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**The relevance of entrepreneur's experience and  
networks to the internationalization speed: a study on  
SMEs from Italy and the USA**

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## ABSTRACT (Italian version)

**Parole chiave:** *internazionalizzazione incrementale/ immediata/accelerata/graduale/a fasi, start-up globale, dinamiche dell'internazionalizzazione, networks.*

**Stato dell'arte e gli obiettivi.** La rapida evoluzione dei mercati internazionali creano un sacco di sfide e di incertezze per le imprese internazionalizzate. Le attività internazionali sono in aumento e le modalità di internazionalizzazione stanno diventando sempre più diversificate. Tuttavia, dato il fatto che le risorse e il potere di mercato sono limitati, il processo di internazionalizzazione delle piccole e medie imprese differisce significativamente da quello delle multinazionali. È interessante notare che un numero crescente di imprese, in particolare nell'ambiente dell'alta tecnologia, si espandono all'estero sempre più velocemente. Nonostante il grande sforzo che è stato fatto, alcune recensioni critiche dello stato dell'arte in questo campo di ricerca hanno sottolineato la necessità di approfondire la nostra comprensione della velocità di internazionalizzazione delle PMI. L'obiettivo di questo progetto di ricerca è stato quello di analizzare l'impatto di questi determinanti di cui sopra sul ritmo di internazionalizzazione delle piccole e medie imprese in Italia e negli Stati Uniti.

**Revisione della bibliografia.** In Italia, la revisione della bibliografia è stata facilitata grazie al database - Sebina Open Library- della Biblioteca Sebastiano Brusco di Modena. Negli Stati Uniti invece, la ricerca è stata condotta alla Hamline University, School of Business, ed ha reso possibile di avere accesso ad una vasta gamma di bibliografia rilevante per la ricerca di cui sopra. La bibliografia principale utilizzata in questa tesi è stata presa dai seguenti database: Business Source Premier della Biblioteca Bush Memorial dell'Università di Hamline, Uniworld Database, Hoovers International Company Database e Reference USA Database. Nel complesso, gli studi teorici ed empirici sulla rilevanza dell'esperienza e delle reti di contatti dell'imprenditore sull'internazionalizzazione accelerata o graduale sono stati trovati nelle seguenti riviste: International Business Review, European Management Journal, Journal of International Entrepreneurship, Journal of World Business, International Small Business Journal, etc.

**Metodologia della ricerca.** Per quanto riguarda la metodologia di ricerca, è stato scelto il metodo esplorativo dei casi di studio multipli. Il campione degli intervistati è stato selezionato nel caso italiano dai contatti dell'università e dall'annuario della Confindustria di Modena, e nel caso degli Stati Uniti con il contributo del database accennato prima. Basandoci sulla nuova bibliografia riguardante l'internazionalizzazione delle aziende, sono stati esaminati i seguenti fattori specifici che possono influenzare la velocità del business internazionale: (1) l'esperienza professionale e la formazione dell'imprenditore, (2) la rete di contatti dell'imprenditore. A questo proposito sono state fatte interviste con quattro CEO dell'industria del settore ICT (due PMI italiane e due PMI americane).

**Originalità e valore aggiunto.** La tesi contribuisce anche alla bibliografia di riferimento, analizzando alcuni fattori dell'internazionalizzazione delle imprese dall'Italia e dagli Stati Uniti. Le aziende provenienti dagli Stati Uniti sono uniche ed interessanti da studiare perché hanno diverse dimensioni e condizioni di mercato rispetto alle PMI italiane. Quindi, lo scopo di questa tesi è anche quello di richiamare l'attenzione di ricerca per completare la bibliografia esistente sulla velocità dell'internazionalizzazione delle PMI in una prospettiva comparata fra questi due paesi.

**Risultati.** Nel complesso, la velocità di internazionalizzazione delle suddette PMI sembra essere determinato dai driver e motivi decisionali degli imprenditori, assieme all'influenza di fattori quali la tecnologia, la concorrenza e la dimensione del mercato interno. Queste imprese hanno un'ampia rete di contatti personali e professionali e sono gestite dai manager con forti visioni internazionali. Inoltre, ogni membro fondatore di queste quattro aziende ha uno specifico insieme di capitale sociale e relazionale che hanno favorito la loro crescita internazionale.

## LIST OF ACRONYMS AND ABBREVIATIONS

<b>BAG</b>	Born-Again Global
<b>BG SME</b>	Born Global Small and medium sized enterprise
<b>BG</b>	Born Global
<b>BRIC</b>	Brazil, Russia, India and China
<b>CEO</b>	Chief Executive Officer
<b>CTO</b>	Chief Technical Officer
<b>DEED</b>	Department of Employment and Economic Development
<b>EIFs</b>	Early internationalizing firms
<b>ELAN</b>	Export Legal Assistance Network
<b>EMC</b>	Export Management company
<b>FSTS</b>	Foreign sales to total sales
<b>GM</b>	Global Mindset
<b>ICE</b>	Agenzia per la promozione all'estero e l'internazionalizzazione delle imprese italiane
<b>ICT</b>	Information and Communication Technologies
<b>IE</b>	International Entrepreneurship
<b>INV</b>	International New Venture
<b>ISTAT</b>	Istituto nazionale di statistica
<b>MHTA</b>	Minnesota High Technology Association
<b>MNEs</b>	Multinational Enterprises
<b>MTO</b>	Minnesota Trade Office
<b>NAICS</b>	North American Industry Classification System
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>STEP</b>	State Trade and Export Promotion
<b>SACE</b>	Servizi Assicurativi del Commercio Estero
<b>SBA</b>	Small Business Administration
<b>SIC</b>	Standard Industrial Classification
<b>SMEs</b>	Small and medium sized enterprises
<b>TMT</b>	Top Management Team
<b>U-Model</b>	Uppsala Internationalization Process Model
<b>UNI</b>	Ente Nazionale Italiano di Unificazione
<b>USA</b>	United States of America
<b>USAID</b>	U.S. Agency for International Development
<b>USDA</b>	U.S. Department of Agriculture

# CHAPTER I INTRODUCTION

## 1.1 State of the art and goals

The current economic environment reflects the complex integration of global economies. Rapidly changing international markets create a lot of challenges and uncertainty for internationalizing companies. International activities are increasing and the modes of internationalization are becoming increasingly diverse. However, given limited resources and market power, the internationalization process of small and medium-sized enterprises differs significantly from that of established multinationals. It is widely recognized that international expansion presents greater risks for small, resource-poor firms than for large, established multinationals. Small firms are typically constrained by a narrower set of capabilities, limited access to comprehensive market research, and their inability to hire experts who can assist them in their internationalization efforts. Definitely, the increase in market globalization over the past decades and the ensuing pressures on top management to internationalize their firms puts a premium on decision-makers with international orientations.

Furthermore, the internationalization has also an important impact on a country's economy and its success on a global scale is the source of new jobs. Therefore, internationalization is becoming an inevitable stage in the strategic evolution of the small and medium-sized enterprises. Firms often start their internationalization via import or export and then gradually increase their international commitment. In addition, the increasing worldwide economic integration leads to the creation of new worldwide networks. New communication technologies simplify interaction within SMEs and create new opportunities for collaboration between them. The Internet is definitely expected to have a major impact on the business world as sustained in 1998 by researchers like Sivadas, Grewal and Kellaris. This is not only because of the speed and ease with which the Internet conveys information across borders. In addition, the uncertainty-reducing properties of the Internet may prompt researchers to re-think the role of knowledge as a determinant of the pace with which companies expand internationally. Unlike other existing media, it has global reach and is predicted to re-define the way business is conducted. This is because of not only the speed and ease with which the Internet conveys information across borders.

Interestingly, Falize sustains that the number of small firms operating on international markets has been growing rapidly in recent years, and more importantly, the process of internationalization has been accelerating. Like this, an increasing number of enterprises, especially in high technology environments such as "Born Global" or "Born-again Global" internationalize faster and faster. (Falize, 2012) It refers to firms that aspire for a rapid international growth from early on in their lives, firms that implement a global strategy from inception.

Furthermore, several scholars state that especially *technology-based firms* are particularly likely to internationalize quickly. They have suggested that this phenomenon may be the result of insufficient, aggregate home demand for highly specialized, that is, niche, products and services. Sometimes, overseas sales are the individual firm's response to excessive domestic competition. Since the appearance of Oviatt and McDougall's seminal paper, in 1994, "Toward a theory of international new ventures", a vast amount of literature has been developed to

analyze the emergence, the behavior and effects of these new international firms; it could be listed only some of this literature like for instance that of Andersson and Wictor, (2003), Autio, Sapienza and Almeida (2000), etc. Some critical reviews of the state of the art in this field of research, namely those of Coviello and McAuley (1999), Jones and Coviello (2005), pointed out the need to deepen our understanding of this early internationalization process and its determinants.

Despite the great effort that has been done, some critical reviews of the state of the art in this field of research pointed out the need to deepen our understanding of this early internationalization process and its determinants.

Trying to fill this gap, I conducted the study whose primary objective was to analyze the relevance of entrepreneur's experience and networks to the internationalization speed focusing particularly on four SMEs from two countries: the United States and Italy (two from Italy and two from the United States). The aim of this research project was to prepare an outline of the fundamental characteristics of the internationalization process of small and medium-sized firms in Italy and the United States from the prospective of their internationalization speed. Therefore, in order to understand the rapidity of internalizing SMEs, the research relates more in depth to the born global literature compared to the traditional process or 'stage' models of internationalization. The present thesis also tends to explain the managerial implications of the various choices and their consequences for a rapid internationalization process. Thus, the **main goals** of the present doctorate thesis are the following:

- to analyze the internationalization speed comparing the characteristics of born-global vis-à-vis traditional SMEs;
- to understand the significance of the selected determinants (entrepreneur's experience and networks) for the internationalization pace;
- to clarify why the existing internationalization theories (for example, such as the step-by-step approach) are no longer applicable when it comes to these new type of rapid internationalizing companies;
- to have insights and to provide a better understanding of specific factors (entrepreneurs' networks and experience), through a qualitative approach as suggested by Yin;
- to examine the process of internationalization in a sample of Italian and American SMEs and to understand if the selected SMEs adopted a phased approach or an early one to internationalization in correlation with two determinants: entrepreneur's experience and entrepreneur's networks;

In conclusion, the intention is to capture broad-spectrum differences in the internationalization changes common within the ICT sector thus allowing responding to the research questions and providing a set of results based on in-depth case studies.

## **1.2 Review of the literature and the relevance of the research**

**Italy.** The literature review was elaborated thanks to the database *Sebina Open Library* of the Sebastiano Brusco Library from Modena. Here I have had access to different international journals, as for instance: *Journal of World Business*, *International Business Review* and *International Small Business Journal*, etc. Furthermore, the articles and books of several Italian

researchers (such as: Marchi (2003), Tiziano (2007), Caroli (2007), Caselli (1994), Cafferata and Depperu (1993), D'Angelo, Majocchi and Zucchella (2013), etc.) were of great interest and importance for the above literature review on internationalization models.

**United States.** The research conducted in the United States, Minnesota, at Hamline University (from May 15 to September 30, 2013) allowed me to have access to a wide range of literature relevant to the research. The main literature used in this thesis was taken from the database called *Business Source Premier of the Bush Memorial Library* of Hamline University. As the world's largest full text business database, Business Source Premier provides full text for nearly 3,800 scholarly business journals, including full text for more than 1,100 peer-reviewed business publications. Coverage includes virtually all subject areas related to business. This database provides full text (in PDF) for more than 350 of the top scholarly journals dating as far back as 1922. This database is updated on a daily basis.

Then, another useful database when searching for companies' profile and dossier was *LexisNexis Academic Search*. This service provides full-text access to articles in news, business, legal research, etc. In addition, the data from the James J. Hill Library were used. This is a private non-profit business reference library, located in Saint Paul, Minnesota, United States. It houses an excellent collection of practical business information resources and is considered one of the most comprehensive business libraries in the United States. Here I had the possibility to consult for free those three types of database (*Uniworld Database, Hoovers International Company Database, Reference USA Database*) that were of interest for me in order to search for the selection of the companies for the case study research. Also of great use was the on-line Book of Business List of the *Journal Twin Cities Business* (the cities of Saint Paul and Minneapolis from Minnesota are also called Twin Cities). Summing up, all these above-mentioned databases were indispensable for the elaboration of this research project. All these types of databases were useful for understanding what kind of SMEs satisfy the selection criteria for this research project. Finally, the selection of those two companies, that were inserted in the in-depth case study were facilitated by the above-mentioned data.

Overall, the theoretical and empirical studies on the internationalization speed and its determinants were found from the following *journals*: International Business Review, European Management Journal, Journal of International Entrepreneurship, Journal of World Business, International Small Business Journal, Irish Journal of Management, Journal of International Marketing, Canadian Journal of Administrative Sciences, etc. (See Attachment 1)

Interestingly, in previous international business literature, mature multinational corporations played a dominant role, whereas SMEs (and especially their internationalization) have only recently attracted broader interest. (Ruzzier et al., 2006) However, previous research brought a considerable contribution to the understanding of the SMEs' internationalization phenomena and, in particular, provided to main existing view:

- a. *the step-by-step internationalization (or, gradual internationalization)* of Cavusgil (1980), Johanson & Vahlne (1977);
- b. *the rapid internationalization* studied by Bell, McNaughton, Young & Crick (2003) and Oviatt & McDougall (1994).

Furthermore, there is a growing body of papers dedicated to understanding International New Ventures (or rapid internationalizers) and the dynamic nature of early, rapid internationalization: Autio et al. (2000), Jones (1999), Knight and Cavusgil (1996),

McNaughton (2000), Madsen and Servais (1997), Oviatt and McDougall (1994), Zuchella et al. (2007), etc. For example, recent empirical studies on Born Global of Oviatt and McDougall and Rennie (1993) put the accent both on the increasing speed and geographic diversity of the early internationalization, and the rapidity of first international market entry particularly amongst high technology and knowledge-intensive firms. In contrast, in the *gradual internationalization literature* presents the internationalization dynamics as a sequential and often linear process identified by distinct stages of development with no clear demarcation of time before or between stages and on psychic distance concept. These findings are revealed by Bilkey and Tesar (1997), Cavusgil (1980), Czinkota (1982) and Johanson and Vahlne (1977).

After reviewing previous research on the internationalization of small and medium companies, I look at whether the relevance of certain characteristics and key internationalization factors differ between firms following the traditional gradual internationalization process and firms internationalizing rapidly. I was looking to discover what roles play the selected variables for the internationalization speed: the entrepreneurs' experience/education and networks for.

Additionally, in terms of the individual firm, the basis of internationalization research can be found in the behavioral theory as well as in different decision-making theories. From a market perspective, trade theories can also provide a lens on internationalization research. (Ruzzier et al., 2006). However, the research does not refer to the above-mentioned theories as it analyzes primarily the Uppsala model (or so-called gradual internationalization model), the rapid internationalization model and the network approach.

### **1.3 The choice of topic and justification of the research questions**

As stressed by Karen, internationalization has become increasingly important to the competitiveness of enterprises of all sizes. In today's environment, SMEs that start with a global strategy can move quickly to take advantage of cross-border activities, which provide opportunities not only for revenue growth but also for the exchange of knowledge and the enhancement of capabilities, thereby strengthening the long-term competitiveness of the firm. (Karen, 2006)

In spite of the wide range of explanatory proposals about the international behavior of firms, e.g. the theory of internalization, by the 1970s there was no theoretical body that could explain the heterogeneity of the situations observed in the internationalization of small and medium companies. It is in this context that the contributions of the Scandinavian School emerge with the step-by-step internationalization model.

From the other side, researchers, like McDougall and others indicate that some small companies overcome the liability of size and newness and are involved in the internationalization process with unexpected speed and from onset of operations. In addition, the process of internationalization for such firms is neither necessary incremental, nor restrained by lack of resources. They point that that technological advances in transportation, communication and production stimulate international growth. Furthermore, the specific industry context appears to have some influence on the rapid internationalization of the firms. (Morgan-Thomas et al., 2009)

Furthermore, even though various studies have shown that such firms have different features and that the patterns (or pathways) followed by BG and traditionally internationalizing

firms exist and differ in terms of *pace and degree of internationalization* with regard to antecedents and firm characteristics, respectively the results are hard to compare, as there have been only a few attempts to establish a rigid classification or typology of INVs or internationalizing SMEs. (Kuivalainen et al., 2012)

Moreover, the importance of research into the issue is also emphasized by the increasing number of start-up companies, particularly in high-technology sectors, who attempt to implement early and rapid internationalization strategies. These firms are in urgent need of vocabulary and frameworks that they can draw on when drafting strategies for early and rapid internationalization. (Autio et al., 2002)

Additionally, it should also be stressed that insufficient attention has been focused on a cross-sectional comparison that has two parts: from a process point of view, like rapid and gradual internationalization, and then from a national point of view, as, for example, with regard to Italian SMEs compared to the American ones. Therefore, the following fundamental questions arise from the indicated theoretical framework:

- *In what way the entrepreneurs' experience and education influence the speed of entering the international markets?*
- *How relevant are the networks for the internationalization speed of SMEs?*

Therefore, my analysis builds on previous study in order to understand which relevance the networks and the entrepreneurs' experience have on the internationalization pace.

Since McKinsey and Co.'s Australian-based research, from 1993, the existing literature that explains the internationalization speed has expanded greatly. This increase in the incidence of the born global concept within the literature is a reflection that these firms are becoming increasingly widespread with the help of the following researchers: Knight, Cavusgil, Madsen, Servais, McDougall, Preece, Rialp, etc. As sustained by McDougall, Born Globals target niche market gaps so that they may remain competitive, while their success is frequently attributed to entrepreneurs who have the vision and drive to avoid the internationalization process following a slow, evolutionary path. (McDougall et al., 2003)

Hence, Taylor and others sustain that the literature lacks an integrative framework, which aims to incorporate pace, as well as other key distinguishing features that characterize born global development. (Taylor et al., 2011) In addition, there is a need for intensive study of born global firms in order to develop a theoretically rich understanding of the phenomenon, because there are still undefined mechanisms that allow the traditional SMEs to internationalize operations rapidly in unknown markets.

Furthermore, given the high relevance of SMEs in many national economies (for example: Italy, Finland, Spain, United States of America, etc.), it is interesting to analyze the internationalization process, thus complementing the existing literature on this topic.

Finally, an overall look is given to the cross-country analysis. Firms from the United States are a unique and interesting setting to study because they have different sized and market conditions than the European SMEs. Therefore, the thesis contributes to the literature by analyzing the internationalization of ICT firms from Italy and the United States that has received relatively little attention.

Therefore, the purpose of this thesis is also to draw research attention to complement the existing literature on determinants (like, for instance, entrepreneur's networks and experience) of the rapid internationalization of SMEs from a cross-country standpoint.

## 1.4 Research methodology

Another common classification is between *empirical and theoretical approaches* to a research topic. The empirical approach draws conclusions by studying and observing the real world at the time of research, that however does not refer to the above thesis as the theoretical approach was selected (or the theory driven approach).

Then, those theories and determinants were checked on concrete company cases. Building upon on the incremental internationalization theory (U-model) and the new venture models, qualitative research is used to analyze some of the determinants of the internationalization process such as: entrepreneur's experience and networks.

In addition, there is a variety of methods of data collection in *qualitative research*, including observations, textual or visual analysis (from books or videos) and interviews (individual or group). Consequently, a special chapter explains the very core of the above research project like the techniques and procedure used to collect primary data. Therefore, as regards the research methodology, it was chosen the multiple-case method as a research strategy. Specifically, the interview strategy that was selected was performed by using *semi-structured questions*.

Therefore, Kalinik and Forza that the case-based methodology is particularly useful in those research contexts where previous theory seems inadequate or incomplete and deeper theoretical development is required. (Kalinik et al., 2012) The case based qualitative research points out the main findings concerning the relevance of entrepreneur's networks and experience to the timing of the internationalization process.

In addition, given the growing calls for greater cross-national enquiry into internationalization issues, the study focused on SMEs from Italy and USA. As well, Falize found out about the recent calls for more in depth case study in internationalization theories. (Falize, 2012) In comparison, Autio and other scholars claim that because little theory exists on the shaping of rapid internationalization strategies, it was chosen to ground the research questions on actual case data complemented with a deep review of received theories on internationalization. (Autio et al. 2002)

Accordingly, the data for the above cross-cases study was collected by the aid of *semi-structured interviews* with general and specific questions. Furthermore, the questions primarily were open. Respectively, the interviews were conducted with CEOs or other persons in charge of international expansion (such as the Vice President for Strategy & Business Development for Expert System, Partner & Corporate Marketing Director for Doxee, Global Sales Manager and Partner for TEAM Informatics). Therefore, in-depth face-to-face interviews were the primary means of data collection. The founders/managers were interviewed in 2014 (in Italy) and 2013 (in the USA). Respectively, the Italian and the English version of the questions are attached as follows: Attachments 2 and 3.

The sample of respondents was selected, in the case of Italian SMEs, from the database of Confindustria of Modena (on-line Annuario) and from the faculty staff contacts. In comparison, the American SMEs were found from databases like *Uniworld Database*, *Hoovers International Company Database* and *Reference USA Database*, and some insights of the Midway Chamber of Commerce, from Saint Paul, Minnesota. Accordingly, this data set included firms that were involved in international operations following the EU definition of SMEs (employee <250) for

the Italian case, and the American definition of SMEs (employee < 500) which provided a sampling source of eight firms in total for the Italian sampling and thirteen firms for the American one. (See Attachments 5 and 6)

*Sample identification* followed two steps. In the first step, I evaluated the secondary data provided for each firm in relation to the selection criteria. In the second step, to collect the data, I undertook the interview method. Each visit contained a short semi-structured interview based on a set of standardized questionnaire and lasted around forty minutes or an hour in total. For the on-site interviews, I developed an interview guide that could be consulted in the Attachment 2 for the Italian firms and in the Attachment 3 for the American ones. This interview guide was sent previously to the interviewers of the selected SMEs. During the interview, I introduced and clarified each section of the questionnaire to the respondents before they reported their answers. Finally, at every firm, we were able to identify the most knowledgeable and experienced person regarding entry into the focal market and evidently this was the founder or the co-founder of those given companies. The interview regarded the above-mentioned persons because of the fact that two of the research questions are trying to confirm or infirm the importance of networks and entrepreneur's experience for an accelerated internationalization process. Summing up, mainly chief executive officers (and/or officers in charge with internationalization) were interviewed. Accordingly, the Attachment 7 and Table 9 provide the companies characteristics and the description of the interviewing activity.

Thus, through personal interviews with the Italian and American entrepreneurs I got a better and deeper insight into the evidences coming from several researchers. Information was obtained on the profile of the firm, internationalization experience, and the characteristics of managers (age and nature of prior work experience), the internationalization entry modes and the role of networks to the internationalization venture. Respondents were encouraged to describe the common factors related to the internationalization intensity, as scope, scale and pace. The analysis of the data reflects the key issues that were investigated in the research questions – the relevance of social and relational capital of the entrepreneurs for the rapidity of internationalization. Furthermore, the present thesis contributes to the understanding of these specific factors that may influence the speed of internationalization.

In addition, in order to enhance the reliability of the study, multiple secondary data sources were also used including formal documents, newsletters, agreements and website pages. Furthermore, by extending the application of the gradual and born global literature into this specific industry sector like the ICT sector, the research is likely to deepen the understanding of some determinants (networks and experience of the founders) associated with rapidly internationalizing firms.

## **1.5 Structure of the thesis**

The purpose of this research is to further my understanding on two factors that may determine the rapidity of an internationalizing company. To such an end, I structured this paper in six chapters.

Before the *introduction*, the thesis starts with the *abstract* (in Italian version), *list of abbreviations and acronyms*.

Thereafter, *the first chapter* entitled “Introduction” reveals some introductory aspects and, at the same time, summarizes the entire work.

Consequently, *the second chapter* defines the notion of a Small and Medium Sized Enterprise as applied by the Italian, American and European Union legislation. Additionally, it also presents an overview on drivers, barriers and challenges in the internationalization process of SMEs and outlines the cross-national state of art from Italy (Emilia Romagna, Modena) and the United States (Minnesota).

*The third chapter* presents the concept of the Scandinavian model of internationalization and, at the same time, reviews the main theoretical contributions related to new international ventures, the network approach and, factors favouring a rapid internationalization process.

*The fourth chapter* develops two working questions related to the entrepreneurs’ experience and networks: “In what way the entrepreneurs’ experience and education influence the speed of entering the international markets?” and “How relevant are the networks for the internationalization pace of SMEs?”

*The fifth chapter* explains the sample, methodology and research design.

*The sixth chapter* presents the empirical results based on multiple case studies (Doxee and Expert System from Modena, Italy, and New Boundaries Technologies and TEAM Informatics from Minneapolis, Minnesota, USA). All the above-mentioned companies belong to the ICT industry. Firstly, it presents the internationalization experience of the selected SMEs. Secondly, the entrepreneur’s education and networks in relation to internationalization velocity are assessed.

*Conclusions and findings* provide a discussion of the main findings within a cross-case standpoint. Accordingly, the conclusions synthesize the main results, implications on policy and paths for future research and conclude with the contributions and limitations of the above doctoral thesis. Finally, the thesis is followed by list of tables, list of figures, list of attachments and references.

This doctorate thesis has 152 pages in total.

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## CHAPTER II FACTS ON OPPORTUNITIES AND CHALLENGES OF SME INTERNATIONALIZATION: A CROSS-NATIONAL COMPARISON

### 2.1 The SME definition in the Italian and American legal framework

For the purposes of this research project, the terms “SME”, “enterprise,” “firm,” “business,” and “company” represent the same thing and are used interchangeably. The abbreviation SME occurs commonly in the European Union and in international organizations, such as the *World Bank*, the *United Nations* and the *World Trade Organization*. For example, the term Small or Medium sized Business or *SMB* has become more standard in a few other countries.

In this paragraph, it is presented a comparative analysis of the main definition of Small and Medium Sized Enterprises in relation to the legal framework on SMEs from Italy, European Union (because many of the European Union legislation are directly transposed in the Italian national legislation) and the United States. The importance of small and medium-sized enterprises (SMEs) in economic development is a subject that has been receiving increasing attention in the literature. Since the mid-seventies, SMEs have been increasingly important in job creation, because in many sectors barriers to entry of new firms were reduced. This fact is still very true in the case of the American and Italian economy. Thus, usually, definitions of SMES include those of the *European Commission (EC)*, *Multilateral Investment Guarantee Agency (MIGA)*, *International Finance Corporation (IFC)*, *Asia Pacific Economic Cooperation (APEC)*, *United Nations Industrial Development Organization (UNIDO)* and other international and national institutions. However, for the purpose of this project the author took into consideration the definition of European Commission with the transposition of the European Commission Recommendation into Italian legal framework through the Ministerial Decree of 18 April 2005, and the U.S. legal framework. (Gazzetta Ufficiale, 2005)

**A. The Italian meaning of a SME.** Popular definitions of Small and Medium-Sized Enterprise (SME) usually vary when considering employee counts, turnover or balance sheet figures. This study uses the definition for SME as presented by the European Commission (2005) which states that a small enterprise employs 10 to 49 people, has a turnover of two to 10 million Euros, or has a total balance sheet ranging from two to 10 million Euros. For medium sized enterprises, the corresponding figures are 50 to 249 employees, turnover of over 10 million Euros but less than 50 million, and a balance sheet totaling more than 10 million Euros but less than 43 million. Employee counts define the sizes of the companies focused upon in this study. (European Commission, 2010)

Hence, SMEs are comprised of three categories of firm taking into consideration only the number of employees: *the micro firm* (less than 10 employees), *the small firm* (less than 50 employees) and *the medium firm* (less than 250 employees), (Briga, 2010).

In Italy, for example, one can find different definitions referring to statistical data based only on one quantitative parameter with an organizational nature. Alternatively, given the strict legal definition that applies to the Community Recommendation 2003/361 EC and to the headcount criteria, other two quantitative parameters with structural nature, namely annual turnover and balance sheet, also are added.

