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Master thesis

Business Administration – International Management

Topic:

What are the factors that explain why some entrepreneurs internationalize whereas others do not?

Internationalization and Venture Lab Twente

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Management summary

During the last decades the world has grown closer together for example by means of communication and transportation. These developments make it easier than ever for entrepreneurs to conduct business and explore opportunities internationally. This applies for multinational companies as well as for small and medium sized enterprises. But still some entrepreneurs explore and exploit the international opportunities whether others do not. This research is concerned with the question why some entrepreneurs are more likely to internationalize than others.

In order to give an answer to that question a quantitative study about internal factors with regard to internationalization activities of entrepreneurs is conducted. The research sample is drawn from a set of entrepreneurs in mainly high-tech SMEs from the Eastern provinces of the Netherlands. This makes it the first quantitative study about the Netherlands with regard to the internal factors of entrepreneurial decision making that can explain internationalization activities. The entrepreneurs are all participants of the VentureLab Twente business incubator. On that account this research also gives information about the implications for the business incubator program with regard to internationalization.

The academic research so far has been looking at internal factors of entrepreneurial decision-making since many years; therefore this research first uses a systematic literature review in order to detect the internal factors of entrepreneurial decision making with regard to internationalization of entrepreneurs that are suggested by the academic literature so far. During the systematic literature review eleven internal factors of entrepreneurial decision-making with regard to internationalization are identified. As suggested by the academic literature, these can be grouped into two categories of internal factors: propensities and human capital. The propensities internal factors that are identified are: innovativeness, risk taking, pro-active/dynamism (those three internal factors that are characterized as entrepreneurial orientation by many researchers), growth ambitions, flexibility, global mindset and self-efficacy. The human capital factors that are identified after the literature review are: age, education, experience abroad and entrepreneurial experience. Using those two categories allows developing a causal model of internal factors of entrepreneurial decision-making with regard to internationalization.

After having established eleven hypotheses regarding the identified eleven internal factors of entrepreneurial decision making with regard to internationalization, they are tested statistically by using multiple regression analysis. As control variables the gender, industry and sales are used and also tested in the models. The goal of this analysis is to identify the relationship between the suggested eleven internal factors of entrepreneurial decision making and internationalization. Based on the systematic literature review the suggested relationships are tested on their statistical significance. The results of the multiple regression analysis show interesting results.

The research is designed to test the levels of the internal factors of 157 participating entrepreneurs of the VentureLab Twente business incubator. The sample is taken based on the data set of July 2012. The eleven independent variables are tested by using three different models, the propensities internal factors model, the human capital internal factors model and the full model. For all of the models the relationship between each independent variable and the dependent variable when all other predictors are held constant are tested. This gives information on how much influence each single internal factor has on the dependent variable of internationalization. Next to that the amount of variance in the outcome explained by the model relative to how much variation was explained in the first

place is given. Therefore after the multiple regression analysis the answer to the question why some entrepreneurs internationalize whereas others do not can be given. The single influence of each independent variable as well as the explanative power of the models is given.

The suggested hypotheses about the internal factors innovativeness, risk taking, pro-active/dynamism, growth ambition, flexibility, global mindset, self-efficacy, age, education, experience abroad and entrepreneurial experience are not supported by the results of the statistical analysis done in this research. This means that there is no statistical significant positive relationship between those variables and internationalization. Furthermore the statistical tests also showed no statistical significant relationship between internationalization and the three suggested control variables.

Interestingly the results of the descriptive statistics show that the international active and domestic-only entrepreneurs do not differ to a great variety on the tested internal factors. The descriptive statistics suggest that those two groups are rather similar on most of the variables. On some internal factors, like pro-active/dynamism, the descriptive statics show higher means for the domestic-only entrepreneurs. This is in difference to what the academic literature has suggested so far. The negative relationship is also not proven as statistically significant during this research. However it gives implications for the future research in this direction.

Another interesting finding of this study is that the results of the entrepreneurs showed that innovativeness, risk taking and flexibility are highly related concepts. The values of those variables showed high correlation on significant levels during the multiple regression analysis.

Concluding it can be argued that this study can prove no statistical significant relationship between a single one of the internal factors and internationalization. Thus it is valid to argument that the internal factors of entrepreneurial decision making are not able to explain why some entrepreneurs internationalize whereas others do not according to this sample testing. Based on this research testing the answer should be that entrepreneurs that internationalize and those that stay domestic-only are not different when it comes to internal factors of entrepreneurial decision-making. Accordingly, internationalization is not a result of different internal factors as well as not related to gender, sales and industry. However this research knows certain limitations as well has having implications for further research which are discussed in the end of this research. This research study clearly gives numerous implications for further research.

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List of abbreviations

SME	Small and Medium sized Enterprise
IE	International Entrepreneurship
n.s.	not specified
VLT	VentureLab Twente

1. Introduction

In the last decades our world grew ever closer together. With the technological development of the last few decades, we are now able to have business conferences from one continent to the other in a live video chat in live time, as well as it is easier to find customers in other countries just by means of internet marketing and web sales channels. Means of communication as well as the possibilities of travel have developed in a speed that makes it possible to visit other continents easily and to communicate in real time even easier. Entrepreneurs can approach customers all over the world, as it is possible to deliver goods to any corner of the world as well as deliver certain services online.

For entrepreneurs that start their business this means that internationalization, in whatever form, has become more feasible and easier than ever before. Especially the last decades have seen an ever faster internationalization process. Already at the end of the 20th century Oviatt and McDougall (1999) concluded that “Internationalization nowadays happens in a faster speed when it comes to breadth, acceleration, modes of entry and investment and role of emerging international business”. Internationalization is one of the growth modes a venture has and the decision to internationalize or not might be crucial for the success of an entrepreneur (Sarasvathy, 2001). Is not only the big players producing in low-wage countries or sell their products to different parts of the world, but also small ventures have this possibility. Small businesses account for between 75% and 99% of all businesses in most modern economies and therefore the role they play in both the domestic economy and in international business is much greater than was previously recognized (Prefontaine & Bourgault, 2002).

Therefore it is not surprising that since almost twenty years the academic literature has acknowledged that there is a new research direction that discovers the aspects of these new developments. Since the 1990s the International Entrepreneurship literature has emerged and contributed towards the existing literature in many aspects. McDougall and Oviatt (2000) see the International Entrepreneurship literature at the intersection of International Business and Entrepreneurship research. International Entrepreneurship is multi-disciplinary drawing on a diverse range of theories from international business, entrepreneurship, economics, psychology, anthropology, finance, marketing and sociology (Oviatt & McDougall, 2005). It studies various aspects on different levels such as: the personal, firm, industry as well as country level, in different elements such as firm strategy, entrepreneurial orientation, resources and capabilities, competitive advantage, organizational learning and inter-firm organization; and also the outcomes such as pattern and propensity of internationalization and performance (Keupp & Gassmann, 2009).

In this master thesis the International Entrepreneurship research will be enriched by a quantitative analysis of the internal factors that are decisive for an entrepreneur with regard to internationalization. The research will therefore combine entrepreneurial characteristics, motives and internal factors suggested by past academic research in the field of International Entrepreneurship. A two-phase systematic literature will be conducted to identify those.

After the literature is reviewed, this study is to analyze quantitatively the motives and circumstances of entrepreneurs that participated in the VentureLab Twente (VLT) project. The VLT is a business incubator located in the east of the Netherlands, aiming at business improvements for participating entrepreneurs from the Eastern provinces of Overijssel and Gelderland.

1.1 Problem indication

Zahra and George (2002) define international entrepreneurship as the “process of creatively discovering and exploiting opportunities that lie outside a firm’s domestic markets in the pursuit of competitive advantage”. In this definition is the process aspect of international entrepreneurship which focuses on the question why some entrepreneurs exploit international opportunities whereas others equally well placed do not (Zahra et al., 2005). There are some enterprises that do their business, whether from start or later, internationally while others focus on the domestic market only.

As described above, academics have acknowledged the importance of the direction of International Entrepreneurship research in the last decades. Almost uniformly the researchers view the research direction of International Entrepreneurship as a natural development from the two research directions of international business and entrepreneurship. This is due to the ever more growing convenience and simplicity of pursuing international business for entrepreneurs and entrepreneurial firms. As Sarasvathy (2001) has put it, first of all internationalization is one of the growth modes for entrepreneurs and second it is sometimes even crucial for the success of an entrepreneur.

But however the academic literature might suggest that the step of internationalization is inevitably for an entrepreneur sooner or later, there are still a vast number of entrepreneurs that decide to ‘stay domestic’. So far in the International Entrepreneurship literature there are different approaches used to explain this behavior. Most of the studies focused on outward internationalization activities, export, solely. To understand the factors that underlie the decision why an entrepreneur internationalizes or not is important for understanding all other international entrepreneurial activities.

In order to address these problems, this research aims at developing hypotheses derived by a review of the International Entrepreneurship literature. These hypotheses can then be used to examine and observe the international market entry decision of entrepreneurs in Small and Medium sized enterprises (SMEs). The hypotheses will then be tested on a sample of entrepreneurs. The statistical analysis of the obtained data will help to understand if there are existing differences between entrepreneurs that internationalize and those that stay domestic. This empirical analysis is an important contribution to the International Entrepreneurship literature.

1.2 Research Questions

In the following the research questions that will be addressed in this research are established and explained. But first a conceptualization of the term internal factors is given that is used throughout this research.

1.2.1 Internal factors

This research will use a concept called ‘internal factors’ which is conceptualized from the several concepts that are operationalized by the academic literature about the decision-making of an entrepreneur. Some researchers call them entrepreneurial motives others entrepreneurial characteristics. Again others speak about factors that lay on the level of the entrepreneur. Researchers that use strong evidence from psychology about entrepreneurial decision-making call them ‘cognition’. In order to overcome misunderstandings in the following only the term ‘internal factors’ will be used.

What all those concepts have in common is that they try to explain why one entrepreneur internationalizes whereas another does not. In this research the term ‘internal factors’ is

chosen as its counterpart would be external factors. External factors are in difference to internal factors those that lie not on the level of the entrepreneur but depended on the external environment. However it should be noted that this research does not assume that internal factors can exist without external factors in the decision-making process as well as internal factors are always to a certain degree depended on the external environment, e.g. culture of the country.

According to Davidsson et al. (2001), the level on which the principal research question is posed and analysis carried out rather than the level on which data are collected determines the level of analysis. Therefore in this study the data is collected at the micro-level of the individuals but the research is giving answer to a question on the macro-level, as it gives information about the regional level as well as on the high-tech industry level and can thus be described as an aggregated mix (Davidsson et al., 2001).

1.2.2 Main research objective

The overall objective of this research is to explore the internal factors that are decisive for the internationalization decision of an entrepreneur. The findings will not only enrich the International Entrepreneurship research, but will be viable information and knowledge when setting up programs that aim at training and coaching entrepreneurs. Especially for VLT this information is very useful as it can take it into account when coaching their participants and designing training sessions.

The thesis is based on a structured two-phased literature review. From this, entrepreneurial characteristics hypothesized to induce internationalization are identified. These characteristics will then be put to an empirical test using the VLT data. This will create important insights concerning entrepreneurial decision-making when it comes to internationalization. During the literature review hypotheses can be established. After the two phases of the literature review the derived hypotheses can be tested by using a sample of entrepreneurs participating in the VLT business incubator. From testing the hypothesis conclusions can be taken and more insight about the internal factors of entrepreneurial decision-making when it comes to internationalization are given.

1.2.3 Research questions

The above-mentioned problem indication and main research objective consequently lead to following main research question:

What are the internal factors that explain why some entrepreneurs internationalize whereas others do not?

The main research question will be answered with the help of the following two sub-questions:

- 1. What internal factors about entrepreneurial decision-making with regard to internationalization does the academic literature propose?**
- 2. To what extent are those internal factors that are proposed by the academic literature replicated in this research when empirically tested?**

1.2.4 Approach to answer the research questions

To be able to come to a valid conclusion regarding the main research questions, an exploratory research is conducted. Firstly, the first sub-question will be answered by help of a two-phased systematic literature review on International Entrepreneurship literature and

other research literature that suggests possible internal factors of entrepreneurial decision-making with regard to internationalization. This literature review will help to develop a good understanding of the internal factors suggested so far and to derive hypothesis about those internal factors. By means of these hypotheses, the second sub-question can be answered. By using an empirical analysis the hypothesis derived from the systematic literature review with a quantitative data sample will be tested. The data is obtained from a set of entrepreneurs participating in the VLT business incubator program. Those entrepreneurs all have to decide whether they internationalize their business or not.

It is presumed that there are internal factors that can explain why one entrepreneur decides to enter international markets whereas another entrepreneur decides to operate in the domestic market only. The focus of this research is therefore the level of the entrepreneur as a person and will look after the internal factors that can be decisive for the internationalization decision. However it will give us information about the entrepreneurs of the East of the Netherlands and is therefore an aggregated mix according to Davidsson et al. (2001).

1.3 Significance of the research

Internal factors of an entrepreneur with regard to decision-making are not a new phenomenon in the academic literature. The study of Grégoire et al. (2006) found that already in the period of 1981 to 1986 the entrepreneurship research had a focus on the entrepreneur as a person. However, since then the research directions have evolved and also entrepreneurship research has evolved together with international business research to a new research direction, i.e. International Entrepreneurship. As Grégoire et al. (2006) and Cornelius et al. (2006) have stated, a lot of entrepreneurship research is self-reflective and an increasing amount of research is focusing on the state of research, the developments and future of the research only. Furthermore, the research is often aimed at multinationals and bigger firms, which leads to an underrepresentation of SMEs so far. Additionally, International Entrepreneurship due to the dynamic, international background it looks at a research field that 'never stands still'. Therefore the academic literature should frequently reevaluate findings and concepts.

This study is focusing on a sample population of high-tech SMEs in the Eastern part of the Netherlands close to the border with Germany. This research is also applied to a distinct context, entrepreneurs that participated in the VLT business incubator program. As the VLT participants are deploying their entrepreneurial activities in the same region in the Eastern regions of the Netherlands, this study will also fill in a gap that no study about the internal factors of entrepreneurial decision-making with regard to internationalization has been conducted with a sample of entrepreneurs from the Netherlands.

Therefore this research will contribute to the existing International Entrepreneurship research and result in a broadened understanding of the entrepreneurial decision-making process with regard to internationalization in general and in the Netherlands in specific.

1.4 Research setting

In the Netherlands small and medium sized enterprises (SMEs), with less than 250 employees, account for 99% of all businesses (MKB Nederland, 2011). Therefore, they play an important part in the economy of the country and are targeted by several development programs in order to ensure their success. One of these programs is developed and executed by VentureLab Twente (VLT). It aims at start-ups mainly in the high-tech sector that seek help in business development. The program offers them weekly business

development sessions by experienced coaches (VentureLab Twente, 2011). All of the enterprises are situated in the Dutch provinces Overijssel and Gelderland, close to the border with Germany. The program is mainly aiming at high-tech industry SMEs, however when it comes to the participating entrepreneurs they have the most different backgrounds. This refers to their own personal characteristics, like education and age as well as the industry they operate in.

The sample consists of entrepreneurs that participated in the program in the last years. Some of the entrepreneurs are venturing internationally whereas others are focused only on the domestic Dutch market. Therefore they can be used as a good sample to test the hypotheses that will be derived in course of this research. The entrepreneur's ventures are based in the same region of the Netherlands and are subject to similar external factors when it comes to the environment, *e.g.* access to transportation. That holds account for several external factors that could influence the internationalization decision as well. This research is based on the VLT data available in July 2012.

1.5 Outline

The following chapter starts with a two-phase systematic literature review in order to get insight into the academic literature with regard to the field of International Entrepreneurship research. The first phase will be to search for the theoretical base of research on entrepreneurial factors when it comes to entrepreneurial decision making with regard to internationalization. Looking for more concrete background, the second phase will use back referencing from the first phase and scan the academic literature accordingly. With factors found in the literature review several hypotheses regarding the internationalization decision will be proposed. It is expected that entrepreneurs that internationalize should have different internal factors of entrepreneurial decision making than entrepreneurs that stay domestic with their venture. The first sub-question should be answered in the end of this chapter.

The next chapter, chapter 3, elaborates on the research methodology selected for testing the hypotheses and the manner in which the obtained data is analysed to determine which internal factors influences the decision-making of an entrepreneur with regard to internationalization.

Chapter 4 tests the hypotheses using a sample of the entrepreneurs from the Overijssel and Gelderland region in the Netherlands that participated in the VLT business incubator program. The statistical analysis will show whether each of the proposed hypothesis can be supported or not. The main internal factors for an entrepreneur to internationalize are examined. In the end a discussion about the results will be made and the research results are summarized. After this chapter the second sub-question is answered.

Chapter 5 draws final conclusions regarding the research problem. The tested hypotheses are evaluated by comparing theoretical expectations with what was found in the data from the sample of the VLT participants. Consequently the main research questions can be answered on the basis of the results of the conducted research. Based on these practical and theoretical implications can be formulated. Finally, limitations of this research and areas for future research projects are specified.

2. Theoretical framework

2.1 Introduction

In order to ensure that this research is based on internal factors adapted from earlier findings on basis of academic research, a two-phased systematic literature review is conducted. The systematic literature review consists of two phases: the first phase is identifying the theoretical base of International Entrepreneurship research and the second phase is exploring the internal factors of entrepreneurial decision making that are suggested by the academic research conducted so far. Consequently the guiding question of this systematic literature review is:

What internal factors about entrepreneurial decision-making with regard to internationalization does the academic literature propose?

First of all, a systematic review of academic publications with the search term 'international entrepreneurship' is conducted; the specific search conditions are elaborated in the next section. The articles were all found by a citation search using the Publish or Perish software (Harzing, 2007). Using this software establishes that the broadest overview of the International Entrepreneurship literature can be obtained.

The goal of this first phase of the two-phase search process is to identify important academic publications that focus on the factors of entrepreneurial internationalization. It should be possible to find a strong base for the validity and importance of research about internal factors in the International Entrepreneurship literature during the first phase. As well, as it is likely that already some concrete internal factors about entrepreneurial decision-making with regard to internationalization can be found in this first phase.

During the second phase the method of back referencing is used. This will counterbalance for the selection criteria used during the first phase. In order to select articles for the second phase, the articles reviewed during the first phase will be searched for references to articles that engage in research about internal factors of entrepreneurial decision-making with regard to internationalization. These findings will be reviewed during the second phase of the systematic literature review.

The table on the next page will give a short overview of the two-phased search process; about each single step, the number of findings of each step and the goal that the steps were able to achieve.

Phase	Step	Findings	Goal
1 – Systematic review	Search term International Entrepreneurship in the Publish or Perish Software	>1000	Identify the theoretical importance of entrepreneurial decision-making in IE literature and identify the first suggested internal factors that were found to have influence
	Only as title	442	Ensure the focus of IE literature
	Papers from 2012-2006	197	Review relevant research directions and themes
	Omitting non-refereed publications	62	Identify peer-reviewed articles
	Select 30 most cited papers	30	Most impact papers
	Repeat above mentioned steps for papers from 2005-2000 and select 10 most cited	10	Not to leave out the classics
	Combine most cited 2000-2012	40	Review
2 - Back referencing	Identify articles about 'internal factors' that are suggested by findings in step 1	17	To counterbalance selection methods of step 1
Limitation: Articles/Journals that could not be accessed via the UB Twente network could not be included in this research.			

