance of SMEs" *Strategic Management Journal*, 22, pp. 565-586
- Lumpkin, G. T. & Dess, G. G. (1996) "Clarifying the entrepreneurial orientation construct and linking it to performance" *The Academy of Management Review*, vol. 21, No. 1, pp. 135-172.

- Mathews, J. & Zander, I. (2004) "International entrepreneurship dynamics: Delineating an emerging field of scholarship" Paper presented at the 2nd Annual Conference on Emerging Research Frontiers in International Business Studies, September 16-19, Michigan State University.
- Merz, R. G., Weber, P. B. & Laetz, V. B. (1994) "Linking small business management with entrepreneurial growth" *Journal of Small Business Management*, vol. 32, Iss. 4, pg. 48-60
- Miller, D. (1983) "The correlates of entrepreneurship in three types of firms" *Management Science*, vol. 29, No. 7
- Moen, Ø., Gavlen, M. & Endresen, I. (2004) "Internationalization of small, computer software firms: entry forms and market selection" *European Journal of Marketing*, 38, 9/10, pg. 1236
- Nummela, N., Saarenketo, S. & Puulalainen, K. (2004) "Rapidly with a rifle or more slowly with a shotgun? Stretching the company boundaries of internationalising ICT firms" *Journal of International Entrepreneurship*, 2, pg. 275-288
- Oviatt, B.M. and McDougall, P.P. (1994) "Toward a Theory of New International Ventures", *Journal of International Business Studies*, 25 (1), pp. 45-64
- Rasheed, H. S. (2005) "Foreign entry mode and performance: the moderating effect of environment", *Journal of Small Business Management*, 43, 1, pg. 41-54
- Szabó, A., (2002) "Internationalization of SMEs" Paper of UNECE (<http://www.unece.org/indust/sme/internat.htm>)
- Wiklund, J. (1999) "Entrepreneurial orientation as predictor of performance and entrepreneurial behaviour in small firms – longitudinal evidence" *Frontiers for Entrepreneurial Research*,
- Wiklund, J. & Shepard, D., (2003) "Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses" *Strategic Management Journal*, vol. 24, Iss. 13, pp. 1307.
- Wiklund, J. & Shepard, D., (2005) "Entrepreneurial orientation and small business performance: a configurational approach" *Journal of Business Venturing*, vol. 20, Iss. 1, pp. 71-91
- Yli-Renko, H., Autio, E. and Tontti, V. (2002), "Social Capital, Knowledge and the International Growth of Technology-Based New Firms", *International Business Review*, 11, pp. 279-304
- Zahra, S. A., Ireland, R. D. & Hitt, M. A., (2000) "International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance" *Academy of Management Journal*, 43, 5, pg. 925

Books

- Alvesson, M. & Sköldbberg, K., (1994) "Tolkning och reflektion – Ventenskapsfilosofi och kvalitativ metod", Studentlitteratur, Lund, Sweden
- Kvale, S., (1997) "Den kvalitativa forskningsintervjun", Studentlitteratur, Lund, Sweden
- Kylén, J-A. & Vestlund, N., (1980) "Utredningsteknik – Intervju", Utbildningskonsulter AB, Stockholm, Sweden
- Nylén, U., (2005) "Att presentera kvalitativa data – Framställningsstrategier för empiriredovisning", Liber, Malmö, Sweden
- Patel, R. & Davidson, B., (1994) "Forskningsmetodikens grunder", Studentlitteratur, Lund, Sweden

Interviews

- Ben-Atar, Bentsi, co-Founder & Hardware projects director, Websilicon Ltd., January 19th 2006, Tel Aviv, Israel
- Ben-Atar, Rafi, Founder & CEO, MainNet Communications Ltd., February 1st 2006, Rosh Haayin, Israel
- Dovev, Yuval, CEO, Commil Ltd., January 25th 2006, Tel Aviv, Israel
- Kafri, Oded, Founder & CEO, Varicom Communications Ltd., January 9th 2006, Holon, Israel
- Maryanka, Yair, Founder & CEO, Yamar Electronics Ltd., January 10th 2006, Tel Aviv, Israel
- Norman, Mandel, Founder & CEO, PowerNet Ltd., January 26th 2006, Tel Aviv, Israel
- Reznik, David, Founder & CEO, A.D.I. Video Technologies Ltd., January 18th 2006, Jerusalem, Israel
- Shemesh, Moty, Founder & CEO, OfficeCore.com Ltd., February 1st 2006, Rosh Haayin, Israel
- Tick, Drew, Founder & CEO, Code Red Ltd., December 28th 2005, Jerusalem, Israel
- Yacobson, Seth, CEO, Zamir Recognition Ltd., January 3rd 2006, Jerusalem, Israel

Additional interviews/discussions

Dr. Niron Hashai, Jerusalem School of Business Administration at the Hebrew University, Jerusalem. Dr. Hashai functioned as an extra academic supervisor and several meetings were held in 2005/2006 at the Hebrew University in Jerusalem and in Dr. Hashai's home in Petah Tiqwa, Israel.

Mrs. Anna Tenstam-Lundvall, Executive Vice President Commercialization, Colbar LifeSciences Ltd., December 10th 2005, Herzliya, Israel.

Websites

Statistics Sweden (SCB) (May 16th 2006)

<http://www.scb.se>

Israel Association of Electronics and Software Industries (May 16th 2006)

<http://www.iaei.org.il>

CIA, The World Factbook (May 16th 2006)

<http://www.cia.gov/cia/publications/factbook/index.html>

Israel Ministry of Foreign Affairs, on immigration (May 16th 2006)

http://www.mfa.gov.il/MFA/MFAArchive/2000_2009/2002/10/Aliyah

European Union's definition of a small firm (May 16th 2006)

http://europa.eu.int/comm/enterprise/enterprise_policy/sme_definition/index_en.htm

Google's academic search (May 16th 2006)

<http://scholar.google.com>

ABI Inform Global (databases/all/ABI Inform Global) (May 16th 2006)

<http://www.hhs.se/library/>

APPENDIX 1: INTERVIEW QUESTIONS

BASIC FACTS

The firm

Name of firm:

Branch and products/services:

Number of employees:

Size of top management:

Year of start up:

Year of internationalization:

Entry mode and current international operations:

The interviewee

Name:

Position in the firm:

Role in the internationalization:

Years in the firm:

Questions

Entrepreneurial orientation

1. How would you describe entrepreneurship and do you perceive yourself to be an entrepreneur?

2. How can you describe the difference between domestic and international entrepreneurship?

3. Do you and the rest of the top management have prior international experience?

4. Was there an intention from the founding of the firm to internationalize and what opportunity had been discovered?

Strategic decision making

5. What are the main focus areas for your entrepreneurial efforts?

6. Were you confronted by chance events and do you perceive these as problems or opportunities?

7. In what stage of the internationalization process and in what function of the firm are you most willing to take risks?

8. Is there a risk of acting too entrepreneurial?

Strategy formation

9. What preparations were made before the internationalization?

10. What was the strategy: a clear plan or a broad vision?

11. Was the strategy of internationalization often reviewed and changed?

12. Did the strategy leave room for experimentation and trial and error tactics?

13. Did the process of internationalization follow the plan?

14. Do you have any procedures to collect information or learn from mistakes?

15. Have the internationalization changed your attitude towards entrepreneurship?

Extra

16. What would be your advice to an inexperienced entrepreneur in the internationalization process?