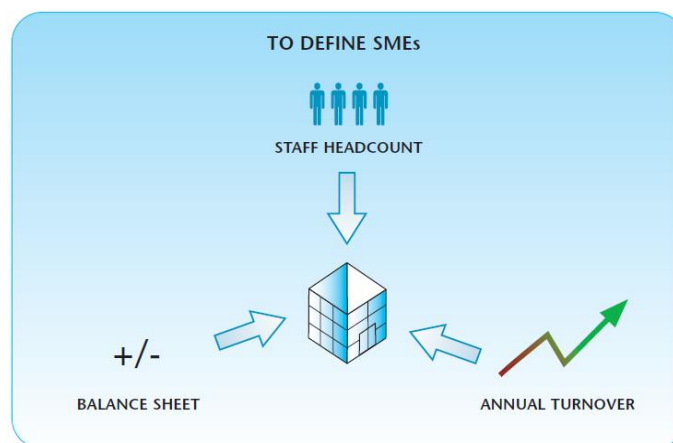
The Bankpedia explains that while there are multiple official definitions for SMEs worldwide, which led the OECD to declare that "*the characteristics of a SME definition reflects not only the economic, but also the social and cultural dimension of a Country*", the international organization has contemporaneously committed itself in these years to bring the requirements to be a SME in different countries to a common and homogeneous level.

Therefore, in the European Union, small and medium-sized enterprises are non-subsidary, independent firms that employ less than a given number of employees. This number varies across countries. The most frequent upper limit designating an SME is 250 employees, as in the *European Union*. However, some countries set the limit at 200 employees, while the *United States* considers SMEs to include firms with fewer than 500 employees. (OECD, 2005)

In a single market with no internal frontiers, it is essential that measures in favour of SMEs are based on a *common definition* to improve their consistency and effectiveness, and to limit distortions of competition. This is even more necessary given the extensive interaction between national and EU measures to help SMEs in areas such as regional development and research funding. In 1996, a recommendation establishing a first common SME definition was adopted by the Commission. This definition has been widely applied throughout the European Union. On 6 May 2003, the Commission adopted a new recommendation in order to take account of economic developments since 1996. It entered into force on 1 January 2005 and applies to all the policies, programs and measures that the Commission operates for SMEs. (Commission Recommendation 96/280/EC of 3 April 1996)

For Member States (and respectively for Italy) the use of the definition is voluntary, but the Commission (DG Enterprise and Industry Publications) is inviting them, together with the European Investment Bank (EIB) and the European Investment Fund (EIF) to apply it as widely as possible. The new definition is the result of wide-ranging discussions between the Commission, Member States, business organizations and experts as well as two open consultations on the internet. The new definition is more suited to the different categories of SMEs and takes better account of the various types of relationships between enterprises. It helps to promote innovation and foster partnerships, while ensuring that only those enterprises, which genuinely require support, are targeted by public schemes.

**Figure 1. The three criteria for SME definition**



Source: User guide and model declaration, Enterprise and Industry Publications, European Commission

According to the art.2, once you have verified that you are an enterprise, you have to establish the data of your enterprise according to the following three criteria:

- *staff headcount,*
- *annual turnover, or*
- *annual balance sheet.*

Comparing your data with the thresholds for the three criteria will allow you to determine whether you are a micro, small or medium-sized enterprise. It is necessary to note that while it is compulsory to respect the staff headcount thresholds, an SME may choose to meet either the turnover or balance sheet ceiling. It does not need to satisfy both and may exceed one of them without losing its status.

The new definition offers this choice since, by their nature, enterprises in the trade and distribution sectors have higher turnover figures than those in manufacturing. Providing an option between this criterion and the balance sheet total, which reflects the overall wealth of an enterprise, ensures that SMEs engaged in different types of economic activity are treated fairly.

As the figure above shows, the category of micro, small and medium-sized enterprises consists of enterprises, which employ fewer than 250 persons and which have either an annual turnover not exceeding 50 million euro, or an annual balance sheet total not exceeding 43 million euro.

**Table 1. Definition of SMEs according to European Commission**

Enterprise category	Headcount: Annual Work Unit	Annual turnover	or	Annual balance sheet total
Medium	< 250	≤ €50 million (in 1996 € 40 million)		≤ €43 million (in 1996 € 27 million)
Small	<50	≤ €10 million (in 1996 € 7 million)		≤ €10 million (in 1996 €5 million)
Micro	<10	≤ €2 million (previously not defined)		≤ €2 million (previously not defined)

*Source: SME definition. User guide and model declaration,  
Enterprise and Industry Publications, European Commission*

For example, with regard to the definition of *an employee*, national labour rules apply. They vary from country to country, for instance, for temporary staff working as independent contractors or on hire from an interim employment agency. You should contact your own authorities to establish how your national legislation defines the term “employee”.

The *annual turnover* is determined by calculating the income that your enterprise received during the year in question from its sales and services after any rebates have been paid out. Turnover should not include value added tax or other indirect taxes.

The *annual balance sheet total* refers to the value of your company’s main assets. Additionally, in the Italian legal framework - Decree from 18 April 2005 - some further directions with regard to the establishment of the size of an SME are given and explained by the below table.

**Table 2. Methods of calculation of dimensional parameters of SMEs**

Enterprise	Employees	Turnover in Million Euros	Balance sheet	Size
A	250	48	42	Big
B	249	51	42	Medium
C	49	11	11	Medium
D	49	10	11	Small
E	10	1,8	1,8	Small
F	9	2	2,1	Micro

*Source: Adeguamento alla disciplina comunitaria dei criteri di individuazione di piccole e medie imprese, Decreto dell'18 aprile 2005*

As mentioned, financial assets are also used to define SMEs and funding programs as well as in the field of State aid where SMEs can be granted higher intensity of national and regional aid than large companies. (OECD, 2005)

**B. Definition of a SME in the American legal framework.** Small and medium sized enterprises account for a “disproportionately large share of new jobs” in the US as well. As stressed previously, according to the *Organization for Economic Cooperation and Development*, the characteristic of SMEs not only reflects the economic patterns of a country but also the social and cultural dimensions. These differing patterns are noticeably reflected within different definitions and criteria of SMEs adopted by different countries: whereas some refer to the number of employees as their distinctive criteria for SMEs, others use invested capital, and some other use a combination of the number of employees, invested capital, sales and industry type. (USAID, 2007)

The *U.S. Small Business Administration* defines a small business as a usually privately owned business with fewer than 500 employees and less than \$10 million in sales. It is organized for profit, and is not dominant in its field. Medium-sized companies are an even more amorphous group, since definitions differ; they would include companies with \$25 million to \$250 million in sales revenues. Depending on the industry, size standard eligibility is based on the average number of employees for the preceding twelve months or on sales volume averaged over a three-year period. (Sweeney, 2010)

In the United States, when small business is defined by the number of employees, it often refers to those with less than 100 employees, while medium-sized business often refers to those with less than 500 employees. However, the most widely used American definition of micro-business by the number of employees is the same of that of European Union: less than 10 employees.

In the United States, there is no distinct way to identify SME; it typically it depends on the industry in which the company competes. There is no universally accepted definition of an SME, even within the U.S. government. This situation reflects the relative nature of the “small” and “medium” size classifications, which can apply differently to firms in the manufacturing, agricultural, and service sectors. Usually, several governmental institutions establish the technical thresholds, such as the *U.S. Department of Commerce* (Commerce), the *U.S. Small Business Administration* (SBA), and the *U.S. Department of Agriculture*. (United States International Trade Commission, 2010)

The definition used for SMEs by SBA's Office of Advocacy (SBA Advocacy) is the most straightforward, as it includes all enterprises with fewer than 500 employees. Census employs this definition to delineate its data by firm size across all sectors of the US economy (using NAICS categories<sup>1</sup>), which include both manufacturing and service enterprises. Therefore, the Small Business Administration in the United States has fixed small business criteria depending on industry, ownership structure, revenue and number of employees (which in some circumstances may be as high as 1,500, although the cap is typically 500). (United States International Trade Commission, 2010).

For instance, in the *Uniworld Database*<sup>2</sup> the number of employees has the following classification: 1-10 employees, 11-50 employees, 51-100 employees, 101- 500 employees and so one and so forth; while *Hoovers International Company Database*<sup>3</sup> divide them as follows: <4 employees, 5-10 employees, 11-49 employees, 50-99 employees, 100-499 employees, etc.

The United States *Small Business Administration* broadly classifies small businesses as any firm with 500 or fewer employees. The SBA has two different approaches for defining small firms. The first approach is to define any firm with less than 500 employees as small. The Small Business Act of 1953 first established this practice. However, the same Act required the SBA to establish a size standard that should vary to account for differences among industries. Second, the Act called on the SBA to assist small businesses as a means of encouraging and strengthening their competitiveness in the economy. These two considerations are the basis for the SBA current methodology for establishing small business size standards. These firms account for more than 5 million businesses, or 99% of all firms. They employ slightly over half of the private sector's employees, pay about 44% of the total private sector payroll, generate about 65% of net new private sector jobs, and create more than half of the nonfarm private Gross Domestic Product.

In conclusion, every country has its own definition of what is considered a small and medium-sized enterprise according to country and industry characteristics.

## 2.2 The key concepts used in the internationalization process theory

In this paragraph, the key concepts utilized in the internationalization theory are explained, such as internationalization, entrepreneur, networks, international entrepreneurship, psychic distance, speed of market penetration, etc.

**Internationalization** can be defined as "*the process of adapting firms' operations (strategy, structure, resource, etc.) to international environments*". For example, several authors use various terms such as "*patterns*", "*pathways*" and "*trajectories*" to describe internationalization behavior of small firms. (Kuivalainen et al., 2012). Internationalization is a route for business growth where businesses seek to expand their activities beyond domestic markets. (Briga, 2010) Internationalization is a synonym for the geographical expansion of

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<sup>1</sup> NAICS stands for North American Industry Classification System

<sup>2</sup> This database allows you to find American firms and their locations in other countries and firms based in other countries with locations in the United States. Since 1955, Uniworld remains the most trusted source for up-to-date multinational business contact information with listings in over 200 countries.

<sup>3</sup> Hoover's Inc., a subsidiary of The Dun and Bradstreet Corporation (D&B), offers proprietary business information of more than 85 million corporations, 100 million people and 1,000 industries.

economic activities over a national country's border. The term started to be used when the phenomenon gradually replaced imperialism as the dominant organization principle framing cross-border interaction between market economies starting in the 1920s. The economic internationalization process accelerated in the post-second-world-war era and appeared unrivalled until the early 1970s, when a new phenomenon of globalization started to emerge. (Ruzzier et al., 2006) Interestingly, this phenomenon is researched intensively from a variety of viewpoints with a predominately large-firm focus. (Enet, 1980)

Internationalization requires the firm to deal with more complexity than when it is operating exclusively in its home country. Serving customers in another country is challenging because it requires integrating more complex information about the needs of consumers, the characteristics of distribution channels, the nature of competitors, and so on. (Cuervo-Cazura, 2011) For example, Johanson and Mattsson, as quoted by Ruzzier, define internationalization as the “process of developing networks of business relationships in other countries through extension, penetration, and integration”. (Ruzzier et al., 2006),

In the article on “*The internationalization of small firms: The relationship between the global mindset and firms' internationalization behavior*” the authors rely on the definition of McDougall and Oviatt and point that international business entrepreneurship is a business activity that cross national borders. (Kyvik et al., 2013)

Following Ruzzier, the term internationalization will be used to refer to SMEs' outward movement of international operations, while globalization will refer to the international connectivity of markets and the interdependence of national economies strongly affecting all SMEs' activities. (Ruzzier et al., 2006)

For instance, the international strategy of family businesses is particularly noteworthy because the internationalization of firms has been the most impressive business phenomenon over the past several decades; even family businesses that traditionally focused on domestic markets now have to deal with issues related to internationalization. (Lin, 2012) However, some features are unique to internationalization or, at least, there are significant degrees of difference between growth at home and growth internationally. (Ruzzier et al., 2006)

Then, following another definition, according to the Oxford Dictionaries, **an entrepreneur** is a person who sets up a business or businesses, taking on financial risks in the hope of profit.

From the other side, Zahra and George (2002) extend their definition of **international entrepreneurship** (IE) by adding a process perspective, defining it as “the process of creatively discovering and exploiting opportunities that lie outside a firm’s domestic markets in the pursuit of competitive advantage”. While Kraus (2011) refers to the works Coviello (2006), Mathews and Zander (2007) and understands IE as a process occurring over time and feel it should be viewed as such.

One of the most recent definitions of “international entrepreneurship” is the “discovery, enactment, evaluation and exploitation of opportunities – across national borders – to create future goods and services” (Al-Laham et al., 2008)

Reflective of the *multidisciplinary nature* of both entrepreneurship and international business, researchers have drawn upon theories and frameworks from international business, entrepreneurship, anthropology, economics, psychology, finance, marketing, and sociology. It is clear that the domain of international entrepreneurship is rich in opportunity. Because the field is broad, there are many interesting research questions to be explored, and many existing

theories may be beneficially employed. Opportunities for both multidisciplinary and multi-country collaboration are clear.

Building on popular business press interest in rapid internationalization Oviatt and McDougall provided a theoretical base for the study of international new ventures, which they defined as business organizations “that, from inception, [seek] to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries”. Thus, international entrepreneurship began with an interest in new ventures. (Oviatt et al., 2005)

In addition, the same dictionary defines the **networks** as a group of people who exchange information and contacts for professional or social purposes.

In 1998, OECD member countries agreed to define **the information and communications technology (ICT)** sector as a combination of manufacturing and services industries that capture, transmit and display data and information electronically. This definition, based on an international standard classification of activities, was considered a first step towards obtaining some initial measurements of ICT sector core indicators. For *services* industries, the products of a candidate industry: must be intended to enable the function of information processing and communication by electronic means. The ISIC Rev. 3<sup>4</sup> classes included in the definition are 72 – *Computer and related activities*. This is the industry from where the field companies, from the empirical part are included.

The OECD’s 1998 activity-based definition of ICT was reviewed in April 2002. It was decided that, although this definition gives only a first approximation of the ICT sector, it should not be changed at this stage; rather its implementation should be improved with the help of more detailed national classifications. In European Union it is used NACE Rev.1<sup>5</sup>, in the United States, it is used NAICS<sup>6</sup> and SIC.<sup>7</sup> (OECD, 2002)

Then, **psychic distance** is defined as factors, such as differences in language, cultures and business practices that prevent and disturb the flow of information between the firm and the market. As the psychic distance increases, the more problematic information flows become. Only through *experiential learning* can firms overcome the psychic distance, and because *learning takes time*, the internationalization process of new firms tends to be gradual and incremental. New firms tend to start their internationalization on close by markets, and with increasing commitment and improved understanding of foreign markets, firms enter into markets that are increasingly dissimilar to their home market. (Arenius, 2005)

While Mtigwe and Wright et al. primarily address the incremental process of internationalization, other researchers focus on the *learning theoretical aspect*, as well as the *psychological distance* aspect of the Uppsala model, as done example, by Wennberg and Holmquist (2008) who value the model as a good description of the development of a company as it makes its way towards becoming a multinational corporation. (Kraus, 2011)

The psychic distance postulate of Johanson and Vahlne, the firms start their internationalization on close by markets at a minimal psychic distance, and gradually move to markets at successively greater distance. Managers select countries based on the psychic distance between home and host country. Psychic distance is “the sum of factors preventing the

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<sup>4</sup> International Standard Industrial Classification of All Economic Activities, Rev.3

<sup>5</sup> Statistical Classification of Economic Activities in the European Community, Rev. 1

<sup>6</sup> North American Industry Classification System

<sup>7</sup> Standard Industrial Classification

flow of information from and to the market. Examples are differences in language, education, business practices, culture, and industrial development”. The firm internationalizes sequentially, expanding first into countries that are psychically closer to the country of origin and later entering countries that are more distant. (Cuervo-Cazura, 2011) In addition, the cultural distance between home and host country may influence managerial cost and uncertainty evaluations in target market. The greater the cultural distance the higher the perceived environmental uncertainty and risk of foreign direct investments. (Nielsen et al., 2011)

For example in the article of Arenius, it is stated that in the view of the internationalizing SMEs, the factors influencing foreign-market selection had changed since the mid-1970s when the Uppsala authors first proposed the principle. They posited that the relevance of the psychic distance in the internationalization process had diminished, and that other *factors*, such as those *related to industry*, the level of foreign-market demand and relationships with existing and prospective clients, exerted more influence on initial and consequent foreign-market selections. (Arenius, 2005)

Thus, Loane and other scholars support the importance of comparability between selected locations in terms of culture, economic, social and political circumstances and technological development. These countries have open economies, with predominantly small firm economic bases, a high degree of export dependence and technical infrastructures capable of supporting rapid internationalization. (Loane et al., 2007)

In his article entitled “*The psychic distance postulate revised: From market selection to speed of market penetration*”, Arenius defines the **speed of market penetration** as the time needed from market entry until the generation of sales income from that market. On far-out markets, the psychic distance increases the liability of foreignness, which in turn increases the time needed to penetrate the foreign market area.

As regards the definition of **social capital**, it is seen as the amount and quality of the external relationships possessed by the firm and the individuals involved in the firm. Social capital may help the firms to overcome their liability of foreignness on far-out markets, and thus enables them to penetrate these markets at an increased speed. (Arenius, 2005)

Interestingly, Oviatt and McDougall (1995) show that product differentiation has a positive influence on the speed of internationalization in particular, while Bloodgood et al. (1996) show that a differentiation strategy positively correlates with the degree of internationalization. (Kraus, 2011) Then, a company's involvement in international business might arise when a company sells its products to foreign markets, buys products from abroad or starts to cooperate in some area with a foreign firm. This implies that international operations can be divided into “inward”, “outward” and “cooperative” operations, which shows the “holistic nature of internationalization”.

Because internationalization is a multidimensional phenomenon, this PhD thesis focuses on SMEs' outward internationalization. For example, in the paper: “*SME internationalization research: past, present, and future*” the authors explain their choice for outward internationalization, which for some reasons is also my motivation. First, more than inward operations, outward operations can in the long-term increase the competitive advantage of a company, organization or a country. Second, at the firm level outward internationalization benefits may also be evident in the form of product and process innovation, better utilization of capacity, skill development and a generally improved business performance. Third, at the

country level outward internationalization induces several favorable outcomes for productivity performance, labor market employment levels, foreign exchange accumulation and related externalities such as industrial welfare and societal prosperity. Fourth, the intensifying competition, integration and liberalization seen in international markets have forced firms to begin considering outward international activities as a key factor in their future growth, profitability and even survival. Finally, knowledge of the outward internationalization process and related operations is more complex than that for inward internationalization. (Ruzzier et al., 2006)

Also, in their *article “Geographical pathways for SME internationalization: insights from an Italian sample”* the authors sustain that the literature on the internationalization of SMEs establishes exporting as a dominant entry mode into international markets. SMEs tend to move into foreign markets mainly as exporters because exporting is the cheapest, simplest and quickest way to achieve internationalization. (D'Angelo et al., 2013)

From the other standpoint, using an empirical study of 59 Finnish companies in the electronics industry, Autio et al. (2000) investigated company age upon entry into international markets, knowledge intensity, and imitability as a competitive advantage as they all relate to the international growth of a company. Here, they discovered that the newer a company is at the start of its internationalization, and the higher its knowledge intensity, the faster the process of internationalization will be. As well, the findings of Oviatt and McDougall sustain that there is a *model that describes the speed at which companies internationalize* and integrate factors that influence the speed at which internationalization occurs. (Kraus, 2011)

In conclusion, in most of these studies, internationalization is seen as a *dynamic process, individual to each firm*, and characterized by an arrangement of business modes into a range of countries that may be adjusted over different time periods, and occurring with varying levels of speed. Speed according to Jones and Coviello (2005) model of internationalization refers not only to pre-entry speed of international business activity. Speed of internationalization is one of the key defining factors of Born Global companies. (Morgan-Thomas et al., 2009)

### **2.3 Motivations and reasons for SME internationalization**

In general, internationalization can provide potential returns to an individual firm due to the following reasons. First, internationalization presents new opportunities for *value creation* by providing access to new resources, foreign stakeholders, new institutions, and the possibility to obtain unique knowledge. Second, internationalization helps *reduce fluctuations in revenue by spreading risks over a number of countries*. Third, internationalization provides *learning benefits* as the firms can adopt new business practices and business processes, thus allowing them to overcome local obstacles to innovation and providing resources to pursue larger-scale R&D projects – both of which can ultimately increase potential returns. (Lin, 2012)

In addition, many studies see internationalization as a means of *achieving SME growth*. (Briga H., 2010) The researchers Karagozulu and Lindell found that the competitive situation on the home market was a reason to internationalize for only a quarter of those companies who were currently doing so. The real motivations for internationalization ranged from reaching *greater levels of turnover*, to achieving a *competitive technology*. (Kraus, 2011)

Additionally, it is generally agreed that three forces are driving the globalization of business. The first is the explosive *growth of low-cost technology* connecting people and locations. Better *information-processing* and *communication technology* is creating a greater awareness of international economic opportunities. The second force behind the globalization of business is the steady *dismantling of trade barriers* and *financial deregulation*. (Caselli, 1994)

Free-trade agreements have generated a more level playing field for innovative firms. The third force motivating the globalization of business is the widespread economic restructuring and liberalization that followed the fall of socialism in Russia and Central/Eastern Europe, as well as the geographical expansion of markets in Asia, particularly China. These previously closed areas are now new markets and magnets for investment, opening further opportunities for growth and investment. (Cannavale, 2008)

While previously SMEs were considered passive victims rather than active players, evidence indicates that this view is no longer valid. In the last few decades, many SMEs have successfully set up activities beyond their home markets and their role is increasingly crucial in contributing to future growth. Traditionally, SMEs restricted their activities to the region of their location, or stayed within their national boundaries. Today many are active in one or two world regions and are therefore international or regional players. In addition, typically small firms do not even consider, for example, exporting until their domestic market is saturated and the emergence of excessive productive capacity at home forces them to look for growth opportunities in foreign markets. (Hill, 2009)

Therefore, as mentioned, improved technology and communications have made it easier for firms of all sizes and in various locations to do business with each other. Advances in information and communication technology in general and the Internet in particular have been described as one of the driving forces of early and accelerated internationalization. Then, it is claimed that with their worldwide reach Internet firms are automatically born global. (Hagen, 2011)

The globalization of large firms and service providers has improved opportunities for SMEs to participate in different parts of the value chain of those companies. The reduction of language barriers and lower travel costs have also facilitated internationalization. (OECD, 2009)

The international market is normally so much larger than domestic market that exporting is nearly always a way to increase the company's revenue and profit base. (Hill, 2009) Pursuing international opportunities is also a way of spreading risk and can improve access to finance. Substantial knowledge and capabilities are also gained in the process, greatly enhancing the competitiveness of the firm. Evidently, context is also important.

Certainly, internationalization was different in the 1970s, than it was in the 1990s or than it will be in the future. Economic, political and regulatory environments change, as do the types of firms and management approaches. Often firm growth is the main goal or motivation of international expansion, like:

- Maximization of returns and minimizing costs in purchasing, production and sales.
- Access to international competencies, technology and labour as well as capital.

For example, the willingness and ability of the CEO, owner/manager or strategic leader is seen as dependent on his/her exposure to a range of factors, including existing formal and informal international contacts, knowledge of foreign competitors, experience of foreign

cultures, language skills and educational background. (Karen, 2006) This aspect is analyzed and explained in detail in several paragraphs of the current research project.

So, with respect to environmental factors, an important driver for internationalization relate to the size of the domestic market of the focal firm vis-à-vis the potential of the international market, and the relative ease of access to the latter markets. For example, in a country where the domestic market size is small, internationalization is an important *growth strategy*. Clearly, a general constraint that many of these small innovative firms face is relatively restricted resource as compared to what is available to larger firms. The internationalization process requires a level of investments and resources that smaller companies typically do not possess. (Falize et al., 2012)

In addition, internationalization seems to positively influence new *ventures' survival, profitability, and growth*. Furthermore, by internationalizing, new ventures acquire knowledge that can be used to build additional value creating skills. Often the value creation of the firm is based on a cross-border combination of valuable resources (such as technical knowledge). In this case, the firm needs to internationalize to create value (e.g. to develop a product), not to disseminate its outputs. (Al-Laham et al., 2008)

Additionally, gains may take several forms: bigger profits, greater knowledge over the long term that leads to technical innovation, intangible benefits such as enhancement of the firm's image from going international. For example, for the researchers Chetty and Campbell-Hunt (2003) it is specifically identified the decision maker's determination, social networking skills, and risk propensity as major driving forces in the internationalization process. Moreover, it is important to determine to what extent the attitudes and motivations of decision makers in the SMEs determine the path and pace of internationalization. (Kyvik et al., 2013)

Interestingly in the article "A *Global Mindset - A Prerequisite for Successful Internationalization?*" the author distinguishes the drivers for rapid internationalization in ICT industry. First, SMEs in the high-tech sectors frequently operate within a narrowly defined market niche. Specialization necessitates international expansion if the firm aims to achieve sales growth. Second, firms are facing high R&D costs that often come before any sales have been made. Third, the competition is intense and products become obsolete very quickly. If the company is to take full advantage of the market potential, it has to penetrate all markets simultaneously. In addition, a wave of deregulation and liberalization was evident during the 1990s. Consequently, new international market opportunities have also emerged for smaller firms.

For instance the model proposed by Oviatt and McDougal shows that *the speed of entrepreneurial internationalization* is determined by four types of forces: (1) enabling, (2) motivating, (3) mediating, and (4) moderating.

The first, or the *enabling force*, makes accelerated internationalization feasible. Faster and more efficient transportation among multiple foreign countries has brought down costs for foreign trade and investment. Airline transportation prices have declined over a very long period, enabling more people to travel longer distances rapidly at historically lower costs. The containerization of freight has reduced costs and increased speed in the movement of goods among all countries. Improvements and cost reductions in digital technology have also been dramatic over a long period. Computers, faxes, and wireless technologies have made high quality and rapid communication feasible in every country in the world. Therefore,

transportation, communication, and digital technology appear to be the foundation enabling rapid internationalization of such an entrepreneurial opportunity.

The second general force influencing the speed of internationalization is the motivating force of *competition*. Whereas technology enables faster internationalization, competitors encourage or even force it upon entrepreneurs. Many entrepreneurs have been motivated to take preemptive advantage of technological opportunities in foreign countries because they feared competitors would respond quickly to a new product introduction and prevent them from eventually going international if they initially competed only in their home country.

*The entrepreneurial actor* is the third, the mediating force. The person or group that discovers or enacts an opportunity is central to the dynamics of international exploitation. Through the lens of their personal characteristics (e.g., years of international business experience) and psychological traits (e.g., risk-taking propensity), entrepreneurs observe and interpret the potential of the opportunity, the potential of communication, transportation, and computer technology to enable internationalization, and the degree of threat from competitors (Oviatt et al., 2005).

Thus, in their study entitled “A Global Mindset-A Prerequisite for Successful Internationalization?”, the authors tested empirically with a representative sample of small Finish companies in the field of ICT. The findings indicate that managerial experience and market characteristics are important drivers of the global mindset, which in turn is one of the key parameters of international performance (Nummela, 2004). For example, the role of the entrepreneurial force in the international venture constitutes one of the research questions of this research project.

There are two types of moderating forces with influence on the speed of internationalization. After an entrepreneurial actor discovers or enacts an opportunity and interprets the enabling and the motivating forces, then the knowledge-intensity of the opportunity combined with the know-how already available to the entrepreneurial actor, plus the *characteristics of the entrepreneur’s international network* largely determine internationalization speed. (Oviatt et al., 2005). Interestingly, some scholars observed that local clusters and networks are among the factors that are increasingly influencing internationalization patterns, especially because of the knowledge spillover.

Thus, the analysis of the role of networks of people for the internationalization process of SMEs is another research question of this research project entitled: “How relevant are the networks for the internationalization pace of SMEs?”