Table 1: Overview of the two-phased systematic literature review

The first phase of the systematic literature review is started by using the search term 'international entrepreneurship' using the Publish or Perish software (Harzing, 2007). This term is chosen due to the fact that the first phase of the review is aimed at getting an overview of the current state of research directions in the field of International Entrepreneurship in general and the academic foundation of entrepreneurial decision making with regard to internationalization particularly. The Publish or Perish software uses Google Scholar to obtain the raw citations, then analyzes these and presents a range of metrics. The search with the search term 'international entrepreneurship' generated more than 1000 results. In order to ensure that the literature that is reviewed focuses on the research direction of international entrepreneurship, it was specifically searched for papers that contained the term 'international entrepreneurship' in their title; this decreased the results to 442. With this step the likelihood to rule out papers with a focus on internationalization or entrepreneurship individually was increased. As a second step the search was limited to publications five years and younger; this led to 197 results. This step was taken to increase the likelihood that only research directions and themes that are still relevant in the academic world would be reviewed. However not to miss out the classics the ten most cited articles from the period 2000 to 2005 were also included in the systematic review. The review was further constrained by omitting books, book chapters and other non-refereed publications. Only journal articles were review during the first phase as they can be considered validated knowledge and are likely to have the highest impact on the field (Podsakoff et al., 2005). This led to a final number of 62 articles.

As already mentioned, from the period of the last five years, 2006 to 2011, the thirty most cited articles were selected for the review in this research. As not to miss out the classics the ten most cited articles from the period 2000 to 2005 were also included during this first

phase. With a selection of forty articles for review in total it is possible to identify the theoretical basis for research on internal factors of entrepreneurial decision-making with regard to the internationalization decision as well as identify the suggested internal factors.

During the second phase of the systematic literature review, a look is taken at the publications that are used as references, by relevant articles that gave most insight about factors of entrepreneurial decision making with regard to internationalization, during the first phase of the literature review. During the second phase the insights into the internal factors are expected to be deepened and a better understanding of the internal factors is anticipated. This second phase of the systematic literature review will be organized around different internal factors of entrepreneurial decision making with regard to internationalization that are suggested by the academic literature. Here the time limitation will not be five or ten years; also older articles will be considered because they could provide strong theoretical background as well as internal factors of entrepreneurial decision making with regard to internationalization. Furthermore there will be no limitation to peer-reviewed articles only, in order to not miss out important publications.

2.2 Systematic literature review

As already explained in the previous chapter, the systematic literature review is conducted in two phases. The first phase with the goal to identify the foundation of 'internal factors' in the International Entrepreneurship literature as well as to find suggestions of influential internal factors of entrepreneurial decision-making with regard to internationalization. The second phase uses the method of back referencing in order to counterbalance the search criteria used during the first phase. The two-phased review is carried out chronologically. However in the following the results will be reported conjointly; firstly by the theoretical support for the importance of internal factors that were found and secondly by the internal factors of entrepreneurial decision-making that were found by previous research.

An overview about the academic journals the articles were published in as well as an overview about the most common concepts found during the first phase of the literature review can be found in the appendix. Additionally, a table that summarizes the findings of all 40 articles of the first phase of the literature review is to be found in the appendix. Those are interesting findings as well, however they will not be discussed in course of this research, as the focus is on internal factors of entrepreneurial decision-making with regard to internationalization.

In the following first the theoretical basis for internal factors of entrepreneurial decision-making with regard to internationalization that was identified by the two-phased literature review will be elaborated.

2.2.1 Theoretical basis for internal factors of entrepreneurial decision-making with regard to internationalization

As expected, in the reviewed articles evidence was found for the claim that the process of internationalization in an entrepreneurial firm has its base on the level of the entrepreneur (McDougall & Oviatt, 2000; Zahra & Garvis, 2000; Coviello & Jones, 2004; Keup & Gassmann, 2009; Wright et al., 2007; Mtigwe, 2006).

Mc Dougall and Oviatt (2000: 903) state that "International entrepreneurship is a combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations". They further identify areas of major interest within the International Entrepreneurship research field; one of them is entrepreneurial characteristics and motivations (McDougall & Oviatt, 2000). The same

argument is brought forward by Keupp and Gassmann (2009: 601) who state that the empirical literature has focused on three fields, where the third one being “the demographic and cognitive characteristics of individuals or groups of entrepreneurs and their actions in the course of internationalization”. In their framework they identify the personal level as one of the most frequent topics within the International Entrepreneurship literature (Keupp & Gassmann, 2009). Mtigwe (2006: 16) states that “International Entrepreneurship theory argues that individual and firm entrepreneurial behavior is the basis of foreign market entry”. Wright et al. (2007: 21) identify a gap in the International Entrepreneurship literature as they write that “most international entrepreneurship studies generally fail to consider entrepreneur-specific variables”. They claim that more attention should be given to the entrepreneur, as they see the entrepreneur as a key resource to the firm.

That the entrepreneur is playing an important role as a factor for the international market entry decision is also supported by Manolova et al. (2002) who suggest that the resource-based view can to some degree explain the internationalization decision. They state that “human resources were found to be the most important resource associated with internationalized firms compared to their non-internationalized counterparts” (Manolova et al., 2002: 10). As well as Shane and Venkataraman (2000: 218) who state that entrepreneurship research is concerned with opportunity exploitation and should address three key questions. The second one is: “Why, when and how do some people and not others discover and exploit these opportunities?” Jones and Coviello (2005) state that attributes of an entrepreneur are said to exert a greater influence on firm internationalization than external factors. Further evidence for the difference in personality of international and domestic entrepreneurs was found by several studies (March & Simon, 1958; Weick, 1995; Wood & Bandura, 1989). Krueger et al. (2000) state that entrepreneurial characteristics comprise certain individual variables such as demographics and personality-related traits or situational factors, e.g. information cues or personality traits. This is supported by the statement of Sommer and Haug (2011) that state that “several researchers have found evidence for motivations playing a crucial role in SME internationalization”.

The underlying themes of the articles reviewed in the section above can be mapped as follows.

Importance of the entrepreneur in the research direction of International Entrepreneurship	
Underlying themes	Author
Acknowledging that the process of internationalization has its base on the level of the entrepreneur	Mc Dougall & Oviatt (2000), Zahra & Garvis (2000), Coviello & Jones (2004), Keup & Gassmann (2009), Wright et al. (2007), Mtigwe (2006), Zahra et al. (2005), Shane & Venkatamaram (2000)
Entrepreneurial characteristics and motivations as an area of major interest	Sommer & Haug (2011), McDougall & Oviatt (2000), Keup & Gassmann (2009), Mtigwe (2006), Krueger et al. (2000)
Identifying a gap in the literature about entrepreneur-specific variables	Wright et al. (2007)
Importance of human resources (resource-based view)	Manolova et al. (2002)

Table 2: Importance of the entrepreneur in the research direction of International entrepreneurship

The extensive list in the section above proves that there is a strong basis for the importance of internal factors for entrepreneurial decision making with regard to internationalization in the International Entrepreneurship literature. In the next section the internal factors of entrepreneurial decision making with regard to internationalization that were found during the literature review are illustrated and discussed.

2.3 Internal factors of entrepreneurial decision-making with regard to internationalization

Before introducing the internal factors of entrepreneurial decision-making with regard to internationalization, it is worth mentioning that they can be grouped into two categories. These categories are propensities of the entrepreneur and human capital. According to the above made analysis of factors that are proposed by the literature this categorization is adopted. Those two categories give information about the nature of the internal factors as they are to some degree different. However it should be noted that those two categories are not definite.

The category of propensities of the entrepreneur (or shortly propensities) is based on the theory about risk taking propensity as suggested by Kogan and Wallach (1964). Propensity in the context of this research describes the likelihood that an entrepreneur would show these internal factors in a real life situation. For the propensity it is important that the entrepreneur reports about them honestly as they are only measurable by scales and not by hard facts, like the year of birth.

The other grouping that is used by this research is human capital. Human capital theory is based on the work of Adam Smith who suggests that one factor of labor costs should be the human capital. In his thoughts this is for example education. One worker has different education than another. Therefore in this research the internal factors that are grouped under this category are factors that are obviously different between the entrepreneurs. They could also be called objective factors, like suggested by Dichtl et al. (1984) and Leonidou et al. (1998).

Therefore the two categories used in this research should be: (1) propensities and (2) human capital. It can be concluded that entrepreneurs that take the decision to take their business to the international markets should have both similar levels on the propensities category as well as on their human capital. In comparison entrepreneurs that decide to stay in the domestic market only should have different levels on the internal factors. Accordingly the internal factors can be modeled into a causal model of entrepreneurial decision making with regard to internationalization that will be proposed in the following section. But first the internal factors are pictured.

2.3.1 Propensities

In this section the internal factors of entrepreneurial decision making with regard to internationalization as found during the literature review are discussed that can be placed in the category of propensities.

Entrepreneurial orientation

When it comes to the internal factors of entrepreneurial decision making, first of all it is worth noticing that several authors mention the three dimensions of entrepreneurial orientation: innovation, proactive behavior, and risk-seeking action (e.g. Covin & Slevin, 1989). However those internal factors are ascribed to entrepreneurs in general whether they enter international markets or not. McDougall and Oviatt (2000: 903) have further

specified these three dimensions of entrepreneurship towards a definition of International Entrepreneurship: "International entrepreneurship is a combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations". It is therefore valid to assume that innovation, proactive and risk-seeking behavior should be found in the personality traits of all entrepreneurs. Accordingly those three characteristics should be detected as characteristics of all entrepreneurs no matter if they internationalize or not. However certain other researchers have picked up those topics and have argued, discussed and analyzed those three internal factors as having an influence in the entrepreneurial decision-making process with regard to internationalization. Zahra and Garvis (2000) have found the sum of company efforts aimed at innovation, pro-activeness and risk taking as important for organizational success both overall and in foreign markets. Knight et al. (2001) showed that the three internal factors of entrepreneurial orientation influence positively the internationalization preparation, strategic competence and technology of a company. Dimitratos et al. (2010) looked at global smaller firms and international new ventures and found higher levels of entrepreneurial orientation (pro-activeness, risk attitude, innovativeness) for entrepreneurs of global smaller firms in comparison to domestic only entrepreneurs.

Even though entrepreneurial orientation is mostly used on the organizational level in previous research; this research assumes that it certainly can be used on the personal level as well. This is due to the assumptions that in this sample we look at a sample of entrepreneurs active in mainly high-tech SMEs. It will hold as follows that if the entrepreneur that is the driving force behind the SME is not innovative than the enterprise itself should not be innovative. Same holds for risk-taking and pro-activeness/dynamism. There are also some studies supporting that found entrepreneurial orientation internal factors on the personal level (e.g. Krauss et al., 2005).

Innovativeness

As stated above the capability to be innovative is essential for successful entrepreneurship and is acknowledged widely in the International Entrepreneurship literature (Covin & Slevin, 1989; Mc Dougall & Oviatt, 2000; Mtigwe, 2006). Dichtl et al. (1984) have found that innovativeness is an important internal factor for the internationalization decision as innovative entrepreneurs are willing to break away from the norm frequently.

There was no study found during the literature review, which empirically supported that international active entrepreneurs have higher levels of innovativeness than domestic-only entrepreneurs. However taking the research setting of this study into account, it seems legit to assume that there is a positive relationship. The entrepreneurs of this study are all based in the Eastern parts of the Netherlands close to the border to Germany and well connected to international highways and airways. The VLT business incubator aims mainly at high-tech companies. Therefore the majority of the sample is supposed to be entrepreneurs operating in the innovative field of the high-tech industry. High-tech products are mainly so specialized that staying only in the domestic market is not profitable. Innovative entrepreneurs with innovative products almost need to go abroad to be successful. Due to those facts even without empirical support from the literature review, it should be valid to hypothesize that entrepreneurs that internationalize have higher levels of innovativeness.

Therefore the following first hypothesis can be derived and will be tested empirically on the VLT research sample:

Hypothesis 1: There is a significant positive relationship between the levels of innovativeness of an entrepreneur and internationalization.

Proactive/Dynamism

As mentioned in the section above pro-activeness is one of the three entrepreneurial orientations, which are mentioned in academic literature. The concept of pro-activeness is often also conceptualized as dynamism and can be understood as “acting proactively to suit the every changing environment” (Abdul-Aziz & Wong, 2010). Therefore in the following the entrepreneurial orientation factor of pro-activeness will also be represented by the concept of dynamism as those can be understood as interchangeably.

Bilkey and Tesar (1977) found that the more dynamism on the management level an enterprise has, the likelier it is that an enterprise is going to internationalize. Similar findings were made by Abdul-Aziz and Wong (2010) who found that dynamism or pro-active behavior is a very important internal factor when it comes to the internationalization decision. Dynamism was one of the four internal factors that were found very important in their study about the internationalization of Malaysian construction companies. Butler et al. (2010) suggest that International Entrepreneurship is not based on coincidences as others might suggest. Individuals thus entrepreneurs have to notice opportunities before they act. In terms of internationalization this means that international entrepreneurs search scope is broader in terms of opportunities and/or more proactively in combining resources in new ways.

Taken the above mentioned studies into account it is valid to hypothesize that international entrepreneurs have higher levels of proactive behavior/dynamism than domestic-only entrepreneurs.

Hypothesis 2: There is a significant positive relationship between the levels of pro-activeness/dynamism of an entrepreneur and internationalization.

Risk-seeking

Risk-seeking is also conceptualized as the willingness to take risk and bearing uncertainty. Butler et al. (2010) call for the academic literature to notice that entrepreneurs that internationalize are more skilled at noticing opportunities and have a greater capacity to bear uncertainty. They argue that entrepreneurs that internationalize must be capable of absorbing the uncertainty associated with exploiting an opportunity. The level of absolute uncertainty will be very high in international situations and individuals with a high capacity to bear uncertainty should be more likely to effectively exploit opportunities by starting successful business (Butler et al, 2010). Even though in the opinion of some researchers, bearing uncertainty does not resemble risk-seeking behavior entirely, in this research the two concepts will be understood as one.

Muzychenko (2010) sees a gap in the current International Entrepreneurship literature when it comes to understanding the process of International Entrepreneurship and related competences. One of the factors she sees underrepresented and suggests that risk-taking should be higher in entrepreneurs that internationalize. Dichtl et al. (1984) in their quantitative analysis have found that entrepreneurs that internationalize have a higher willingness to take risks. In the study of Abdul-Aziz and Wong (2010) the willingness to take

risk of an entrepreneur was also found as an important factor for the internationalization decision.

This leads to the assumption that even though entrepreneurs whether they are domestic-only or international operating already have high levels of risk-seeking in comparison to non-entrepreneurs, those who are international active should have even higher levels of the willingness to take risks. This leads into formulating following hypothesis.

Hypothesis 3: There is a significant positive relationship between the levels of risk-seeking of an entrepreneur and internationalization.

Growth ambitions

Next to the three entrepreneurial orientations other propensities internal factors of entrepreneurial decision making with regard to internationalization were found during the literature review. One propensities internal factor that was found influential in the systematic literature review is the one of the growth ambitions of an entrepreneur.

Several studies have found that it is influential to internationalization whether an entrepreneur has high growth ambitions or not. Edvardsson et al. (1993) in their study about internationalization in service companies have found the propensities internal factor of personal growth ambitions influential. Andersson and Wictor (2004) in their study about Swedish born global (companies that are operating in the international environment from day one) also found that high growth ambitions a common trait of the international entrepreneur. Abdul-Aziz and Wong (2010) in their study about the top management characteristics that drive firms towards internationalization have found high personal growth ambitions of an entrepreneur as significant for internationalization decision. Those studies suggest that entrepreneurs that have high personal growth ambitions will strive for an international active firm because they can fulfill their growth ambitions with it. Domestic-only entrepreneurs might therefore not have so high levels of growth ambitions as they are easier satisfied by staying in one country only.

This means that there is evidence that an internal factor with regard to the decision-making in terms of internationalization is growth ambitions. Therefore the following hypothesis can be introduced:

Hypothesis 4: There is a significant positive relationship between the growth ambitions of an entrepreneur and internationalization.

Flexibility

Another propensities internal factor of entrepreneurial decision making with regard to internationalization that is detected by the literature review is flexibility of an entrepreneur. Flexibility was suggested as an internal factor by several studies.

For example flexibility is one of the four factors that were found as very important by the study of Abdul-Aziz and Wong (2010) when it came to the internationalization decision in their sample population of entrepreneurs. Furthermore flexibility levels of the entrepreneur were found important by the research of Dichtl et al. (1984) when it comes to the internationalization decision. Flexibility was regarded as important when dealing for example with foreign clients, especially those unfamiliar with the construction business or the technology involved (Abdul-Aziz & Wong, 2010). Being internationally active calls for high flexibility, therefore the researchers argue that entrepreneurs that already have higher

levels of flexibility are more likely to internationalize. On the other hand they might even develop that factor while being internationally active, leading to even higher levels of flexibility in international active entrepreneurs.

The above mentioned studies suggest that entrepreneurs that internationalize should have higher levels of flexibility than domestic-only entrepreneurs as they are dealing with a more static and well-known environment. Therefore in this research following hypothesis about flexibility should be tested:

Hypothesis 5: There is a significant positive relationship between the levels of flexibility of an entrepreneur and internationalization.

Global mindset

A global mindset of an entrepreneur is a internal factor that suggests the awareness for the international environment of an entrepreneur.

Muzychenko (2007) acknowledges the importance of a global mindset for entrepreneurs to successfully cope with challenges and exploit opportunities presented by globalization. Next to this theoretically derived assumption, Sommer and Haug (2011) have developed a model where they relate motivations to other cognitive elements such as skills or knowledge which lead in certain ways to action. After testing their hypotheses empirically with 100 German SME executives, Sommer and Haug (2011) came to the conclusion that within the category of attitudes the attitude towards globalization in general plays an important role for internationalization. Moon and Lee (1990) on their empirical investigation on the Korean electronics industry have found that world mindedness of an entrepreneur has certain influence on the internationalization decision. The global mindset construct by Burpitt and Rondinelli (1998) that is also used by Harveston et al. (2000) during their research about 224 born global firms and gradual globalizing firms test the global mindset of an entrepreneur. The results show significant relationships between a global mindset and internationalization. Another study that strengthens the importance and relevance of the global mindset was conducted by Levy et al. (2007). They have reviewed the academic literature about the role of the global mindset and have found that a growing number of academics and practitioners view the global mindset of key decision makers as a critical success factor for a variety of organizational outcomes (Gupta and Govindarajan, 2002; Murtha et al., 1998; Harveston et al., 2000; Jeannet, 2000; Levy, 2005).

The findings by the academic studies mentioned above lead to yet another hypothesis about entrepreneurial decision-making with regard to internationalization. A global mindset is seen as a positive attitude towards globalization which leads to world-mindedness in difference to a mindset that is focused on the home country. Therefore the theoretical and empirical studies have found that international active entrepreneurs have higher levels of a global mindset than domestic-only active entrepreneurs. This leads to following hypothesis that this research should test:

Hypothesis 6: There is a significant positive relationship between the global mindset of an entrepreneur and internationalization.

Self-efficacy

The last internal factor of entrepreneurial decision making that was detected during the literature review is the one of self-efficacy.

Self-efficacy is conceptualized as representing people's judgments of their capabilities to implement a specific behavior on a specific performance level (Bandura, 1997). According to Bandura (1997) expectations of self-efficacy are the most powerful determinants of behavioral change because self-efficacy expectancies determine the initial decision to perform a behavior, the effort expended, and the persistence in the face of adversity. Manolova et al. (2002) have found that self-assessed strength in international business skills is significantly different between internationalized and non-internationalized firms. Wood and Bandura (1989) suggest the importance of self-efficacy; in their findings this is people's belief in their capabilities. Accordingly entrepreneurs that decide to internationalize need to believe in their own capability to do it. Muzychenko (2011) has also acknowledged the importance of self-efficacy in International Entrepreneurship.

In terms of self-efficacy the literature review shows that in past research there has been a strong basis for the difference of levels of self-efficacy between international and domestic-only entrepreneurs. International active entrepreneurs are suggested to have higher levels of self-efficacy because those are the entrepreneurs that belief in their own capabilities and therefore believe that they can master the internationalization of their enterprise. As a converse argument domestic-only entrepreneurs are supposed to have lower levels of self-efficacy as they are not so sure of their capabilities and therefore stay in the known environment. This assumptions lead to the following hypothesis.

Hypothesis 7: There is a significant positive relationship between the levels of self-efficacy of an entrepreneur and internationalization.

After having established seven hypotheses about the propensities in the following section the human capital internal factors of entrepreneurial decision-making with regard to internationalization are reported in the next section.

2.3.2 Human capital

Next to the propensities, the literature review suggested several human capital internal factors of entrepreneurial decision making with regard to internationalization. Those are elaborated in the following as well as hypotheses about their relationship towards internationalization are derived.

Demographics

Many of the past studies that were found during the systematic literature review have included the concept of demographics as a potential independent variable explaining the entrepreneurial decision-making with regard to internationalization. This might be due to the fact that 'demographic characteristics' have a prominent position in international marketing research (Manolova et al., 2002). Some authors have found a positive relationship between demographic factors whereas others have found no difference in terms of international active and domestic-only entrepreneurs. In the following is an overview about the mentioned demographics found in the systematic literature review.

Age

Some researchers have found that relative youth of an entrepreneur is associated with the international activities (Dichtl et al, 1984; Cavusgil & Naor, 1987). Abdul-Aziz and Wong's (2010) research found that management with younger members (under 50 years old) as an important factor with regard to the internationalization decision. However other studies have found that the age of an entrepreneur has no significant empirical support with regard to internationalization (Manolova et al., 2002; Davis & Harverston, 1999). Whereas others

even found that older age of the owner/founder of an enterprise is related to internationalization (Welch & Weidersheim-Paul, 1980; Nakos et al., 1998).

The empirical findings on the internal factor of age are ambiguous; some see a positive relationship towards younger age, some towards older age, and some no positive relationship. Taking the research setting into account, this study will hypothesize that there is a significant positive relationship between age and internationalization. This is based on two assumptions. Firstly the geographical location, the VLT participants are located in the East of the Netherlands, close to the border to Germany and with good logistic connections on roads, rails and air. The longer an entrepreneur stays into business, the more likely that he will make use of this access. This assumes that entrepreneurs that are older are longer into business. Secondly, it seems legit to assume that older entrepreneurs have broader networks abroad and are therefore more likely to make that step.

Based on those assumptions, this study will test the following hypothesis:

Hypothesis 8: There is a significant positive relationship between the age of an entrepreneur and internationalization.

Education

Similar to the above mentioned findings about the internal factor age are the ones of the internal factor education. During the literature review, the theoretical and empirical evidence on the internal factor education were somewhat ambiguous. On the one hand some researchers found that high education levels are positively influential towards internationalization (Dichtl et al., 1984; Abdul-Aziz & Wong, 2010; Cavusgil & Noar, 1987; Oviatt et al., 1993). On the other hand other studies suggest that there is no relationship between educational levels and internationalization activities (Manolova et al., 2002; Davis & Harverston, 1999; Keng & Jiu, 1989; Nakos et al., 1998).

As the theoretical and empirical findings on the internal factor education are ambiguous by the reviewed literature, this study will take the research setting into account. The majority of entrepreneurs that participate are active in the high-tech industry; those products are highly specialized and need to be placed on the international markets in order to be profitable. They are not customized to the Dutch market, in difference to service related industries there are no big changes necessary to sell them in different markets. Higher education makes it more likely to be active in the high-tech industry. As well as it mostly increases the chances that foreign language skills are good.

Based on this argumentation it seems legit to hypothesize that there is a significant relationship between education and internationalization. Therefore in the following the following hypothesis will be tested:

Hypothesis 9: There is a significant positive relationship between the levels of education of an entrepreneur and internationalization.

Experience abroad

Next to the demographic internal factors, another internal factor was detected during the literature review. This is the factor of experience abroad of an entrepreneur.

Zahra et al. (2005) claim that why an entrepreneur focuses on a particular venture idea in an international market while ignoring others, can be explained by the entrepreneur's

history and his/her interactions and experience with other cultures. Previous international experience generates a large pool of routines to draw upon in strategic decisions about international operations (Zahra et al., 2005). Sommer & Haug (2011) state that experience with and knowledge about internationalization also plays a role in the decision-making. Also, Zuccella et al. (2007) found that previous international work experience is influential towards the internationalization activities. Many studies, even though using different operationalizations of the variable, have found that experience abroad has a positive and significant relationship towards the internationalization decision of entrepreneurs (Manolova et al., 2002; Dichtl et al., 1984; Knight & Cavusgil, 1997; Holzmüller & Stottinger, 1996; Karazgolu & Lindell, 1998; Sood & Adams, 1984; Almeida & Bloodgood, 1996; Burgel & Murray, 1998; Eriksson et al., 1997; Nakos et al., 1998; Reuber & Fischer, 1997).

Concluding the experience abroad that an entrepreneur has obtained while studying, working or only being on holidays is supposed to have a positive relationship towards internationalization. Thus the hypothesis about the internal factor experience abroad should be formulated as follows:

Hypothesis 10: There is a significant positive relationship between the experience abroad of an entrepreneur and internationalization.

Entrepreneurial experience

The last of the internal factors that was found during the literature review about internationalization is entrepreneurial experience. This is not to confuse with experience abroad. Experience abroad, as discussed above, is concerned with the experience of an entrepreneur in other countries. However this can be work, holidays or studies. Entrepreneurial experience means the experience an entrepreneurs has being self-employed and responsible for his/her own business.

Zahra et al. (2005) argue that the entrepreneur's education, functional expertise (e.g. previous work experience), and past track records of success and failures are also shaping his/her perceptions of the viability of different strategic options under consideration. Wright et al. (2007) distinguish that "some entrepreneurs may be more adept at identifying opportunities for internationalization than others" and that "some entrepreneurs who have been exposed to foreign markets may, as a result of this personal experience, develop an international orientation whereby they are positively pre-disposed to internationalization. Owners of firms may have started previous firms where they gained experience of internationalization" (Wright et al., 2007:22). They hold that there is a difference in the behavior of novice and habitual entrepreneurs when it comes to internationalization. Also Westhead et al. (2003) has found that habitual entrepreneurs are more likely to internationalize than novice entrepreneurs. Naude and Rossouw (2010) showed that an entrepreneur with previous exporting experience is noted to significantly increase the probability that a firm internationalizes early.

Based on the above mentioned findings for the influence of the internal factor entrepreneurial experience the following hypothesis can be formulated and tested:

Hypothesis 11: There is a significant positive relationship between entrepreneurial experience and internationalization.

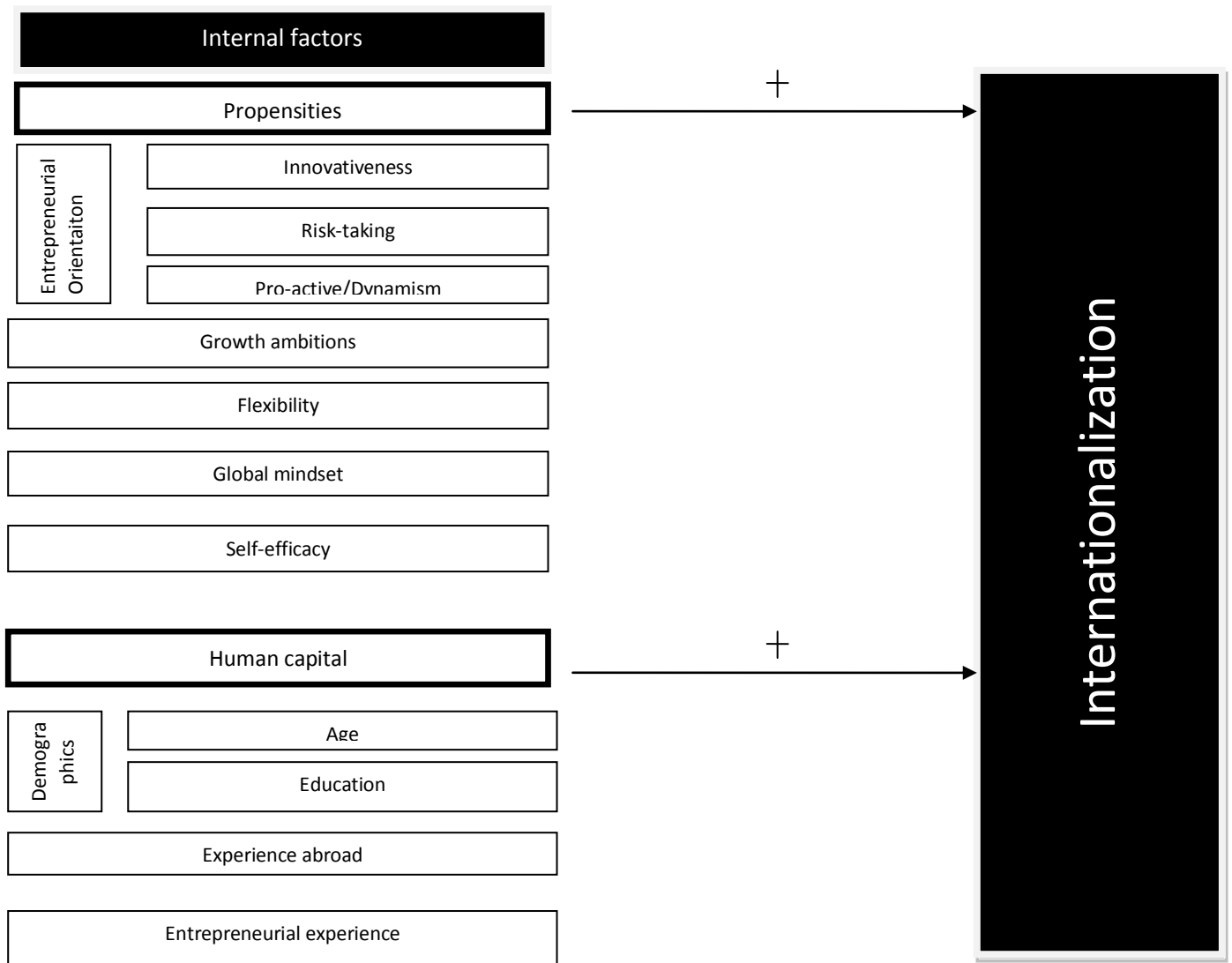
2.4 Causal model

As the elaborations about the propensities and human capital internal factors above show, there is a strong theoretical evidence for the importance of the internal factors of entrepreneurial decision-making with regard to internationalization in the International Entrepreneurship literature and academic literature in general. Furthermore the systematic literature review showed that previous research has come up with several internal factors that have proven to be statistically significant with regard to internationalization. Those internal factors can be placed into two different categories human capital and propensities internal factors.

The literature review has brought forward arguments for the relationship between those internal factors and internationalization. The majority of the suggested internal factors are believed to have a significant positive relationship towards internationalization. Therefore they will be tested on their positive significance towards internationalization in the following.

During the literature review eleven internal factors were found that are suggested to have an influence on internationalization for entrepreneurs. Correspondingly eleven hypotheses were formulated that can be tested statistically in the following. However the eleven internal factors are also translated into a causal model. Especially when keeping the first research question in mind: What internal factors about entrepreneurial decision-making with regard to internationalization does the academic literature propose?

The causal model can be found on the next page.



Legend: + = positive significant relationship

Figure 1: Causal model – Internal factors of entrepreneurial decision making with regard to internationalization

2.5 Conclusion

The above made systematic literature review was conducted in two phases. The guiding question for both phases was the first sub-question of this research:

What internal factors about entrepreneurial decision-making with regard to internationalization does the academic literature propose?

During the first phase the theoretical base of International Entrepreneurship research was identified and during the second phase the internal factors for entrepreneurial decision making suggested by the research conducted so far were explored. With those findings the above mentioned first sub-question of this research is answered.

The results of the two phases of the systematic literature review show that there is enough evidence in the academic literature that research on the factors of entrepreneurial decision making with regard to internationalization is playing a role from the beginning of the research on (international) entrepreneurship but is also still a vivid research topic nowadays. During the first phase, which was conducted by using predetermined search parameters, as well as during the second phase which used the method of back referencing; evidence for the importance of the internal factors of entrepreneurial decision making was found. Different researchers named and framed those internal factors slightly different but overall they agreed that the personal level, cognition, entrepreneurial capabilities, motivations and mindsets play an important role for the international market entry decision (Mc Dougall & Oviatt, 2000; Zahra & Garvis, 2000; Coviello & Jones, 2004; Keup & Gassmann, 2009; Wright et al., 2007; Mtigwe, 2006; Manolova et al., 2002; Shane & Venkatamaran, 2000; Jones & Coviello, 2005; March & Simon, 1958; Weick, 1995; Wood & Bandura, 1989; Krueger et al., 2000). During the whole literature review not a single article was found that hypothesized that those factors play no role for international entrepreneurship. Therefore it is valid to conclude after having seen the results of the two phases of the systematic literature review that international active entrepreneurs are different from domestic-only entrepreneurs when it comes to the internal factors of entrepreneurial decision making. According to the literature, internationally operating entrepreneurs should have different characteristics, mindsets, motivations, cognition and capabilities, thus internal factors.

The full results of the systematic literature review can be found to full extent in the appendix.

During the two phases of the systematic literature review eleven internal factors were detected. Those are explained in the section above. Accordingly eleven hypotheses could be established about the internal factors of entrepreneurial decision-making with regard to internationalization. Two categories are established which give an information about the nature of the internal factors are established. These are propensities and human capital. Therefore of the eleven internal factors, seven were placed in the category of propensities and four in the category of human capital.

With the findings from the above conducted systematic literature the first sub-question of this research could be answered by developing a causal model about the eleven internal factors.

The causal model shows the suggested and hypothesized relationships between the internal factors of entrepreneurial decision making and internationalization. As suggested

by the reviewed academic literature all eleven internal factors should have a significant positive relationship towards internationalization. There was no internal factor found that suggested a negative relationship towards internationalization.

The above made systematic review clearly shows that the academic literature suggests that internal factors of entrepreneurial decision making are playing a role when it comes to internationalization. Therefore entrepreneurs that internationalize should have different levels of the internal factors than domestic-only entrepreneurs. The systematic literature review suggested relationships of those internal factors towards internationalization which are formulated into eleven hypotheses. With those findings the first sub-question of this research is answered.

While taking the eleven internal factors into account, the next chapter will elaborate how the internal factors can be operationalized. This will allow us to test the hypotheses while using the VentureLab Twente data as a research sample.

3. Methodology

Having conducted a systematic literature review in the last chapter that revealed the internal factors of entrepreneurial decision making with regard to internationalization that the academic literature proposed; the objective of this chapter is to elaborate on the methodological part of the research. In the previous chapter, eleven hypotheses have been established about the suggested relationship between the internal factors of entrepreneurial decision-making and internationalization. As the systematic review of the academic literature indicates, all of those eleven factors are possible indicators of the likelihood to internationalize. Furthermore a causal model that differentiates between the propensities and human capital was developed. This causal model will be tested in the following.

Firstly the context of the research is described and will explain how the causal model is tested. Secondly this chapter will define how the data of the research sample is obtained. This means that the data collection techniques to test the validity of the hypotheses and the population of entrepreneurs surveyed are explained. Thirdly in order to properly test the causal model, in this chapter the suggested variables are operationalized. This allows measuring the suggested internal factors and testing the causal model afterwards. In the end of this chapter the data processing and analysis will be explained.

3.1 Context of the research

By means of a two-phase systematic literature review of the International Entrepreneurship literature and beyond, the internal factors of entrepreneurial decision making with regard to internationalization that are suggested by the already existing research data are shaped into eleven hypotheses. Furthermore they could be placed into two categories: propensities and human capital. Even though those eleven internal factors were all found as having a relationship towards internationalization as suggested by past theoretical and empirical research they were not tested all together yet. Therefore the developed causal model will give a first overview of all suggested internal factors by the academic literature so far. Once more there was no study found that has tested internal factors of entrepreneurial decision making with regard to internationalization within the context of entrepreneurs in the Netherlands. Those two facts make this study first of its kind and will give important insights to the academic research.

The eleven established hypotheses will be tested in this research by using a data sample of participants of the VentureLab Twente. The VLT is a business incubator that assists existing companies as well as start-ups. The focus for the training of the existing companies lies in accelerating the growth whereas for start-ups the focus lies more on assisting to bring ideas into practice. The program consists of several themes that all aim at developing entrepreneurial competences. The themes are: commercial management, finance, organization, personal skills, team skills, strategy and technology management. What really characterizes the VLT program is that the highly diverse background of the entrepreneurs and their companies is acknowledged, therefore VLT does not offer a traditional program where everyone enters at the same time but VLT offers a supply- and demand-oriented training program which is highly customizable and flexible. With the help of a personal coach a development plan is established.

This research will aim at the internal entrepreneurial internal factors of decision-making with regard to internationalization. The entrepreneurs participating in the VLT are supposed to be a good data sample because some of them are already conducting

international business whereas others are staying domestic only. The results of this research will help to understand if this decision is based on the internal factors suggested in the causal model established in the last chapter. The findings of this research can be used by the management and coaches of the VLT in order to customize the training with regard to internationalization and international business even more.

3.2 Obtaining the research data

To obtain the data for this research the choice was made for a quantitative design for data collection.

The quantitative research design is chosen due to several reasons. The decision for a research design always depends on the research problem and its purpose (Jankowicz, 1991). Therefore researchers can choose between quantitative, qualitative or even mixed methods. First of all, the basic distinction between quantitative and qualitative research is that quantitative researchers employ measurement and qualitative researchers do not (Layder, 1993; Bryman & Bell, 2003). Therefore is the difference between quantitative and qualitative methods and approach not just a question of quantification, but also a reflection of different perspectives on knowledge and research objectives (Ghauri & Gronhaug, 2010). When looking at the research problem and the research objectives a quantitative research design seems to be the appropriate decision. Quantitative methods allow us to put the emphasis on testing and verification of the above established hypotheses. As well as a quantitative design allows for a logical and critical approach with a controlled measurement. It is argued that quantitative methods hypothetical-deductive and have their focus on hypothesis testing (Reichardt & Cook, 1979).

Therefore the eleven hypotheses and the subsequent causal model, derived in the previous chapter are statistically tested by the means of a quantitative method. By means of a survey the quantitative data will be collected to come to a conclusive answer to the research question. By using quantitative research methods, insight will be gained into the internal factors of entrepreneurial decision-making with regard to internationalization. To achieve these research goals it is necessary to understand which of the internal factors proposed by the academic literature might be influencing internationalization. The quantitative research design will ensure that the proposed factors are measured accurately and similar for each entrepreneur. By using a survey the research bias of the interviewer is ruled out. As the proposed factors deal to some degree with feelings and self-perception of the entrepreneurs it is important to have the same measurement for each of them. The survey is an efficient mean to collect numerical data from a large sample. Furthermore does the use of a survey increase the sample population as entrepreneurs are mostly very busy and might not have time for a personal interview.