In addition, previous research has examined the factors that fuel international expansion, including *institutional factors* (i.e. regulations), *industry factors* (i.e. competitive intensity), and *organizational factors* (capabilities and knowledge). (Al-Laham, 2008) The aspect of organizational and more specifically managerial factor is more in details stressed in the above research question “In what way the entrepreneurs’ experience and education influence the speed of entering the international markets?” At the same time, some researchers recognize that many small firm may not be directly exposed to international competition due to their context, sector, or industry and are mainly geared toward the home market. (Kyvik et al., 2013)

For instance, the study done by Wilson highlights the fact that efforts to support and encourage SMEs to internationalize should be tailored, providing different levels and types of support for each target segment. There is not one policy approach, which will suit all SMEs.

Thus, public policy at local, regional and national levels can play a significant role in encouraging entrepreneurship and SME internationalization by tackling various market failures, which can occur. (Karen W., 2006)

As a conclusion, the aim of this paragraph was also to analyze the policies and instruments necessary to facilitate SME internationalization and determine why certain SMEs are more likely to internationalize than others are.

## **2.4 Challenges and barriers to SME internationalization**

Despite the trends facilitating internationalization, many barriers still exist both internal to the firm and external. These barriers and impediments that deter or inhibit SME access to global markets deny enterprises and ultimately domestic economies the significant potential gains to be reaped on global markets. (Farchione, 2010)

*External factors* impeding the internationalization of SMEs include national and international administrative rules and regulations as well as formal and informal trade barriers.

*Internal barriers* for SMEs trying to, internationalize can include cultural differences, lack of information or skills, insufficient networks, language barriers and lack of access to necessary finance. So, operating successfully in international markets requires, amongst other things, learning to manage at a distance using a variety of informal and formal contractual business relationships, gaining familiarity with different business regulations, customs, cultures and languages, and developing appropriate solutions for all the markets in which the firm operates. Thus, identifying and accessing appropriate information, both from private and government sources, remains a key challenge for SMEs seeking to enter international markets. (Carlino, 2005) SMEs that are already established in international markets tend to have developed a greater competence, and the networks needed, to assess new markets. (OECD, 2006)

Although smallness is usually related to some advantages, such as flexibility and innovative capacity, it also creates some problems that can be significant obstacles to internationalization. These problems may be based on insufficient financial resources, lack of knowledge and skills of operating in foreign markets. By co-operating with other internationalizing SMEs the partners could use their sparse resources more efficiently, divide costs and risks related to foreign markets, obtain information and learn new skills that are needed in foreign markets. (Karen, 2006)

One reason more SMEs are not proactive is that they are unfamiliar with foreign market opportunities; they simply do not know how big the opportunities actually are or where they might lie. Simple ignorance of the potential opportunities is a huge barrier to exporting. Also, many are often intimidated by the complexities and mechanisms of exporting to countries where business practices, language, culture, legal system, and currency are very different from home market. (Hill, 2009)

According to the OECD action plan from 2006, the internal barriers are the following:

**1. Informational Barriers** (limited information to locate/analyse markets; unreliable data about the international market; identifying foreign business opportunities, inability to contact overseas customers, etc.)

2. *Human Resource Barriers* (lack of managerial time to deal with internationalisation; insufficient quantity of and/or untrained personnel for internationalisation; difficulty in managing foreign employees, etc.)

3. *Financial Barriers* (shortage of funds to finance working capital for internationalisation, shortage of funds to finance investment for internationalisation, shortage of insurance for internationalisation, etc.)

4. *Product and Price Barriers* (difficulty in developing new products for foreign markets: inability, difficulty or unwillingness to develop entirely new products for specific foreign market needs and wants; difficulty in adapting product design/style; difficulty in meeting product quality/standards/specifications of foreign markets; difficulty in offering satisfactory prices to customers; difficulty in matching competitors' prices; difficulty in granting credit facilities to foreign customers; lack of excess production capacity for foreign markets)

5. *Distribution, Logistics and Promotion Barriers* (difficulty in obtaining reliable foreign representation; difficulty in supplying inventory abroad; excessive transportation/insurance costs.(OECD, 2006)

So, common pitfalls or barriers include poor market analysis, a poor understanding of competitive conditions in the foreign market, a failure to customize the product offering to the needs of foreign costumers, lack of an effective distribution program, a poorly executed promotional campaign, and problems securing financing. For example in the case of the Chinese market, it may take years before foreigners are comfortable enough to purchase in significant quantities. (Hill, 2009)

In addition, many findings emphasize the need to examine SME internationalization as a series of interrelated activities that should be embedded as part of the overall growth strategy of the firm as opposed to a separate strategy. A summary of the most pertinent challenges encountered by managers in internationalizing their business are described in the paper of Briga, and notably:

- Adaptation of their product/service to meet new customer expectations;
- Different business practices;
- Insufficient time and effort for the market research;
- Lack of management expertise and experience in securing and negotiating contracts with potential partners and customers in new markets;
- Managing time and space differences;
- Problems in managing the costs of doing business in international markets. (Briga, 2010)

Instead, according to the European Commission's survey, such costs include those associated with doing market analysis abroad, purchasing legal consulting services, translation of documents, adaptation of products to foreign markets, and travel expenses, in addition to the higher business and financial risk incurred.

The findings also confirmed that the size of the domestic market has an impact: smaller domestic markets drive SMEs with a specialized or large production to internationalize.

Resulting challenges can include standards and international compatibility issues, intellectual property protection, political risks, corruption and rule of law issues. As stated by the OECD report on "Promoting entrepreneurship and innovative SMEs in a global economy: towards a more responsible and inclusive globalization" from 2004, "the protection of intellectual property can be a serious issue for SMEs with global operations. An intellectual

property system which is ineffective, inefficient, inaccessible, or unsuitable for SMEs can constitute a major barrier and impediment for a would-be globalising SME.” (OECD, 2004)

Having identified an opportunity to internationalize SMEs face a variety of barriers, many of which are specific to their operations or industry. Those firms that are new to internationalizing, in particular, lack knowledge on the best way to enter or to make the greatest use of a commercial engagement in that market. They also lack the ability to identify potential high-value customers in new markets. They may decide not to take-up the opportunity, or they may take an approach to the market that ends up being unsuccessful. (OECD, 2006)

Other perceived and real challenges include heightened international competition from foreign firms. Other issues mentioned in European Commission study included the lack of know-how with respect to international activities, identifying partners and assessing market potential. (Karen, 2006)

Many of the barriers that SMEs can face originate at the level of the national economy, institutions, and general infrastructure. Competition policy, legislative and regulatory frameworks, telecommunications infrastructure, research and education policy all contribute to SME preparedness or lack of preparedness for globalisation. Barriers can concern, *inter alia*, intellectual property rights; political risks; corruption and rule of law issues. (OECD, 2004) SMEs appear to go through a learning process when they engage in international activities and each step of this learning process presents special challenges for SMEs. (OECD, 2006)

However, some of these barriers, listed randomly in this paragraph, could be surpassed with the help of the Export Management Companies (EMC) or other related organizations. EMCs are export specialists who act as the export-marketing department or international department for the client firms. Moreover, here appear two types of scenarios. They start export operations for a firm with the understanding that that firm will take over the operations after they are well established. In another type, start-ups services are performed with the understanding that the EMC will have continuing responsibility for selling the firm’s product. Others possible alternatives are also international trade attorneys, commercial banks, major accounting firms, and different special state departments. (Hill, 2009)

International expansion is a significant decision for small and medium-sized enterprises that traditionally have a small financial base, a domestic focus and a limited geographic scope. While some SMEs are "born global", most lack the resources necessary to internationalize and traditionally they have appeared reluctant to engage in global business activities. (Karen, 2006)

Therefore, as stressed by several researchers, suggestions have to be put forward for government policy to develop more SME-targeted financial and non-financial supports to develop the export capabilities and competencies of owner-managers and to assist them establish strategic alliances and partnerships necessary to facilitate international firm growth. (Briga, 2010).

In conclusion, in all these above-mentioned difficulties, governments have a role to play in order to lower the barriers faced by entrepreneurs who wish to globalise their activities – thereby benefiting, in particular, a category of entrepreneurs whose businesses have high growth and export potential and who could develop and exploit niche markets and expand their businesses on international markets. (OECD, 2004)

## 2.5 Drivers for international growth of Italian SMEs (Modena)

**A general overview on business environment from Modena.** The province of Modena in the Italian industry is known for the high density of business activities. Modena is part of the Region named Emilia Romagna. For instance, as stressed by the portal Invest in Emilia Romagna, the attractiveness of Italian regions was evaluated according to six indicators: economic potential, human resources, cost effectiveness, quality of life, infrastructure and business friendliness. Thus, the ranking was drawn up considering all of the above indicators and Emilia-Romagna got the fifth place among the regions of Southern Europe, ahead of all other Italian regions. Emilia-Romagna – the only one Italian region - ranked twentieth for foreign investment promotion strategy among the top 25 European regions and fourth among the top 10 Southern European regions. In addition, the rate of activities in the region is higher than the national average, thanks, above all, to the participation of women in the employment market, extremely high in Emilia-Romagna, and respectively in Modena.

In fact, for some years now Emilia-Romagna has been one of the top regions in the nation for living standards, thanks also to the strong system of relations and close integration between economic development and the services network. Industry represents the core division for this province (the last data available for year 2007); this sector contributes to 27.2% of the province's economic activities, a fact that places Emilia-Romagna among the most industrialised regions in Italy. The tertiary sector is worth noting, reaching 64.3% (the tertiary sector includes wholesale and retail trade, restaurants and hotels, transports and services).

Also according to the data of Unioncamere of Emilia-Romagna, the region is the fourth largest Italian exporter. Industries with particularly high export levels compared to other parts of Italy are minerals and non-ferrous products (mostly ceramics), agricultural and industrial machinery, food products and textile-clothing products. The main foreign markets for region's exports are concentrated in the EU. For instance, 55% of the total exports of Emilia-Romagna are indeed directed towards European countries, (especially Germany, France, and Great Britain). Other important markets include North America, Asia and Eastern European countries. More than 60% of the enterprises are also importers. Furthermore, Emilia-Romagna has the highest density of banks per inhabitant.

According to the data of Confindustria of Modena, compared to a population of over 688,000 inhabitants, nearly 69,000 are companies, or in other words, in Modena there is one company for every ten inhabitants. Nearly 10,000 belong to the agricultural sector, more than 34,000 to services and nearly 24,000 to the manufacturing industry.

Over the decades, the economic situation in Modena has continued to be remarkably dynamic, enabling it to reach a high level of internationalisation and bringing with it a general competitive position in relation to the other territorial systems in a global dimension. Production fabric is made up predominantly by small and medium size enterprise. Another element of specificity is represented by the organisation of production into local enterprise systems, such as the *internationally renowned industrial districts* (metal mechanics, ceramics, bio-medical, textile, and agro-food). The city with the greatest industrial density is Sassuolo (the ceramics district) with 5,365 units, followed by Vignola with 2,732 units in total. Modena has almost 20 thousand units in total, Fiorano has almost 2 thousand units and Carpi with around 2,824 units.

The province's economic development is confirmed by a constant increase in the number of active businesses. (Data available for 2008)

As reported, by Province of Modena on its portal Modena Statistiche, job opportunities in the Modena area greatly influence the levels of education and schooling in general. The technical skills guaranteed by middle-school education can in fact easily be used to enter the local job market and this does not encourage further education. In the province of Modena, at 5.8%, the percentage of graduates is lower than the national and regional averages. Around 700 companies have agreements with the university for professional training placements, guaranteeing a high level of employability once studies are completed. (Data available for 2006)

**Characteristics of internationalizing SMEs and the contribution of governmental support.** The economic crisis of recent years has hit mostly companies linked to the domestic market and less prominent the internationalized companies from Modena. This trend is continuously underlined by several analysis. Curiously, as referred to by the journal *Messaggero*, only 34% of Italian SMEs have their own website, and only 13% of them use it to do e-commerce. For this reason, the Ministry of Agriculture, Food and Forestry along with Unioncamere, created the platform *google.it/madeinitaly*.

With regard to the characteristics of internationalizing SMEs, *from an export/import standpoint*, it should be noted that even the latest ISTAT (Istituto nazionale di statistica) figures confirm a positive trend for the exports of Modena based products, the export performance in the province of Modena is positive for the year 2012.

In addition, as extracted from the on-line journal of Confindustria of Modena, in 2013, the amount of exported goods reached 10.445 billion Euros, an increase of 3.3 % compared to 2011. Despite the positive trend of the past three years, the total value of exports has not yet reached the levels of 2008 (10.890 billion Euros). Within the Emilia Romagna region, Modena is in second place, after Bologna, with regard to the total value of exports, with a share of 21.1 % of the total amount. At the national level, Modena is the seventh province as regards the total sales abroad. The main geographical areas are located in the BRIC countries (Brazil, Russia, India and China). In the BRIC countries, the imports increased from 6.4 % in 2008 to 8.5 % in 2012. The United States also maintain a good place in the ranking.

Then, in another article of the on-line journal of Confindustria of Modena, it is attested that, despite the economic crisis, for Modena based companies the United States remains the first market outside of the European Union and the third after Germany and France. The total value of exports to the U.S. market is surpassing the value of 2011, with one billion euro and represents 10.8 % of total exports of the province of Modena. Therefore, the market is in a strong recovery in many sectors and is able to offer great opportunities for made in Italy products.

With regard to the top sectors in the first place, *the metal mechanics (metalmeccanica)* and more precisely the machinery achieved a growth rate of 21 %. The American market (United States) has had an increase of 60 % (€ 254 million Euros), thus being the largest importer. Then, it follows the Russian market (58 % with more than 100 million Euros). In Europe, Germany has the supremacy with an increase of 29 % (192 million Euros). It has to be pointed out also some data from so-called distant countries like Uzbekistan because the amount grew by 874 % (to a value of 5.4 million Euros). Then, Peru scored an increase of more than 212 % (with 18.2 million Euros).

However, there are also country markets where Modena based machinery products decreased significantly. Iran, China, Canada, United Arab Emirates are among these countries. For instance, in Iran, the exports of this category of products decreased with 52 % (for a total of 29.7 million Euros). In China the percentage of exports decreased with around 15 % (for a total of 58 million Euros) and in Canada with 27 % (18.9 million Euros).

Positive was the trend for the *transport means*. These products made an increase of 30 %. Among the countries, the growth rate was the biggest for India and China, instead negative data showed the following countries: Luxembourg, Portugal and Brazil.

Even the *food industry* has withstood the blows of the economic crisis scoring for the 2010-2012 years an increase of 18 %. The Modena based companies exported considerably in Germany with 218.7 million Euros, followed by France (€ 194 million Euros) and the United States (97 million Euros). It should be paid attention to the growth of Thailand for the exports from this category, because the growth rate was around 252 %.

Positive trends have been seen also for the *textile sector*, as the exports increased by 8 %, exceeding the 800 million euro. The main target markets for the textile industry are the following countries: France, Russia, the United Kingdom, Hong Kong and Latvia.

Finally, the report of Confindustria of Modena on Internationalization trends details that the *ceramic industry* globally grew by 3 %, with an export value of 1.7 billion Euros. Instead, within the European Community there was a decrease of 6 %. The United States are still the first country for the export of ceramic products with an increase of 8 % (190 million Euros) between 2010 and 2012, followed by Russia with 69.3 million Euros and Japan (16.4 million Euros).

The above-indicated industries corresponds with Modena international industrial districts that are predominantly those mentioned here above: metal mechanics, ceramics, bio-medical, textile, agro-food. Interestingly, the *ICT industry*, from where the field companies were selected for the empirical study, is not considered one of the main traditional industrial districts of Modena. However, for 2012, the ICT sector from Modena showed improving figures with +10,5 %.

Referring in general to the Italian international growth of private sector, for example, the authors of the paper "Geographical pathways for SME internationalization: insights from an Italian sample" sustain that location in industrial districts (*networking*) and the *deployment of external* (non-family) managers (human resource management) exert their positive impact exclusively on regional and global export performance, respectively. (D'Angelo et al., 2013)

Furthermore, the TMT composition and processes are likely to represent the Italian SMEs; however, families are the most important shareholders. Precise data are lacking but according to a recent survey by the Italian Central Bank (Banca d'Italia, 2008), families own around 64 % of large quoted firms with estimates of much higher percentage for SMEs. Families typically maintain control of firms not only through ownership but also by appointing executives based on family connections. (Devecchi et al., 2008) For instance, D'Angelo and Zucchella have analyzed the effect of two further resources that are a special feature of Italian small-firm capitalism, i.e. a family-oriented approach to human resource management and networking activities within the company's home market. Families typically maintain control of firms not only through ownership but also by appointing executives because of family connections. This selection bias tends to limit the access of these firms to the specific resources and capabilities

that professional managers have and that are needed for the internationalization process. (D'Angelo et al., 2013)

Respectively, the international potential and growth of Modena-based companies could be promoted and supported by several state institutions. Thus, in Italy, the Chamber of Commerce to have a key role in facilitating access and expansion of business in foreign markets, by providing information and promotion services. This kind of services are carried out in collaboration with other public institutions, such as Regional Desks for Internationalization, the Foreign Centers, the European Info Centers (Eurosportelli), the Italian Chambers of Commerce abroad and Mondimpresa. They aim at sustaining Italian companies in the processes of integration in the international markets, promoting economic, commercial, industrial and financial cooperation.

In particular, the *Desks for the Internationalization* of the Chambers of Commerce provide to businesses the portal named Globus. Through the above portal businesses can receive assistance and information targeted on sectors and countries of their interest.

Finally, the Chambers of Commerce promote and organize - either directly or through foreign centers to which they have subscribed to and through special agencies - the participation of small and medium-sized enterprises to major international trade fairs, and in collaboration with the National Institute of International Trade (Istituto nazionale per il commercio estero). (Della Bella, 2009)

More in details, according to the portal named Piccole e Medie Imprese (or, Small and Medium Enterprises), the Chamber of Commerce of Modena supports investments of SMEs to promote internationalization, by activating new grants that assist financially the small business for the participation in international events. The incentives are aimed at business, also joined in associations, cooperatives and groups, registered in the Register of Enterprises of the Chamber of Commerce of Modena. The above grant provides money for economic missions abroad, participation in international fairs and exhibitions in Italy and abroad.

From the other part, as recalled by the Chamber of Commerce of Modena, *Promec*, the Special Agency for Internationalization (Azienda speciale per l'internazionalizzazione) is in charge of the international development of local businesses and operates in four areas in order to help local businesses to open up to new markets with:

- Personalized assistance and consulting about foreign trade and organization of meetings with international partners.

- International promotion of Modena based companies across national borders through the organization of trade missions, fairs and workshops and through the portal ExpoMO.com in order to facilitate the matching of Modena companies with international partners.

- Corporate training, technology Desk and UNI Point: organization of training courses on technical standards related to enterprises management systems; seminars on international trade and country focus for entering into emerging markets.

- Territorial development: service of professional matching between graduates and firms, organization of educational tours for foreign journalists and foreign delegations, development of relations with the mass-media and with the university, both nationally and internationally.

The SMEs from Modena are also supported as well by the Comitato Export & Internazionalizzazione of the Emilia Romagna Region, thanks to the 2013-2015 development program. Several initiatives are in place as well for the upcoming international fair named Expo

2015 that will take place in Milan.

In addition, another Italian institution that provides supports to all Italian associated companies no matter what size they are is the Confindustria. Confindustria was founded in 1910 and is divided according to the Italian region and province administration system. Therefore, the Italian based SMEs and big companies may be supported by Confindustria of Modena with internationalization related matters. Furthermore, there are other national and European institutions that support SMEs in their internationalization path, such as: *Agenzia per la promozione all'estero e l'internazionalizzazione delle imprese italiane (ICE)*, *Servizi Assicurativi del Commercio Estero (SACE)*, *Bilateral Chamber of Commerce*, *Foreign Chamber of Commerce in Italy*, *Europe Direct*, *European Networks Enterprise*, etc.(Cafferata et al., 1997)

Summing up, in this paragraph the author presented general introductory facts about the business environment in Modena. As well, some insights on industry division of Modena-based companies were pointed together with the list of main governmental bodies supporting the internationalization process of SMEs.

## **2.6 International potential and growth of American SMEs (Minnesota)**

**A general overview on business environment from Minnesota.** The state of Minnesota ranked among 20th largest among all states. Minnesota has been called one of the best-kept secrets in America. Located in the middle of the country, with outstanding transportation links to both U.S. coasts, the state has a diverse and healthy economy.

Minnesota has *21 Fortune 500 companies* - more per capita than any state - and seven of the country's biggest private businesses: Cargill, 3M, General Mills, Medtronic, U.S. Bank, and Ecolab. However, these are multinationals companies. The state has a strong record of producing successful businesses, especially in finance and insurance, biosciences and medical devices, computers and electronics, food production, and transportation equipment.

Interestingly, the heart of the state's economy and culture is Minneapolis-St. Paul, a thriving area of nearly three million people that has the 14th largest metropolitan economy in the United States. The region has the *third-lowest unemployment rate* among major U.S. metro areas, and only eight states had lower unemployment rates than Minnesota as of July 2010. Part of it lies in the state's history of innovation that includes the development of the cardiac pacemaker, open-heart surgery, aviation black box, supercomputers, retractable seatbelts, and more.

Minnesotans also have *a strong work ethic* - with the fifth-highest rate of labor force participation in the country - and *a commitment to education*, ranking second in the United States for the percentage of people with high school diplomas and among the highest for those with bachelor's degrees. The University of Minnesota, which receives \$600 million in federal and corporate research funding annually, is an internationally recognized institution, with strong programs in chemical engineering, economics, biomedicine, and food science.

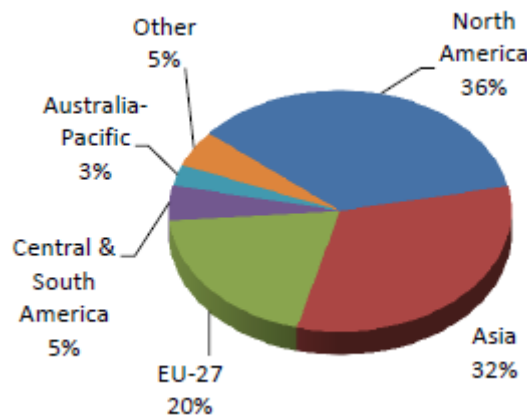
Following the Portal Area Development Online, with outstanding infrastructure, a healthy economy, and a strong labor force, Minnesota is the ideal setting for starting or expanding a company. St. Paul ranks second in the country for colleges per capita. Hamline University, where I was part of an exchange program for Ph.D. students, is Minnesota's first university and its students come from 40 states and 39 countries.

In general, the USA's exports increased \$246 million (or 1.2 %) between 2011 and 2012. Despite the slow growth rate, state exports are at a record high. *Leading exported products in Minnesota* were machinery (\$4.0 billion, up 2 percent), optics and medical instruments (\$3.1 billion, up 10 percent), electrical machinery (\$2.5 billion, down 9 percent) and vehicles (\$1.9 billion, up 10 percent). In addition, Minnesota's top five export markets in 2012 were Canada (\$6 billion), China (\$2.5 billion), Mexico (\$1.3 billion), Japan (\$1.2 billion) and Germany (\$728 million).

According to the data of the Department of Employment and Economic Development of Minnesota, these exporters have an important impact on Minnesota's economy and its success on a global scale can become a source of new jobs in the state.

Furthermore, following the International Trade Administration at the U.S. Department of Commerce, every \$1 billion in U.S. exports of goods and services supported 4,926 jobs in 2012. Major European markets are Germany, Belgium, United Kingdom, and Netherlands. However, non-EU markets (Switzerland, Finland, and Russia) in Europe had the state's strongest regional export growth rate during this period.

**Figure 2. Minnesota Exports by major Regional Markets**



Source: Minnesota Trade Office, (2012)

For example, speaking about different institutional services for the export promotion, during my stay in Minnesota, I have had the opportunity to have a short conversation following a semi-structured interview with one of the MTO's international trade representative in order to understand what were their services and supports to potential internationalising small companies. (Please see the Attachment 4). The outcomes of this mini-interview are represented randomly all along this paragraph. Accordingly, international trade representatives with broad international business experience are available to provide practical advice and information to help companies successfully export. International trade representatives provide assistance with conducting market research, identifying market opportunities, developing business plans, evaluating market entry strategies, identifying potential distributors/agents/partners, providing advice on international logistics, reviewing regulatory requirements, and much more.

As referenced by the Department of Employment and Economic Development of Minnesota, the Office of Protocol for Minnesota, the Minnesota Trade Office ensures that affairs of the state with official visiting foreign delegations and dignitaries are conducted in accordance with standard etiquette of diplomacy and culturally appropriate practices. The MTO

also serves as the liaison between the State of Minnesota and the Minnesota Consular Corps. For instance, more specifically, in the case of Minnesota State Office, it has to be underlined that MSO opened a new foreign trade office in Dusseldorf, Germany, to promote exports and foreign investments in the state. As referred by the press Twin Cities, the Dusseldorf trade office is one of three the state will open around the world under a \$1.5 million "global competitiveness initiative" The reason for locating in Dusseldorf was that Minnesota shares many similar industries with Germany like medical technology and medical device innovation, food processing (and) renewable energy.

Additionally, analyzing this aspect from a theoretical point of view, Bloodgood et al. (1996) applied the INV definition by Oviatt and McDougall as they investigated the internationalization behavior of 61 new enterprises in the USA. Here, they found that when companies aim to achieve competitive advantages, a direct relation exists between internationalization and product differentiation. Additional success factors include the international *experience of the board of directors*, and the size of the company at the point when it decided to go public. (Kraus, 2011)

From the other part, a study of US competitiveness by Massachusetts Institute of Technology suggested that US firm are being hurt in the global economy by a failure to achieve cooperation both within a company and between companies (for example, between a firm and its supplier), and respectively because of its society driven by the importance given to individuals. (Hill, 2009)

**Characteristics of internationalizing SMEs and the contribution of governmental support.** Interestingly, many American SMEs are often intimidated by the complexities and mechanisms of exporting to countries where business practices, language, culture, legal system, and currency are very different from home market. This combination of unfamiliarity and intimidation probability explains why exporters still account for only a tiny percentage of U.S. firms, less than 5 % of firms with fewer than 500 employees, according to the Small Business Administration Act.

For instance, President Obama's National Export Initiative places a specific emphasis on expanding exports by small and midsize businesses, companies that make up 97 % of all U.S. exporters, according to the *U.S. Commerce Department*. Companies of this size - which are often privately held, typically have fewer than 20 employees and usually export to a single market - represent the biggest potential for increasing U.S. exports, but have less experience and export know-how than the big U.S. exporters that have the resources to market and administer their exports. Of the 362 companies surveyed, 42 % cited transportation as the biggest challenge, followed by compliance with local regulations, 37 %; understanding tariffs, duties and customs clearance, 32 %; and credit risk, 30 %.

In addition, there is the *State Trade and Export Promotion* (STEP) grant initiative, awarded by the U.S. Small Business Administration. The STEP program builds on President Obama's National Export Initiative, which is aimed at doubling exports by 2014 and supporting two million jobs in the U.S.

It is important to mention that Hill in his book sustain that many U.S. firm are relatively blind when they seek export opportunities for instance compared to Germany or Japan, and maybe this has an historical explanation. United States has been a relatively self-contained continental economy in which international trade played a minor role. This is changing both

imports and exports now play a great role in the U.S. economy than they did 20 years ago. However, the United States has not yet evolved an institutional structure to that of either Germany or Japan. (Hill, 2009) Also from those companies that are exporting, 58 % export to only one country.

According to the National Small Business Poll the most frequent problem limiting small business manufacturers from increasing foreign sales is the difficulty to locate sales prospects and finding reliable foreign representative to help. Few exporting manufacturers rely upon government programmes for export assistance.

Inexperienced exporters have a number of ways to gain information about foreign market opportunities and avoid common pitfalls that tend to discourage and frustrate novice exporters. There is a wide range of information sources for American exporters, for, example, to increase their knowledge on foreign markets. These aspects are very in details explained in the book of Hill. (Hill, 2009) For instance, in the case of American information sources about foreign market opportunities and the contribution of the governmental support, we could mention the following:

1. The most comprehensive source of information is the *U.S. Department of Commerce* and its district offices all over the country. Within this department are two organizations that dedicated to providing businesses with intelligence and assistance for attaching foreign markets: The International Trade Administration and Foreign Commercial Service. These agencies provide the potential exporter with a “best prospect” list, which gives the names and addresses of the potential distributors in foreign markets along with business they are in, the product they handle, and their contact person.