The quantitative method makes it possible to measure the proposed internal factors and give statistical conclusions about their influence. It will be possible to support positive relationships as well as reject factors after the statistical testing of the quantitative data.

Having established the choice for a quantitative research design the following section will elaborate on the survey that is used to obtain the quantitative data from the research sample.

3.2.1 The survey

The survey that was used to obtain the quantitative data from the entrepreneurs that participate in the training of the VentureLab Twente can be found in the appendix.

The survey was administered throughout the participating entrepreneurs of the VLT trainings. The fact that they are all already willingly participating in the training program will ensure a good and high response rate. The entrepreneurs know that with the results of the survey the training for them is even more suited towards their needs. This will also increase the reliability of the answers given. Giving untrue answers would not be in their interest or even stronger it would be counterworking for them. With wrong assumptions about the internal factors of entrepreneurial decision-making with regard to internationalization the program would not be beneficial for them anymore.

Before handing out the surveys the rough purpose of the survey is explained, to increase the understanding of entrepreneurial decision-making with the aim to enhance the trainings of the VentureLab Twente. However anonymity is guaranteed for the evaluation and analysis of the surveys. The surveys are administered on paper. A paper version of the survey is the most appropriate measure. If an interviewer was involved the risk of an interviewer bias would be there (Scott, 1961; Boyd & Westfall, 1970). Furthermore according to Churchill (1999) a paper survey is recommended for structured questions like this research will use.

As explained in the section above the survey questions will mainly consist of scaled questions. "Scaling questions are a coherent set of questions or items that are regarded as indicators of a construct or concept" (Corbetta, 2003). The internal factors of entrepreneurial decision making with regard to internationalization that were found in the literature are tested by using these scaling questions. They are consisting mainly of 5-point Likert scales or IPIP based positively and negatively keyed items. Those are instruments that are widely spread and used in the social sciences research arena. Additionally some of the scales use reverse-scaled items which ensure that the respondents will not be biased when answering a question. The entrepreneurs that internationalize and those who do not will get the exact same surveys. Therefore the variables are measured in exactly the same way and no bias about a different ordering of the items can evolve.

After having discussed the structure and purpose of the survey design the next section will elaborate on the sample population and size of this research.

3.2.2 Sample population and size

The focus population of this study consists of entrepreneurs that have participated in the VLT training program. Until now more than 200 entrepreneurs in total have completed the VLT program. VLT does not offer a traditional training programme, in which every participant enters the programme at the same time, follows the same training programme and finishes at the same time. Instead, the entrepreneurs that participate are mostly from technology based start-ups and established companies that want to accelerate their growth.

The number of $n=200$ suggests that a non-probability sampling approach is appropriate in this sample (Babbie, 2010). The participants themselves already reflect a fraction of the entrepreneurial population of the Netherlands. According to MKB Nederland (2012) 99% of the more than 850000 businesses in the Netherlands are small and medium sized enterprises (SMEs). Therefore the sample of the entrepreneurs that finished the VLT training program is a purposive sampling, as it is assured that they are willing and interested in filling in the questionnaire truthfully. Furthermore this purposive sampling will help the VLT program makers to improve their training regarding internationalization. This

research will help them to understand the internal factors that drive entrepreneurs towards internationalization.

All 200 entrepreneurs that participated VLT training program were handed out the survey that can be found in the appendix. Of those 200 a number of 157 entrepreneurs have answered the question about internationalization. Therefore this research will work with a sampling population of 157. As mentioned in the previous section internationalization activities are operationalized as inward as well as outward activities conducted as well in other EU-27 states as the rest of the world.

As normal for a voluntary questionnaire the answer to the questions were not made obligatory, as this might influence the answers given. Therefore the n of the different items might vary. For testing the causal model only entrepreneurs that responded to all items could be analyzed. The N of the specific items is given in the following chapter.

However we cannot account for the sample selection correction, meaning that entrepreneurs that answered the questions might be different from entrepreneurs that did not. This can be due to a variety of reasons; one of them could be that non-answering entrepreneurs were too busy with their entrepreneurial activities.

In the next section will define how the data obtained by the surveys is processed and analyzed in order to statistically test the data.

3.3 Measurement of the factors

Based on the systematic literature review eleven internal factors were found that should be able to explain the entrepreneurial decision making with regard to internationalization. In the following section it will be explained how these eleven internal factors are measured. Therefore they will be operationalized. The measurement of the factors is based on operationalization of previous academic literature whenever possible. However some of the factors are rather straight forward, like age and education. Next to the eleven internal factors of entrepreneurial decision making, the dependent variable internationalization is also operationalized and thus made measurable. Next to the eleven internal factors, the independent variables, internationalization, the dependent variable, also three control variables are introduced in the following.

The full questionnaire that was distributed can be found in the appendix. The following will explain the measurement of each of the questions.

3.3.1 Dependent variable: Internationalization

First of all the dependent variable of this research will be operationalized. Logically the dependent variable is internationalization as we will measure the relationship between the internal factors suggested by the literature and internationalization. Zahra and George (2002) have described internationalization as follows the “process of creatively discovering and exploiting opportunities that lie outside a firm’s domestic markets in the pursuit of competitive advantage”. Therefore internationalization should contain all possible means of being internationally active. Accordingly in this research internationalization is measured as international activities of both categories: inward and outward international activities. Internationalization is thus operationalized in the broadest sense of its meaning. It contains inward as well as outward activities with any foreign country. The scale is adapted as used in the work of Kirwan (2008).

In order to measure internationalization entrepreneurs were asked if they were involved in the following inward/outward activities. Inward: (1) contract-in R&D from foreign based firm, (2) import from foreign based supplier, (3) license in technology from foreign based firm, (4) import with distribution in the home country, (5) contract-in manufacturing from foreign based firm, (6) recruiting foreign employees, (7) investment capital provided by foreign based firm, (8) recruiting foreign board members, (9) technical service or consultancy performed in the domestic market for foreign clients, (10) management or marketing service or consultancy performed in the home country for foreign clients. Outward: (1) License-out technology to foreign firm, (2) exporting through foreign based agent/distributor, (3) contract-out R&D to foreign based firm, (4) exporting through home country based intermediary, (5) minority investment in foreign production, (6) contract-out manufacturing to foreign based firms, (7) majority investment in foreign production (8) technical service or consultancy performed overseas, (9) management or marketing services performed overseas, (10) Exporting through foreign based sales consultancy representative or branch. Each of the single items is dichotomous, which is adapted from previous research (Buckley, 1989; Manolova et al., 2002). The international activities of an entrepreneur will be added and result in a continuous dependent variable. As inward and outward activities are not mutually exclusive they will be regarded as weighting similarly. This measurement is supported by previous studies about internationalization (Manolova et al., 2002).

3.3.2 Independent variables: internal factors

In the following the eleven internal factors of entrepreneurial decision making are operationalized. As the literature review has suggested, the grouping into propensities and human capital will be continued in the following. In the appendix the survey with the full questions can be found.

Propensities internal factors:

Innovativeness is one of the three factors of the entrepreneurial orientation characteristics (Covin & Slevin, 1989; McDougall & Oviatt, 2000). Several studies have observed innovation as a dependent variable looking at the influence of independent variables like internationalization as well as firm performance (Acs & Audretsch, 2006; O'Cass & Weerawardena, 2009; Brazeal & Herbert, 1999). However in this research a measurement for the innovativeness of the entrepreneur himself/herself is needed. The research conducted so far about innovativeness has measured the level of innovation in very different context, most of the time the influence of independent variables on innovation as a dependent variable. Therefore this research will use a scale suggested by the International Personality Item Pool (IPIP) based on measuring constructs similar to those in the Jackson Personality Inventory (JPI-R) (Goldberg et al., 2006; Jackson et al., 2000). This scale is constructed to measure the level of ingenuity thus innovation on the individual level of an entrepreneur. The Cronbach Alpha of this scale in previous research was reported as .84 and therefore good. The Cronbach Alpha of this research for the scale innovativeness is .789 and therefore acceptable. The scale has six positively keyed items and four negatively keyed items (reverse items). The reversed items will be turned into positively keyed item when analyzing the scale. It used a 5-point Likert scale of 1= inaccurate to 5= accurate.

Willingness to take risk or **risk taking behavior** is another one of the three characteristics of entrepreneurial orientation as suggested by Covin and Slevin (1989) and McDougall and Oviatt (2000). The results of the literature review led to the assumption that internationalizing entrepreneurs will have an even higher willingness to take risk. Abdul-

Aziz and Wong (2010) as well as Butler et al. (2010) have risk-taking behavior operationalized as: management which is willing to take risks, is willing to place itself in an uncertain and unfamiliar situation which may result in a loss, and has a more optimistic view about possible consequences of its risky decisions. The factor willingness to take risk will be measured by a scale suggested by the International Personality Item Pool (IPIP) about risk taking based on measuring constructs similar to those in the Jackson Personality Inventory (JPI-R) (Goldberg et al., 2006; Jackson et al., 2000). The scale uses six positively keyed items and four negatively keyed items (reverse items). The scale is reported to have a Cronbach Alpha of .78 and is therefore acceptable. In this research the scale risk taking has a good Cronbach Alpha of .872. Again a 5-point Likert scale of 1=inaccurate to 5=accurate is used.

The factor **proactive behavior/dynamism** is the third factor of the entrepreneurial orientation characteristics as suggested by the academic literature (Covin & Slevin, 1989; McDougall & Oviatt, 2000). Dynamism as a factor is found to have very important relationship towards the internationalization decision (Abdul-Aziz & Wong, 2010). It is characterized as “acting proactively to suit the every changing environment” (Abdul-Aziz & Wong, 2010: 53). This dynamic element is a relatively new characteristic to be studied. Johanson and Vahlne (1990) in their eclectic paradigm and resource-based view have not introduced a dynamic element. Dynamism in the research so far is seen interchangeably with pro-active behavior. As dynamism might be understood closely related to the previous characteristic of flexibility the emphasis in testing the factor dynamism should be focused on the pro active behavior that comes with it. As International Entrepreneurship literature has not a coherent measurement scale for dynamic behavior of an entrepreneur in this research the scale of Lay (1989) is used. The scale of Lay (1989) originally measures procrastination behavior. This research understands the factor dynamism as a proactive behavior in difference to a non-active behavior. As the validity and reliability of the Lay scale have been demonstrated in a variety of contexts (Lay, 1987, 1988; Kusyszyn, 1990); it is believed to be a valid and reliable scale. The scores are measured on 20 items on a 5-point Likert scale using a measurement from 1=uncharacteristic to 5=characteristic. The Cronbach alpha of the study of Lay (1987) was .82 and therefore good. In this research a Cronbach alpha of .734 is reported and thus acceptable.

Growth ambition is an internal factor that relates to the intentions and aspirations an entrepreneur has for his/her business. According to Abdul-Aziz and Wong (2010) growth ambition plays a very important role in the internationalization decision. However they only survey a small sample size by using qualitative measures and the research is therefore on a descriptive basis as well as does not deliver an appropriate operationalization for a quantitative research design. The other academic literature about growth ambitions and the internationalization decision shows different measures (Edvardsson et al., 1993; Andersson and Wictor, 2004). To survey growth ambition in this data sample, on a quantitative basis, the entrepreneurs will be asked about their ambitions for their business. They will be asked for their honest growth ambitions and not about what they think is best for the business. The growth ambition will be measured on five 5-point Likert scales concerning the ambition for starting a business that has rapid growth, an industry leader position, multiple locations, listing on a major stock market and is known worldwide. The scale is adapted by the scale for high growth as used by Hmieleski and Corbett (2008) with a Cronbach alpha = .90. The Cronbach Alpha of this study for high growth not as high but still acceptable with .784. The scale uses a measurement from 1= strongly disagree to 5=strongly agree.

The factor **flexibility** is found to have a very important relationship towards the internationalization decision by Abdul-Aziz and Wong (2010: 53) who state that “management with flexibility does not rigidly adhere to past practices, traditions and mindsets in the face of new challenges”. Flexibility is regarded as important when for example dealing with foreign clients, especially those unfamiliar with the construction processes and technologies involved (Abdul-Aziz & Wong, 2010). Another research that found flexibility as having a positive relationship towards internationalization was conducted by Dichtl et al. (1984). However the literature is not very consistent when it comes to the measurement of flexibility. Therefore for this research the following measurement as suggested by empirical research is applied. Flexibility as an entrepreneurial characteristic is described as not sticking to routines and adapting fast to new practices. Therefore the scale suggested by the International Personality Item Pool (IPIP) of variety-seeking is used to measure the factor of flexibility. The scale is a measuring construct similar to those in Cloninger’s Temperament and Character Inventory (TCI) and has a Cronbach Alpha of .80 which is considered good. In this research a Cronbach Alpha of .795 is measured which is almost good but definitively acceptable. It has seven positively keyed items and three negatively keyed items. The items were measured by using a 5-point Likert scale from 1= inaccurate to 5=accurate.

The **global mindset** of the entrepreneur is measured by the following operationalization. It is constructed by using a series of questions adapted from Burpitt and Rondinelli (1998) measuring the attitude of managers towards internationalization. The reliability of this scale has a Cronbach alpha of .85 in the study of Burpitt and Rondelli (1998) and is therefore acceptable. Burpitt and Rondinelli (1998) have defined this construct as the propensity of managers to engage in visionary behaviors in order to achieve strategic objectives in international markets. The global mindset construct by Burpitt and Rondinelli (1998) was also used by Harveston et al. (2000) in their research about 224 born global firms and gradual globalizing firms. The results have shown significant relationships between a global mindset of an entrepreneur and internationalization. Therefore it seems legit that the internal factor global mindset will be measured by the scale suggested by Burpitt and Rondelli (1998). The factor of global mindset is assessed by a 5-point Likert scale which specifies the importance of the interest in global markets as well as the level to which the global markets are valued by the entrepreneur. The Cronbach Alpha of this research for the scale of global mindset is .772 and therefore acceptable.

The factor **self-efficacy** has proven to have a positive relationship with entrepreneurial decision making with regard to internationalization. Different studies all use somewhat different operationalizations to measure self-efficacy. Therefore the scale about social and general self-efficacy from Sherer et al. (1982) is used as a measurement in this research. It is used in many studies since it was introduced and provided valuable insight into the relationship towards self-efficacy in many fields. Sherer et al. (1982) have developed a self-efficacy scale that they have tested for the construct and validation. They suggest that individual differences in past experiences and attribution of success to skill or chance result in different levels of generalized self-efficacy. To measure these generalized expectancies, the self-efficacy scale was developed. Through a factor analysis they yielded two subscales: a general self-efficacy subscale with 17 items and a social self-efficacy subscale with six items. Sherer et al. (1982) have tested the construct validity and confirmed it in their research. The self-efficacy scale developed by Sherer et al. (1982) is used in many researches since it was introduced. For example Rudy et al. (2012) have used the self-efficacy scale in their research finding that general self-efficacy had a mediating role whereas social self-efficacy was not a mediator. Unfortunately, none of the studies

reported the Cronbach alpha of this scale however due to its frequent use it will be assumed that it is reliable. The Cronbach Alpha of this study is .844 for the scale and thus supports this assumption. In this research therefore the self-efficacy scale suggested by Sherer et al. (1982) will be used and the relationship with regard to the internationalization decision will be evaluated. The items were measured by a 5-point Likert scale from 1=strongly disagree to 5=strongly agree.

After having operationalized the propensities internal factors of entrepreneurial decision making with regard to internationalization in the following the human capital internal factors are discussed.

Human capital internal factors:

The demographic internal factor of **age** is a pretty straight forward concept and is therefore measured by the self-reported age of the entrepreneur. The self-reported age of the entrepreneur is surveyed by asking for the year of birth of the entrepreneur.

The other demographic internal factor **education** is also rather straight forward. It will be measured using a dichotomous scale containing the items higher education or no higher education. Higher education will be defined for this research as university level (e.g. for the Dutch system HBO and WO will count as higher education). Having obtained no higher education is operationalized as all education below the university level.

The internal factor of **experience abroad** is suggested as an influencing factor regarding entrepreneurial decision making about internationalization by several researchers (Dichtl et al., 1984; Zahra et al., 2004; Zuccella et al., 2007; Sommer & Haug, 2010). Experience abroad is not only regarded as professional experience abroad but also international education and travelling abroad. Most of the studies use their own concepts to measure experience abroad; therefore here an operationalization that is used by more than one study in the past is adopted. To measure the international experience a four item 5-point Likert scale (1= not at all to 5= to a great extent) is adopted as suggested in earlier research (Beamish & Calof, 1989; Beamish et al. 1993; Christensen et al., 1987; Harveston, 2000). The scale was found to have a Cronbach Alpha =.77 and is therefore acceptable. In this research setting the Cronbach Alpha is reported to be .801 and therefore good. The internal factor experience abroad is measured by following four items: international travelling, international education, international vacations and holidays, working internationally.

Entrepreneurial experience is an human capital internal factor that distinguishes habitual from novice entrepreneurs. Wright et al. (2007) mention the influence that entrepreneurial experience has for the research field. They build their assumptions on the finding that there may be important behavioral and learning differences between experienced (habitual) and novice entrepreneurs (Westhead et al., 2003, 2005). The measurement of this factor should be pretty straight forward, as a dichotomous variable can give information about whereas an entrepreneur has been self-employed (full as well as part-time) before or is a novice entrepreneur. Therefore this research will question whereas the entrepreneur has engaged in entrepreneurial activity (full or part-time) before or not. The measurement is a by a dichotomous variable measuring if the entrepreneur is a novice entrepreneur or has previous entrepreneurial experience.

After having discussed the operationalization and measurement of the eleven internal factor of entrepreneurial decision making, thus the independent variables of the causal

model; the next step is introducing three control variables and discuss their operationalization and measurement.

3.3.3 Control variable

Control variables fulfill an important role in quantitative empirical hypotheses testing. They are held constant to test the relative impact of the independent variables. Following three control variables are chosen due to their prominence in International Entrepreneurship research.

As a first control variable the **gender** of the entrepreneur is used in this research. During the systematic literature review no study was found that showed an effect on gender on the entrepreneurial decision-making with regard to internationalization. Therefore it seems reliable to use gender as a control variable, as there is no effect of this variable expected. The dummy variable gender is dichotomous with two values, female or male.

Another control variable is the **industry** the entrepreneurs operate in. The control variable industry is coded as a dummy variable. The two values are whether the entrepreneur is active in the high technology sector or not. The differentiation between firms that operate in the (high) technology industry sector versus firms that operate in other industry sectors is popular among internationalization research (Manolova et al., 2002).

As a third and last control variable the **sales** of the entrepreneur are operationalized. The entrepreneur will be asked about the sales of the past months and those will be operationalized as a continuous variable.

After having discussed the operationalizations and measurements of the dependent, the independent and control variables the context of the research is explained as a next step.

3.4 Data processing and analyzing

The quantitative data that is collected by the individual surveys had to be consolidated into one database. This database was used as starting point for the data analyzing with means of the statistical program SPSS. Using SPSS will help to understand the relationship between the dependent variable of internationalization and the independent variables.