Then, there could be done different customized studies conducted on-site by an officer of the department of Commerce. The Department of Commerce also organizes trade events that help potential exporters make foreign contacts by organizing exhibitions at international trade fairs, which are held regularly in major cities worldwide. The department also has a matchmaker program, in which department representatives accompany groups of U.S. businesspeople abroad to meet with qualified agents, distributors and customers.

2. Another governmental organization, the *Small Business Administration*, can help potential exporters. The SBA employs 76 district international trade officers, 10 regional international trade officers trough the United States as well as 10-person international trade staff in Washington, D.C. Through its service corps of retired executive program, the SBA also oversees some 850 volunteers with international trade experience to provide one-on-one counseling to active and new-to-export businesses. The SBA also coordinates the Export Legal Assistance Network (ELAN), a nationwide group of international trade attorney who provide free initial consultations to small businesses on export-related matters.

3. In addition to the Department of Commerce and SBA, nearly every state and many large cities maintain active *trade commissions* whose purpose is to promote exports. Most of those provide business counseling, information gathering, technical assistance and financing.

4. A number of *private organizations* are also beginning to provide more assistance to would be exporters.

5. *Commercial bank and major accounting firms* are more willing to assist small firm in starting export operations than they were a decade ago.

6. In addition, *large multinationals* that have been successful in the global arena are typically willing to discuss opportunities overseas with the owners or managers of small firms. (Hill, 2009) This fact, for instance, was the case of one of our case study company from the United States.

I would like to stress more on the role of *export management companies (EMC)* in identifying opportunities associate with exporting for the first-time exporters. This companies would fall in the category of private organizations specialized in the field of international trade issues. EMCs are export specialists who act as the export-marketing department or international department for their client firms. They typically accept two types of assignments. They start export operations for a firm with the understanding that the firm will take over operations after they are well established. In other type, start-up services are performed with the understanding that the EMC will have continuing responsibility for selling the firm's products. Many EMCs specialize in serving firms in particular industries and in particular area in the world. In theory, the advantages of EMCs are that they are experienced specialists who can help the neophyte exporter identify opportunities. A good EMC will have a network of contacts in potential markets, have multilingual employees, have a good knowledge of different business more, and be fully conversant with the ins and outs of the exporting process and with local business regulations. One drawback of relying on EMCs is that the company can fail to develop its own export in capability, or sometimes the support provided by them could be not the best one. (Hill, 2009)

Then, speaking more specifically about the Minnesota state, there is the *Minnesota Trade Office (MTO)*. This is an office within the Department of Employment and Economic Development (DEED) and is the state agency that provides export assistance to Minnesota companies. The MTO delivers programs and services particularly focused on helping small and medium sized companies enter and compete in the international market. The MTO provides cutting-edge training seminars designed to provide knowledge and tools necessary to be successful exporters. The MTO organizes promotional events to help companies explore market opportunities firsthand and meet potential business partners and buyers. The MTO organizes trade missions, provides exhibition opportunities at domestic and international trade shows, and arranges face-to-face meetings with potential foreign buyers.

In conclusion, as stated by Leach, the U.S. economic growth depends upon export business of small to medium-sized enterprises. Therefore, SMEs have significant expansion opportunities in emerging market countries, which have not been leveraged. Constrained by external tariff and non-tariff trade barriers, organizational impediments add to the resistance of their leaders to launch businesses primarily outside regional markets. (Hill, 2009)

## CHAPTER III THEORETICAL AND CONCEPTUAL SETTING OF THE SELECTED INTERNATIONALIZATION MODELS

The theories and models for SME internationalization, (*namely the stage model, the network model and the international new venture model*), have been signaled by the appearance of special issues and forums on international entrepreneurship and international business in various journals, such as *International Business Review*, *European Management Journal*, *Journal of International Entrepreneurship*, *Journal of World Business*, *International Small Business Journal*, *Irish Journal of Management*, *Journal of International Marketing*, etc. Therefore, the relevant literature was reviewed particularly in the context of the above theories on internationalization. Thus, the academic interest is very strong. (See Attachment 1 on the overview of the summary for several academic papers).

As stressed by Taylor, in order to investigate this issue and to allow for a more sophisticated understanding of the firm internationalization process, it is worthy to evidence a conceptual framework incorporating the key dimensions of the pace, scale and pattern of firm internationalization, (Taylor et al., 2011)

One of the fundamental questions in international business is how firms expand beyond their national borders. A number of theories have been applied to explain, for example, the entry mode decision, as the transaction cost and institutional theory are among the most commonly used theories. Much of this literature is grounded in economic theory with a strong focus on rational choice in relation to cost-minimization and risk-adjusted return on investment. (Nielsen et al., 2011) From the other part, previous studies related to SMEs' internationalization success have often been criticized as lacking a valid body of theory, but Katsikeas et al. (2000) in their seminal paper proposed the adoption of the resource-based view to enhance knowledge on export performance and its determinants. (D'Angelo et al., 2013)

However, the thesis proceeds by reviewing important features of the internationalization pattern analyzing the stage model, the network model and the international new venture model. Next, drawing on this selective literature review, the above models are explained. For example, Havnes et al. (1998) observed that research-based knowledge about internationalization is fragmented. In addition, they conclude that there is no uniform theory of the exporting behaviour of small and medium-sized companies. Instead, Barret (1986), as quoted by Belso-Martinez, pointed out that due to the large number of methodologies and the complexity of the phenomenon, this wide research has not always offered clear results. Even so, a certain consensus has traditionally existed in describing internationalization as a gradual-evolutionary process, in which companies progressively increase their implication in international markets. (Belso-Martinez, 2007)

The main theoretical frameworks on the internationalization process are those of *Johanson and Vahlne* (1977) and *Oviatt and Mc Dougall* (1994). Oviatt and McDougall have positioned their work as a challenge to the received Uppsala model but the two frameworks appear complementary. The purpose of Johanson and Vahlne was to explain the gradual, constrained pattern of internationalization whereas Oviatt and McDougall's model emphasizes enabling factors of a rapid internationalization process. (Falize, 2012)

Importantly, although global strategies, strategic international alliances, and problems of diversification and control are concepts frequently encountered, the discussion focuses almost exclusively on large firms or the so-called multinational enterprises (MNEs). Small entrepreneurial business research is more concerned with export development models of internationalization. In spite of the gap between the two lines of research, both build on the *foundations of organization theory*, although significant differences have resulted. Therefore, Ruzzier concluded that attempts to apply theories developed for or based on large firms may lead to relatively awkward results when applied to smaller businesses, as ideas developed for large firms do not necessarily work in a small business setting. (Ruzzier, 2006)

However, from the literature, it emerges that knowledge-based or knowledge-intensive firms are able to perform rapid internationalization, and vice versa, traditional firms are supposed to internationalize slowly, following gradualist models, unless they have a strong international network. (Kalinik, 2012) Theoretical approaches to Early Internationalizing Firms (EIF) have evolved over recent years.

In relation to the internationalization speed of SMEs, the three main approaches: *the stage approach*, *the network approach* and the *born global approach* are object of the present research. Obviously, the economic models and approaches are frequently discussed in the literature, but they are not explored in the above research project.

Within this category, the most cited theoretical perspectives are those on the resource-based view of the firm, transaction cost, institutional theory and dynamic capabilities perspective, etc. (Bjorkman et al., 1997)

For example, the U-model or the stage approach is one of the most important internationalization model in the literature. In common, the network approach and the born global approach posit that early internationalization occurs because of *entrepreneurs' human and relational capital components*, combined with firm-specific variables and environmental-institutional influences. (Federico, 2011) The approaches analyzed in the subsequent paragraphs provide varying perspectives on how SMEs internationalize their business, especially with respect to its speed or timing. These approaches are not mutually exclusive and can occur simultaneously in the SME. Therefore, as underlined by Briga, it is important to examine their potential complementarities to obtain a more integrated perspective of internationalization in the SME. (Briga, 2010)

Thus, the correlation between the human relations aspect and internationalization pace of SMEs constitutes the object of this research project with the respective research questions.

### **3.1 Stage internationalization model**

The *stage models*, which started in the '70 in the Nordic countries, assume that internationalization process starts with sporadic overseas sales and continues with bigger and bigger commitments in the foreign markets through sales (Kalinic et al., 2009). The traditional pattern is a process in which a firm gradually increases the number and diversity of markets it serves. Several studies have commented on *the traditional, incremental internationalization models* which have mostly focus on large firms (Falize, 2012) Interestingly, the Uppsala model of internationalization by Johanson and Vahlne continues to strongly influence IE research.

The stage internationalization model is the result and work of the business theorists from the University of Uppsala in Sweden. They assigned knowledge a key role in their explanation of firms' internationalization. Firms' learning - or, acquisition of knowledge - about foreign markets was pointed out as being determining not only the speed by which firms expand internationally, but also which regions of the world firms enter and what *operation methods* they employ in the foreign markets. (Petersen et al., 2003)

### **3.1.1 Gradual internationalisation model: manifestations and critiques**

First of all, the theoretical model of Johanson and Vahlne, from 1977, assumes market-specific knowledge to be the sole *determinant of firms' internationalization behaviour*, although the authors have pointed out that other potentially important factors are at play in the internationalization process of firms. As such, the modelers explicitly stress the partiality of the model. In their quest for a comprehensive, total internationalization process model the Uppsala scholars and their apprentice students have drawn attention to determinants of internationalization patterns in addition to *knowledge and operating cost considerations*. (Petersen et al., 2003) Knowledge was at the core of the models of internationalization developed by Johanson and Vahlne and their Uppsala colleagues. Building on the behavioral view of the firm, they viewed the lack of foreign market knowledge as an impediment to international expansion as firms tended to confine their operations to the geographical vicinity of their existing knowledge. Thus, firms remained domestic until they were pushed or pulled internationally by an event such as an unsolicited export order. (Oviatt et al., 2005)

For instance, Pedersen and Petersen identified several factors that, in addition to acquisition of market-specific knowledge, may explain firms' gradual commitment of resources to foreign markets. Thus, increasing commitment to a foreign market as a response to strategic *behaviour of competitors*. (Petersen et al., 2003) Therefore, perhaps the internationalization model that is most familiar to entrepreneurship scholars is the Scandinavian one. From a micro-economic focus and taking the company as the starting point, the denominated Scandinavian model outlined by diverse authors belonging to the *School of Uppsala*, considers the process of internationalization of small and medium companies as a *progressive gradual commitment of the company to foreign markets*. (Belso-Martinez, 2007)

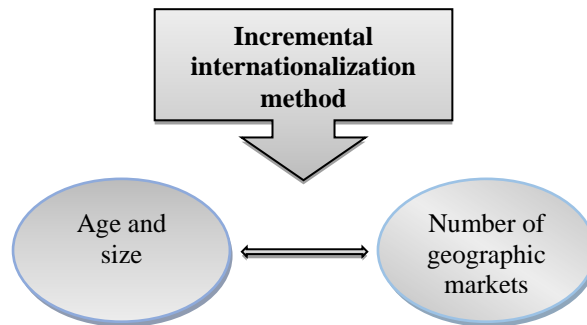
Based on studies of Swedish manufacturing firms, the gradual model of internationalization postulates that the company begins its international operations when it is still reduced in size, and spreads its activities towards psychologically close markets and uses less committed modes of entry. Once the company learns and increases its foreign market knowledge, it increases its international market commitments and expands to more psychologically distant markets (Belso-Martinez, 2007) For example, in the model proposed by Arenius in his article, the author posits that a higher psychic distance decreases the speed of market penetration. (Arenius, 2005)

In the original model of Johanson and Vahlne, the knowledge that is particularly important in the internationalization process of firms takes on the following characteristics. First, the knowledge of crucial importance to firms' internationalization process is *market-specific* (for instance, the knowledge is about how to do business in the targeted foreign country). Furthermore, the incremental internationalization model argues that managers' lack of

knowledge about foreign markets and their aversion to risk explain the firm's selection of countries into which to expand (Cuervo-Cazura, 2011)

Having their individual particularities all foreign markets differ from each other and only to a limited extent can knowledge acquired in one foreign market be used in another. Secondly, the crucial knowledge is *experience-based*. It originates from the current foreign business activities, and as such, the *knowledge acquisition is a learning-by-doing process*. Thirdly, the crucial knowledge is *embedded in individuals* through *personal experience* and the particular company person appears as a repository of that knowledge. Fourthly, the individually embedded experiential knowledge does not lend itself easily to dissemination throughout the organization. (Petersen et al., 2003) In addition, of relevance to the focus of many studies is the fact that traditional incremental internationalization methods posit that the *number of geographic markets* that a firm serves is related to the age and size of the firm.

**Figure 3. The relationship between number of country markets and the age/size of a company**

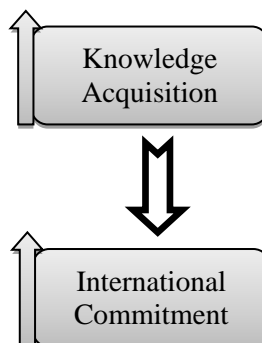


Source: author's elaboration from Taylor and Robert Jack (2011)

While the underlying reasoning of these models remains valid, it does not fully explain the internationalization paths of small and medium-sized enterprise internationalization. (Taylor et al., 2011). At this point, it is suggested to look into entry behavior of other theories like that of BGs.

Then, another suggestion made by Johanson and Vahlne is that international involvement, including commitment of irrevocable resources to foreign markets, increases proportionately with knowledge acquisition. Therefore, the Uppsala model postulated a monotonically increasing proportionality between knowledge accumulation and resource commitment.

**Figure 4. The impact of knowledge acquisition on international commitment**



Source: author's elaboration from Petersen, Pedersen and Sharma (2003)

Thus, the original Uppsala internationalization process model sustains that reduction of decision-makers' uncertainty about foreign markets leads to increased resource commitment. Furthermore, decision-making is almost absent in relation to acquisition and transfer of knowledge. Apart from the above-mentioned learning aspect, the second major postulate of the model is that companies start their internationalization process in psychically closer countries and then go farther from there on. In internationalization process theory, the liability of foreignness is traditionally conceptualized as a psychic distance between the firm and the foreign market and is described as the factors that prevent the flow of information between the firm and the foreign market. (Hilmersson et al., 2012)

As regards the ways of acquiring international market knowledge, inspired by Penrose (1959) Johanson and Vahlne distinguished between “*experiential knowledge*” and “*objective knowledge*” in their internationalization model. The two types of knowledge differ in terms of the way it is acquired.

1. Objective knowledge is obtained through standardized methods, i.e. market research, and can easily be transferred to other countries and replicated by other firms.

2. Experiential knowledge, on the other hand, is acquired through the carrying out of activities – the learning by doing.

For example, over the past three decades the development of learning theory has included embeddedness of knowledge as a key issue. It is conceded that knowledge – including tacit knowledge - can be embedded not only in individuals, but also in teams and company organizations as a whole. (Petersen et al., 2003)

An essential element of this foreign liability is the gap between the knowledge the firm possesses and the knowledge the firm needs to accomplish the foreign venture. In research on firms' internationalization process, experiential knowledge has come to occupy a central position. (Hilmersson, 2012) For example, these authors differentiate between three types of learning; (1) *learning from direct experience* describes the extent to which a firm generates and distributes knowledge within the boundaries of the firm, (2) *learning from experience of others* is the extent to which the firm is exposed to knowledge about foreign markets from network partners, and (3) *learning from paradigms of interpretation* is the extent to which the firm learns by imitating routines of firms, which are perceived to be best practices in the focal market. See also the Figure 7.

Additionally, in their definition, Ruzzier tries to summarize the fundamental characteristics of the internationalization process based on the Nordic research findings. Their definition also covers two concepts occasionally applied in the context of internationalization, namely *international orientation* and *international commitment*. International orientation refers to a firm's general attitude towards internationalization. For instance, Reid (1981) defined it as a measure of the perceived difference between foreign markets and the home market space along economic, cultural, political, and market-strategic dimensions. International commitment is associated with the requirements of the operation modes chosen and the size of international business. The latter seeks to position firms somewhere between the extremes of no involvement (domestic firm) and full commitment (a firm with a realized foreign direct investment). (Ruzzier, 2006)

Furthermore, there exists a number of management choices in relation to knowledge acquisition in the firms' internationalization process. Among these Petersen and Sharma point out three questions that managers are confronted with:

1. *How much knowledge should be acquired?* First, the amount of knowledge that a decision-maker requires in order to undertake an irreversible commitment to a foreign market is subject to managerial discretion. In the Uppsala model decision-makers were assumed to be risk averse, indicating that the maximum tolerable risk. However, some studies suggest the opposite; that important decisions in the internationalization process reflect risk-taking behaviour.

2. *In which way should this knowledge be acquired?* The assumption made in the Uppsala model that knowledge acquisition is carried out by the employees of the company is an overt simplification of the realities. Managers can make important "shortcuts" to acquiring crucial knowledge by recruiting individuals (or even teams) with valuable international knowledge from other companies organizations. For example, the "born global" phenomenon is largely explained by spin-offs of personnel from companies with long international experience starting up their own business.

3. *In which form should the knowledge be acquired?* In the Uppsala model, the choice is available in the form of objective knowledge, or the company has to acquire the knowledge through its ongoing business activities. In the first case, the company can buy the knowledge (or, in some cases, get it cost free from public institutions). Presumably, the choice between acquiring objective knowledge versus acquiring experiential knowledge is not that straightforward, but very much depending on cost-benefit considerations. The need for time-consuming experiential learning can probably be brought down to a negligible minimum if the company is willing to pay the (considerable) costs, for example, to the use of export consultants. In this situation, the managerial discretion is about the trade-off between relatively slow international expansion and fast, but expensive expansion. (Petersen et al., 2003)

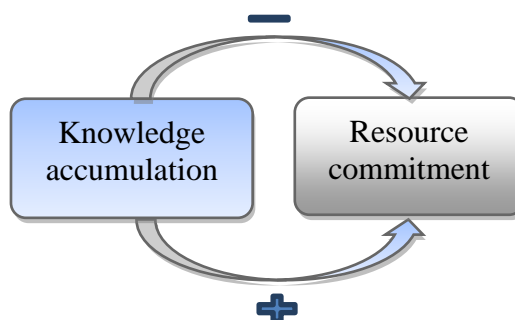
**Table 3. Knowledge acquisition at managerial discretion**

	<b>Uppsala model</b>	<b>Born Global model</b>
<b>Risk propensity</b>	- risk adverse managers	- risk preferential managers
<b>Subjects</b>	- company's employee	- recruiting individuals - recruiting specialized team - spin-off personnel
<b>Forms</b>	- objective knowledge: bought or get for free from public institutions - experiential knowledge from learning by doing	- export consulting

*Source: author's elaboration from Petersen, Pedersen and Sharma (2003)*

For more details, the Born Global phenomena is analyzed in the further paragraphs. From the other part, Erramilli (1991) has suggested a U-shaped relationship between *experiential knowledge* and a firm's inclination to employ *high-control modes* of entry into foreign markets.

**Figure 5. Knowledge and resource commitment**



Source: author's elaboration from Petersen, Pedersen and Sharma (2003)

The above figure is trying to explain the role of knowledge accumulation to the resource commitment. The logic is that decision-makers, prior to systematic market investigation, may have overoptimistic expectations about foreign market opportunities. The accumulation of knowledge will confront the decision-makers with facts resulting in a temporary reduction of their willingness to engage in high-control, and high-commitment operation modes in foreign markets. Eventually, the knowledge accumulation will make the decision-makers more confident of the competitiveness of their companies vis-à-vis local firms, thereby returning to the initial willingness to undertake investments in high-commitment operation methods. (Petersen et al., 2003)

From the other part, Cuervo-Cazura extends the core idea of the internationalization models, and mainly that international experience determines the internationalization process of the firm. His paper argues that a firm may develop, in its home country, dimensions of knowledge that are useful to overcome the difficulties of internationalization. (Cuervo-Cazura, 2011)

However, there are also *critiques to the incremental internationalization model*. For instance, Andersen questions some explanatory facets of the Scandinavian School's contributions for their evident inability to reveal the reasons that push the international manager into making certain decisions. He also argues that often firms show a non-sequential internationalization especially when they have larger resources. Finally, gradual approaches to internationalization fail to take into account the aspirations of entrepreneurs, the resource needs of small firms and the network context in which firms are embedded. (Belso-Martinez, 2007) Therefore, this model considers the internationalization process as "one-directional", and Welch and Luostarinen (1988) however show that a company may find itself in a disadvantageous situation in which a withdrawal from one or more countries might become necessary. For instance, the de-internationalization is also not covered by the above mentioned U-model. Furthermore, the Uppsala model is not able to provide an explanation for born-global companies.

As a conclusion, according to Uppsala model, the knowledge acquired in connection with the international venture is either "objective" or "experiential". It is also important to underline that little attention is paid to the possibility of transforming experiential knowledge into objective knowledge, for instance, the process through which tacit skills and knowledge are made explicit. (Petersen et al., 2003) Potentially, the Internet may reverse the conventional role of knowledge as a limiting, slowing factor in firms' internationalization process to that of being

a catalyst. If true, this could pose a major challenge to internationalization theory as currently understood.

### 3.1.2 Patterns of traditionally internationalizing SMEs

According to Uppsala model, the company develops its national market first, and secondly it begins to carry out irregular exports, later it uses independent agents, in fourth place it establishes commercial branches, and the process concludes with the setting up of international productive branches.

**Figure 6. Internationalization stage according to Uppsala model**



*Source: author's personal elaboration*

For example, Johanson and Widensheim-Paul (1975) found a regular process of gradual change involving the firm *moving sequentially through four discrete stages*: 1. intermittent exports; 2. exports via agents; 3. overseas sales via knowledge agreements with local firms, for example by licensing or franchising; 4. foreign direct investment in the overseas market. The rationale was that this approach minimizes risk and investment amounts required at each point in time and allows for learning and experience gaining before further expansion. (Wilson, 2006) The incremental internationalization model argues that firms should follow *a sequential process*, selecting countries that are similar to the country of origin in their first international expansion and only later entering countries that are dissimilar. Several studies find support for this sequence, but other studies do not, arguing that the incremental internationalization model may need to be reevaluated.

However, the excessive specification of the different stages that companies must complete during their international expansion, has resulted in one of the constant criticisms made about this theory. (Belso-Martinez, 2007) Additionally, Bell's results allow the conclusion to be made that although internationalization can in fact be explained by the models in question, internationalization processes in companies do not occur in such a deterministic fashion as the models would expect. (Kraus, 2011)

For example, in the article of Cuervo-Cazura, it is argued that a firm that has developed, in its home country, knowledge useful to overcome foreign expansion difficulties may choose a non-sequential internationalization. However, the knowledge is today acknowledged as an important, but far from sole determinant of firms' internationalization pattern. The three types of knowledge developed in the home country are: *knowledge to manage complexity* developed by having multiple operations at home; *knowledge to manage differences in competitive conditions*, developed by operating in business-to-business industries; and *knowledge to manage differences in institutional environments*, developed by having an alliance to a foreign firm at home. (Cuervo-Cazura, 2011)

In Nordic countries, the internationalization of SMEs has traditionally been defined as “the process of increasing involvement in international operations” and this process has often been understood as gradual and sequential, consisting of several stages. (Ruzzier et al., 2006) In addition, it often makes sense to enter a foreign market on a small scale to reduce the cost of any subsequent failure. Most importantly, entering on a small scale provides the time and opportunity to learn about the foreign country before making significant capital commitment to that market. Moreover, the exporter needs to recognize the time and managerial commitment involved in building export sales and sometimes maybe it is the case to hire additional personnel to oversee this activity. (Hill, 2009)

Therefore, as the theoretical bases of the incremental internationalization model stresses that an internationalizing SME had to follow a predefined sequence, I controlled, in the chapter related to the empirical analysis, if the company’s entry mode changed in time and I analysed as well the main stages in the company’s internationalization process. I also tried to find out if their entry mode were the same in different markets, because, for example, the non similarity in entry modes for those countries the SME is operating is a typical and distinguishing characteristics of a BG SME.

### **3.2 Rapid internationalization model as a challenge to stage internationalization model**

The *key role status of knowledge* in internationalization theories has not passed on unchallenged since the seminal work of the Uppsala theorists. When introducing their internationalization model the Uppsala theorists themselves emphasized the partiality of the model. (Petersen et al., 2001) Different terms have been used to define born-globals, such as *international new ventures, global start-ups, instant exporters, instant internationals*, amongst others. Irrespective of the terms used, it is widely acknowledged that such firms “go international” soon after formation, breaking the rules of stage-wise internationalization, typically associated with traditional and large organizations. (Zhang et al., 2013) The observation that these firms engage in cross-border activities from their inception poses an interesting challenge for the established body of theory in the area of international management because new ventures have fewer resources and less international experience and know-how than large multinational enterprises. (Al-Laham et al., 2008)

It can be argued that there are significant potential benefits associated with early internationalization. For one, firms willing to take the risks associated with venturing abroad are exposed to new learning and growth opportunities. In addition, early internationalization results in benefits stemming from “learning advantages of newness” in the form of faster adaptation and the development of flexible organizational routines. (Musteen, 2010)

Traditionally, an Early Internationalizing Firm (EIF) has been conceptually defined as “a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries”. However, the question of how to empirically identify such firms has been one of the most challenging tasks in this research field. Researchers have usually defined this type of firms using two variables: *the extent of the international activities*, and *the speed of internationalization*. In this logic, one of

the most referred operational definitions of an EIF is a firm that exports more than 25% of its total sales within three years of its inception. More recent and improved definitions also include the *number of countries* to which a firm is exporting (Federico, 2009)

An important topic within international entrepreneurship is the international new venture, and explaining its accelerated internationalization is an important focus of research. However, no model of the forces influencing the speed of internationalization exists. For example, the authors Oviatt and McDougal present in their paper *”Defining International Entrepreneurship and Modeling the Speed of Internationalization. Entrepreneurship: Theory & Practice”* proposing that the speed of entrepreneurial internationalization is determined by four types of forces: enabling, motivating, mediating and moderating. These forces are explored more in details in the further paragraphs of this research project. Furthermore, a more fundamental issue explored, but still largely unresolved, in the literature is a focus on which distinguishes born globals from other rapidly internationalizing firms (Taylor et al., 2011)

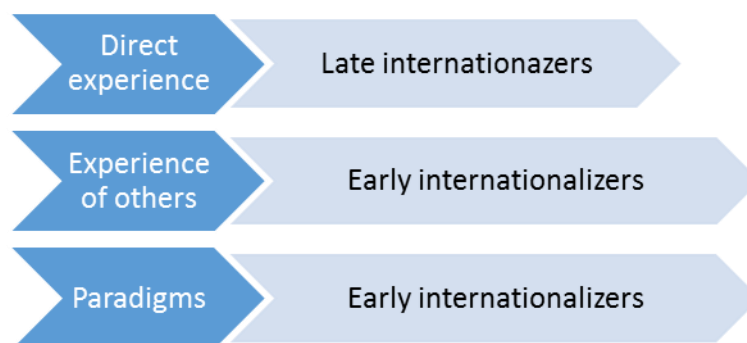
Therefore, all these mentioned issues about accelerated internationalization are analyzed in the further paragraphs. When realizing an extensive review of born-global phenomenon, it is worthy to mention the papers of Weerawardena, Mort, Liesch, and Knight (2007), Coviello and McAuley’s (1999) that highlight many of these issues, particularly the *importance of networks*. (Loane, 2007)

Then speaking about the importance of market learning for the internationalization speed, Schwens and Kabst argued that late internationalizers are more likely to apply direct learning, as they possess established competence, a more experienced workforce, and experience in the industry, all of which promote dealing with trajectories through direct learning. In contrast, we assume early internationalizers to have a stronger need to learn from the experience of others and from paradigms of interpretation compared to late internationalizers.

Early internationalizing firms do not have the “... time and patience to base their foreign investments on experience from their own current activities”. This learning pattern helps early internationalizers to overcome liabilities such as newness, size, and foreignness, and allows for rapid internationalization. (Schwens et al., 2009)

In terms of knowledge implications for the internationalization process between late and early internationalisers, the figure below gives a simplistic presentation of the issue.