Some of the data consisted of scales (e.g. 5-point Likert scales) whereas other data was of numerical value. Furthermore some of the independent variables could be measured by dichotomous scales (e.g. age, education, experience) whereas other independent variables are computed by using scales that use more than one item. For example the independent variable of self efficacy is measured by a twenty item scale. However based on the database derived from the quantitative data, tables and diagrams could be made in order to understand the data and explore the relationship between the dependent and the independent variable and also hold the control variables constant.

In the end of the data processing, the quantitative results will give answer to the research question. The proposed hypotheses about the internal factors of entrepreneurial decision making with regard to internationalization can then be rejected or supported. Finally, an empirical analysis based on proposed internal factors of the systematic literature review is made which can lead future research into new directions as well as provide basis for following certain directions. The second sub-question can be answered as well as together with the answers of the first sub-question the main research question can be answered.

After having established the measurement of the variables, the data obtaining, processing and analyzing as well as the research sample the data is tested on; the next section will elaborate the results of the empirical statistically testing of the causal model.

4. Results

In the previous chapters, it was explained and clarified that the main research question is answered by testing the validity of the developed causal model with the sample of the participating entrepreneurs of VLT based in the Eastern provinces of the Netherlands. In the following the results of the statistical analysis will be presented. The statistical analysis is conducted as explained in the foregoing.

The data that was obtained from the sample population is tested concerning the internal factors of entrepreneurial decision making with regard to internationalization. The empirical results of the distributed surveys are tested according to the influence of the independent variables and control variables on the dependent variable.

The first section of this chapter will discuss the descriptive statistics of the survey results. It will describe the findings on the dependent variable internationalization as well as summarize the descriptive statistics of the eleven independent variables. Furthermore it will sum up the descriptive statistics of the control variable. For the descriptive statistics of the results it is important to notice that it the valid percent of the statistics are used. The descriptive statistics will throw light on the most intriguing findings of the conducted survey. The descriptive statistics will give an insight in the findings on the variables for the two groups, the international active and the domestic-only entrepreneurs. After having elaborated on the descriptive statistics, it is already possible to have an idea about the internal factors of entrepreneurial decision making with regard to internationalization and their differences between the two groups.

The second part of this chapter shows the results of the statistical testing of the developed causal model. It will give information about the significance of the relationship between the dependent and independent variable. Additionally considerations about the validity and reliability of the scales are looked upon. Furthermore the relationship between the dependent variable and the control variables is tested. First the propensities and human capital internal factors are tested separately and in the end the full causal model is statistically tested by using regression analysis.

4.1 Descriptive Statistics

4.1.1 Dependent variable

The full descriptive statistics of the dependent variable internationalization are available in the table following this section. In here shortly the most important figures will be listed.

In total 157 valid responses were collected according to the question “What of the following inward/outward activities have you been involved?”. 92 of the entrepreneurs (58,8%) had not been involved in any internationalization activities. 20 of the entrepreneurs (12,7%) reported that they were involved in one internationalization activity, 17 of the entrepreneurs (10,8%) in two internationalization activities and 9 of the entrepreneurs (5,7%) in three internationalization activities and 19 of the entrepreneurs (12%) in more than four (on the scale up to twenty) international activities.

When looking at the inward and outward activities independently it is visible that slightly more inward activities (136 internationalization activities) are conducted in difference to the outward activities (88 internationalization activities) in the whole sample population. The most frequently inward activities reported were: import from foreign based supplier (31 times; 22,8%), management or marketing service or consultancy performed in the

home country for foreign clients (19 times; 14%), technical services or consultancy performed in the domestic market for foreign clients and recruiting foreign employees (both 16 times; 11,8% each). The most frequently outward activities reported were: technical services or consultancy performed overseas (14 times; 15,9%), exporting through home country based intermediary (13 times; 14,8%) and contract-out manufacturing to foreign based firms (12 times; 13,6%). Furthermore it is important for the statistical analysis to note that inward and outward activities are not mutually exclusive. An entrepreneur that is active with inward internationalization activities can as well be active with outward internationalization activities.

All in all the distribution of the internationalization activities shows that the sample population is almost split by the half to international active and the other half domestic-only entrepreneurs. This is a good basis for the regression analysis in the following section.

In the following section the descriptive statistics of the eleven independent variables are listed.

4.1.2 Independent variables

The following section is a summary of the descriptive statistics of the eleven internal factors of entrepreneurial decision making that were detected during the literature review. The full descriptive statistics are available in the table after this section.

The descriptive statistics are listed by the propensities and human capital separately, as the literature review has suggested.

As described in the previous chapter some of the internal factors of entrepreneurial decision making were measured by using some reverse items in the scales. Those are items that are semantically phrased in the other direction than the measurement of the scale. This is done in order to overcome that respondents will try to aim for high scores. For all internal factors the scales that used reverse items were translated as described by the inventors/users of the scale, e.g. for the IPIP scales as suggested by Goldberg et al. (2006) reverse 5-point Likert items were transcribed as follows: 5 to 1, 4 to 2, 2 to 4, 1 to 5. If not otherwise indicated all scale items were weighted similar and a scale as the sum of the average individual item score is used. For the statistical analysis the reverse items were translated into the reversed score.

In the following the descriptive statistics of the propensities internal factors suggested by the systematic literature review are given. The descriptive statistics will give information about the scores of the international active as well as domestic-only entrepreneurs. Again it is worth mentioning that the mentioned facts are the most intriguing ones, the whole descriptive statistics can be found in the table that follows this section. Furthermore some information about the single items of the scales is given. After looking at the descriptive statistics the first preliminary conclusions about the international and domestic-only entrepreneurs can be taken. However the regression analyses, that give answer to the research question about which internal factors influence follows in the next section.

Propensities internal factors:

Innovativeness

For the internal factor of innovativeness the following descriptive statistics were reported. The domestic-only entrepreneurs are found to have a mean of 4.14 on the innovativeness

scale whereas international active entrepreneurs are found to have a mean of 4.09. The standard deviation for the internal factor innovativeness is .49 for the whole sample. Both groups ranked the (reverse) items of “can’t come up with new ideas” and “difficulty imagining” the highest and “come up with bold plans” and “excellent ideas” as the lowest. When comparing the means of the international and domestic-only entrepreneurs for the internal factor of innovativeness the descriptive statistics show no significant difference between those two. Yet entrepreneurs that are domestic-only active even reported themselves as slightly more innovative than international active entrepreneurs.

Risk-taking

Overall the descriptive statistics of the scale of risk-taking behavior shows a mean of 3.14. The means of the two different groups are as follows, a mean of 3.2 for domestic-only entrepreneurs and a mean of 3.05 for international active entrepreneurs is reported. The standard deviation is .49 for the scale of risk-taking. The valuations of the single items of the scale are also similarly distributed. Noticeable is that domestic-only entrepreneurs have slightly higher scores on the reversed item “avoid dangerous situations” with 3.15 in difference to internationally active entrepreneurs with a mean score of 2.8. This means that domestic-only entrepreneurs are indicating that they are less likely to avoid a dangerous situation. Overall this means that domestic-only entrepreneurs see themselves slightly more engaging in risk-taking behavior than international active entrepreneurs.

Pro-activeness/ dynamism

For the third internal factor that is part of the entrepreneurial orientation following descriptive statistics could be derived. The group of domestic-only entrepreneurs scored a mean of 3.43 with a standard deviation of 0.62 on the scale of pro-activeness/ dynamism similar to the group of international active entrepreneurs with a mean of 3.44 with a standard deviation of 0.57. Both see the reverse item of “often miss events because I don’t buy tickets on time” as very characteristic for them with a mean of (domestic only: 4.12 ; international active: 4.16). Domestic-only entrepreneurs valued the reverse item of “shopping for gifts at the last moment” as least characteristic for them with a mean of 2.63. Whereas international active entrepreneurs value the item of “finish tasks sooner than necessary” as the most uncharacteristic from them with a mean of 2.77. All in all this third internal factor of entrepreneurial orientation is in line with the two previously discussed in seeing no significant difference between domestic-only and international active entrepreneurs.

Growth ambition

International active entrepreneurs have somewhat higher scores on the growth ambition scale with a mean of 3.47 in difference to domestic-only entrepreneurs with a mean of 3.29. When looking at the wishful number of countries international active entrepreneurs would like to be present a mean of 3.46 is found, reflecting a number of countries present between five and ten. Domestic-only entrepreneurs have a mean score of 3.08 on this scale which is reflecting a wish for international presence in five countries only. Those results show that international active entrepreneurs score slightly higher on the scale of growth ambition measured by high growth as well as they wish for an average international presence in more countries than domestic-only entrepreneurs.

Flexibility

Both groups have similar self-reported scores on the flexibility scale, with a mean of 4.3. When looking at the single items that were measured, domestic-only entrepreneurs saw themselves as the most accurately reflected in “enjoy hearing new ideas” (4.56) and the

least with “seeking adventure” (3.94). For international active entrepreneurs that were the same two items with means of 4.61 and 3.9. On the single item of “like visit new places” international active entrepreneurs had a mean of 4.57 whereas domestic only entrepreneurs had a mean of 4.33. However looking at the flexibility scale as a whole both groups had similar high means showing that both groups see themselves as having a great deal of flexibility. This means that no difference on the scale of the internal factor flexibility was found for the two groups.

Global mindset

When looking at the self-reported results of the internal factor global mindset of the entrepreneurs; the domestic-only entrepreneurs have a scale mean of 3.3 whereas the international active entrepreneurs have report themselves at a mean of 3.62. This means that international active entrepreneurs have a slightly higher score on the global mindset scale. If a look at the single items of the global mindset scale is taken it is visible that domestic-only entrepreneurs report themselves with a mean of 3.7 to be interested in internationally expanding firms, whereas international active entrepreneurs have a mean of 4.29 on this item. The domestic-only entrepreneurs describe themselves a mean of 2.82 for the item “attractive opportunities for growth lies overseas”, internationally active entrepreneurs report a mean of 3.29 on this item. Concluding it can be stated that the descriptive statistics show that internationally active entrepreneurs have a somewhat higher global mindset than domestic-only entrepreneurs. Next to growth ambitions this is the second internal factor where the descriptive statistics show a higher score for the international active entrepreneurs as hypothesized about the relationship by the academic literature.

Self-efficacy

The internal factor of self-efficacy was measured on a scale that gave insight about social as well as general self-efficacy. On the scale that combined those two concepts the domestic-only entrepreneurs were found to have a mean of 3.89 and the international active entrepreneurs 3.82. The overall results on the general self-efficacy items were higher in comparison to the social self-efficacy items. Domestic-only entrepreneurs had a mean of 3.98 on the general self-efficacy scale and a mean of 3.64 on the social self-efficacy scale. International active entrepreneurs had a mean of 3.94 on the general self-efficacy scale and a mean of 3.51 on the social self-efficacy scale. The standard deviation for all the mentioned scales was rather low with 0.52 maximum. Summarizing it can be said, that domestic-only entrepreneurs have a slightly higher perception of themselves as having general as well as social self-efficacy. The descriptive statistics show that the results are against the hypothesized relationship between self-efficacy and internationalization.

After having looked at the propensities of entrepreneurial decision making with regard to internationalization next are the human capital internal factors.

Human capital internal factors:

Age

Looking at the descriptive statistics of the internal factor of age the following results are reported. The mean age of the responding entrepreneurs is 46 years. The youngest respondent is 24 and the oldest 66 years old. The average age for an international active entrepreneur is 48 years whereas the average age of the domestic-only entrepreneurs is 45.5 years. This means that international active entrepreneurs are slightly older than

domestic-only entrepreneurs. In total the 33% of the respondents is younger than 40 years and in 66% older than 40 years.

Education

The majority of the respondents (51.3%) have finished academic education on the level of the Dutch WO. Of the respondents 10.6% have even finished a PhD, 28.3% finished the Dutch level of HBO or comparable and 9.7% have education below that level. When looking at the distribution of education and international activities, one effect that can be observed is that the valid percentage of below HBO decreases towards 8.5% and the one of PhD level is increasing towards 14.9%. Also HBO and comparable level decreased to 23.4% and WO and comparable level increases slightly to 53.2%. Therefore in comparison to the whole sample population those who engage internationally tend to be slightly better educated than those who stay domestic only.

Experience abroad

For the internal factor of experience abroad the descriptive statistics are as follows. Entrepreneurs that are international active have a marginally higher mean on the scale of international experience with 3.32 in difference to domestic-only entrepreneurs with 3.27. However what is interesting is that on the single item of international holidays and vacations the mean of domestic-only entrepreneurs is 4.1 whereas the one of international active entrepreneurs is 3.95. However the international active entrepreneurs have therefore slightly higher scores on the other three items. The differences in the mean of the scales already indicate that there is no significant difference in experience abroad between international and domestic-only entrepreneurs. This is in difference to what is hypothesized about the relationship based on the conducted literature review.

Entrepreneurial experience

The last factor this research looks at is entrepreneurial experience. Looking at whether or not the responding entrepreneurs have entrepreneurial experience the following results were reported. 39.3% of the responding entrepreneurs are novice entrepreneurs whereas 60.7% are habitual entrepreneurs. When looking at international active entrepreneurs only the distribution is almost similar. Meaning that of the international active entrepreneurs 40% are novice entrepreneurs and 60% habitual entrepreneurs. This means that habitual entrepreneurs are almost twice as likely to be internationally active and also to involve in inward international activities.

After having discussed the descriptive statistics of the eleven independent variables and already giving an idea about the relationship between those and internationalization; the next section will elaborate on the descriptive statistics of the control variables.

4.1.3 Control variables

The control variables have the function to control the effects of the independent variables on the depended variable. Therefore the descriptive statistics will be described in here briefly.

Gender

Of the 157 entrepreneurs that returned the survey 135 (86%) are male and 22 (14%) are female. This is an overrepresentation of male entrepreneurs, however should still be a distribution that is sufficient for a control variable.

Industry

Of the entrepreneurs 40.1% were classified as working in firms operating in the high-technology sector. Entrepreneurs are active in high-technology sectors such as embedded systems, biotech and radiation. Another 59.9% of the responding entrepreneurs are identified as not working in a high-technology industry environment. Their businesses are rather service oriented in the fields of marketing, consulting as well as some entrepreneurs engaged in rather manufacturing oriented services.

Sales

The entrepreneurs were asked to self-report their sales over the past months. The mean self-reported sales of the entrepreneur were 109,564 € with a standard deviation of 141,659 €. The minimum self-reported sales were 7000 € and the highest 427,000 €. This means that sales vary to a great degree between the responding entrepreneurs.

As mentioned in the section above a table with the full descriptive statistics of the variables can be found in here. The table includes the dependent variable, the independent variables as well as the control variables.

Scale	Whole sample			International			Domestic only		
	M	SD	N	M	SD	N	M	SD	N
Dependent variable									
International activities	1.43	2.82	157	3.45	3.51	65	0	0	92
Propensities factors									
Innovativeness	4.12	.49	108	4.09	.48	44	4.14	.51	64
Risk taking	3.14	.55	108	3.05	.50	45	3.20	.59	63
Pro-active/ Dynamism	3.43	.59	104	3.44	.57	44	3.43	.62	60
Growth ambition	3.37	.85	107	3.47	.81	46	3.29	.87	61
Flexibility	4.30	.43	110	4.30	.42	46	4.30	.43	64
Global mindset	3.43	.86	82	3.62	.78	32	3.31	.89	50
Self-efficacy	3.86	.44	104	3.82	.42	45	3.89	.45	59
Human capital factors									
Age	46.5	10.3	128	48.2	9.8	54	45.2	10.5	74
Education	.61	.49	113	.66	.48	47	.58	.5	66
Entrepreneurial experience	.61	.49	117	.6	.49	48	.61	.49	69
Experience abroad	3.29	1.05	112	3.32	1.07	44	3.27	1.05	68
Control variables									
Gender*	.14	.35	157	.12	.33	65	.15	.36	92
Sales	77111.6	113870.2	38	102028.5	138246.4	21	46331.8	65370.5	17
Industry*	.40	.49	147	.38	.49	60	.41	.49	87
*Dummy variables: Gender (0= male, 1=female), Industry (0= no high-tech, 1= high-tech)									

Table 3: Overview descriptive statistics causal model

After having talked about the descriptive statistics, the next section will provide the correlation tables of the variables.

4.2 Correlations

As said above before the model should be tested on the correlations between the dependent, independent and control variables. It should be checked for multicollinearity.

Multicollinearity is a statistical phenomenon where two or more independent variables are highly correlated. If the independent variables, the predictors, are highly correlated, it means that they would measure the same thing. Low or little correlation however would mean that they measure different things. Multicollinearity does not reduce the predictive power or the reliability of a model as a whole but it affects the individual independent variables (Shadish, Cook & Campell, 2002). If two or more independent variables in our model would be correlated, the suggested hypotheses could not be answered as such because the model would not give us an indication about the individual independent variables. Correlation is measured with the Pearson correlation coefficient where +1 is the case of a perfect positive (increasing) linear relationship (correlation) and -1 the case of a perfect decreasing (negative) linear relationship (anticorrelation) between the variables. The values between +1 and -1 indicate the degree of linear dependence between the variables. The closer the values are to zero the less likely a relationship between the variables. The closer the coefficient is to either -1 or +1 the stronger the correlation between the variables (Field, 2009). The causal models will be checked for multicollinearity. Therefore the correlation matrix for the different models is presented in the following. We start by the propensities model, then the human capital model and at last the full model of the internal factor of entrepreneurial decision-making with regard to internationalization.

	1	2	3	4	5	6	7	8	9	10
1.International activities										
2.Risk taking	.11									
3.Dynamism	-.398*	.088								
4.Growth ambition	.173	.427*	-.102							
5.Flexibility	-.157	.744***	.208	.343						
6.Global Mindset	.245	.178	-.047	.563**	.152					
7.Self-efficacy	-.289	.224	.638**	-.115	.482*	-.178				
8.Innovativeness	-.21	.596**	.09	.45**	.768***	.201***	.304			
9.Sales	.362*	.084	-.354*	.038	-.338	.241	-.463**	-.208		
10.Industry	-.134	.03	.014	.181	-.017	.129	.109	.076	-.047	
11.Gender	.136	-.107	-.003	.306	.040	.259	.076	-.86	-.149	-.156
p-value: *significant at .05, **significant at .01, ***significant at .001										

Table 4: Model 1a, Propensities factors - Correlation

The table shows that there is no perfect multicollinearity between the individual independent variables. Generally speaking, substantial correlation is found at levels of $r > .8$ - $.9$ (Field, 2009). This is not the case for the independent variables of the propensities internal factors model, as the results in the table above show. Perfect collinearity would be at $r = 1$. The correlations between the two internal factors risk taking – flexibility (.744), innovativeness – flexibility (.768), self efficacy – dynamism (.638) and innovativeness – risk taking (.596) are rather large at significant levels. As explained in the section above, this does not threaten the reliability of this research. However for the further analysis we should keep this I mind. Next is the human capital model.

	1	2	3	4	5	6	7
1.International activities							
2.Entrepreneurial experience	.234						
3.Experience abroad	.112	.102					
4.Age	.266	.147	-.213				
5.Education	.051	-.347	.155	-.437*			
6.Sales	.409*	.028	.133	.039	.25		
7.Industry	-.033	-.143	-.213	.062	-.277	-.192	
8.Gender	-.213	-.289	-.048	-.009	.040	-.163	.0
p-value: *significant at .05, **significant at .01, ***significant at .001							

Table 5: Model 1b, Human capital - Correlations

As we can see in the table above there are no correlations that would let us assume multicollinearity between the independent variables. Therefore it is valid to assume that the variables are all measuring different things and are not correlated with each other.