**Figure 7. Types of experiences for firms' internationalization process**



*Source: author's personal elaboration*

Importantly, as was mentioned in previous paragraphs these three different learning types do not mutually exclude each other. Additionally, in contrast with traditional internationalization approaches, born global firms also appear to minimize the relevance of psychic distance in strategic decisions related to market entry Madsen and Servais (1997). Researchers - Bell et al. (2004), Knight and Cavusgil (1996) - have emphasized that rapidly internationalizing firms do not enter new markets based on psychic distance, but instead focus strategically on the size of the market and its ability to be a lead market. (Taylor et al., 2011)

Also with regard to *tacitness and transferability of knowledge*, it has been pointed out that firms can gain access to the (experiential) knowledge of other firms without necessarily going through the same experiences as these firms. Imitative learning, (for example, learning via the observation of other international firms' behaviour, in particular imitating firms of high legitimacy (Petersen et al., 2003)

To further enhance our understanding of this phenomenon, this thesis draws on the "born global" literature to identify common internationalization behaviours with which rapidly internationalizing firms are involved, especially putting accent on pace, scale and pattern of firm internationalization. (Taylor et al., 2011)

Thus, the results from a comprehensive case study of two Italian and two American SMEs intend to analyze the two factors in determining the pace with which a firm internationalizes. As mentioned in this thesis, the need for in-depth case study on network specific to rapid internationalization among Born-Global and Born-again Global firms has been recognized by Arenius (2002), Andersson and Wictor (2003), Sharma and Blomstermo (2003), Autio (2005) and Coviello (2006). The main models challenging the 'traditional' process we can identify in the literature at the beginning of the '90 are the 'born-global' and 'born-again global' internationalization patterns, which differ in terms of *pace and degree of internationalization*. (Falize, 2012) For example, the paper published, in 1994, by Oviatt and McDougall in the Journal of International Business Studies "*Toward a theory of international new ventures*" is today the publication having the greatest influence on international entrepreneurship research. (Kraus, 2011)

Definitely, the "Born Global" firms have certainly reinvigorated researchers' interest toward internationalization phenomena, particularly among entrepreneurship researchers such as Autio, Bell, Kuemmerle, Zahra and others. Either most of these studies have focused on describing this "new" type of firms, or they have attempted to assess the extent and economic impact of this phenomenon. Several studies have also explored the implications of the phenomenon for the internationalization theory. (Autio et al., 2002)

From the other part, Madsen and Servais (1997) provide an overview of the scientific literature published so far on the topic of BGs. Using this overview, they show the limitations of Johanson and Vahlne's, Uppsala model of internationalization, providing open questions, suggestions, and directions for future research. In addition, over the past 15 years, Oviatt and McDougall have been cited with a high level of consistency among all kinds of different research thematic dealing with the topic. Studies by other researchers were also emerging at the same time that investigated the behavior of INVs and BGs. Although these works differ in how they view the phenomena of INV/BG, they all agree on the need for more extensive, more comprehensive research on the topics. (Kraus, 2011)

Therefore, the observation that these Born Global firms engage in cross-border activities from their inception poses an interesting challenge for the established body of theory in the area of international management because *new ventures* or born global firms have fewer resources and less international experience and know-how than large *multinational enterprises*. (Al-Laham et al., 2008)

### 3.2.1 Early internationalising firms: types, behaviour and determinants

An important focus of recent international business enquiry is the phenomenon of rapidly internationalizing small firms. In this paragraph, a special attention is given to the study of two types of rapid internationalizing firms: the born global and born-again global. The term BG itself implies that a firm aims for international markets “from inception” and BAGs internationalize rapidly after operating for a rather long-time in their home markets. (Kuivalainen et al., 2012) In contrast, a fundamental postulation describing the traditional pattern is that internationalization is a process in which a firm gradually increases the number and diversity of the markets it serves. This aspect was discussed in the previous paragraphs.

**A. The Born Global SMEs.** The born-global firms model has been presented as an alternative to the incremental internationalization model. (Cuervo-Cazura, 2011) Known variously as “*born-global*” firms from McKinsey & Co. (1993), “*committed internationalists*” from Bonaccorsi (1992) or “*international new ventures*” from McDougall, Shane, & Oviatt (1994), these are entrepreneurial firms that internationalize from inception, or shortly thereafter as stressed by Oviatt. (Loane, 2007) Therefore, Born Globals are firms that are internationally oriented since their inception, or soon after it, and manage to reach a certain degree of internationalization within *a relatively small number of years*. (Falize, 2012)

Commonly, definitions of these firms revolve around either the born global or international new venture concepts. For example, a *born global firm* is defined, by Knight and Cavusgil (1996) as a “small and usually technology oriented firm that expands into international markets, virtually from its inception” Similarly, an *international new venture* is defined, by Oviatt and McDougall as “a business organization that, from inception, seeks to derive significant competitive advantages through the use of resources and the sale of outputs in multiple countries”. (Taylor, 2011)

For instance, the authors Schwens and Kabst suppose that early internationalizers enter foreign markets shortly after the company's foundation. Due to a lack of experience and the absence of a stable domestic market, which might endanger firm survival, early internationalizers need to utilize mechanisms that enable them to enter foreign markets early in their lifecycle. Accumulating own knowledge over time is a time-consuming process, which impedes rapid internationalization. If the learning behavior of a firm is largely based *on learning from direct experience*, the probability for early internationalization is rather limited. If, however, internationalization does not depend on learning from direct experience, the possibility to internationalize from inception is higher. Consequently, the extent of learning from direct experience constitutes a major adverse for the appearance of early internationalization. (Schwens et al., 2009)

Importantly, since the appearance of Oviatt and McDougall's seminal paper in 1994 "*Toward a theory of international new ventures*" a vast amount of literature has been developed to understand not only the emergence but also the behavior and effects of these new international firms. In particular, since the emergence of this research field, many scholars have demonstrated that early internationalizing firms are generally led by entrepreneurs with higher levels of human and relational capital. (Federico et al., 2011)

The model on rapid internationalizing companies proposes that advancements in information technology and globalization have eased the acquisition of knowledge by firms and its application across countries. As a result, firms with international marketing and entrepreneurial orientation achieve the innovativeness needed to succeed in international markets, internationalizing early and widely. (Cuervo-Cazura, 2011) Therefore, the research has also been conducted in different geographical locations, thus demonstrating that the phenomenon is not context-specific and of huge interest also for policy makers and managers. For instance, McDougall identifies three central factors to explain the internationalization behavior of INVs: the company's founder, why internationalization is done, and the kind and form of international activities. (Hagen et al., 2011)

For example in the article "*Does entrepreneurs human and relational capital affect early internationalization ? A cross-regional comparison* ", the authors are trying to fully exploit their dataset, and they operationally define an EIF as a firm that has experienced some export activity in the first year, has exported at least 25% of its sales by the third year and has exported at least 50% of its sales by the year of the survey (on average the eighth year). The 25% third year cut-off value could be interpreted as restrictive, but it has been previously adopted by several studies. As previously explained, it is eventually considered standard within this field of research. The adoption of the 50% cut-off value, however, has less empirical support in the literature. (Federico et al., 2011)

For instance, following Vermeulen and Barkema (2002), as quoted by Lin, it is possible to measure the three dependent variables in a firm's internationalization process:

- internationalization pace is the average number of foreign subsidiaries per year.
- internationalization scope is the number of countries in which the firm establishes subsidiaries in a given year.
- internationalization rhythm is the kurtosis of the first derivative of the number of the firm's foreign ventures over time. (Lin, 2012)

Instead, Bloodgood et al. (1996) indicated that the higher an industry's margins, the lower the level of internationalization will be in it. ( Kraus, 2011)

It is important to underline that the extant literature does not give detailed information about Born Global or Born-again Global SME internationalization patterns and we can note that BGs are early adopters of internationalization. Therefore, the above-mentioned authors, for analyzing better the internationalization pathways of SMEs, structured their study from three point of view: time, scale and scope.

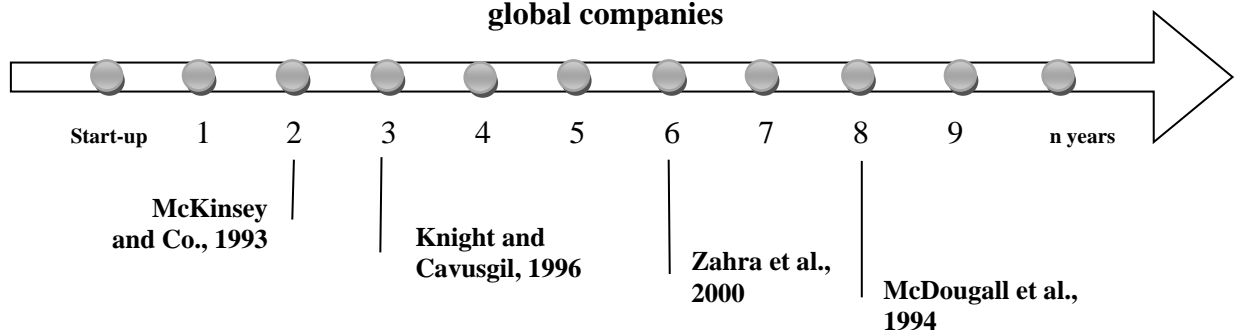
**1. Time** is a key element that distinguishes research focusing on BGs and BAGs from studies focusing on the internationalization of traditional SMEs. In the field of international entrepreneurship, there are two key areas of research concerning time:

- (a) time lag between the founding of a firm and the commencement of its international operations;

(b) speed of a firm's subsequent international growth and development.

A commonly used definition of BGs includes a time measure: a born global is a firm that has reached a share of foreign sales of at least 25% after having started export activities *within three years of its foundation*. (Kuivalainen et al., 2012) However, there is also variety in terms of the time lag between the founding of a firm and its commencement of international operations: for example, researchers like Rennie (1993) and Moen and Servais (2002) use the time span “*two years from foundation*”. Instead, Kalinic when defining Born-Global firms says about a *relatively small number of years* (Kalinic, 2012). The pace of internationalization, considered to be defining characteristic of a born global firm, refers to the time taken between the inception of the firm and its entry into international markets. The extant literature shows considerable differences of opinion regarding the speed required to be defined as a “born global” firm. It is seen to range from *two years from inception* in the case of McKinsey and Co., (1993) *to three years*, in the case of Knight and Cavusgil (1996), *to six years*, in the case of Zahra et al., (2000) and *to eight years* in the case of McDougall et al., (1994). (Taylor et al., 2011) This time lag issue is shown in the below figure.

**Figure 8. Differences in opinion with regard to the internationalization pace of born global companies**



Source: author's elaboration

**2. Scale.** The scale of internationalization measures relate to the extent of a firm's international operations. The most common indicator seems to be export intensity, i.e. the share of turnover from foreign markets of the total turnover (foreign sales to total = FSTS). There are several FSTS ratios utilized in the extant research on rapidly internationalizing firms. The above-mentioned *25 percent criterion*, often associated with Knight and Cavusgil (1996), is applied in many studies. Furthermore, this criterion probably implies that a firm is taking its international operations seriously, and that internationalization is not meant to be sporadic. (Kuivalainen et al., 2012)

**3. Scope.** In terms of market scope, there are two types of generic internationalization strategies commonly discussed in the literature, market concentration (a *narrow geographic scope*) and market diversification (i.e. a *broad geographic scope*). As discussed above, the theory postulates that a firm following a traditional internationalization pattern should have a narrow market scope at the beginning of its international operations, whereas one following a BG strategy or pattern must begin to operate in multiple countries on international markets almost from inception. For example, these two authors state that a firm should have activities “... *in multiple countries*”. Moreover, as it was underlined previously, a higher prevalence of

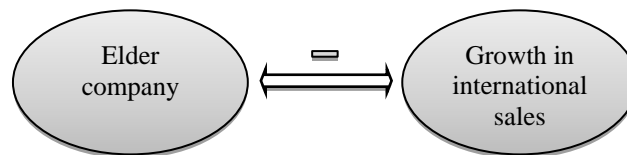
born global firms appears to occur where the size of the domestic market is insufficient. (Taylor et al., 2011)

Once again explaining the concept of distance, it refers to the psychic and geographic distance of the markets to which the internationalizing firms extends its reach. A basic tenet of the new venture internationalization theory is that some new ventures are able to overcome traditional rigidities and leapfrog over proximate markets in an effort to maximize their global exposure. From the learning perspective, an important trade-off is created by the fact that *a high distance is typically associated with a higher international diversity*, an important influence on both managerial and technological learning. (Autio et al., 2002)

Within both the born global and international new venture literature, *there is no specific definitional stipulation for the number of markets that a born global must serve*. More recent studies that focus on defining born global firms more accurately do not significantly extend McKinsey & Co., or Oviatt & McDougall's original definitions that outline the need for born global firms to enter multiple countries. (Taylor et al., 2011)

For example, Autio endeavoured to determine whether age at entry influenced the number of markets entered for born global firms; this study found a negative relationship between the age and foreign market entry and growth in international sales. This relationship is expressed by the below figure. (Autio et al. 2000)

**Figure 9. The relationship between age and international sales growth**



Source: author's elaboration from Taylor et al., (2011)

They assert that by internationalizing earlier, firms are able to develop knowledge and routines that enable them to enter additional foreign markets. By entering markets sooner, young firms have a learning advantage of newness that enables them to identify and take advantage of opportunities better than those who internationalize later. For instance, according to the findings of Sapienza, Oviatt and McDougall, new firms seeking to grow are not constrained by having developed embedded routines or inertial constraints that can limit older, more established firms emphasize further that the earlier in its history a firm internationalizes, the faster it seems to grow. (Taylor et al., 2011)

It is important to measure that *scope measures* also often suffer from context specificity: for example, Reuber and Fischer (1997) focused on Canadian software firms and considered the scope of operations to some extent by differentiating three regions, Canada, North America and 'outside North America. In addition, it is worthy to stress that in the context of BGs, the temporal factor needs to be viewed along two dimensions, *precocity and speed*. As Zucchella point out, precocity relates to the early start of internationalization whereas speed concerns its effectiveness. (Zucchella, 1999)

For instance, the time of internationalization (when and how rapidly) seems to be shortened in many cases, and this development in particular has challenged the traditional models. In principle, the time intensity of the activities is different between BGs and traditional firms in start-up phase of internationalization. Furthermore, it is interesting to specify according to the

article of Kuivalainen, that despite some scholarly attempts to define the scope of BGs more explicitly, the question of what number of markets served qualifies a firm as a proper BG remains. (Kuivalainen et. al., 2012) Thus, in order to sum up these three criteria about start-up pattern of BGs SMEs, the author of the present thesis elaborated this table that explains concisely their features and measurement.

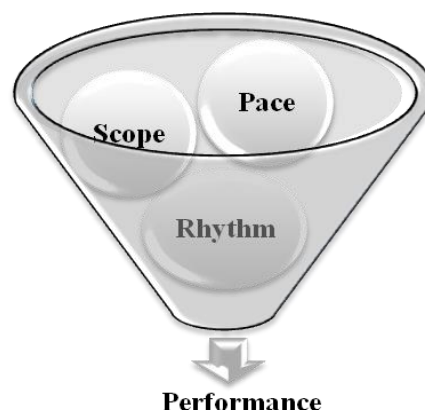
**Table 4. Measures related to the time, scale and scope for early internationalizing SMEs**

Criteria	Measurement
<b>Time</b>	<ul style="list-style-type: none"> <li>❖ precocity = BGs – early start of internationalization</li> <li>❖ speed = the effectiveness of their international involvement</li> </ul>
<b>Scale</b>	<ul style="list-style-type: none"> <li>❖ export intensity (i.e. the share of turnover from foreign markets, Sullivan (1994))</li> <li>❖ 25% criteria (Knight and Cavusgil (1996), Servais (2004))</li> </ul>
<b>Scope</b>	<ul style="list-style-type: none"> <li>❖ market concentration = narrow geographical scope (traditional internationalizers)</li> <li>❖ market diversification = broad geographical scope (BGs or BAGs)</li> </ul>

*Author's personal adaptation from Kuivalainen, Saarenketo, Pumalainen (2012)*

Also, it is important to underline with regard to the internationalization speed of a small company that Vermeulen and Barkema (2002) and Wagner (2004) show that different internationalization processes, such as the *pace, scope, and rhythm of internationalization*, may result in differing *performances or differing cost efficiencies*. The above correlation is designed in this figure below.

**Figure 10. The relation between performance and pace, scope, and rhythm of internationalization**



*Author's personal adaptation from Vermeulen and Barkema (2002)*

In addition, Vermeulen and Barkema were the first to discover that different paces and rhythms of foreign expansion result in different levels of firm performance. His study introduces three dimensions of the international process: (1) *pace*, referring to the speed of the internationalization process, (2) *scope*, referring to the geographical dispersion of the

internationalization, and (3) *rhythm*, referring to the irregularity of the foreign expansion pattern. Pace is a time-based measure and is indicative of how much time passes before achieving a specific target or a specified level of performance. (Lin, 2012)

The recent literature provides evidence of differences in the internationalization strategies of born global firms and non-born global firms. Furthermore, in the literature, there are three dimensions that make a distinction between traditionally internationalizing firms and internationalization of BGs and BAGs: *Time, Scale and Scope*. For example, Bell et al. (2003) investigated firms that followed born global pathways beyond their inception, and proposed an integrative model of firm internationalization that related the factors, detailed above, into three concepts. Within their study these three concepts are described as the pace, scale and pattern of internationalization. (Taylor, 2011) Here above it is presented a classification of different internationalizing SMEs, done by Falize, in base of the three criteria of time, scope and scale.

**Table 5. Explanatory typology of internationalizing SMEs**

	<b>Traditional Firms</b>	<b>Born-Global firms</b>	<b>Born-again global firms</b>
<b>TIME (precocity)</b>	Operate for a long time in their home markets	Aim for international markets from inception	Operate for a long time in their home markets
<b>TIME (speed)</b>	Gradually increase the number of markets	Reach a certain degree of internationalization within a small number of years	Reach a certain degree of internationalization within a small number of years
<b>SCOPE</b>	Market concentration (narrow geographic scope at the beginning of international operations)	Market diversification (broad geographic scope almost from inception)	Market diversification (broad geographic scope almost from the first international involvement)
<b>SCALE</b>	Slow, evolutionary path of development	Internationalize rapidly with a high share of foreign sales	Internationalize rapidly with a high share of foreign sales

*Source: Falize (2012)*

Summing up, even though labeled very differently, definitions have a common denominator, thus according to Knight & Cavusgil (1996), born globals (BG) or international new ventures (INV) are “small, (usually) technology oriented companies that operate in international markets from the earliest days of their establishment” They have been identified first by McKinsey in 1993, and subsequently have been described across different countries and industries by Rialp and other scholars in 2005. These firms challenge conventional internationalization theories and the long-held belief that the strategic options of small firms are constrained by resource poverty by directly entering international markets at or near their founding (Hagen et al., 2011)

**B. Born-again Global SMEs.** Numerous SMEs, *especially in high technology environments* such as “born global” or “born-again global” internationalize faster and faster. In particular, research focused on International New Ventures, Born Global or Born again Global firms. The first two types of firms are internationally oriented and have been since their inception or soon after, and they manage to reach a certain degree of internationalization within

a relatively small number of years (three, five or six). (Kalinik et al., 2012) Then, it is not provided an explicit operational cut-offs for the BAG pattern. However, it appears that BAGs do not have precocity, but speed is implicit. (Kuivalainen et. al., 2012)

For example, Bell et al. (2003) has also contributed to this ongoing debate by researching another related phenomenon, that of “born-again” global firms. These firms are typically well established in their home markets, and have suddenly embraced rapid internationalization. This type of behavior is often a response to a “critical” incident or incidents, which are either *internal* (a change of management, adaptation of product and/or market innovation, or the adaptation of new information technology) or *external* (client ”followership” to a number of markets).

In the case of BAGs there are no detailed time criteria given. In their seminal study Bell et al. (2001) note only that, “... born-again” global firms had internationalized very rapidly, typically within 2–5 years of their first international involvement”. Then, another feature of these firms is the fact we speak about firms with *highly sophisticated knowledge bases*. They are likely to internationalize much more rapidly than those with more basic capabilities. (Falize, 2012)

The two key sources in such a rapid internationalization process are *knowledge and international networking*. Firms with higher market knowledge (*due to entrepreneur’s international experience*) have a higher propensity to gather further foreign knowledge according to the findings of Oviatt and McDougall, and the knowledge intensity develops the learning skills and makes it easier for firms to adapt in a new environment. (Kalinik et al., 2012) Subsequently, as regards the role of networks in a quicker internationalization of a firm’s operations, it is further described in details in a dedicated paragraph of this thesis.

As a conclusion, the aim of this paragraph is to identify key factors that may influence the rapid internationalization process of small and medium-sized firms. These exogenous variables can be classified into three main groups: *business strategy characteristics, the attitude and profile of international managers and sector particularities*. For example, knowledge-intensive firms adopted much more proactive and structured approaches to internationalization and internationalized more rapidly. (Belso-Martinez, 2007)

### **3.2.2 Patterns of rapidly internationalizing SMEs**

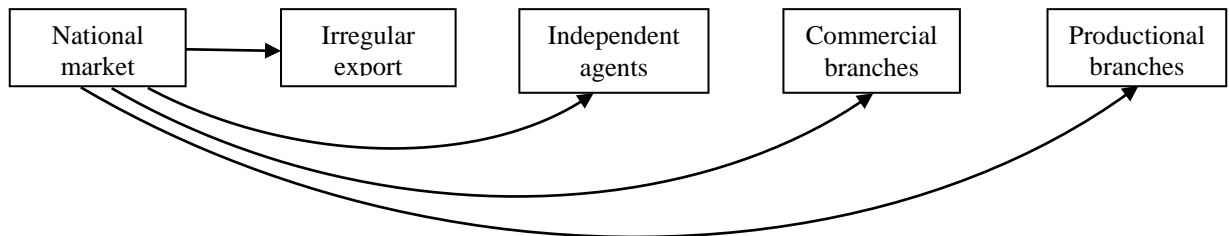
The literature on internationalization accounts for different types of foreign market entry choice, regularly distinguishing between *hybrid modes of market penetration* (such as joint ventures and other forms of cooperative market entry) and *wholly owned subsidiaries*. Evidently, entry mode choice is influenced by *variables at multiple levels* (e.g., country, industry, firm and decision) it can be considered a multilevel phenomenon. (Nielsen et al., 2011)

Therefore, Falize mentions some scholars (such as Oviatt and McDougall) finding that some SMEs are able to internationalize more rapidly than the stage models predict, jumping over some stages. (Falize, 2012)

Interestingly, compared to other studies of Oviatt and McDougall that are investigating the internationalization behavior of new enterprises finding that these companies skip over some steps of the internationalization process, Autio et al.’s results show that the internationalization process of the companies examined is more of an incremental one, thus confirming the

internationalization theory of Johanson and Wiedersheim-Paul and, Johanson and Vahlne. (Kraus, 2011)

**Figure 11. Internationalization stage according to the Born Global model**



*Source: author's personal elaboration*

As well, Kraus cite the publication by Mtigwe, from 2006, to provide reasons why companies are able to skip some of the steps of internationalization, or even internationalize after only a few years of being in business. (Kraus, 2011)

Then Nielsen and other researchers state that full-control modes of entry are more vulnerable to environmental uncertainties and risks because they are less flexible and involve higher irreversible investments. As environmental uncertainty increases, firms may choose lower-control governance modes over full-control modes in order to limit the risk exposure and increase operational flexibility. At the same time, risk and cost associated with cultural distance between host and target countries may be mitigated by shared ownership. (Nielsen et al., 2011)

Then, surprisingly the extant literature does not give detailed information about BG or BAG internationalization patterns (Kuivalainen et al., 2012). There are several definitions of rapidly internationalizing firms but the results are hard to compare. Following Kuivalainen, there have been only a few attempts to establish a rigid typology of rapid internationalizing SMEs. Although authors do not give detailed classification criteria for BG or BAGs, there is sufficient evidence of the phenomenon to justify further investigation of these specific firms. (Falize, 2012)

Curiously, the born-global firms model assumes that business knowledge has a limited impact on the firm's internationalization because the firm is *high-tech* or *highly innovative*. Thus, its products face limited competition in other countries and customers are more willing to use them even if they are not fully adapted to their needs. This enables the firm to quickly and easily enter a variety of countries. Then this model assumes that institutional knowledge has a limited impact on the firm's internationalization. (Cuervo-Cazura, 2011)

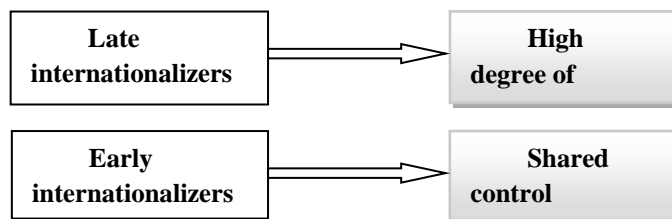
In addition, Kraus mentions the publication of Bell (1995) that applied an empirical investigation to study the internationalization behavior of 187 small software firms in Finland, Ireland, and Norway. Here, he showed that this behavior cannot be explained using the Uppsala model of internationalization, that is, the results did not indicate a step-by-step, incremental internationalization in companies. (Kraus, 2011)

For example, according to Taylor and Jack, born global firms are becoming more prevalent, markets are becoming more homogenous, and as growth or the survival needs of the firm become more important, the scale of a firm's internationalization, as measured by the number of international markets that it enters, will be influenced by how early it internationalizes. (Taylor et al., 2011)

As stated in the article of Schwens and Kabst learning is a history-dependent process, early internationalizers opposed to late internationalizers may continue to internationalize by choosing *more cooperative modes* rather than establishing wholly owned foreign subsidiaries in the same foreign market. (Schwens, 2009) Furthermore, early internationalizers have the stronger need and greater ability to learn from others and from paradigms of interpretation. Then, Rosenkopf & Nerkar (2001) state that less resistance within the company enables faster and better transfer of outside knowledge throughout the organization. Early internationalizers are more flexible in their structure and behavior, and are more eager to learn from others They learn about foreign markets through networking and interpreting paradigms such as best practices in the focal market.

1. Notably there is the supposition that early internationalizers, having improved competence by substituting the experience of others for direct experience, may continue to learn from others, and thus may cater to hybrid entry modes in the subsequent internationalization phase in the same market. In contrast, late internationalizers may pursue a more traditional growth path capitalizing on their experience and resource endowment for sustainable company development ending up by establishing a wholly owned subsidiary. This may guarantee a high degree of control and internalization of transactions.

**Figure 12. Entry modes for late and early internationalizers**



Source: author's personal elaboration from Schwens (2009)

2. Besides preferring *cooperative modes of market penetration* for subsequent international business, the learning behavior of *early internationalizers* may also result in a lower propensity to switch the first chosen entry-mode in the foreign market. Early internationalizers may not change their first chosen entry-mode as late internationalizers do. They may be more stable in their choice of entry-mode. Furthermore, to reach scale and efficiency, *late internationalizers* develop their international markets further along the establishment chain. For them, a continuous adaptation of entry-mode is part of the internationalization strategy. This process of market commitment and generation of knowledge necessitates continuous adaptation of entry-mode. (Schwens, 2009).

Then, as regards the networks approach, as previously mentioned, network resources also enable firms to cope with the risks and challenges associated with *foreign-market entry decisions*. (Musteen et al., 2010)

Summing up, the recent literature on international new ventures and “born-global” firms, while recognizing the inherent complexity of operating in an increasingly global business environment, points to *factors that facilitate rapid internationalization*, like:

- emergence of new communication and process technologies;
- increased trade liberalization;
- regional economic integration;

- growth of international networks;
- supply of value-added products and services.

However, the above factors were extensively mentioned in the paragraph entitled “*Motivations and reasons for SME internationalization*” Furthermore, according several researchers, key decision-makers are widely regarded as the “driver” and single most important factor in achieving this international orientation. They are responsible for influencing both the firm’s strategic orientation and *the patterns and pace of internationalization*. Success is often determined by their willingness to take risks in entering new export markets. (Loane et al., 2007)

### **3.2.3 Human resources factor in early internationalization model**

Active research has produced a considerable number of studies related to managerial characteristics and internationalization. The studies suggest that the positive attitude of the manager is a significant factor in distinguishing exporters from non-exporters. However, because interest in rapid internationalization and is a recent phenomenon, the number of empirical studies connecting *managerial characteristics* and the *speed of internationalization* is still rather limited. In the few that do exist, the global mindset of the manager is emphasized, and it has even been argued that it is a pre-requisite for early internationalization. This assumption has prompted most empirical studies to include, at least implicitly, the *global mindset of the manager* in the definition of rapidly internationalizing firms. (Nummela et al., 2004)

From this perspective, the two most studied sources of human capital are entrepreneurs’ level of *education and previous work experience*. Regarding *entrepreneurs’ educational background*, it is expected that education plays a key role in business performance. In general, according to Cooper et al.’s findings (1994), education is associated not only with technical knowledge but also with other *soft skills*, such as problem solving abilities, creativity, autonomy and self-confidence. In addition, other researchers state that higher levels of education also contribute positively to an individual’s ability to learn about markets and technology as well as their ability to recognize new business opportunities.

In the context of early export behavior, a growing number of scholars such as Andersson and Victor (2003), Westhead et al., (2001) have identified the positive correlation between entrepreneurs’ educational level and firm export behavior. Managing the complexity associated with an emerging international firm requires a critical set of competencies, some of which are obtained through education.

In addition, in the article of Juan S. Federico and others “*Does entrepreneurs human and relational capital affect early internationalization? A cross-regional comparison*”, it is underlined that postgraduate studies often offer the opportunity for international travel and/or contact with other cultures. Both of these elements can improve entrepreneurs’ knowledge of foreign markets. Thus, we would argue that an entrepreneur’s educational background enrich a firm’s human capital platform, improving its chances of international growth. Therefore, in this paper the author argues that prior work experience among founders has been repeatedly studied by Stuart and Abetti as means of explaining firm behavior.

Empirical evidence of Kantis, Moori-Koenig and Angelelli (2004) has also shown that prior work experience serves as an “entrepreneurial training”. Through such experience, entrepreneurs learn not only codified knowledge but also implicit know-how regarding markets and the world of business – key information that could not be fully acquired in any other way.

In terms of the *influence of entrepreneurs’ previous work experience* on their early export behavior, the empirical evidence of Westhead and other scholars is not conclusive. Regardless of the type of work experience, industry-specific knowledge is what really impacts firms’ export behavior (Westhead et al., 2001).

As these authors point out, entrepreneurs who found a new company in the same industry as the one in which they have experience have a more in-depth knowledge about the sector and the core technologies. This knowledge gives them a competitive advantage. In addition, they are better acquainted with suppliers and customer needs, both in domestic and international markets, and so are better equipped to identify market opportunities. (Federico, 2011)

For instance, Nummela, Saarenketo & Puumalainen use the concept “*global orientation*” This refers to the manager’s positive attitude towards international affairs, and also his or her ability to adjust to different environments and cultures. According to Knight, rapidly internationalizing companies seem to be more globally oriented than others, but studies with contradictory findings exist. A narrower but clearly overlapping concept is the international entrepreneurial orientation of the manager, like risk taking, innovativeness, and pro-activeness. (Nummela et al., 2004)

Previously, it was argued that the role of management teams was likely to become a major plank in internationalization research. (Loane et al., 2007) Accordingly, the born-global firms model assumes that managers have internationalization knowledge before the firm ventures abroad. Managers developed the attitudes, experience and entrepreneurial capabilities needed to manage across countries by working in other companies before joining the firm. Thus, the firm can quickly start selling abroad. (Cuervo-Cazura, 2011)

Furthermore, the authors Federico and other scholars consider that *entrepreneurs’ age* as another element of human capital that is of importance. At the simplest level, older entrepreneurs have generally had more time to accumulate valuable human capital. In this vein, Westhead et al. concluded that entrepreneurs’ age exerts a positive influence on export propensity. Aside from the aforementioned positive effect of age on human capital accumulation, older entrepreneurs are expected to have more *financial security* as well as more *extensive social and business networks*. This enriched resource platform as well as the considerable experience of older entrepreneurs may be of great importance when it comes to international sales and marketing. (Federico, 2011)

As well, in the opinion of Belso-Martinez, changes in the economic environment (originated by the reduction of trade barriers or the improvement of transport and communication) favour the appearance of companies that are able to reject a prolonged period of learning and to take on international operations immediately. For example, researchers have described in detail cases of companies with an evident international focus virtually from the beginning. These new companies have been referred to as new international ventures (according to McDougall et al.), born globals (according to Knight and Cavusgil, Madsen and Servais) or global start-ups (according to Oviatt and McDougall). (Belso-Martine, 2007)

In addition, it is stated that *businesses owned by teams* have a more diversified base of skills and other *intangible resources*, which allow them to identify and exploit new opportunities in foreign markets. The number of partners contributes to the completely firm resource platform, adding not only knowledge and experiences but also networks and personal contacts. In addition, Cooper et al. (1994) pointed out that entrepreneurial teams increase venture legitimacy, reducing some of the liabilities associated with new ventures. Finally, entrepreneurial teams are also more likely to have accumulated a broader base of financial resources.

Interestingly, the international business literature traditionally assumes that internationalization decisions are purely rational and scholars tend to ignore strategic decision-making research in explaining how foreign investment decisions are made. While empirical research on entry mode choice for foreign direct investments has identified and tested numerous predictor variables, such as firm, industry and country characteristics, it largely neglects to account for the individuals and teams making the actual decisions. Based on the behavioral theory of the firm, strategic decision-making research focuses on how decisions are conditioned by bounded rationality of individuals. For instance, upper echelons theory suggests that executives' backgrounds and experiences greatly influence their interpretations of strategic decision-making situations, and, in turn, affect their choices. (Nielsen et al., 2011)

For example, in their article Nielsen and Nielsen demonstrate that TMT nationality diversity is positively associated with a preference for shared-control entry modes, such as international joint ventures, whereas internationally experienced TMTs are more likely to prefer full-control entry modes, such as greenfield or acquisitions, as mode of entry into foreign markets. (Nielsen et al., 2011) From the other part, Taylor supports other findings on born global firms which employ international joint ventures or international acquisitions do so because of the characteristics of the management team, firm-specific characteristics and cultural similarity of markets. (Taylor et al., 2011)

For instance, in the article written by Arenius, the model proposes *social capital as a mean to speed up the market penetration* and it may help the firms to overcome their liability of foreignness on far-out markets, and thus enables them to penetrate these markets at an increased speed. (Arenius, 2005)

Also human resource management can play an important role as an intangible element of the entrepreneurial internationalization process. This is particularly true in the context of small firms facing resource constraints. (D'Angelo et al., 2013)

Furthermore, the *management team's role in the internationalization process* has been widely recognized in literature like by several scholars. For example, according to Rasmussen, some companies are involved in international activities mainly because managers consider foreign markets as key targets in their business strategy. In the present environment, where training levels, knowledge of other cultures and geographical mobility are greater than ever, an important pool of highly qualified human resources is ready to take on an international adventure immediately, without the traditional period of acquiring experience. (Rasmussen et al., 2000).

This *international orientation* leads to a proactive attitude by managers, which can become a dynamic element that minimizes and even eliminates some of the traditional stages established by the Scandinavian Model. Greater education, which is a characteristic of knowledge-intensive

firms, has been linked to *greater international openness*, together with foreign origins and past international experience. Oviatt and McDougall suggested an alternative explanation also, why early international ventures appear not to follow the psychic distance postulate. (Belso-Martinez, 2007)

As well in the managerial cognition literature, with the papers of Nummela and other two scholars, the *global mindset* (GM) concept is regarded as determinant for CEO's strategic perception of the global market. The GM implies a manager's openness to foreignness, awareness of cultural diversity, and ability to handle it and succeed in a global market. However most discussion of the GM focus on large and multinational companies while few efforts have been made to measure the GM in small firms and show its impact on their internationalization. (Nummela et al., 2004),

Mindsets cannot be measured, so Kyvik used a "*global orientation*" variable, based on responses to questions about global orientation as the indicator for GM. The indicators of global orientation include: a wish to grow internationally, an owner/manager who is pro-internationalization, management that evaluates the firm's international affairs, a CEO who sees the world as one big marketplace, a CEO with a holistic and global vision of foreign markets, a CEO open to foreign idea and cultures, a CEO willing to consider working abroad. (Kyvik et al., 2013)

For instance, McDougall et al. also conclude that management teams are often involved in the formation of smaller INVs. They argue that such firms may internationalize early because *teams with a priori international experience* and *allied professional or social networks* may be able to rapidly pursue new combinations of key resources across national borders. Directly related is the work of Bloodgood, Sapienza, and Almeida (1995), which posits that the international experience of the entire TMT is related to greater internationalization. (Loane et al., 2007) Instead, the dimension of role of networks for an accelerated internationalization of SMEs constitutes another research question that is explained better in a separate paragraph.

It is interesting to mention the findings of Gomez-Mejia et al., referred to by D'Angelo, showing that family firms wanting to diversify internationally are forced to hire non-family specialists that have specific knowledge of international markets. Furthermore, the scholars Reuber and Fischer (1997) showed that experienced TMTs represent a resource that has a major part in the degree of internationalization of SMEs. Exporting of course requires the development of external and international ties, and family ties hamper a firm's ability to develop other cross-border ties. (D'Angelo et al., 2013)

According to Oviatt and McDougall, early international ventures are endowed with internationally experienced managers, who need not to gain experiential learning of international markets. Instead, they can take advantage of their international experience and target distant markets immediately. This is confirmed by the findings of Crick and Jones released in 2000, who report that the market-selection decision was primarily based on the managers' experience in operating in international markets, in other words, on their previous employment, and the contacts they had developed. (Arenius, 2005)

Indeed, the involvement of non-family managers has also been identified in the literature as having a positive influence on performance in that such involvement may provide the firm with crucial managerial competencies. These competencies can take the form of both knowledge

about foreign markets, international legitimacy and reputation, and of a global network of external ties that promote internationalization (D'Angelo et al., 2013)

For example, in their study Nielsen and Nielsen sustain that *internationally oriented TMTs* are believed to be better at coping with diverse cultural, institutional, and competitive environments and make strategic decisions that result in superior performance than *domestically oriented TMTs*. Research has linked TMT characteristics, particularly international experience, to firm international involvement, as had to be tested in this study through a case study approach. (Nielsen et al., 2011)

With the same standpoint in the paper “*Geographical pathways for SME internationalization: insights from an Italian sample*”, the authors underline the research of Fernandez and Nieto, that discovered a negative relationship between family ownership and export intensity with a sample of Spanish SMEs. Additionally, George et al. (2005) found in a Swedish sample that internally appointed CEOs and senior executives tend to be more risk-averse than their external equivalents, and hence tend to reduce the scale and scope of SME internationalization. (D'Angelo et al., 2013)

In conclusion, it could be emphasized that factors leading to this rapid process of internationalization have dominated born global analysis. The drive, vision, experience and ability of the entrepreneur have been considered a key driver in the pace of born global firm internationalization. In particular, its ability to identify, assess and act on opportunities is considered vital. Linked to the influence of the entrepreneur to the internationalization speed is the development of an innovative culture considered unique and essential to born global development. As Knight and Cavusgil explain, born globals are inherently “entrepreneurial and innovative” firms with a culture that facilitates the acquisition of knowledge, and capabilities that engender early internationalization. (Taylor et al., 2011)

### **3.3 Network approach**

The network approach to internationalization effectively evolved from the Uppsala model during the 1990s. Focusing on the personal and extended networks of the entrepreneur and his/her management team, several studies challenging traditional models of internationalization have drawn upon network theory. (Manolova et al., 2010) For example, a comparative study of export behavior among entrepreneurial software firms in Finland, Ireland, and Norway led Bell, in 1995, concluded that the network approach was a better explanation of the internationalization process of these firms.

McDougall and several researchers explained that networks helped founders of international new ventures, or born-globals, to identify international business opportunities, and those networks appeared to have more influence on the founders' country choices than did their psychic distance. Additionally, Oviatt and McDougall identified strong international business networks as one of the seven most important characteristics of successful global start-ups. As well, Servias and Rasmussen found that networks were important to the majority of the Danish firms in their study, but Rasmussen, Madsen, and Evangelista's (2001) case studies of five Danish and Australian born-globals did not find support for the importance of the founder's network. (Oviatt et al., 2005)

Thirteen years later, in 1990, Johanson and Vahlne renewed the discussion of the Uppsala model in reference to the criticism that had been made regarding it up to that point in time, as well as the model's limitations. Here, they identified the importance of networks for a company's internationalization process. (Kraus, 2011)

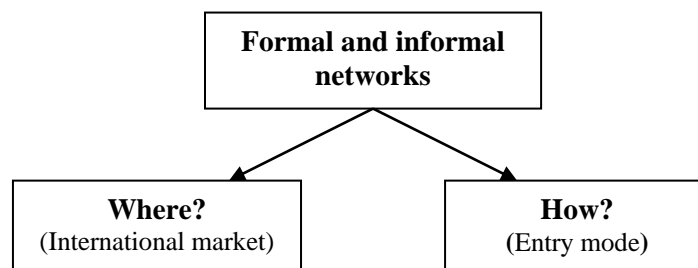
Therefore, while the Uppsala model focuses on the characteristics of the individual firm and the individuals of the firm in the internationalisation process, network theory (with its main founders: Johanson and Mattsson, 1988; Johanson and Vahlne, 1990 and 1992; Forsgren and Johanson, 1992) highlights the firm's business context as an important explanatory factor. (Petersen et al., 2003) Not surprisingly, the role of networks in the internationalization of small firms has figured prominently in recent research. However, much of this body of research focuses on the benefits of such networks, with only a few, addressing the potential downside of networks in the context of SME internationalization. Furthermore, even less is known about whether certain network attributes are more beneficial than other is in the exploration and exploitation of early international opportunities. (Musteen et al., 2010)

In fact, Johanson and Vahlne's network model specifically calls upon international entrepreneurship researchers to integrate network theory into the existing theories of firm internationalization. In addition, Johanson and Mattson consider business networks as intense business relationships that a firm has with its *customers, distributors, suppliers, competitors and government* – the actors in a business network. These international relationships should be intensified and maintained. (Belso-Martinez, 2007)

### 3.3.1 Types of network profile

In his paper, Kraus names Coviello and Munro, that investigated the internationalization behavior of companies using a case study of Canadian software firms. Here, they looked at the influence of network relationships and their impact on the internationalization process by expanding the traditional stage model to include a network perspective. Their results found that a mixture of formal and informal networks influence the internationalization process, especially regarding what international markets are chosen, as well as how the market is entered.

**Figure 13. The influence of the networks on the internationalization process**



*Author's personal adaptation from Kraus, 2011*

They also have a positive influence on a company's international growth. (Kraus, 2011). Respectively, as defined by Nahapiet and Ghoshal in their work elaborated in 1998, the social capital is "*the sum of the actual and potential resources embedded within, available through,*

and derived from network relationships possessed by an individual or social unit.” While some differences exist in the way social capital has been conceptualized, there is general agreement that three different dimensions characterize social capital:

- (1) relational embeddedness
- (2) cognitive embeddedness
- (3) structural embeddedness

*Relational embeddedness* refers to the extent to which network relationships are characterized by emotional closeness and inter-personal trust. By drawing on the notion of social capital embeddedness, we believe we can tease out the differential impacts of network characteristics on internationalization speed and performance. According to the article of Goerzen from 2007, firms often prefer familiar ties because they are perceived to be reliable and trustworthy; however, those that rely primarily on these types of relationships may end up being trapped “in suboptimal, stable equilibria”. However, the quality of information obtained from personal ties (e.g., friends and relatives residing abroad) may be inferior to that obtained from more “distant,” professional ties. In addition, as observed by Uzzi (1997), firms that rely primarily on close ties may become isolated from other valuable sources of information. (Musteen et al., 2010)

*Cognitive embeddedness* relates to the extent to which network actors share common systems of meaning including shared language, codes and narratives. Cognitive embeddedness, can also be expected to influence the speed with which SMEs enter foreign markets and their performance. One key element of cognitive embeddedness is language commonality among network members. Language proficiency is important from the standpoint of effective communication, learning about foreign markets and reduced perceived psychic distance between home and foreign market. It also minimizes the likelihood of misunderstandings and cross-cultural conflicts and leads to other benefits that facilitate faster internationalization. (Musteen et al., 2010)

Instead, it is sustained that *structural embeddedness* describes the overall architecture and configuration of networks. Each dimension has an important impact on firms by influencing information access and flow along with the quality of information being transmitted. Obviously, like relational and cognitive embeddedness, structural embeddedness can be expected to play a key role in SME internationalization. While dispersed networks may lead to the identification of a broader set of international opportunities, the large volume of information emanating from a geographically diverse network can create an information processing overload, slowing down the speed of internationalization. Geographically concentrated networks, on the other hand, are likely to be more effective in reducing the perceived risks associated with international markets resulting in quicker entry into foreign markets. (Musteen et al., 2010)

Consequently, the positive effects of networks may be mediated by the nature of such networks. For instance, in the paper of Szarka from 1990, networks are divided into social and professional ones. Social networks include not only family members but also all relatives, friends and acquaintances with whom the entrepreneur relates primarily on a social basis. In contrast, professional networks include all those individuals (institutions, suppliers, customers, etc.) with whom the relationship is primarily established at the business level.

Therefore, the below table summarizes different types of networks.

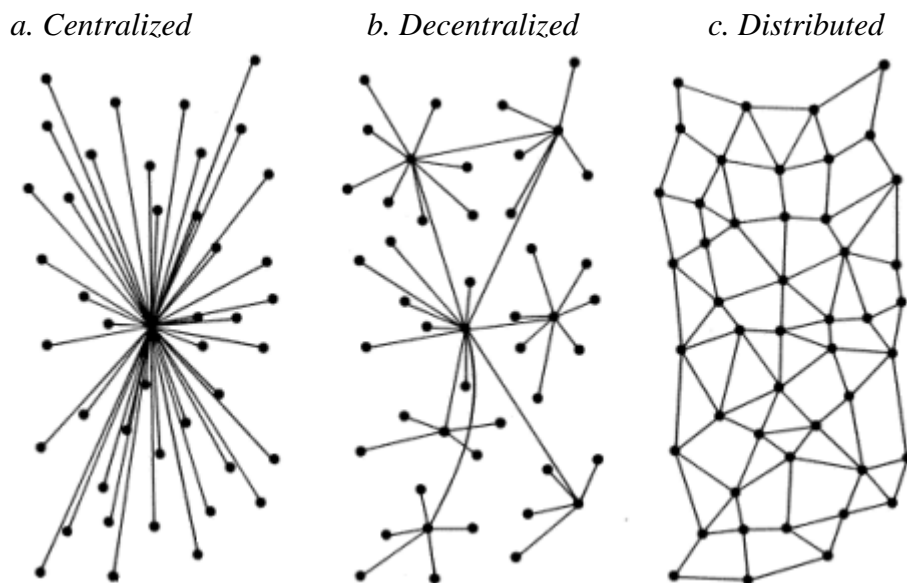
**Table 6. The classification of networks**

Types of networks		Examples
1.	a. Social	Family members, relatives, friends and acquaintances;
	b. Professional	Institutions, suppliers, customers, competitors, etc.;
2.	a. Informal	Family members, relatives, friends and acquaintances;
	b. Formal	Joint-ventures, clusters, production nets, etc.;
3.	a. National	National institutions, suppliers, customers, etc.;
	b. International	International institutions, suppliers, customers, etc.;
4.	a. Centralized	When the nodes to which they are tied are tied also to each other;
	b. Decentralized	When the nodes to which they are tied are not tied to each other;
	a. Distributed	The example of spider's web;

Source: author's elaboration

Then, according to Oviatt and Mc Dougall, the third and final key moderating aspect of entrepreneurial networks is density. While *sparse networks (or decentralized)* are especially good at gathering new information, *dense networks or (centralized)* are useful when trust and reciprocity are vital. Actors are said to have sparse networks when the nodes to which they are tied are, for the most part, not tied to each other. There also the third category of *distributed networks* that looks like the spider's web. This typology is illustrated better in the below figure.

**Figure 14. Types of networks**



Author's personal elaboration according to Oviatt and Mc Dougall classification (2005)

For example, if a German new venture has a link to two businesses in the United States, but those businesses have no ties to each other, then the network of the German venture is less dense than it would be if the two U.S. businesses were directly linked in some way. (Oviatt et al., 2005) Thus, entrepreneurship research has shown a pattern of change in the importance of both *profiles of networks*, where social networks are more important at the early stages of the venture, whereas professional networks tend to become increasingly important as the venture grows. In fact, some evidence showed that a higher usage of professional networks is associated

with better performance (Kantis et al., 2004). From a resource-based perspective, information, knowledge and experience drawn from professional networks may generate more firm-specific relational capital than would social networks. Some empirical evidence supports this idea of the relative superiority of one type of network over the other in terms of performance. (Federico et al., 2011)

### **3.3.2 The relationship between network perspective and the internationalization speed**

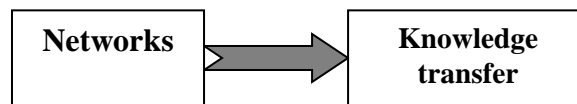
This thesis also seeks to investigate whether the characteristics of Italian/American CEOs' relationships influence the speed with which their firms internationalize and the relative success of such internationalization. It is important to underline that because of increasing changes in the global business environment, firms are starting to work together as it is too complicated and expansive to work independently. Therefore, small and medium-sized firms suffer from limited information, finance, management time and experience and are vulnerable to environmental changes. All these limitations constrain their internationalization efforts. Collaborating through business networks, however, enables small to medium-sized firms to accelerate their internationalization process and to achieve success beyond what they could achieve alone. (Federico et al., 2011)

In the article "*Network embeddedness and new-venture internationalization: Analyzing international linkages in the German biotech industry*" the authors mention that by operating alongside other organizations with international linkages, cluster firms would be more capable of learning about the possibilities that exist internationally. Thus, Laham expects them to benefit from *knowledge spillovers* about foreign market opportunities and challenges. (Al-Laham et al., 2008)

From the other side, some scholars have argued that networks both facilitate and constrain the internationalization process and that early internationalization is not necessarily associated with successful internationalization. (Musteen et al., 2010) However, overall the empirical evidence derived from case studies has highlighted the importance of relational capital networks on export behavior. For instance, Sharma and Blomstermo proposed three reasons for the importance of networks to the internationalization process. First, networks may provide access to information about foreign markets and may help identify the needs of potential international customers. Secondly, networks may be a useful way to find potential partners abroad. Finally, networks may help identify new international business opportunities. (Blomstermo et al., 2002) This argument, is also applied by Mort and Weerawardena, in 2006, who investigate the networks of a company as a contributing factor in their rapid internationalization. As well, Oviatt and McDougall cite Bell's findings to support the integration of a company's networks into their models that show how rapidly internationalization occurs. (Kraus, 2011)

In other words, the importance of networks is highlighted as a pervasive vehicle for *knowledge transfer*. Other evidence also supports the hypothesis that new firms with extensive networks are able to internationalize earlier and more successfully than their competitors do. Finally, networks may also enrich the base of firm resources, both financial and non-financial. (Federico et al., 2011)

**Figure 15. The effects of networks on internationalization speed**



*Source: author's elaboration*

Thus, Johanson and Vahlne, in 2003, provide an outline of a proposed integration that uses the interplay of experiential, or tacit, learning and resource commitment in organizations as its driving mechanism. These are, of course, concepts from the traditional Uppsala Model, but they combine them with a new focus on network relationships involving customers and suppliers. The above authors hypothesize that firms learn and benefit from such relationships and, therefore, make increasing commitments to them. Those relationships, in turn, sometimes lead them to enter foreign markets, at times incrementally and at times quite rapidly. Using a network perspective, Johanson and Vahlne propose that the establishment and development of foreign customer and supplier relationships determine much about the nature of international entry and expansion. (Oviatt et al., 2005)

For instance, in a network context, Ruzzier and other researchers describe internationalization as a “*cumulative process, in which relationships are continually established, maintained, developed, broken and dissolved in order to achieve the objectives of the firm*”. (Ruzzier et al., 2006)

From the other side, the number of relationships, following Al-Laham, does not fully capture a firm's position within a greater social structure. In simple terms, having many contacts is not equal to having the right contacts. The social network literature suggests that the position of an actor in a social network can indicate the importance of the actor. Actors are defined as “*prominent*” if their ties make them particularly visible to other actors in the network (Al-Laham et al., 2008)

Therefore, as stressed by Belso-Martinez, collaboration in business is becoming common practice amongst firms. These collaborations can range from informal relationships to more formal ones such as joint ventures. Various terms are used for these collaborations: production nets, networks, clusters, constellations or virtual corporations. Firms use these networks to gain access to resources, to improve their strategic positions, to learn new skills, to gain legitimacy or to control transaction costs. (Belso-Martinez, 2007)

Overall, the network approach seems to have merit in explaining the market selection of technology-based new ventures. International opportunities are presented by network members and networks convey information and experiential learning. (Arenius, 2005) For example, in her study, Falize is focusing on explaining how international network acts to reduce fundamentally internationalization liabilities and perceived risk and how rapid internationalization of SMEs is possible through this formal network. (Falize, 2012)

Moreover, in their paper “*Defining International Entrepreneurship and Modeling the Speed of Internationalization*”, the researchers believe there are three key aspects of such networks that moderate the speed of internationalization:

- the strength of network ties,
- the size of the network;

- overall density of the network. (Oviatt et al., 2005)

In formal network analysis, the actors are called “nodes” and the links between them are called “ties”. For their study, Musteen and others agree on two types of ties.

1. *Strong ties* between nodes, or actors, are durable and involve emotional investment, trust, reliability, and a desire to negotiate about differences in order to preserve the tie. Because of their small number and the investment required, the authors of the above paper believe strong ties are not the most important type for internationalization.

2. *Weak ties* are relationships with customers, suppliers, and others that are friendly and business-like. Weak ties are far more numerous than strong ties because they require less investment. Their number can grow relatively quickly, and they are important because they are often vital sources of information and know-how. Especially important are weak ties with “brokers”. Brokers are nodes in a network, or actors, who are tied to nodes that are not tied themselves. In other words, brokers establish ties between actors who, without the broker, have no link to each other. Thus, brokers enable *indirect ties*. In international business, brokers often provide links across national borders between actors who want to conduct international business with each other.

Therefore, especially close personal ties with their international contacts may mitigate the perception of risk associated with early internationalization among SME CEOs. Instead, they often turn to “trusted” personal sources of information for guidance. As a result, the knowledge that SMEs gain through such interactions should reduce perceived risks and costs associated with internationalization resulting in an increased willingness on their part to venture into foreign markets. (Musteen et al., 2010)

## CHAPTER IV CORRELATING THE CONSULTED MODELS TO RESEARCH QUESTIONS

Environmental influences, industry conditions, and the thinking of entrepreneurial actors themselves are believed to be *prime factors determining the speed of international involvement*. It is important to achieve a better understanding of how international opportunities are discovered, enacted, evaluated, and exploited in an accelerated manner.

There may be a performance advantage in rapid internationalization as stated by Autio, Sapienza, & Almeida because it is supposed that the earlier in its history a firm internationalizes, the faster it seems to grow. Thus, it is fundamental to explain why some entrepreneurial behavior crosses national borders with greater speed than others. (Oviatt et al., 2005)

This paper focuses only on certain so-called intangible resources previously identified as being important to SME internationalization and are shown in the below figure.

**Figure 16. The two determinants that might influence the internationalization process of SMEs**



*Source: author's personal elaboration*

In addition, international experience helps establish *informal networks* that support decision-making in international contexts. A number of studies have demonstrated the positive association between firm internationalization and international experience of the CEO as well as the entire TMT. (Nielsen et al., 2011)

The topic of the present project regards the correlation between the CEO's networks and formation and the internationalization speed and is explained better through the following research questions:

- *"In what way the entrepreneurs' experience and education influence the speed of entering the international markets?"*
- *"How relevant are the networks for the internationalization speed of SMEs?"*

These two determinants mentioned in the above figure are further described in the following paragraphs. The above-mentioned research questions or determinants are tested through an empirical study of two American SMEs and two Italian ones.