For reasons explained already, first the propensities model and human capital model were tested on the correlation with each other. This is done in order to see whether the human capital internal factor might correlate with the propensities internal factors or control variables. In the following the results for the correlations of the full model that includes all suggested internal factors are given.

	1	2	3	4	5	6	7	8	9	10	11	12	13
Dependent variable													
1.International activities													
Independent variables													
2.Entrepreneurial experience	.418												
3.Experience abroad	.215	.116											
4.Risk taking	.093	.128	.064										
5.Flexibility	-.132	-.016	.133	.871***									
6.Dynamism	-.49	-.554*	.13	.37	.282								
7.Self efficacy	-.275	-.123	.01	.515*	.588*	.523*							
8.Growth ambition	.139	.025	.032	.342	.335	-.203	-.286						
9.Global Mindset	.035	.282	.346	.193	.142	-.101	-.31	.578*					
10.Age	.137	.506*	-.362	-.269	-.473	-.302	-.063	-.374	-.433				
11.Education	.192	-.488	.534*	-.367	-.364	.181	-.204	.081	.006	-.27			
12.Innovativeness	-.12	.124	.089	.818**	.869**	.206	.415	.319	.424	-.406	-.427		
Control variables													
13.Sales	.375	.095	.237*	-.169	-.375	-.063	-.164	-.174	.066	.034	.297	-.432	
14.Industry	-.099	.333	-.582	.383	.33	-.211	.106	.325	.326	.018	-.683**	.519*	-.304
15.Gender													
p-value: *significant at .05, **significant at .01, ***significant at .001													

Table 6: Model 2: Full Model - Correlations

As expected the propensities internal factors of innovativeness – risk taking (.818), innovativeness – flexibility (.898) and risk taking – flexibility (.871) show high levels of correlation. In the full model the correlation values of these variables lie at problematic high levels. This is an indicator for the fact that the three variables do not measure unique concepts but rather the same propensities internal factors. As the correlation values in the full model are close to the critical value of .9, the three variables should not stay in the model at the same time. Therefore the full model is tested three times, each time with only

one of the three above mentioned independent variables: innovativeness, risk taking and flexibility.

	1	2	3	4	5	6	7	8	9	10	11
1.International activities											
Independent variables											
2.Entrepreneurial experience	.311										
3.Experience abroad	.225	.064									
4.Global Mindset	.062	.165	.356								
5.Growth ambition	.163	-.065	.05	.595*							
6.Dynamism	.083	.141	.058	.177	.322						
7.Self efficacy	-.419	-.607*	.151	-.036	-.129	.333					
8.Flexibility	-.227	-.218	.033	-.244	-.22	.481*	.559*				
9.Age	.187	.198	-.274	-.283	-.299	-.265	-.111	.068			
10.Education	.136	-.283	.476*	-.055	.013	-.329	.069	-.267	-.373		
11.Industry	-.027	.083	.482*	.372	.374	.318	-.05	.203	.218	-.72*	
12.Sales	.351	.14	.223	.04	-.194	-.16	-.097	-.19	-.029	.319	-.326**
13.Gender											
p-value: *significant at .05, **significant at .01, ***significant at .001											

Table 7: Flexibility – Correlations

	1	2	3	4	5	6	7	8	9	10	11
1.International activities											
Independent variables											
2.Entrepreneurial experience	.311										
3.Experience abroad	.225	.064									
4.Global Mindset	.062	.165	.356								
5.Growth ambition	.163	-.065	.05	.595*							
6.Risk taking	.083	.141	.058	.177	.322						
7.Dynamism	-.419	-.607*	.151	-.036	-.129	.333					
8.Self efficacy	-.227	-.218	.033	-.244	-.22	.418	.559*				
9.Age	.187	.198	-.274	-.283	-.299	-.265	-.111	.068			
10.Education	.136	-.283	.476*	-.055	.013	-.329	.069	-.267	-.373		
11.Industry	-.027	.083	.482*	.372	.374	.318	-.05	.203	.218	-.72*	
12.Sales	.351	.14	.223	.04	-.194	-.16	-.097	-.19	-.029	.319	-.326**
13.Gender											
p-value: *significant at .05, **significant at .01, ***significant at .001											

Table 8: Risk taking – Correlations

	1	2	3	4	5	6	7	8	9	10	11
1.International activities											
Independent variables											
2.Entrepreneurial experience	.418										
3.Experience abroad	.215	.116									
4.Global Mindset	.035	.282	.346								
5.Growth ambition	.139	.025	.032	.578							
6.Dynamism	-.49	-.554*	.13	-.101	-.203						
7.Self efficacy	-.275	-.123	.01	-.31	-.268	.523*					
8.Age	.137	.506*	-.362	-.433	-.374	-.302	-.063				
9.Education	.192	-.488	.534	.006	.081	.181	-.204	-.27			
10.Innovativeness	-.12	.124	.089	.424	.319	.206	.415	-.406	-.427		
11.Industry	-.099	.333	-.582*	.326	.325	-.211	.106	.018*	-.683*	.519	
12.Sales	.375	.095	.237	.066	-.174	-.063	-.164	.034	.297	-.432	-.304
13.Gender											
p-value: *significant at .05, **significant at .01, ***significant at .001											

Table 9: Innovativeness - Correlation

As the three tables above show, when the three internal factors, flexibility, risk taking and innovativeness are put in them model separately (without the other two) there is no correlation at significant high levels. Therefore testing the causal model is conducted separately for each of the three factors. This is done so that none of the correlations will influence the result.

As now the problematic issue of correlations is clarified, in the following the test of the models is conducted.

4.3 Testing the model

As already mentioned the above proposed causal model of internal factors of entrepreneurial decision-making with regard to internationalization will be tested by applying statistical analysis. The statistical method used in this research setting is multiple regression analysis. Using multiple regression analysis will allow us to explicitly control for many other factors which simultaneously affect the dependent variable, internationalization. Thus, we are able to measure the extent to which the independent variables, the internal factors of entrepreneurial decision making with regard to internationalization, to predict the outcome of internationalization. Furthermore it will allow us to give information about the proportion of variance in the outcome that is explained by the variables in the model. After testing the proposed causal model of the suggested propensities and human capital internal factors of entrepreneurial decision-making with regard to internationalization, it is possible to give an indication about the effect of each independent variable (Field, 2009). For all three tests the three control variables will be entered as well to the model.

4.3.1 Basic equations

The causal model will be tested by using three different multiple regression models. First the propensities are tested, as a second step the human capital internal factors and in the end a full model of the internal factors is tested.

The models are designed after the basic equation for multiple regression models:

$$\text{Outcome}_i = (\text{model}) + \text{error}_i$$

Accordingly the three equations should be as follows:

Model 1a (propensities):

$$\text{INT}_{\text{SUB}} = \beta_0 + \beta_1 \text{RISK} + \beta_2 \text{PRO} + \beta_3 \text{AMB} + \beta_4 \text{FLEX} + \beta_5 \text{GLOB} + \beta_6 \text{EFF} + \beta_7 \text{INN} + \beta_8 \text{GEN} + \beta_9 \text{IND} + \beta_{10} \text{SALE} + \varepsilon_i$$

Model 1b (human capital):

$$\text{INT}_{\text{OBJ}} = \beta_0 + \beta_1 \text{EXP} + \beta_2 \text{ABR} + \beta_3 \text{AGE} + \beta_4 \text{EDU} + \beta_5 \text{GEN} + \beta_6 \text{IND} + \beta_7 \text{SALE} + \varepsilon_i$$

Model 2 (all internal factors):

$$\text{INT}_{\text{ALL}} = \beta_0 + \text{INT}_{\text{Sub}} + \text{INT}_{\text{Obj}} + \text{CONTROL} + \varepsilon_i$$

Those three models will be tested independently and the results will be reported in the following. For the multiple regression analysis of the three models, the method of blockwise entry is chosen. First the independent variables that are hypothesized to have an effect on the internationalization activities are entered and in the end the control variables are entered. Through the blockwise method it is ensured that all independent variables that are entered simultaneously are forced into the model simultaneously. Studenmund & Cassidy (1987) have suggested that this is the only appropriate method for theory testing.

As multiple regression analysis assumes a normal distribution of the variables, the histograms of the variables are included in the appendix. The variables mostly show a normal distribution, which gives enough support to continue with the multiple regression analysis.

4.3.2 Reliability

As said in the previous section, in order to test the models the reverse coded items of the scales were computed into the same direction as the other items. The scales used for this research have all been used in at least one previous academic research. The inter-item consistency is operationalized by the Cronbach's alpha coefficient. As showed in the previous section the Cronbach's alpha of all used scales were above the significant level of .7 within the sample of this research. Therefore all scales are considered acceptable or good in terms of reliability (Cronbach, 1951). Accordingly the research does not suffer from threats to reliability of the scales.

In the section about the operationalization and measurement of the eleven independent variables, the Cronbach's alpha scores of the scales were given for previous research projects. The Cronbach's alpha gives information whether the same thing is measured. In this section the Cronbach's alpha scores of the results of this research sample are given. All

tested scales have proven to have a reliability of good or acceptable Cronbach's alpha scores. Cronbach's alpha is a measure that is commonly used in statistical research and gives information about the internal consistency of scales. The highest Cronbach's alpha of .872 was measured for the scale measuring the internal factor of pro-activeness/ dynamism and the lowest Cronbach's alpha with .734 for the scale measuring the internal factor of risk-taking. The other internal factors score somewhere in between those two; this means that all scales that were used are reliable. All Cronbach's alpha scores are found in the following table.

Internal factors	Cronbach's alpha
Propensities	
Innovativeness	.789
Pro-activeness/ dynamism	.872
Risk-taking	.734
Growth ambition	.784
Flexibility	.795
Global mindset	.772
Self-efficacy	.844
Human capital	
Age	n.a.
Education	n.a.
Entrepreneurial experience	n.a.
Experience abroad	.801

Table 10: Cronbach's alpha scores internal factors

4.3.3 Unidimensionality

A confirmatory factor analysis is performed to assess whether or not the scales used to measure the internal factors are valid and reliable and fit the overall model. The most common approach to do this is the principal components analysis is the Varimax with Kaiser Normalization method. This method attempts to minimize the number of variables that have high loadings on each factor.

Firstly while performing a factor analysis it is important to assess the suitability of the data for factor analysis. When looking at the correlation matrix coefficients greater than .3 must be found. If only few correlations above the level of .3 are found, then the factor analysis may not be appropriate. Two statistical measures are there to help assess the factorability of the data: One is Bartlett's test of sphericity and the other is the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The Bartlett's test of sphericity should be statistically significant at $p < .05$. This is important for the factor analysis to be considered appropriate. The KMO index ranges from 0 to 1 with a level of .6 suggested as the minimum value for a good factor analysis (Hair, Black, Babin, & Anderson, 2010). The second step of factor analysis is to determine how many underlying factors there are in the data. One of the most commonly used techniques to do so, is known as Kaiser's criterion or the Eigenvalue rule. Using this rule, only factors with an Eigenvalue of 1 or more are retained in the study. The Eigenvalue of a factor represents the amount of the total variance explained by that factor (Hair, Black, Babin, & Anderson, 2010).

4.3.4 Convergent validity

The convergent validity assesses the degree to which two measures of the same latent variable are correlated. The measures that are indicators of a specific latent variable should share a high proportion of variance together. Factor loadings of .5 and higher are considered practically significant (Hair, Black, Babin, & Anderson, 2010) as they load on one factor. In the ideal case factor loadings are above .7 because a factor loading of that level or

above is equal to 50% variance extracted of that item while the other 50% is error variance (Hair, Black, Babin, & Anderson, 2010). Even if loadings fall below the level of .7, they can still be considered significant, but more of the variance in the measure is error variance than explained variance.

In the following table the variance explained (Eigenvalue), KMO index score and the factor loadings for the scales that are used in this study. Independent variables that are measured by dummy variables (yes/no) are not included in the table as for dichotomous variables no confirmatory factor analysis can be performed.

Variable	Variance explained (Eigenvalue)	KMO	Loadings
Propensities			
Innovativeness	38.4%	.796	.416 - .866
Pro-activeness/dynamism	30.2%	.816	.398 - .759
Risk-taking	33.5%	.804	.381 - .743
Growth ambitions	53.7%	.763	.312 - .684
Flexibility	38.3%	.794	.427 - .792
Global mindset	60.1%	.641	.352 - .718
Self-efficacy	24.5%	.773	.484 - .763
Human capital			
Experience abroad	63.4%	.717	.410 - .789
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization			

Table 11: Factor analysis internal factors

The table above shows that the KMO for all the constructs of the internal factors are above the critical level of .6. The same can be said about the Eigenvalue of the factors. For the factors loadings, the convergent validity, the results show that some of the scales have some factors that are not above .7. However they are kept in the dataset as lower levels do not necessarily mean that they cannot be considered significant.

4.3.5 Validity

After having talked about the reliability of the research, the next step should be to check the validity of the research. The work of Shadish, Cook & Campbell (2002) provides four validity types (statistical conclusion, internal, construct and external). Although there are many threats and considerations applicable to reliability and validity, the most important ones for this research are discussed in the following.

Statistical conclusion validity

Statistical conclusion validity describes the validity of inferences about the correlation (co-variation) between independent and dependent variable (Shadish, Cook & Campbell, 2002).

The sample is consists of the entrepreneurs that participated in the VLT business incubator. The program of the VTL business incubator aims at enterprises that are active in the high-tech industry, however the VLT is open for entrepreneurs from all sorts of businesses and backgrounds and no restrictions apply to participating. Anyhow to overcome a possible threat to statistical conclusion validity, the research includes a number of control variables that increase the assumption of statistical conclusion validity.

Internal validity

Internal validity refers to the validity of inferences about whether observed co-variation between A (the independent variable) and B (the dependent variable) reflects a causal

relationship from A to B as those variables were manipulated or measured (Shadish, Cook & Campbell, 2002).

The respondents of this research are entrepreneurs that participated in the VLT business incubator. They are mostly the ones that have power over the decision making about the strategic directions of the enterprise, including the decision making about the internationalization decision. However it is possible that the entrepreneurs that participate in the VLT program are not solely responsible for those decisions within their companies; for example there could be two founding entrepreneurs and only one is participating in the VLT business incubator and responding to this research. Therefore it is possible that the strategic decision are influenced by the internal factors of entrepreneurial decision making of both of the entrepreneurs in charge, but this survey only covers the internal factors of one of them.

Another consideration that must be taken with regard to internal validity is that there could be self-reported bias. The entrepreneurs are all willingly participating in the survey, but also know that the managers of the program might have insight into the results. Therefore it is possible that they would like to be seen in a certain way. An example could be that an entrepreneur would like to be seen as a very innovative person, whether he is not truly feeling like this in reality. This self-reported bias can somewhat affect the results.

The scales used in this research are mainly Likert scales. Likert scales tend to lead respondents with weak opinions or those who are ambivalent, to select the midpoint of a scale. A midpoint is helpful for respondents to select when they are not sure whether they agree with the statement or not. However in a 5-point Likert scale there is the threat that the data is not dispersed due to midpoint selection.

Construct validity

Construct validity refers to the validity of inferences about the higher order constructs that represent sampling particulars (Shadish, Cook & Campbell, 2002).

The grouping of the questions is important for this research. Previous questions/items may bias responding to later questions. Therefore the dependent variable and the control questions are placed later in the questionnaire. Furthermore the reverse coded items in the scales are used to overcome the threat that respondents want to score very positive and to focus their attention.

The construct validity of this research is increased due to the fact only already tested and well reasoned scales by peer-reviewed academic research studies are used to measure the internal factors of entrepreneurial decision making with regard to internationalization.

External validity

External validity refers to the validity of inferences about whether the cause-effect relationship holds over variation in persons, settings, treatment variables, and measurement variables (Shadish, Cook & Campbell, 2002).

This study is executed in the East of the Netherlands with entrepreneurs that have their business founded and established in this region close to the German border with good access to infrastructure. Furthermore all of the responding entrepreneurs participated in the VLT business incubator program that aims mostly at business active in the high-tech

industry. This research is therefore generalizable for another setting of entrepreneurs within the high-tech industry that has good access to infrastructure.

After having talked about the possible threats to validity of this research and means to overcome those threats, the next section is about the statistical analysis of the research results.

4.3.6 Model analysis

As discussed in the section above, to test the suggested causal model statistically three different models were developed. This will help to give information whether the hypothesized relationships between the internal factors and internationalization can be supported or rejected. Additionally by testing the suggested causal model by using multiple regression analysis, an answer to the second sub-question of this research can be given. The results of the multiple regression analysis will show whether the suggested internal factors of entrepreneurial decision making are replicated empirically or not. In the end it will also lead to an answer to the main research question. After conducting this multiple regression analysis a conclusion can be drawn. A start is made by the model for the propensities, then the human capital internal factors are tested and in the end the full causal model is tested.

Model 1a: Propensities

First we entered the propensities, identified by the literature review, into the model. This was done by first entering the variables where a significant positive relationship towards internationalization is hypothesized and expected and in the end the control variables. This leads to the following model:

$$INT_{SUB} = \beta_0 + \beta_1 RISK + \beta_2 PRO + \beta_3 AMB + \beta_4 FLEX + \beta_5 GLOB + \beta_6 EFF + \beta_7 INN + \beta_8 GEN + \beta_9 IND + \beta_{10} SALE + \varepsilon_i$$

Additionally the table of the Pearson correlation coefficients for the propensities internal factors model shows there shouldn't be any problems to untrustworthy b's (b-values tell us the relationship between each independent variable and the dependent variable when all other predictors are held constant) and limitations to the size of R (R represents the amount of variance in the outcome explained by the model relative to how much variation was explained in the first place) (Field, 2009).

As a next step of the statistical analysis, in the following a look will be taken at the regression coefficients of the variables of the propensities internal factors model. There are two different regression coefficients B (unstandardized coefficients) and beta (standardized coefficients). The B weight associated with each variable is given in terms of the units of this variable. The beta uses a standard unit that is the same for all variables in the equation. Beta (standardized coefficients) is useful because they allow comparing two variables that are measured in different units. If the regression coefficient is positive, then there is a positive relationship between the independent and dependent variable. If the value is negative, then there is a negative relationship between the independent and dependent variable. The regression coefficients tell us the change in outcome resulting from a unit change in the predictor when holding all other variables constant. In the following the overview for the B and beta of the independent variable of the propensities internal factors model is given (Field, 2009).

The table also includes the R^2 of the model. The R^2 describes to how much percent the model can account for the variances on the dependent variable. Furthermore the F-ratio and the degrees of freedom are included. The F-ratio is a test statistic that is used to decide whether a model as a whole has statistically significant predictive capability. Under the null hypothesis that the model has no predictive capability, the F statistic follows an F distribution with p numerator degrees of freedom and n-p-1 denominator degrees of freedom. The null hypothesis is rejected if the F ratio is large (Field, 2009).

The p-value is the probability of obtaining a test statistic that is at least as extreme as the one that was actually observed, assuming that the null hypothesis is true. In social sciences the null hypothesis is often rejected when the p-value is less than the significance level, which is often .05 or .01. In here the p-values of different significance levels will be reported. If results will not meet those p-values, than that means that they are likely to be produced by chance and that the null hypothesis should not be rejected (Field, 2009).