Therefore, overall, as it was previously stated, the objective is to explore the internationalization rhythm of American and Italian SMEs from the Information Technology Sector and more precisely from the software industry.

#### **4.1 In what way the entrepreneurs' experience and education influence the speed of entering the international markets?**

Researchers such as Stuart and Abetti (1990), Chetty & Campbell- Hunt (2004) claim that prior work experience among founders has a positive impact on internationalization dynamics. (For example, postgraduate studies, may also contribute to enhance entrepreneurs' international networks) Complementary, the last aspect is the second research question for this research project.

For example, when a MNE enter a foreign market, international experience plays a crucial role because it facilitates internationalization by enabling firms to assess local market conditions more accurately, to estimate costs and returns more precisely and to mitigate environmental uncertainty. However, usually the SMEs lack the above market knowledge experience. (Kuo et al., 2012)

As stated in the paragraph entitled "*Human resources factor in early internationalization model*", various dimensions of human capital also affect the internationalization of the firm, and particularly the speed of entering international markets. Earlier research has particularly highlighted the role of the top manager. (Nummela et al., 2004)

Adopting a perspective focused on the human and relational capital has been considered by many authors, as an adequate framework to analyze the *influences of entrepreneurs' abilities, knowledge, experiences and networks* on firm strategic behavior, including early internationalization. Similarly, McDougall et al. argue that, in emerging firms, the "decision-making system" is embedded into the founders' minds. (Federico et al., 2011) For example, McDougall and other scholars show that it is the INVs in particular whose founders have international experience that pursues internationalization as a growth strategy right from the start. (Kraus, 2011) They also may apply hybrid structures (network alliances, strategic partnerships) for internationalization.

Then, given that the international experience of firm CEOs has been shown to influence the internationalization of small firms, I had the intention to control for such experience. Additionally, international experience was operationalized as the *number of years the firm CEO had spent studying and working abroad*. (Musteen et al., 2010)

An early venture into international markets has been suggested, by Sapienza et al., in 2006, to be crucial as "age at internationalization is assumed to have important implications for the companies' successful expansion, survival and performance" Whereas early exposure to a foreign environment encourages growth opportunities shaping a subsequent competitive position, it also exposes a firm to fundamental challenges. Facing different kinds of liabilities of foreignness already at the entry stage, the entrant firm is at a disadvantage compared to indigenous competitors. To reduce these liabilities the firm needs to learn about particularities of the foreign market before entering. In their paper, it is examined the impact of three different types of learning (*learning from direct experience, learning from experience of others, and learning from paradigms of interpretation*) on the likelihood of early compared to late internationalization.

Likewise, especially in the case of start-ups or young companies, *entrepreneurs constitute firm's unique resources*. This uniqueness is derived from the human and relational capital of these individuals. From this human and relational capital platform, entrepreneurs may create a

critical level of firm-specific competitive advantages that allow their companies to be involved in international markets right from their inception. Therefore, the authors argue that higher levels of human and relational capital would contribute positively to the likelihood of creating an EIF. (Federico et al., 2011)

One should also note that small firms “owner managers ‘values and goals are indistinguishable from the goals of their businesses and lie at the center of small firms” enterprise behavior. Thus, the CEO cognitive processes reflected in his/her role as the firm’s main decision maker, entrepreneur and facilitator may easily cause or impede internationalization (Kyvik et al., 2013)

Additionally, the outcome of foreign expansion decisions is highly uncertain and risky. Therefore, the information necessary to be processed is difficult to access and interpret due to the Johanson & Vahlne’s “psychic distance” concept between the home and host country. As a result, foreign expansion decisions are likely to be influenced by prior knowledge and experiences of decision-makers. (Nielsen et al., 2011)

Indeed, several researchers agree that team formation enables firms to overcome some of the inherent financial and human resource constraints and the lack of managerial expertise that characterise the small business sector generally and act as major barriers to small firm internationalization. (Loane et al., 2007)

For example, Madsen and Servais, in 1997, proposed that the experience of the founders and partners, as well as the economic and capability or customer-related factors determine the location of foreign activities. Experience, like international working experience, experience in living abroad and other international experience, may shape the minds of the founders decreasing the perceived psychic distance.

While some scholars see the international experience of upper management as an essential reason and/or requirement for achieving this, other scholars also apply this argument, deriving from it their hypothesis that they are subsequently able to confirm: “The more international experience the top management of a company has, the more this company will profit *from international industry clusters.*” (Arenius, 2005)

Also sustaining the same supposition, Kraus refers to the publication of Reuber and Fischer (1997) that investigated the internationalization behavior of SMEs using an empirical investigation of 58 software SMEs in Canada. The results of their investigation show that companies whose management possesses international experience have a stronger tendency towards developing *international strategic partnerships*. They also require less time after founding to achieve international turnover, which leads to *a greater degree of internationalization*. (Kraus, 2011)

Then, heterogeneity in functional experience and educational background may increase venture performance, as a range of such skills may allow the firm or venture to make more comprehensive decisions of strategic importance as asserted by Eisenhardt and Schoonhoven. (Loane et al., 2007)

In addition, Oviatt and McDougall show that *management experience in particular has a positive influence on the pace of internationalization*. (Kraus, 2011) For example, the challenges encountered in achieving international firm growth relates to the effective skills and competencies of the owner-manager and how they can establish and manage business relationships in different legal, social and economic contexts. (Hynes, 2010)

However, authors like Hilmersson and Jansson argue that despite its importance and central role in internationalization studies, little or no research has explicitly examined how different types of international experiential knowledge reduce perceived uncertainty. In particular, they examine the extent to which experiential knowledge generated in one market environment can be transferred to and used in another environment. (Hilmersson et al., 2012)

In conclusion, it is often assumed that rapid internationalization requires a global mindset among managers. Previous research indicates that this determines the extent to which a firm engages in international activities. It can be assumed that managers with a global mindset should be able to combine resources from different markets. (Nummela et al., 2004)

As mentioned above, in an attempt to link the entrepreneurial literature with the forces that influence the pace of firm internationalization, for instance, Oviatt and McDougall propose that entrepreneurs act as interpreters to both the enabling and motivating forces of accelerated internationalization. (Taylor et al., 2011)

Accordingly, many studies have proven that a company whose management possesses international experience internationalizes more rapidly and successfully and even displays a higher degree of internationalization. Moreover, not just professional experience abroad can have a positive influence. For example, *training and education* obtained internationally are shown, for instance by Burgel and Murray, to be factors as well. (Kraus, 2011)

Additionally, empirical findings indicate that internationally oriented managers:

- have low psychic distance from foreign markets;
- are well educated, master foreign languages and have experience of foreign countries;
- are less risk-averse and resistant to change;
- have a positive attitude towards exporting and stays abroad.

At the same time some researchers have used the term “*international outlook*” when referring to the difference between foreign and the home markets as perceived by the manager. This is a component of “international orientation” Therefore, Ardichvili, Cardozo, & Ray state that the innovative, proactive risk taking behavior of SME’s key decision-makers is often influenced by prior experience, in terms of international travel, being born abroad, having studied or worked overseas, access to global networks or foreign language capabilities. (Loane et al., 2007)

According to the theoretical framework, entrepreneurs’ experience and education significantly affect early internationalization of young firms, thus I controlled for the following items:

- level of education of the entrepreneur;
- correlation between previous work experience and present job;
- entrepreneur’s age;
  - number of shareholders;
  - international outlook or mindset;
  - foreign language capabilities;
  - international experience and work;
  - the composition of TMT, etc. (See the Attachments 2 or 3)

## 4.2 How relevant are the networks for the internationalization speed of SMEs?

With this research question, I would like to find support for the importance of the founder's networks in the internationalization pace of SMEs. Indeed, SMEs differ from large firms in various ways. Apart from suffering from resource constraints and having other structural differences, SMEs differ from large firms in the type of strategy they use for achieving competitive advantage. Specifically, SMEs tend to rely on using informal social networks (termed as "connections" in USA, "*conoscenze* or *contatti*" in Italy "*guanxi*" in China, "*kankei*" in Japan, "*immak*" in Korea, or "*blat*" in Russia) to serve as the initial basis from which formal networks of business linkages are developed and through which exporting relationships are formed. (Zhang et al., 2013)

Firstly, it is supposed that the international networks decrease the four types of liabilities, described in previous paragraphs, for internationalization and affect the speed at which SMEs penetrate foreign market. Additionally, it could be stated that the structure and content of international networks that SME CEOs utilize prior to their first international venture will have an important impact on the speed of internationalization. It could be possible to expect that for example the so-called *relational embeddedness* has a positive influence on SME performance during early internationalization and that SME managers use close ties because they associate such ties with higher levels of trust. In other words, they perceive such ties to be more reliable resulting in superior information quality and improved organizational outcomes. (Musteen et al., 2010)

To answer the question concerning the role of networks in the internationalization behaviour, we concentrated on these main elements:

- quality of information obtained from networks;
- geographical diversification of networks;
- role of international ties during the first international venture;
- frequency of communication with firm's international contacts;
- type of networks (for example, professional and/or personal contacts).

Thus, Rasmussen and others also found that networks were important to the majority of firms included in their research. Additionally, all the cases studied by Chetty and Blankenburg show how a firm's internationalization is *influenced by the internationalization of the actors in its business network*. As mentioned, according to Johanson and Mattson, four large networks are important to our analysis as they facilitate firm rapid international development: supplier, competitor, customers and institutional. (Belso-Martinez, 2007)

Furthermore, for understanding *cognitive embeddedness*, managers who are in a position to effectively communicate with their international network ties without the help of translators are likely to develop closer relationships with such ties because they can be more emotionally expressive and more easily interpret verbal and non-verbal cues. That, in turn, makes it easier for them to gather critical information about foreign-market opportunities facilitating *quicker internationalization*. (Musteen et al., 2010)

As it was mentioned before, I believe cross-national-border networks facilitate the speed with which international entrepreneurial opportunities are exploited. Because the influence of

networks is more complex and have received less attention than the other forces highlighted in this research project, I believe they are fundamental issues worthy of more exploration here.

Also, in order to assess the extent of international personal ties in the network of analyzed SMEs (see the empirical part of the thesis), it was willing to ask respondents to provide the total number of international *professional contacts* (customers, suppliers, export agents, or other industry-related contacts) and *personal contacts* (friends and relatives and other non-industry-related contacts) they had at the time of the first international venture.

Networks are often named as one of the causes that facilitate the firm-accelerated internationalization process and one of the most efficient internationalization strategies for SMEs. Therefore, research into new international ventures and the internationalization process demands much more attention to *the role of company networks*. (Belso-Martinez, 2007)

For instance, Johanson and Vahlne, the principal authors of the Uppsala Model, recently concluded that: “we have a situation where old models of internationalization processes are still applied quite fruitfully at the same time as a number of studies have suggested that there is a need for new and network-based models of internationalization. Instead the authors Oviatt and McDougall, with regard to Johanson and Vahlne’ statements, were sustaining : “we think it might be worthwhile to reconcile and even integrate the two approaches.” (Oviatt et al., 2005)

In conclusion, based on scholars’ hypothesis and research, the research question of this project has to confirm or infirm the supposition on the impact of networks to a rapid internationalization strategy, based on the selected empirical cases.

Thus, the size of an entrepreneurial actor’s network is the second key determinant that may moderate the speed of internationalization. Accordingly, I controlled for the following items:

- quality of information obtained as a result of networks cooperation during their first international venture;
- type of networks at the time of the first international venture;
- geographical diversification of networks at the beginning of their internationalization process
- frequency of communication with the stakeholders of networks (suppliers, competition, customers, institutions);
- networks as a facilitating or constraining factor during the internationalization process;
- responsible person that manage overseas contacts;
- other sub-determinants. (See the Attachments 2 or 3).

## **CHAPTER V RESEARCH DESIGN, QUESTIONS AND METHODOLOGY**

This chapter is devoted to the methodology applied to the empirical study. It outlines the chosen research design and summarizes the advantages and disadvantages of a qualitative research approaches. Furthermore, qualitative parts of the study are described in detail in the following paragraphs of this chapter and as well in the following chapters as applied to companies' case. The above chapter outlines the cross-checking interviews with CEOs from internationally active SMEs.

The objective of this chapter is to present the ways in which this research is conducted, analyzing the research problem, the organisations to whom it is addressed and the choice of the methodology used. Therefore, it explains the choice of the qualitative research methodology and justifies the appropriateness of its choice.

The chapter begins with a presentation on the general research approaches and methods used in business and management research then it follows with the analysis of specific indications concerning the empirical part of the thesis like the relevance of entrepreneur's experience and networks for the internationalization speed.

In addition, in investigating the speed of company's internationalization, a certain importance is given to the study of the research methodology commonly applied to internationalization pace. In other words, I applied the case study method to empirically investigate the internationalization process of SMEs from the United States and Italy in order to understand if entrepreneur's experience and networks favored (or not) their internationalization behavior.

### **5.1 Definition of the research issue**

The above research project relies on the velocity of internationalization of SMEs correlated to some of its determinants, and pretends to understand why some companies expand overseas very quickly after their inception and are successful internationally instead others small firms choose a step-by-step approach to enter the foreign markets.

Referring to the internationalization speed, it could be seen in two ways: gradual and rapid internationalizers.

a. Gradual Internationalization. The roots of the gradual internationalization model lie in the Uppsala School or model. According to Johanson and Valne, companies start to internationalize with a relatively low resource commitment. Over time, they acquire more and more general and market specific knowledge that leads to a gradually increased resource commitment.

a. Rapid Internationalization. Based on the empirical definition suggested by Knight and Cavusgil, it is worthy to base on a stricter definition of an EIF that also takes into account two additional factors: the regularity of the export activity and the growth in its importance over time. (Musteen et al., 2010)

Bearing in mind the existing definitions and characteristics of BGs and traditional internationalizers, it was the case to measure the extent, i.e. pace, intensity (measured through the percentage of foreign sales) and scope of internationalization for the selected case studies in order to understand their speed of internationalization. This follows the lines of Oviatt and McDougall, as the key dimensions in their study of rapid internationalizing firms are:

1. *the scale* (for example, export intensity);
2. *the scope* (possible indicators include market distance and number of markets);
3. *the time (speed)* of internationalization. (Kuivalainen et al., 2012)

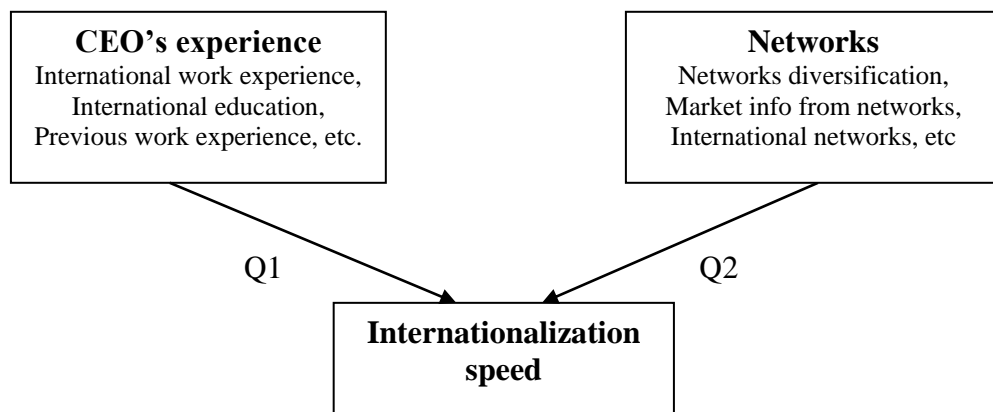
All these details were asked to the participating companies according to the first part of the interview, in the section about the introductory aspects on internationalization of small companies. Then, specific questions followed being in line with two specific research questions (entrepreneur's experience and networks and internationalization speed).

Indeed, Taylor and other scholars compared multiple studies that have led to a number of *common factors* found to be directly related to the development of born global firms. Some of these factors can be classified as:

- the speed or pace of the internationalization process according to Aspelund and Moen (2001);
- the scale of international market selection according to Shrader et al. (2000);
- the importance of personal networks according to Crick and Jones (2000);
- the relationship with entry modes according to Burgel and Murray (2000);
- the relevance of entrepreneur's education and formation, according to Crick and Jones (2000) (Taylor et al., 2011)

However, in this research project only two of these factors are tested on four companies. Therefore, the figure below presents the two selected research questions that are analyzed and tested in this research project.

**Figure 17. The research setting of the thesis**



*Source: author's personal elaboration*

Accordingly, the research questions analyse the correlation between the relevance of entrepreneur's experience and networks to the internationalisation velocity.

## 5.2 Research design

Usually it is suggested that any research approach and method has its advantages and disadvantages, hence the choice of specific methodology inevitably limits the conclusion that can be drawn. (Yin, 2009) There are two fundamental methodological approaches to academic research: *the quantitative and the qualitative approach*. Following Coviello, the classification is based on the objectives of the approach, the data collected, and the ways they are analyzed. The debate over which approach is superior to the other is controversial. Most researchers prefer one or the other methodological approach. Their preference is partly determined by the *nature of the research problem and the research questions*, but also often by the researchers' conventions and research areas. (Yin, 2009) Both approaches are characterized by different strengths and weaknesses. For example, Denzin broadly defines triangulation, or the use of *mixed methods*, as "the combination of methodologies in the study of the same phenomenon." (Denzin, 1994) Qualitative and quantitative methods should be viewed as complementary rather than as rival camps. (Jick, 1979)

Consequently, it was chosen the qualitative method in order to explore in details the relevance of entrepreneur's experience and education to the internationalization speed of companies. Qualitative research aims at *exploring, describing, explaining and understanding a phenomena*, by collecting contextual data within its natural context in order to generate comprehensive explanations.

Thus, Yin suggests that an exploratory case study approach is an appropriate research strategy when attempting to examine a "how" or "why" question in a contemporary set of events and in its real-life-context. Like in this case, the first research question entitled "How relevant are the networks for the internationalization speed of SMEs?" Importantly, in the qualitative research, the reader gets up close and personal with the ideas, the people, and the events that stimulated the researcher's curiosity. This intimacy with the phenomenon of interest means that the reader can see the world through the researcher's eyes, which often captures the informants' experiences. What qualitative research can do that quantitative research often cannot is to bring the reader closer to the phenomenon being studied. Moreover, the case study method used in this research accords with prominent authors in the field, specifically Eisenhardt's and Yin's approaches. (Taylor et al., 2011)

The current research of Sharma and Blomstermo (2003), quoted by Oviatt, departs from other studies on small firm internationalization, where the focus has been on the internationalization rhythm, within a specific industrial sector, like in this case within the ICT sector. Literature also indicates that some managers and businessmen, endowed with appropriate training, represent a key factor in the acceleration of internationalization processes. (Oviatt et al., 2005)

For example Bansal and Corley sustained that "*...the most evocative and memorable pieces of research drew me into the text and engaged me so deeply that I was there. Moreover, we should encourage not just diversity in what is analyzed, but also in what research questions are asked. Qualitative researchers have the opportunity to raise new research questions, or even challenge the questions they or others have already asked*". (Bansal et al., 2011)

Because my interest was in answering the two research questions, I have chosen the case study method as a research strategy. My choice of the case study method was further motivated

by my interest in highly complex and in detail processes that take a long time to be understood: this is a type of problem to which the case method is ideally suited, as well, according to Yin's suggestions. The following aspects of the qualitative method are described in detail:

- research objectives;
- the semi-structured questionnaire for the interviews;
- data collection;
- data processing and analysis. (Yin, 2009)

In order to understand the internationalization speed I analyzed the determinants of early and late internationalizers. Hence, the empirical component of this Ph. D. thesis consists of a multiple case study on four firms. Qualitative case study method was selected as it allows holistic investigation of the topic. For instance, in this order of ideas, reading the article of Flyvbjerg, I found out some misunderstandings about case studies where the author says:

“It was clear to me that to understand a complex issue such as internationalization of SMEs, in depth case study research was necessary, even if sometimes this particular research methodology could be not so well seen. The contra argument are the following:

- a case study is subjective, giving too much scope for the researcher's own interpretations;
- it may be used in the preliminary stage of an investigation since it provides hypothesis;
- it may be linked to hypotheses, for the well hypothetical deductive model of explanation;
- the case knowledge is central to human learning. “ (Flyvbjerg, 2006)

The conclusion to be drawn about case studies is certainly that a case study should be as favorable as possible to the thesis. For example, in 1976, Hans Eysenck who originally regarded the case study as nothing more than a method of producing anecdotes, later realized, as underlined here above, that “*sometimes we simply have to keep our eyes open and look carefully at individual cases – not in the hope of proving anything, but rather in the hope of learning something*”. In addition, another recommendation about choosing a research method is that it should clearly depend on the problem under study and its circumstances. More recent, in 1992, John Walton has similarly observed, “case studies are likely to produce the best theory”. However is not the goal of the present research, they answer the research questions formulated by resuming the existence bibliography with regard to the internationalization pace of SMEs. Therefore, the only general advice given by Flyvbjerg is that when looking for a critical case, either it is a good idea to look for “*most likely*” or “*least likely*” cases, that is, cases likely to either clearly confirm or irrefutably falsify propositions and hypotheses. (Flyvbjerg, 2006)

Traditionally, case study analysis is associated with qualitative methods. This arises from the simple fact that when one is attempting to incorporate a large number of cases into a single analysis, it is necessary to reduce the evidence into a small number of dimensions. One cannot explore thousand cases thoroughly, whereas this is possible with just one or a few cases. Cross-case methods, like in the case of the present research, define observations differently, and largely operate on different levels of analysis. In addition, following the suggestions of Miles elaborated in 1979, research conclusion derived from qualitative research are “*rich, full, earthy, holistic and real*” On the other hand, the qualitative methodology and quantitative methodology are not mutually exclusive. (Denzin et al., 1994)

Furthermore, qualitative or mixed methods are less structured and the researcher's pre-specified conceptualizations are not imposed on the respondent. (Loane et al., 2007) For example, Yin analyzes the dichotomy of these different case study approaches. Yin states that

the *method of the study is dependent on the data and nature of the study*. Qualitative and quantitative methods are not attributes of competing types of research; rather they are features of different types of data analysis and cannot be readily replaced by one another. There is no fundamental difference in the scientific credibility of either of the methods, even though many prejudices exist for and against both of the discussed methods. (Yin, 2009)

**Table 7. Main features of a qualitative research according to the literature review**

Features	Qualitative research
Aim of Inquiry	Understanding
Relationship Between Researcher and Subject	Close
Research Approach	Flexible and open
Nature of Data	Rich and deep
Data Analysis	Explicative and explorative
Scope of Findings	Ideographic
Strengths	- Lack of generalizability - Susceptibility to researcher bias - Difficult replication
Weaknesses	- lack of generalizability - Susceptibility to researcher bias - Difficult replication

*Source: author's personal elaboration*

The important point is that there is no single right methodology for organizing and analyzing data, but rather a logic in the methods that ties together the research question, data collection, analysis, and theoretical contribution. Researchers must show a trail of evidence, conveyed not just in the methods section, but throughout the paper, such that each element of the paper is logically connected. (Bansal et al., 2011) So, in order to gather data for the case study, key employees of the target companies are interviewed through series of open-ended questions. The aim of the current research is to extend our understanding of the characteristics associated with rapidly internationalizing firms as the social capital of the founder. In order to conduct an exploratory, inductive investigation, we employed a *multiple case study methodology*. (Fideli, 1998) This approach (*cross-case studies*) allows data from several cases to be examined in a process that constantly *compares theory and case data to seek a close fit between the two*. In addition, comparison of similarities and differences across cases allows the researcher to suggest explanations for possible patterns, trends or linkages. (Taylor, 2011)

Accordingly, the author Eisenhardt's proposes that to enhance relevant theory and help further explain born global internationalization process that is related to a company's internationalization speed, a qualitative approach should be used to assist in understanding the complexities associated with the internationalization processes of an individual firm. (Taylor, 2011) With this idea in mind, I employed a multi-case design by identifying four SMEs that internationalized their operations. Each case, as suggested by Kalinik and other scholars, is used to confirm or infirm the emergent relationship between an accelerated internationalization the international mindset of the founder. (Kalinik et al., 2012) Respectively, a summary of the case-firms is presented in the Attachment 7 on companies' selection.

### 5.3 Selection of the case companies for empirical study

The company selection criteria defines the setting of this study and builds a framework that states under which conditions the particular phenomenon *is likely to be found* as well as the conditions under which it is not likely to be found. For example, concerning this research the existence of high tech companies that succeeded in foreign markets in a very short period after their inception confirmed the supposition of a most likely industry sector. In addition, more precisely, one of the largest definitional issues about the internationalization speed within the literature, as stated by Rialp, is that the focus remains *largely devoted to high-tech start-ups* rather than a *broader industry-wide focus*. (Taylor, 2011)

In addition, the sampling frame was defined following Miles & Huberman's setting – event – actor – process parameter setting. Accordingly, I focused the above research on Italian and American technology-intensive new firms (*setting*), on the top management team of these firms (*actors*), on the importance of the internationalization of SMEs (*event*), and similarly on the crafting of an early and rapid internationalization strategy (*process*). (Autio et al., 2002)

Then, we introduce the case companies and describe their internationalization process with regard to the selected determinants (represented by two research questions). To further protect the company data, as suggested by Arenius, precise figures are deliberately withheld, and some information could eventually remain secret. (Arenius, 2005) Therefore, as stated here above the field of study for this research project was the high tech industry with a special focus on the software companies. The sampling of the cases was theoretical and not statistical, such as stressed by a number by a number of researchers. (Kalinik et al., 2012)

The selection of the two American case companies was facilitated by several database available in the United States of America. For example, the James J. Hill Library, from Saint Paul, Minnesota, United States, houses a world-class collection of practical business information resources and is considered one of the most comprehensive business libraries in the United States. Here I had the possibility to consult freely those three types of database that were of interest for me in order to search for the selection of the companies for the cross-case study research.

1. *Uniworld Database* helped to find the American firms and their locations in other countries and firms based in other countries with locations in the United States. Since 1955, Uniworld remains the most trusted source for up-to-date multinational business contact information with listings in over 200 countries. Therefore, this database from the James J. Hill Library provided free information about American firms operating in foreign countries or that have substantial investments in overseas operations, affiliates, branches, partially or wholly owned companies. Here the main data on companies concerns the revenue, number of employees, location, industry, etc.<sup>8</sup>

2. *Hoovers International Company Database*. Hoover's Inc., a subsidiary of the Dun and Bradstreet Corporation (D&B) that offers proprietary business information through its online platform and integrated workflow solutions. Its data comprises more than 85 million corporations, 100 million people, and 1000 industries. This database also provides information on sales, employees, ownership type, industry, etc.<sup>9</sup>

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<sup>8</sup> Data from the company's official website

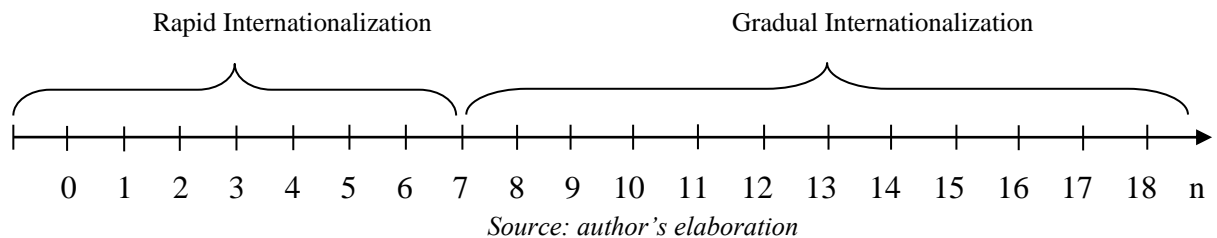
<sup>9</sup> Data from the company's official website

3. *Reference USA Database*. This is a database on 20 million businesses and as well about new US businesses. Here it is possible to find information on location, industry and business profile, business demographics, management directory, etc.<sup>10</sup>

Instead, in Italy, it was of help for the company’s selection the database of Confindustria of Modena and from University contacts. Thus, in Italy, I identified around eight companies with considerable international sales while in Minnesota, USA, I identified around fourteen companies with substantial overseas operations (see the Attachments 5 and 6). They belong to the same industrial sectors as the focus was directed towards maximizing the differences among the observations and because of the internationalization pace that usually creates the difference. Definitely, my aim was to identify firms that met the criteria in selecting companies with a considerable extent and scope of international sales. To capture the phenomena of internationalization speed, I kept in mind the following division and selection criteria:

1. **time span** from the foundation of a SMEs to its first international operation;

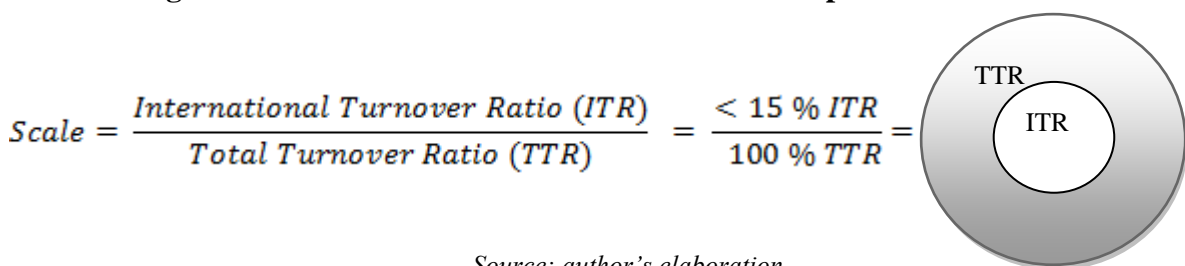
**Figure 18. Time span from the company start-up until its effective internationalization**



However, this figure is an approximate one because according to many researchers there is no strict delimitation as regards the right time span in order to distinguish between a pure gradual and rapid internationalizing company.