Variable	Unstandardized Coefficient B	Standard Error SE	Standardized Coefficient beta
Risk taking	1.564	1.434	.473
Dynamism	-1.749	1.131	-.478
Growth ambition	.248	.797	.111
Flexibility	-1.351	2.097	-.36
Global Mindset	.801	.902	.268
Self-efficacy	1.504	2.073	.274
Innovativeness	-1.304	1.493	-.34
Sales	1,520E-007	0.0	.010
Industry	-.849	1.036	-.204
Gender	.150	2.742	.015
R^2 .409			
Adjusted R^2 .083			
F .832			
DF 10			
p-values: *significant at .05, **significant at .01, ***significant at .001			

Table 12: Regression coefficients propensities internal factors

With regard to the hypothesized relationships between the independent and dependent variable, the regression coefficients show different results than what was suggested by the results of the systematic literature review. What we can conclude from the table above is that some of the independent variables even could have negative relationship towards the dependent variable; e.g. dynamism, flexibility and innovativeness. However none of the regression coefficients is significant at the p-values of .05, which is the standard in social science for what is acceptable. Not even at the significance levels between .05 and .10 which is considered as marginal in social sciences (Field, 2009).

Similar to the regression coefficient the results of the R^2 can be interpreted. The propensities internal factors model is suggested to explain for around 40% of the dependent variable internationalization. However also when it comes to the R^2 and the adjusted R, the significance levels are not met and therefore the results are rather mere chance than accounted for by the model. Anyhow it is interesting to notice that there is a big difference between the adjusted R^2 and the R^2 . This can be due to the fact that there

are a large number of independent variables in comparison to the sample size. In this case it is possible that the R^2 becomes artificially large, simply because some independent variables chance variations explain small parts of the variance of the dependent variable. Therefore the adjusted R^2 might be noticeably lower. As additional variables are added to a regression equation, R^2 increases even when the new variables have no real predictive capability. The adjusted R^2 is an R^2 -like measure that avoids this difficulty. When variables are added to the equation, adjusted R^2 doesn't increase unless the new variables have additional predictive capability. This can be the explanation for the big difference between the R^2 and the adjusted R^2 in this case.

The F-ratio shows that it is slightly below 1. A good model should have an F-ratio greater than 1 at least (Shadish, Cook & Campbell, 2002). The F-ratio that is smaller than 1 means that the null hypothesis here cannot be rejected.

The above made statistical analysis of the model for the propensities internal factors with regard to internationalization show that all hypotheses should be rejected. This is due to the fact that the statistical analysis did not show that any of those variables have significant positive effect on the internationalization activities of the entrepreneurs. Even more some of the variables seem to have higher levels in the domestic-only entrepreneurs. The same accounts for the control variables. Also they could not account for any variation on the dependent variable.

This section has taken a look at the propensities now a look will be taken at the human capital internal factors as suggested by the literature review.

Model 1b: Human capital

The statistical analysis of the human capital with regard to internationalization is done in the same way than the statistical analysis of the propensities internal factors in the section above. Therefore not every single step is explained in detail in this section, but rather just the results are presented in here as the same theories and techniques are used in here.

$$INT_{OBJ} = \beta_0 + \beta_1 EXP + \beta_2 ABR + \beta_3 AGE + \beta_4 EDU + \beta_5 GEN + \beta_6 IND + \beta_7 SALE + \varepsilon_i$$

Also the human capital model is tested by block wise entry method. First the internal factors that are supposed to have a positive significant relationship towards the internationalization activities and at last the control variables.

Before making the statistical analysis the independent variables of the human capital are tested on their correlations with each other.

Next are the regression coefficients for the human capital model. The same considerations as for the propensities model apply.

Variable	Unstandardized Coefficient B	Standard Error SE	Standardized Coefficient beta
Entrepreneurial Experience	.987	1.145	.231
Experience abroad	.227	.538	.103
Age	.075	.061	.325
Education	.879	1.240	.212
Sales	7.400E-006	0.0	.332
Industry	.529	1.081	.124
Gender	-.532	1.404	-.093
R ² .314			
Adjusted R ² .055			
F .851			
DF 7			
p-values: *significant at .05, **significant at .01, ***significant at .001			

Table 13: Regression coefficients human capital

However even if the interpretation of the regression coefficients for the human capital internal factors are a bit different than for the propensities internal factor model, the effects are not at any significance level that is acceptable in social sciences as well. Therefore probably the hypothesized effects of the independent variables on the dependent variable are due to chance. At least the results do not allow claiming that there is a significant statistical relationship. Similar to the findings of the propensities internal factors, the control variables also have no statistical significant effect in the human capital internal factors model.

The R² and the adjusted R² of the human capital internal factors model is smaller than for the propensities internal model; however it is also not significant at any levels acceptable by social sciences. Here the same explanation as discussed in the previous section could be the reason for the big difference between the R² and adjusted R².

Similar to the findings in the section above also here the F-ratio is below zero. The same conclusions can be derived from this level than in the previous model.

Due to these results the hypotheses of the human capital internal factors also have to be rejected.

After having looked at the propensities and human capital of entrepreneurial decision making separately, the next step will be testing the full causal model in order to draw conclusions.

Model 2: Full model

Even though the propensities internal factors and the human capital internal factors alone are not significant on levels acceptable by social research, the full causal model of the internal factors with regard to internationalization is tested in the following.

The regression equations used is as follows:

$$INT_{ALL} = \beta_0 + INT_{Sub} + INT_{OBJ} + CONTROL + \varepsilon_i$$

In the following the regression coefficients for the three different full causal models are given. The same theoretical reasoning applies as in the above mentioned sections.

Variable	Unstandardized Coefficient B	Standard Error SE	Standardized Coefficient beta
Entrepreneurial Experience	.313	7.231	.062
Experience abroad	1.621	3.671	.62
Global Mindset	-2.403	8.112	-.555
Growth ambition	.711	4.654	.228
Dynamism	-1.056	4.788	-.279
Self-efficacy	-1.433	9.076	-.236
Flexibility	.505	8.553	.130
Age	.069	.480	.258
Education	1.232	7.501	.262
Sales	8.169E-006	0.0	.379
Industry	3.32	9.068	.379
R ²	.515		
F	.095		
DF	12		
p-values: *significant at .05, **significant at .01, ***significant at .001			

Table 14: Regression coefficients full model – flexibility

Variable	Unstandardized Coefficient B	Standard Error SE	Standardized Coefficient beta
Entrepreneurial Experience	-.2623	6.387	-.515
Experience abroad	1.323	2.889	.506
Global Mindset	-.557	6.335	-.129
Growth ambition	-.935	3.657	-.3
Risk taking	3.491	4.881	.917
Dynamism	-.3.314	4.954	.917
Age	.154	.241	.577
Education	2.236	5.203	.475
Sales	5.720E-006	0.0	2.65
Industry	2.341	7.503	.460
R ² .675			
F .189			
DF 12			
p-values: *significant at .05, **significant at .01, ***significant at .001			

Table 15: Regression coefficients full model – risk taking

Variable	Unstandardized Coefficient B	Standard Error SE	Standardized Coefficient beta
Entrepreneurial Experience	11.692	7.405	2.092
Experience abroad	-2.57	2.468	-.989
Global Mindset	-4.081	3.337	-.934
Growth ambition	-.295	1.729	-.094
Dynamism	.652	2.638	.166
Self-efficacy	-2.251	3.809	.166
Age	-.319	.282	-1.068
Education	7.712	5.047	1.571
Innovativeness	3.046	4.331	.490
Sales	2.178E-006	0.0	.101
Industry	-11.157	0.0	-1.997
R ²	.73		
F	n.a.		
DF	12		
p-values: *significant at .05, **significant at .01, ***significant at .001			

Table 16: Regression coefficients full model - innovativeness

The tables above show that excluding two of the three correlating variables, flexibility, risk taking and innovativeness from the model the results change. However as already seen in the propensities and human capital internal factors model the regression coefficients of the full causal model of the internal factors are also not significant at any levels acceptable in social sciences.

Similar to the previous two models, also in these three models the R² are not significant at statistically acceptable levels but however exceptionally high. Most likely this is due to the fact that there is a large number of independent variables and a relatively small number of cases that are entered into the model.

The F-ratios show also that we have very different F-ratios for the three models. First of all it is important to notice that the F-ratios as well are not statistically significant. For the model that includes the independent variable of innovativeness the F-ratio could not even be computed for the whole model. For the model including flexibility it is a little smaller than 1 and for the model including risk taking it's a bit higher than 1. When the F-ratio is 1 this means that the null hypothesis cannot be rejected.

Therefore the statistical analysis of the full model supports the findings of the propensities and human capital internal factors models and we need to reject all the hypotheses.

4.4 Other tests

In order to see whether there are relationships between the independent and dependent variable that might not have been detected by the multiple regression analysis, the model was tested for further statistical relationships. The model was tested by curvilinear regression, U-shaped relationships and moderating variables. However none of these tests found any statistical significant relationship. Therefore those testes are not summed up here but it is only mentioned that they also could not find a statistical significant relationship.

4.5 Summary of the results

During this chapter the models with the internal factors that were derived from the literature review were tested statistically. This was done by using three different models, the propensities internal factors, the human capital internal factors and the full model. All three different models were tested by using multiple regression analysis. Using multiple regression analysis allows to explicitly control for many other factors which simultaneously affect the dependent variable. Thus, we were able to measure the extent to which the independent variables predict the outcome of internationalization. Furthermore multiple regression analysis allows us to give information about the proportion of variance in the outcome that is explained by the variables in the model.

The results were tested for multicollinearity. Multicollinearity is a statistical phenomenon where two or more independent variables are highly correlated. If the independent variables, the predictors, are highly correlated, it means that they would measure the same thing. Low or little correlation however would mean that they measure different things. The statistical analysis showed that three variables of the propensities internal factors model are correlated at statistical significant levels. These three internal factors are: innovativeness, risk taking and flexibility.

In all reported models the R^2 are considerably bigger than the adjusted R^2 . A possible explanation of this is that the R^2 becomes artificially large, simply because some independent variables chance variations explain small parts of the variance of the dependent variable. Therefore the adjusted R^2 might be noticeably lower than the R^2 . As additional variables are added to a regression equation, R^2 increases even when the new variables have no real predictive capability. The adjusted R^2 is an R^2 like measure that avoids this difficulty. When variables are added to the equation, adjusted R^2 doesn't increase unless the new variables have additional predictive capability. This can be the explanation for the big difference between the R^2 and the adjusted R^2 in this case.

In most of the models the F-ratio is slightly below 1. A good model should have an F-ratio greater than 1 at least (Shadish, Cook & Campbell, 2002). The F-ratio that is smaller than 1 means that the null hypothesis here cannot be rejected.

Important to notice is that none of the results are statistically significant at any p-values that are acceptable for social sciences. This can be interpreted in a way that the results are rather created by chance than that there is a significant statistical relationship between the variables.

After the multiple regression analysis some more statistical tests were conducted. But also the results of the curvilinear regression were statistically not significant. As well as no U shaped effects were found and no moderating variables could be detected.

Summarizing the results, all hypotheses that were established after the literature review have to be rejected, as no positive statistically significant relationship was found. Also the control variables did not show any effect on statistically significant levels.

5. Discussion & Conclusions

5.1 Discussion

In the following the implications for research and practice, limitations, and suggestions for further research are given. As well as in the end a conclusion to the main research question can be taken.

First of all it is important to note that the above made statistic analyses of the internal factors with regard to internationalization that were suggested after the systematic literature review are found not to be statistically significant in the above tested sample. However it is important to note that this does not mean that the suggested internal factors of entrepreneurial decision making with regard to internationalization are not important in general. They are not distinguishing international and domestic-only entrepreneurs in the sample of the participants of the VentureLab Twente, however they could be valid in another sample setting. It is important to note that also the control variables have no statistical significant impact for the internationalization decision in the tested sample. In order to fully reject internal factors in their influence on the internationalization decision follow-up research should be conducted. Imaginable is a follow-up research that compares the VentureLab Twente sample with a sample of entrepreneurs from the East of the Netherlands that did not participate in a business incubator. By doing this a comparison between VLT participating entrepreneurs and non-participating entrepreneurs could be drawn. Another interesting follow-up study could be to do a randomized sample setting from the Netherlands as this would allow increase validity of the research.

This research uses scales for the internal factors that are validated by existing research; this increases the reliability and validity of this research. However due to the fact that this research fits into a bigger research, which collects data for similar but not identical research, the scales are not only created for measuring the effect on internationalization but also on other subjects. Also the literature review has shown that different researches of the International Entrepreneurship literature use different constructs for the same concepts. This sets limitations to this research in a way that the results could be different if other scales that measure the same concepts were used. Therefore another research should be conducted that testes the influence of internal factors with regard to internationalization while using different scales for the same constructs. Another option would be a study that suggests clear operationalization as a framework for the variables measuring the concepts.

It is also notable that all entrepreneurs are voluntarily participating in the VentureLab Twente program in order to improve their skills; therefore the group can be too homogenous which is not only due to external factors but also due to internal factors. It is possible that all entrepreneurs that participate think about themselves in a certain way. Therefore in order to fully reject the influence of internal factors with regard to the internationalization decision, the another research should be conducted that compares the VentureLab Twente participants with entrepreneurs that did not participate in a business improvement program.

In general researchers agree that a small sample is sufficient for exploratory studies but this also means that effects will be considerably small. Therefore it is possible that the results are not significant due to the fact that the sample size was too small. New research on internal factors with regard to internationalization should be conducted using a bigger sample size, preferably aiming at all entrepreneurs within the Netherlands. This would also

overcome the limitation that the N of this study is too small for testing the full model, as per each predictor at least 15 N should be counted. Therefore the study should be repeated with a bigger sample size.

Another limitation to the study is that the descriptive statistics show that the scales all have a small standard deviation this could be an evidence of a central tendency bias due to midpoint selection. The 5-point Likert scales are a threat to validity as they let respondents choose the midpoint and therefore not much variety in the sample is found. This could be a limitation of this study as both the international and domestic only entrepreneurs tend to choose the midpoint of the scale. This could possibly be overcome with other scale constructions like 7-point Likert scales or a qualitative research setting where the respondents have to talk about their motivations. A follow-up research should consider those scale constructions.

Another limitation of the study is that it assumed that the entrepreneurs are mainly active in the high-tech industry. The hypotheses are based on this assumption. As said the high-tech industry is very special due to its international character itself. However the findings on the control variable industry showed that at least half of the entrepreneurs are not active in the high-tech industry. Many of them are active in service related sectors. This means that for the internal factors different assumptions should have been made. A follow-up study could concentrate on the differences between the high-tech and service related industries as well as focus on a bigger sample from high-tech entrepreneurs.

For VentureLab Twente and other business incubators in the Netherlands this means that if they want to stimulate internationalization they should not focus on the internal factors. This means that they cannot assume that the more experience abroad an entrepreneur has the more likely he or she is to internationalize. According to these findings there are no big differences between the international and domestic-only entrepreneurs in propensities and human capital. However a factor that is underrepresented in this study is the age of the company. The study also includes entrepreneurs that just have started their enterprises or are rather participating with a business idea than a real existing enterprise. Even though the research has asked for the entrepreneurial experience it could be that the entrepreneur is currently active in two enterprises and has entered the VLT business incubator with the new venture that is not international yet. A follow-up study should take the age of the enterprise into account.

During the systematic literature review evidence was found that the suggested internal factors have a positive statistically significant relationship towards internationalization. However it needs to be noticed that none of the empirical studies was conducted in the Netherlands. Therefore it can be assumed that the Dutch entrepreneurs might not differ in their propensities and human capital when it comes to internationalization. This research does not provide the answer to the question why this might be so, but gives already an indication that there might be some underlying factors that influence the non-difference.

Another point of discussion is that many of the empirical studies are qualitative studies as well as some hypotheses are based on theoretical studies. Therefore the internal factors that they found effect on or they assumed to have an effect could be replicated in this research.

What should also be taken into consideration is that this research measures all concepts on the personal level of the participating entrepreneur. However concepts such as

entrepreneurial orientation are traditionally measured and tested on the organizational level. This study did not find any positive effects for these variables. With a view to the results of previous studies testing the entrepreneurial orientation and their effect on internationalization it should be stated that this study can therefore not disprove those findings as the factors are measured on different levels.

This section has discussed the implications for research and practice, limitations and has given suggestions for further research. The next section will come to a final conclusion to the main research question.

5.2 Conclusion

The academic literature has been looking at the phenomenon of internationalization as well as entrepreneurship for quite some time. Also the combined phenomenon of international business and entrepreneurship research, International Entrepreneurship has found its own research direction and marked its place in the academic research arena. Studies have suggested that there are certain factors that can describe and control for the internationalization activities of an entrepreneur. That is in line with the resource based view where the level of the entrepreneur is central for research. This study established the role of the individual level of the entrepreneur for internationalization. Only after the importance and relevance of this was established this study was designed.

This research was designed to find an answer to the question which internal factors of entrepreneurial decision making with regard to internationalization explain why some entrepreneurs internationalize whereas others are not. By conducting this research the International Entrepreneurship literature is enriched by a quantitative analysis of the internal factors of entrepreneurial decision making with regard to the internationalization activities. The research used a sample of entrepreneurs that participated in the VentureLab Twente business incubator program. These entrepreneurs are very diverse in their backgrounds, companies and other circumstances; however they are all located in the same region in the East of the Netherlands. This makes them a good research sample to draw a sample upon and test why some of them internationalize whereas others do not.

This research started with looking at internal factors that were already suggested by the academic literature. The main research question was answered by addressing two sub research questions. The first sub research question was asking for the internal factors with regard to internationalization that are suggested by the academic literature. In order to come to a valid conclusion for this part, a literature review was conducted. During the first phase a search for the theoretical base of research on entrepreneurial factors when it comes to internationalization was conducted. Looking for a more concrete background, the second phase used back referencing from the first phase and scanned the literature accordingly. After those two phases, the following internal factors of entrepreneurial decision making with regard to internationalization were identified: risk taking, innovativeness, pro-activeness/dynamism, growth ambition, global mindset, flexibility, self-efficacy, age, entrepreneurial experience, educational level and experience abroad. They were placed into two categories: propensities and human capital internal factors. However it should be noted that those two categories do not mean that the internal factors are correlated and/or connected directly.

The relationship of the suggested eleven internal factors of entrepreneurial decision making with regard to internationalization were also hypothesized based on the findings of the literature review. For all eleven factors based on the theoretical and empirical evidence

that was found a positive statistical significant relationship is hypothesized. What is worth mentioning is that during the whole systematic literature review not a single article was found that suggested that there was no relationship between internal factors of entrepreneurial decision making and internationalization.

After having established eleven hypotheses about the relationship with internationalization, thus possible explaining variables why some entrepreneurs internationalization whereas others do not, they were operationalized in order to conduct a statistical empirical analysis and give answer to the main research question. Next to the independent variables also three control variables were introduced. Those are: gender, sales and industry. With those control variables the effects of the internal factors, the independent variables, on the dependent variable can be controlled. This means not leaving out other important external factors with regard to internationalization

After having operationalized the variables and established the reliability and validity of the research setting, three models were derived for the statistical analysis. Those are: a model of the propensities, a model of the human capital internal factors and a full model combining the latter two. First of all a look at the descriptive statistics was taken and then the models were tested by using multiple regression analysis.

More in particular this study has analyzed the internal factors of 157 entrepreneurs that participated in the VentureLab Twente (VLT) project. The suggested eleven internal factors, three control variables and the dependent variable were designed as a survey in order to collect the answers of those entrepreneurs. The results of the survey are tested by the above mentioned multiple regression analysis.

After having conducted the statistical analysis of the survey results some conclusions could be drawn. Three internal factors innovativeness, risk taking and flexibility showed correlation at significant high levels. This means that they are related towards each other and not measuring different things independently. In a statistical analysis this can be a threat to the reliability of the research. Therefore the full causal model was tested three times, each time without two of those three internal factors.

However the results of all tested models showed that the international active and domestic-only entrepreneurs do not differ on the independent variables as well as on the control variables. This was supported by the multiple regression analysis. None of the variables proved to be statistically significant in explaining the variation on the dependent variable, internationalization. This was the case for the independent as well as the control variables.

Those findings during the statistical analysis are supported by the descriptive statistics of the results. Those showed little variation between the findings on the variables for the international active and domestic-only entrepreneurs. For some internal factors the reported mean was even higher for the domestic-only entrepreneurs meaning that some of the internal factors had a negative relationship towards internationalization; however not at statistical significant levels.

What was noticeable was the considerable difference between the R^2 and the adjusted R^2 . It is suggested that this is due to the rather large number of variables entered into the model and the rather small sample size. This is also an indication why no statistically

significant relationships are found. The sample size of this study could be too small to show effects that would be visible if the sample size would be bigger.

Another suggestion why there were no effects found could be that there is too little variation on the dependent variable of internationalization. Roughly half of the entrepreneurs are not internationally active with their enterprise. This does not allow for a normal distribution on the variable. This overrepresentation of non-domestic entrepreneurs could be an explanation why not effects were found.

Concluding to the above mentioned findings the hypotheses that suggested that there was a significant positive relationship between the independent variable and the dependent variable had to be rejected. Also the findings on the control variables were not statistically supported and therefore it can be concluded that they cannot explain why some entrepreneurs internationalize whereas others do not.

The answer to the main research question should therefore be as follows. During this research no internal factor could be detected and tested that showed that there was a positive relationship between this internal factor of entrepreneurial decision making and internationalization. In other words, contrary to earlier studies there was no internal factor replicated in the empirical analysis that could explain why some entrepreneurs whereas other do not.

However there are some limitations to this research setting that are discussed above. To mention some, the research sample involves entrepreneurs from very different backgrounds and not mainly high-tech enterprises as assumed in the beginning. However those were all participants in the same business incubator VentureLab Twente. Therefore the research cannot be easily generalized towards another population of high-tech entrepreneurs. And the suggested hypotheses about the independent variables can only be rejected and supported for this specific group. As already said, a follow-up research should compare the VLT participants with non-participating entrepreneurs in order to give an indication if the non-variation on the independent variables can be explained by their willingness to improve themselves thus participate in the VLT program. But for this moment the conclusion should be taken that there are no internal factors of entrepreneurial decision making with regard to internationalization that explain why some entrepreneurs internationalize whereas others do not.

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7. Annex

7.1 Tables

Author (Year)	Title	Factors	Research method	Finding on factors
Abdul-Aziz & Wong (2010)	Exploring the internationalization of Malaysian contractors: the international entrepreneurship dimension	Flexibility, dynamism, high ambition, world-mindedness, personal & business networks, willingness to take risk, innovativeness, high education level, young members, language proficiency, experience abroad	qualitative (14 Malaysian firms)	+
Andersson & Wictor (2004)	Innovation internationalization in new firms: born globals - the Swedish case	high ambition	quantitative	+
Autio et al. (2010)	International Entrepreneurship and Capability Development—Qualitative Evidence and Future Research Directions	Learning capabilities -> uncertainty in international environment	literature review	+
Bandura (1997)	Self-efficacy	self-efficacy	quantitative	+
Bilkey & Tesar (1977)	The export behavior of smaller-sized Wisconsin manufacturing firms	dynamism on the management level	quantitative	+
Butler et al. (2010)	Linking international entrepreneurship to uncertainty, discovery and cognition	Cognition, noticing opportunities -> IE action Absorbing uncertainty, bearing uncertainty -> IE action	model developing & testing (literature review)	u u
Buttriss & Wilkinson (2007)	Using narrative sequence methods to advance international entrepreneurship theory	narrative sequence method	Single case study	n.s.
Chandra & Coviello (2010)	Broadening the concept of international entrepreneurship: "Consumers as international entrepreneurs"	Four types of customers as international entrepreneurs	literature review	n.s.
Coviello & Jones (2004)	Methodological issues in international entrepreneurship research	Empirical methods in IE	literature review	n.s.
Coviello et al. (2011)	The emergence, advance and future of international entrepreneurship research--An introduction to the special forum	Overview of IE literature so far	literature review	n.s.
Davis (2008)	Understanding Entrepreneurship: Developing Indicators for International Comparisons and Assessments	Call for OECD based standards on IE measurement	literature review	n.s.

Dichtl et al. (1984)	The export decision of small and medium sized firms: a review	flexibility, willingness to take risk, innovation, high educational level, relative youth, language proficiency, experience abroad	quantitative	+
Dimitratos et al. (2004)	The relationship between entrepreneurship and international performance: the importance of domestic environment	Entrepreneurship -> perceived satisfaction with performance in the foreign country Uncertainty of the domestic environment -> entrepreneurship Uncertainty of both environments -> entrepreneurship-foreign sales ratio	quantitative (152 Greek firms)	+ (direct effect) + (moderates, contingency effect) + (configurational effect)
Dimitratos et al. (2010)	The global smaller firm in international entrepreneurship	International market selection approach, international opportunity exploitation approach, proactiveness, risk attitude, innovativeness	qualitative (in-depth studies 10 SMEs)	+
Edvardsson et al. (1993)	Internationalization in service companies	high ambition	quantitative	+
Etemad & Lee (2003)	The knowledge network of international entrepreneurship: Theory and evidence	Knowledge network	literature review	+
Fink et al. (2008)	Cooperative internationalization of SMEs: Self-commitment as a success factor for International Entrepreneurship	Trust-based internationalization (self-commitment) -> performance results	quantitative (146 SMEs in Austria, Slovenia, Czech Republic)	+
Gamboa&Brouthers (2008)	How International is Entrepreneurship?	IE research is being published in IE literature	literature review	n.s.
Hauser & Werner (2010)	Fostering International Entrepreneurship: Are SMEs targeted adequately by official foreign trade promotion schemes?	Small business -> usage of foreign trade promotion scheme Large business -> usage of foreign trade promotion scheme	quantitative (615 German enterprises)	- +
Hohental (2007)	Integrating qualitative and quantitative methods in research on international entrepreneurship	Organizational memory -> perceived costs of further expansion	mixed method (case study & mail survey)	u
Keupp&Gassmann (2009)	The Past and the Future of International Entrepreneurship: A Review and Suggestions for Developing the Field	Sociocognitive factors as important in IE	literature review	n.s.
Knight (2001)	Entrepreneurship and strategy in the international SME	International entrepreneurial orientation -> internationalization preparation, strategic	mixed methods (in depth interviews and survey)	+ (except technology acquisition on international performance)

		competence, technology acquisition -> international performance			
Kobeissi (2010)	Gender factors and female entrepreneurship: international evidence and policy implications	Female education, female to male earnings ratio, female economic activities, fertility rate	quantitative (44 developed and developing countries)	+	
Majumdar et al. (2010)	Industry Structure Characteristics and International Entrepreneurship in India's Software Industry	Dominant firms -> high revenue per employee industry segment of business process outsourcing Less powerful firms -> low revenue per employee segment of high technology	quantitative (876 longitudinal Indian firms)	+	+
Manolova et al. (2002)	The impact of resources on small firm internationalization	Human capital factors (traditional demographic, international orientation, environmental perception, self assessed strength in international business skills)	quantitative	-,-,+,+	
McDougall&Oviatt (2000)	International Entrepreneurship: The Intersection of Two Research Paths	Innovation, proactiveness, risk seeking that crosses national borders and intended at value creation Firm size and age	literature review	+	o
McGaughey (2007)	Hidden ties in international new venturing: The case of portfolio entrepreneurship	Portfolio entrepreneurship in INVs	qualitative (longitudinal study of Australian 11 SMEs)	u	
Moon & Lee (1990)	On the internal correlates of export stage development: an empirical investigation in the Korean electronics industry	world mindedness	quantitative	+	
Mtigwe (2006)	Theoretical milestones in international business: The journey to international entrepreneurship theory	IE as understanding firm-level process dynamics by isolating variables that set internationalization in motion key to get the process started	literature review	n.s.	
Muzychenko (2007)	Facilitating international entrepreneurship through developing a global mindset	Global mindset -> cope with challenges and exploit opportunities of internationalization	literature review	+	
Nasra & Dacin (2009)	Institutional arrangements and international entrepreneurship: The state as institutional entrepreneur	Role of the state	qualitative (case study Dubai/UAE)	+	
Naude & Rossouw (2010)	Early international entrepreneurship in China: Extent and determinants	Foreign shareholders -> early internationalization Entrepreneur with	quantitative (3948 Chinese firms)	+	

		previous exporting experience -> early internationalization		+
Nummela & Welch (2007)	Qualitative research methods in international entrepreneurship: Introduction to the special issue	Underrepresentation of qualitative methods in IE	literature review	n.s.
Pisano et al. (2007)	International Entrepreneurship in Emerging Economies: the role of social capital, knowledge development and entrepreneurial actions	Strategic alliances -> entry mode to emerging economies Social capital -> entry to emerging economies	hypothesis testing by literature review	u u
Reuber & Fischer (2011)	International entrepreneurship in internet-enabled markets	Online reputation, online technology capabilities, online brand communities -> successful pursuit of international opportunities	literature review	+
Seymour (2007)	Hermeneutic phenomenology and international entrepreneurship research	Underrepresentation of philosophy of science in IE and E	literature review	n.s.
Sommer & Haug (2011)	Intention as cognitive antecedent to international entrepreneurship - understanding the moderating roles of knowledge and experience	Direct effects on IE: Subjective norms Attitude towards risk Networking capabilities Experience Knowledge on internationally doing business Moderating effects: Experience & knowledge -> attitude towards behavior and perceived behavioral control	hypothesis testing by literature review	o o + + + +
Stel, van (2008)	The COMPENDIA database: COMParative Entrepreneurship data for international analysis	Business ownership rate over time	quantitative (longitudinal 23 OECD countries)	u
Szyliowicz & Galvin (2010)	Applying broader strokes: Extending institutional perspectives and agendas for international entrepreneurship research	Call for deeper application of institutional arguments in IE research	literature review	n.s.
Wennberg & Holmquist (2008)	Problemistic search and international entrepreneurship	Search behavior & performance below aspiration levels -> new internationalization attempts High and low levels of performance -> search behavior	Longitudinal quantitative (860 Swedish firms)	+ +

		Slack resources -> new internationalization attempts		o
Westhead et al. (2003)	Differences between private firms owned by novice, serial and portfolio entrepreneurs: implications for policy makers and practitioners	novice vs. habitual entrepreneurs	quantitative	+
Williams & Hee Lee (2009)	International Management, political arena and dispersed entrepreneurship in the MNC	Employees in remote subsidiaries act as entrepreneurs Variables on corporate, subsidiary and individual level	literature review	n.s.
Wood & Bandura (1989)	Social Cognitive Theory of Organizational Management	self-efficacy	literature review	+
Wright & Dana (2003)	Changing paradigms of international entrepreneurship strategy	Multi-polar business networks	literature review	n.s.
Wright et al. (2007)	The Internationalization of SMEs and International Entrepreneurship: A Critique and Policy Implications	7 important themes of IE on policy context	literature review	n.s.
Yeung (2002)	Entrepreneurship in international business: An institutional perspective	Institutional structures of the home country -> variations in entrepreneurial endowments of transnational entrepreneurs	literature review	n.s.
Young et al. (2003)	International entrepreneurship research: what scope for international business theories?	Lack of theories based on International Business that focus on international nature	literature review	n.s.
Zahra & Garvis (2000)	International corporate entrepreneurship and firm performance:: The moderating effect of international environmental hostility	innovation proactiveness risk taking on company performance perceived hostility of the international environment	quantitative (89 US firms)	+
Zahra et al. (2005)	Cognition and international entrepreneurship: implications for research on international opportunity recognition and exploitation	Cognitive model	literature review	n.s.
Zuccella et al. (2007)	The drivers of the early internationalization of the firm	previous international work experience	literature review	+

Table 17: Overview literature review

Journal	Number
Journal of International Entrepreneurship	10
Journal of Business Venturing and Entrepreneurship Theory and Practice	3
International Business Review	2
European Management Journal	2
Journal of World Business	2
Measuring Entrepreneurship	2
Academy of Management Journal	1
Journal of International Management	1
International business review	1
Asia Pacific Journal of Management	1
Small Business Economics	1
Regional Studies	1
Journal of Management	1
International Journal of Technology Management	1
International Entrepreneurship and Management Journal	1
International Entrepreneurship and Management Journal	1
International Business Journal	1
Construction Management and Economics	1

Table 18: Overview journals publications

Often reoccurring themes in the first phase of the literature review	
SMEs as focus & importance of them	Wright et al. (2007), Mtigwe (2006), Fink et al. (2008), Hohental (2007), Sommer & Haug (2011), Wennberg & Holmquist (2008), Hauser & Werner (2010), McDougall & Oviatt (2000), Knight (2001), Wright & Dana (2003)
International New Venture (INV)	Knight (2001), McGaughey (2007), Dimitratos et al. (2010), Naude & Roussouw (2010), Chandra & Coviello (2010), Auto et al. (2010)
Theory development	Buttriss & Wilkinson (2007), Seymour (2007), Hohental (2007), Numella & Welch (2007), Chandra & Coviello (2010), Szyliowicz & Galvin (2010), Butler et al. (2010), Knight (2001), Zahra et al. (2005), Young et al. (2003)
Policy context	Davis (2008), Williams & Hee Lee (2009), Naude & Roussouw (2010), Nasra & Dacin (2009), Kobeissi (2010), Hauser & Werner (2010), Szyliowicz & Galvin (2010)

Table 19: Often reoccurring themes in the first phase of the literature review

7.2 Questionnaire

Dear respondent,

try to answer the following questions as honestly as you can and work as quickly as possible – fill out the first answer that comes to your mind. Your answers to this survey will be treated as strictly confidential and will be treated anonymously. Any research report that might be written would typically report only aggregated, and not individual, results. However, within the VentureLab program we do ask your permission to share your personal responses with your individual coach and trainers when required for the programme. In our view, very different persons with very different backgrounds can be successful entrepreneurs. This means that there are no right or wrong answers in this questionnaire. It is your honest response that is important.

Thank you in advance!

1. Name:

2. Age:

3. Gender:

☐ Male

☐ Female

4. Highest level of education finished:

5. Company Name:

6. In what industry is the company active?:

7. Indicate the amount of sales in € you made over the past months:

_____ €

8. Internationalization

Please tick a box for each of the following *inward* activities that you are involved in:

☐ Contract-in R&D from foreign based firm

☐ Import from foreign based supplier

☐ License in technology from foreign based firm

☐ Import with distribution in the home country

☐ Contract-in manufacturing from foreign based firm

☐ Recruiting foreign employees

☐ Investment capital provided by foreign based firm

☐ Recruiting foreign board members

☐ Technical service or consultancy performed in the domestic market for foreign clients

☐ Management or marketing service or consultancy performed in the home country for foreign clients

Please tick a box for each of the following *outward* activities that you are involved in:

Please indicate to what extent you have international experience or not:

<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I have travelled extensively internationally
<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	My education included an international dimension
<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I have taken international vacations and holidays
<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I have worked internationally

For each of the last ten years, please indicate your *major* activities. Put an 'x' in each box that applies. For example, if you were a student part-time and employed part-time in 2012 you would put an 'x' in two rows for the 2012 column.

[illegible]

11. Innovativeness

Inaccurate 2 3 4 Accurate

<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Love to think up new ways of doing things
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Have a vivid imagination
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Am full of ideas
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Carry the conversation to a higher level
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Come up with bold plans
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Have excellent ideas
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Do not have a good imagination
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Have difficulty imagining things
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Will not probe deeply into a subject
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Can't come up with new ideas

12. Pro-activeness/dynamism

Uncharacteristic 2 3 4 Characteristic

<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I often find myself performing tasks that I had intended to do days before
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I often miss concerts, sporting events, or the like because I don't around to buying tickets on time
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When planning a party, I make the necessary arrangements well in advance
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When it is time to get up in the morning, I most often get right out of bed
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	A letter may sit for days after I write it before mailing it
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I generally return phone calls promptly
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Even with jobs that require little else except sitting down and doing them, I find they seldom get done for days
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I usually make decisions as soon as possible
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I generally delay before starting on work I have to d
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When traveling, I usually have to rush in preparing to arrive at the airport or station at the appropriate time
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When preparing to go out, I am seldom caught having to do something at the last minute
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	In preparing for some deadline, I often waste time by doing other things
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If a bill for a small amount comes, I pay it right away
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I usually respond to an invitation shortly after receiving it
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I often have a task finished sooner than necessary
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I always seem to end up shopping for birthday or Christmas gifts at the last minute
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I usually buy even an essential item at the last minute
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I usually accomplish all the things I plan to do in a day

<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I am continually saying 'I'll do it tomorrow
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I usually take care of all the tasks I have to do before I settle down and relax for the evening

13. Risk taking

Inaccurate	2	3	4	Accurate	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Enjoy being reckless
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Take risks
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Seek danger
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Know how to get around the rules
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Am willing to try anything once
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Would never go hang-gliding or bungee-jumping
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Would never make a high risk investment
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Stick to the rules
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Avoid dangerous situations

14. Growth ambition

Strongly disagree	2	3	4	Strongly agree	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	will grow rapidly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	becomes an industry leader
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	has multiple locations
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	is listed on a major stock market
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	is known worldwide

15. Flexibility

Inaccurate	2	3	4	Accurate	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Prefer variety to routine
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Love to think up new ways of doing things
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Am open to change
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Enjoy hearing new ideas
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Seek adventure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Like to begin new things
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Like to visit new places
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Don't like the idea of change
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dislike changes
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Prefer to stick with things that I know

16. Global Mindset

Strongly disagree	2	3	4	Strongly agree	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I am very interested in firms expanding into international markets
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I feel the possible gains of doing business overseas are well worth the costs
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I feel that the most attractive opportunities for growth lie in overseas markets
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I think firms that try to do business overseas are really onto something

17. Self-efficacy

Strongly disagree	2	3	4	Strongly agree	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When I make plans, I am certain I can make them work
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	One of my problems is that I cannot get down to work when I should
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If I can't do a job the first time, I keep trying until I can
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	It is difficult for me to make new friends.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When I set important goals for myself, I rarely achieve them
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I give up on things before completing them
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If I see someone I would like to meet, I go to that person instead of waiting for him or her to come to me
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I avoid facing difficulties
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If something looks too complicated, I will not even bother to try it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	If I meet someone interesting, who is very hard to make friends with, I'll soon stop trying to make friends with that person
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When I have something unpleasant to do, I stick to it until I finish it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When I decide to do something, I go right to work on it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When trying to learn something new, I soon give up if I am not initially successful
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When I'm trying to become friends with someone who seems uninterested at first, I don't give up very easily
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When unexpected problems occur, I don't handle them well
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I avoid trying to learn new things when they look too difficult for me
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Failures just make me try harder
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I do not handle myself well in social gatherings
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I feel insecure about my ability to do things
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I am a self-reliant person
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I have acquired my friends through my personal abilities at making friends
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I give up easily
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I do not seem capable of dealing with most problems that come up in my life

7.3 Histograms