2. **international scale**, or the extent of a firm’s overseas operations;

**Figure 19. The ratio of international turnover compared to the total one**



For example, to measure “international sales development speed” it was taken the time span with an indicator of international growth – firms’ international intensity (ratio of total international sales to total turnover) (Preece et al., 1999).

More specifically, *international intensity or scale* represents the most popular measure of international growth. Existing studies use widely different levels of international sales to depict rapid growth including:

- 5 % for Zahra et al. (2000);

<sup>10</sup> Data from the company’s official website

- 25 % for Knight and Cavusgil (2004);
- 75 % in the case of BGs for Rennie (1993). (Morgan-Thomas et al., 2009)

Importantly, following the suggestions of Bell and other researchers, international sales ratios vary from year to year and some authors advocate average measures taken over a few years. However, this study uses a single indicator taken from the last year of firms' international operations. Also, although it has been suggested that born globals are not an industry or sector-specific phenomenon and therefore, should not be defined solely as businesses that implement and/or sell "cutting edge" technology. A large proportion of the research, as analyzed by Rialp et al. in 2005, focus on born globals remains devoted to high-technology start-up firms. (Taylor et al., 2011) In my case, I have chosen the threshold of at least 15 %. (See the Attachment 7)

3. **international scope** that is seen in terms of market concentration or market diversification. I used several indicators to reflect "*international diversification strategies*". First, to measure the diversity of international involvement, I asked the respondents the number of county markets in which they do business (Hitt et al., 1997). To capture the extent of concentration, I focused on the key export market and the proportionate share of the key export market to the total sales. (Morgan-Thomas et al., 2009)

4. use of standards of **Italian/European Union and American definition on SME**, or less than 250 employees in case of Italian SMEs and less than 500 employees for American ones.

5. **privately held, and independent** - not subsidiary or divisions of other companies.

In conclusion, when choosing the companies for the qualitative research, the following criteria were taken into consideration:

- the international scale or intensity (the percentage of international sales as part of total sales);
- the international pace (the time span from company's inception and its first effective international venture);
- the international scope (how many markets);
- the size of the firms (less than 250 in the case of Italian SMEs and less than 500 in the case of American one);
- the structure of the company (independent firms rather than subsidiary of a parent company).

## 5.4 Research sample and methodology

The strength of case study method lies in facilitating the study of the internationalization process from its speed perspectives, and facilitating a more thorough analysis of each firm taken into consideration: Doxee, Expert System, New Boundary Technologies and TEAM Informatics. These SMEs are considered knowledge intensive firms.

For instance, opinion is divided on how to measure "*knowledge intensity*". Some authors suggest objective indicators such as R&D intensity or number of patents. These, however, have been criticized based on relevance in the small firm context.

For example, many small firms have no distinct R&D departments, and therefore, the costs associated with R&D are difficult to trace. The number of patent might also not be indicative, as

small firms cannot afford to go to the expensive patenting procedure and, being worried about competitive copying, protect their knowledge by exploiting first mover advantages. (Morgan-Thomas et al., 2009)

However, I did not check for such indicators, as this is not the object of this thesis. Therefore, the research phase was divided in two stages. The first step: *the census of SMEs*. The first phase consists of a census of the American and Italian SMEs that have had substantial foreign operations. The second step: *qualitative analysis through interviews* of companies that accepted to be part of the present research.

Initially, the four case studies were identified using academic contacts (especially reviewing the case study literature on the best-suited methodology for such a study) and recommendations from representative bodies such as the Midway Chamber of Commerce from Saint Paul and Saint Paul Port Authority. Prospective firms were investigated by the researcher to ascertain whether they contained the characteristics associated with born global.

**A. Primary data.** I followed the internationalization process of the Italian company (Doxee) over a period. The data collection for the other three firms was conducted during the year 2013-2014. The data collection for the American enterprises was done from May 2013 until September 2013. Initially, for understanding what kind of companies could fit with the selection criteria, it was used basic data on company profile from *Business Source Premier* and *LexisNexis Academic Search* from Bush Memorial Library. So, the company profiles were primarily based upon search engine sources in the public domain. For example, the James J. Hill Library houses practical business information resources like *Uniworld Database*, *Hoovers International Company Database* and *Reference USA Database* helping to find the American firms and their locations in other countries.

**B. Secondary data.** Although these databases were an excellent source of contact information it had one disadvantage - the data did not perfectly meet the research criteria for the selection of the companies, so an additional step was undertaken as to comply with those criteria mentioned previously. Accordingly, I combined all the databases and searched as well for information in the companies' official websites.

Relying on a single source of information is not recommended in conducting case studies. Therefore, secondary source data, such as annual reports, newspaper, official website pages, was collected in when preparing for interviews. The secondary source data reflected the content of the interviews and was used as confirmatory source material. (Arenius, 2005) For instance, Eisenhardt says that when a data source pattern is corroborated by evidence from another source, the finding is better grounded. Then, the use of different sources was important in order to ensure the validation and reliability of data. (Eisenhardt, 1989)

Before approaching the companies from USA, we met the Executive Director of Midway Chamber of Commerce of Saint Paul and the representative from the Saint Paul Port Authority (an institution that has its unique transactional expertise to consult different business needs). Data was gathered using the information from the recorded interview. Firstly, it was done a sample including the name of the firms, their location, telephone number and e-mails. I have sent emails to the companies' CEOs and introduced the research project attaching also the questions that were going to be asked. For example, according to the recommendations of other researchers like Andersson and al. (2004), Kotey and Meredith (1997), the CEO (often combining the role of CEO, manager, owner or part-owner) is the best-qualified to answer

questions about the firm’s actual behavior and strategy vis-a-vis internationalization and the global market. (Kyvik et al., 2013) However, also other staff in charge with internationalization was interviewed.

The interviews were conducted in the United States during the month of September 2013, and in case of Italian companies during the month of January 2014. The interview guideline was sent to the interviewees before the interview took place. The interviews were recorded.

**Table 8. The stages of an interview**

Stage One	Introduction of the research project
Stage Two	Beginning the interview
Stage Three	Cross-checking of the quantitative research findings
Stage Four	Ending the interview

*Source: author’s elaboration from Ritchie and Lewis (2003)*

The stages of the performed interviews can be described in more details as follows (Ritchie, 2003):

- **Stage One** - *Introduction of the research project* as the importance of entrepreneur’s experience and networks for the internationalization rhythm, its objectives, research questions and the design of the empirical study.
- **Stage Two** - *Beginning the interview*. The structure and content of the interview was decided in connection to the research topic discussed.
- **Stage Three** - *Cross-checking of the quantitative research findings*. The validation of the findings, their interpretation and the drawn of practical implications were the main part of the interview. It was organized according to the research questions and subsequently according to the investigated internationalization topic. Generally, the experts were first asked to provide their estimates or answers regarding the research questions.
- **Stage Four** - *Ending the interview*. At the end of the interview the experts are thanked for the participation, their contribution to the research results was emphasized and they were reassured that the interview data were going to be used only for the research purposes of this thesis.

## 5.5 Data collection process and interview structure

This part of the research project is based on the empirical investigation through the qualitative method. For each case study, one interview was carried out with each firm. (Only in case of Doxee two interviews were conducted) Following the findings of Miles and Huberman (1994), because a multiple-case study involves cross-case comparison, it requires some standardization of instrumentation so that the findings can be laid side by side in the course of analysis A great deal of qualitative material comes from talking with people whether it would be through formal interviews or casual conversations.

So, as it was stated in a previous paragraph, the interview guideline was sent prior to the meeting itself to those companies that were chosen in accordance with the criteria presented in the paragraph “*Selection of the case companies for empirical study*”. Some emails were general

and not addressed directly to the CEOs or Global Sales Managers (in some of these companies they have different names), because of the lack of their email addresses while others emails were guessed combining the name/surname with the company's domain, and were respectively addressed to the target person. However, even if the founders of those target companies were reachable the response rate was still very low. Then, later on, a reminder was sent out to the companies from the potential list of companies to be interviewed. In addition, it should be pointed out that the effective time for data collection, in the USA, was only of two months.

Accordingly, semi-structured interviews were used. The interview has some pre-set questions, but it also allows more scope for open-ended answers. Because certain issues have been identified before the interview itself, I used more focused questions. There is a number of techniques researchers use in the natural course of the conversation to aid clarity, depth and validity for a semi-structured interview. (Woods, 2006) Here are some of them:

- searching for opinions (*What do you think of the quality of this information?*);
- asking for clarification (*Can you give me an example of networks of people that facilitated your first internationalization venture? Exemplify the most important sources of information useful for expanding overseas?*);
- asking for explanations, pose alternatives (*Does your network of people (supplier, customers, etc) were active internationally during your first international venture?*);
- seeking comparisons (*Is the entry mode the same in different markets? Which is the international revenue compared to the total one?*);
- pursuing the logic of an argument (*Here is the list of entry modes. What was the entry mode used during your first international operations when entering the X marketplace?*)
- asking for further information (*Are they reliable and trustworthy or not?*).

Therefore, the exploratory nature of the research required that a range of different types of questions were used to allow unexpected answers and perspectives to emerge. It also allowed the inclusion of “*what, when and why*” questions and, as a result, a rich information was accumulated. For more details, see Attachment 3.

Following good case research practice, all interviews were recorded and transcribed for *content analysis*. (Arenius, 2005) This procedure is explained in a further paragraph entitled “Codification activity”. Therefore, the above interviews were conducted in order to cross-check the findings of the empirical study. The interviews were the best means of acquiring in-depth information. The method was also chosen because of its flexibility. It enables the changing of the wording of the question if necessary, clarifying doubts and ensuring that the answers are correctly understood. Additionally, the interview is interactive in nature, so the data material is generated through the interaction of the researcher and the interviewee.

Thus, the interviews began by explaining the research asking permission to tape-record the interview and explaining the reason why they were recorded. The recording procedure was necessary for checking whether I have recorded informants' views correctly and also because of a language barrier issue. Interviews have lasted between 40 and 60 minutes and as it was mentioned before; the informants were CEOs and Global Sales Managers of those companies that were part to this qualitative research project. Then some exchange of mails for clarification and completion were sent for a more complete and detailed internationalization behaviour.

Interestingly, the interview protocols, elaborated by Eisenhardt, say that we have to be “concentrated on facts and events rather than on respondents' interpretations”. (Kalinik et al.,

2012) Therefore, I asked the company’s CEO to freely describe the company and its internationalization process. After that, I concentrated on two main determinants such as experience and networks. The semi-structured questionnaire for interviews was developed in relation to the objectives of the qualitative study and divided into three sections; the last two sections were focused on specific research questions (“*In what way the entrepreneurs’ experience and education influence the speed of entering the international markets?*” and “*How relevant are the networks for the internationalization speed of SMEs?*”), while the first section included introductory facts on pace, scale and scope of the internationalization process.

As well as the relatively structured interview guide, prompts were used during each interview to explore a number of relevant issues including on: the pace, scope and scale of internationalization experience; the role of networks and the relevance of entrepreneurs’ experience and education. Accordingly, the primary purpose of these interviews was to understand internationalization behaviours in accordance to some of its determinants. They provided rich and meaningful data on the pace, scope and scale of the overseas operations. In addition, the influence of CEOs and/or Global Sales Manager (or the officer responsible with international operations) in leveraging and acquiring networks in their internationalization effort as well as the CEO’s education and experience were explored in considerable depth. Respectively, all of the information collected was introduced into a mini case study database.

**Table 9. Sources of data**

Companies	Interview		Primary and secondary data	Observation
	Informants	Minutes/ Hours		Number of visits and visited sites
<b>New Boundary Technology</b>	- Founder and CEO	1 h	Web sites, Official databases, company’s newsletters	None
<b>TEAM Informatics</b>	- Global Sales Manager and Partner	50 min	Web sites, Official databases, company’s newsletters, Local Business Journal	None
<b>Doxee</b>	- Founder and CEO - Partner & Corporate Marketing Director	1 h	Web sites, business plan, internal documents, newsletter	Traineeship within the Marketing Division
<b>Expert System</b>	- VP Strategy & Business Development	40 min	Web sites, business plan, internal documents, newsletter	None

*Source: author’s personal adaptation from Kalinik and Forza (2012)*

Thus, as mentioned before the data collection included, as well, internal documentation provided by the company, company website, products/services and firm brochures.

Summing up this paragraph, as mentioned in the paragraph on data collection process, the data was collected by interviewing the key personnel in the case companies who have been deeply involved in planning and implementing the internationalization decisions of the firm especially during the company’s first international venture. The interview data was improved using secondary data from a wide range of different sources as shown in the above-mentioned table.

## 5.6 Interviewed CEOs

Before conducting the real interview with companies' CEOs, that agreed to take part to this research, a simulation technique was effectuated. Thus, the co-tutor from the United States served as a surrogate CEO that was going to be interviewed. This simulation was very useful in order to make sure everything is clear on both sides.

Firstly, in the case of the American company named New Boundary Technology, the interview lasted about an hour, and it was recorded. I have interviewed the CEO.

Secondly, in the case of the American company named TEAM Informatics, the interview lasted about 50 minutes, and it was recorded. I have interviewed the Global Sales Manager and partner of the above company.

Thirdly, in the case of the Italian company named Doxee, the interview lasted about an hour in total, and it was recorded. I have interviewed the Partner and Corporate Marketing Director and their CEO. The author of the above research project was also involved in a traineeship program for around six months with this company. Thus, it was possible to observe and understand relatively easier the business environment by getting in contact with company's employees, visiting different units, and being better informed about the company's structure. Subsequently, thanks to this program it was also easier to understand the content of information provided by the informants on the relation between the entrepreneurs' experience/networks and the internationalization speed.

Fourthly, in the case of the Italian company named Expert System, the interview lasted about forty minutes and it was recorded. I have interviewed the VP Strategy & Business Development. Before the interview, the informant provided answers to other parts of the interview guideline. Then during the interview, clarification questions were asked.

Finally, the records from the two Italian case studies were written down, and then translated in English.

Summing up, the internationalization behavior of SMEs was tested empirically through the interview method on a small scale (four SMEs), which limit its transferability to other companies, as it is very specific and contextual to the companies from the sample.

## 5.7 Determinant related questions

As suggested by Yin, the *literature-driven conceptual framework* on the pace of internationalization was used to guide the interviews as well as the investigation. This helped in structuring, gathering and analyzing the empirical data. First, to guide the above selected case studies and for the purposes of responding to the research questions, I tried to analyze the internationalization speed of these small companies. (Yin, 2009)

As it was mentioned before, the author opted for the method of the qualitative research that fits better with the object of the present topic and, in generally, for the management research field. Usually, the main methods employed in *qualitative research* are observation, interviews and documentary analysis. In the case of this research, it was decided to conduct interviews with CEOs or Global Sales Managers of those SMEs that were selected and accepted to be part of

this empirical research. Accordingly, there are three fundamental types of research interviews: structured, semi-structured and unstructured.

*Structured interviews* are, essentially, verbally administered questionnaires, in which predetermined questions are asked. Consequently, they are relatively quick and easy to administer and may be of particular use if clarification of certain questions are required or if there are likely to be literacy or numeracy problems with the respondents. However, by their very nature, they only allow for limited participant responses and are, therefore, of little use if “depth” is required. (Melchers et al., 2011)

*Unstructured interviews* are usually very time-consuming and can be difficult to manage, and to participate in, as the lack of predetermined interview questions provides little guidance on what to talk about. Conversely, they do not reflect any preconceived theories or ideas and are performed with little or no organization. Their use is generally only considered where significant “depth” is required, or where virtually nothing is known about the subject area.

*Semi-structured interviews* consist of several key questions that help to define the areas to be explored, but also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail. (Woods, 2006) The choice for the interview format for this thesis was that of a *semi-structured type* because of those reasons explained above. Then, as mentioned previously, an interview guideline was elaborated and it was divided in three parts. *The first section* consisted of several qualifying question like the international revenue compared to the total one, or the period when firms started their first internationalization venture, etc. The second and third section were directly related to the research questions. *The second section* of the interviewed guideline was composed by several questions in order to understand the role of networks during the first international venture. Finally, the third part included questions that looked for the international education and experience of the entrepreneur or founder. It also has to be underlined that some questions (from the last version compared to the draft of the interview guideline) were cancelled and the idea was to prioritize the questions and to not overlap them with other questions, thus reducing at minimum the time needed for interviewing the informant.

In addition, my intention was to perform a *cross-country analysis* on the internationalization speed of SMEs. The countries that have constituted the object of the present cross-country analysis are Italy and the United States of America and, more precisely, the Minnesota state and Modena province.

A. *United States of America.* The initial pool of questions was drafted from a literature review on the internationalization process of small companies and, preliminary research involving detailed case studies. The draft was then shown to a professor from Business School of Hamline University, specialized in the field of globalization and competition in the context of international business, in order to receive his feedbacks on further improvements to be made.

Firstly, after the consultation with my co-supervisor, the initial guideline of questions was reduced because it was supposed to take too much time for answering all those planned questions. Secondly, after being used the simulation technique for interviewing a potential CEO, some of those proposed questions were changed or rephrased in order to follow the logic structure of the topic.

B. *Italy.* In the case of the Italian empirical research, the supervisor from Italy put me in contact with a knowledge intensive SME from Modena. In 2012, I used to collaborate with the

above company, notably with the Commercial Division, for a 6 months period. In 2014, I returned for interviewing their Partner & Corporate Marketing Director and CEO. In this case, I tried to combine the observation with the interview technique. Here, the researcher adopts a recognized role within the institution or group like that performed within the commercial division. Therefore, the advantages of participant observation are:

- It gives the researcher access to the same places, people and events as the subjects.
- It gives access to documents relevant to the role, including confidential reports and records.
- It facilitates the use of mechanical aids, such as tape recorders and cameras.
- It provides personal first-hand experience of the role and thus heightens understanding of it.

In addition, there are some disadvantages, as for instance, there is a danger of “going native” - an over-identification with people's views. Moreover, there is a possibility of conflict between one's role as a participant and one's role as a researcher. However, I preferred a non-participant observation, or where the researcher has only the role of researcher and observes situations of interest in that capacity. ( Woods, 2006)

Initially, each case was analyzed independently to help gain familiarity with each firm before cross-case study analysis was implemented. This involved a detailed case write-up for each firm as presented in the chapter VI, followed with a cross-case analysis in the chapter entitled “Conclusions and findings”.

## **5.8 Methodological steps**

Methodological steps are understood as stages towards knowledge generation that underlined the research on internationalization speed of SMEs in relation to entrepreneur's experience and education. In addition, given to the difficulties of identifying the population and the rudimentary research in the area, the feedbacks rate was not so bad. It is possible that many companies did not reply because of a growing demand from different management related research organizations that were looking for meeting the Founders or Global Sales Managers for research interest. Moreover, usually companies accept to meet those research organizations that will indirectly promote a company through a given research project.

Furthermore, the time constraint issue in the United States (for instance, it took only 2 months of effective data collection) presented some discontinuity issues. In addition, the first major problem was the respondents' concern about confidentiality of their data. For instance, the persons I have interviewed asked about the exact use of their data and who get access to it. I assured the informants about the purpose of these data. Then, the quality of records was not good and, coupled with linguistic barriers, slowed down the research process (in case of the American SMEs). Additionally, the need for adaptation period in the United States and understanding local practices took away a lot of time at the begging of my stay period there. In addition, the research period started pretty close to the summer vacation. However, all of the above mentioned aspects did not jeopardize the objects of this research. Therefore, several methodological stages that could be divided as follows:

- The first step requested the *collection of texts* or data from available databases and contacts. At this stage, the entire taped interviews were literally transcribed;

- The second step required the *isolation of the relevant part of the text*. (See next paragraph and partially the Attachment 8);
- The third step regarded the *assessment of the single text* by anchoring key items related to the research questions;
- The fourth step was related to the *crossed-assessment* among texts thus contrasting and comparing inferences within and among the firm;
- The fifth step consisted in the elaboration of the *final inference* through single construct and relationship validation.

Summing up, finding the appropriate sequence of methods is often one of the most delicate design steps. However, it should be stressed that a methodological framework or the sequence of methods could evolve and could be re-defined during a research project.

## 5.9 Codification activity

Therefore, the interviews were recorded, transcribed and subjected to a thematic content analysis utilizing qualitative techniques and a *thematic matrix*. (Loane S. et al. 2007) The next step was to start looking in detail at the data and to start identifying themes. In the margins of each transcript or set of notes, were put notes about what the interviewee was referring to.

Unlike numbers, qualitative data are not easily “reduced.” This might be why we are seeing a trend toward coding, as it allows qualitative data to be shown efficiently and demonstrates the presence of constructs and their relationships. (Bansal et al., 2011)

Firstly, the relevance of the **entrepreneur’s experience and education** was analyzed.

- “*L’azienda deve vedere coinvolte le figure chiave dell’azienda nel rendere più trust possibile nei rapporti internazionali*” (“The company must see the key persons involved for conveying more trust in international relations”); “*Comunico in inglese con i partner internazionali e questo che è fondamentale, ... e a volte non è sufficiente*” (“I speak in English with our international partners and this is essential, ... and sometimes it is not enough”); etc. (Doxee)

- “*I have worked for a software company previously and we had a professional group down in Australia and New Zealand and I have also worked in Japan and Korea*” (TEAM Informatics )

Secondly, the relevance of the **entrepreneur’s networks** were analyzed.

- “*...l’aspetto culturale ti consente di semplificare e di capire più velocemente come rapportarti.*”; (“...the cultural aspect allows you to simplify and understand more quickly how to interact with others”); “*I contatti personali ed istituzionali di fatto hanno facilitato la comprensione del mercato estero*” (“ the personal and institutional connections have facilitated the foreign market understanding”), etc. (Doxee)

- “*The relationships were mixed because there were a lot of people with whom you worked for many many years so you have some sort of personal relationship.*” (TEAM Informatics)

- “*...all’inizio dell’espansione all’estero, principalmente, erano dei contatti personali*” (“... at the beginning of our overseas expansion we have had mainly personal contacts”); “*le reti di contatto... al momento sono queste tre nazioni: il Regno Unito, l’Israele e gli Stati Uniti*”

("about networks ... at the moment they cover these three countries: the United Kingdom, Israel and the United States.") (Expert System)

Summing up, once recordings of interviews are fully transcribed, the relevant parts of the whole text should be isolated. Then, the text is analyzed in details. For example, the text from the question marks shows the parts of the text that were isolated (related to pace, scale and scope of internationalization, but furthestmost entrepreneur's experience and networks).

Then, after this procedure, the respective comments are presented. After the exposition of a detailed case write-up for each firm, a cross-case synthesis is presented in the thesis conclusions. As similarities between answers began to emerge, categories of responses were able to be determined, allowing the data to be classified and sorted accordingly. For further details, see the Attachment 8 entitled "Conceptual framework and "proof" quotes".

## 5.10 Anchorage items

Once have been selected the relevant parts of the text, a link was made between the whole sentences of a text by using anchor items. We must therefore search for the words or entire phrases that are related to those concepts. For the following anchor item, we have:

A. *Entrepreneurs' experience and education*, according to Federico et al. (2011), Nummela et al. (2004), Loane et al. (2007), etc.

- International work experience;
- International education;
- Composition of the management team;
- Previous work experience;
- International outlook or mindset.

B. *Networks*, according to Oviatt et al. (2005), Ruzzier et al. (2006), Musteen et al. (2010), Falize, (2012), Belso-Martinez, (2007), Bent et al. (2003), etc.

- Networks diversification;
- Market knowledge from networks;
- Internationalization of the networks;
- Type and content of connections.

In conclusion, within the isolated parts of the transcript these ones connect to the above mentioned key variables, such as : *entrepreneurs' experience and education and networks*.

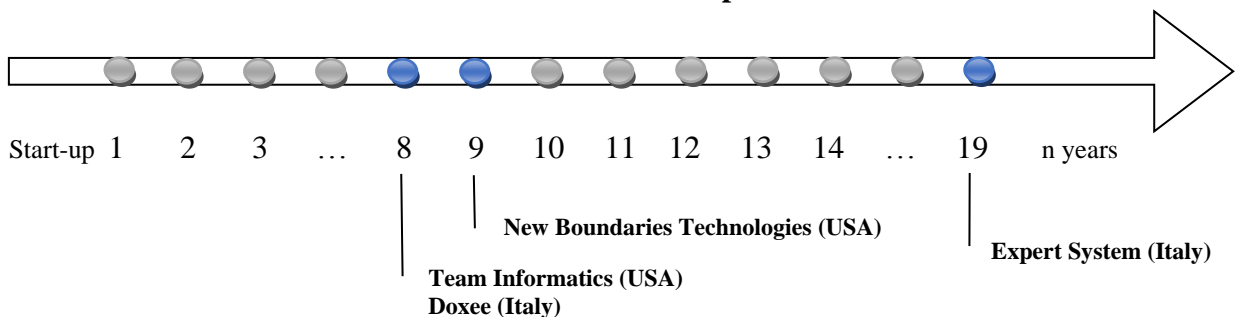
## CHAPTER VI CORRELATING THE CONSULTED LITERATURE TO THE RESEARCH QUESTIONS

In this chapter, I put together data from all the sources and analyzed them by building single case studies, and then compared them in order to construct a conceptual framework (Eisenhardt, 1989). Since the focus of the enquiry was the internationalization speed, the following information about the target SMEs was sought:

- Firm demographics (age, size, turnover, etc.), history, and structure;
- Main activities, product/service offerings, major clients, partnerships/alliances, suppliers;
- Background and prior experience of entrepreneur, or founding members;
- Entrepreneur's networks;
- Current export markets/export ratio/market entry modes and pace to markets;
- Any other relevant information.

Interestingly, according to the definitions of several researchers the field companies (Doxee, Expert System, New Boundaries Technology and TEAM Informatics) are considered *knowledge intense company*. Firstly, they have a specialized know-how that is required to market their product/services. Secondly, it takes a long time to learn about their product/services. Thirdly, it is difficult for an outsider to learn the requirements of company's customers. (Bello et al., 1995). The second scale reflects the extent to which the product is technically complex and sophisticated. (Morgan-Thomas et al., 2009) Subsequently, I wrote the single case histories aiming at integrating and finding missing or doubling information from primary and secondary sources. For instance, a short overview with regard to the time span of the companies that constituted the object of the present research project is explained graphically by the aid of the bellow figure.

**Figure 20. Time span between the first overseas sales and the company inception in case of the field companies**



*Source: author's elaboration*

Therefore, the studied case companies and their relevant features regarding the internationalization time, scope and scale are described below in the subsequent paragraphs. Basic and concise information of the case companies is also provided in the Attachment 7.

## 6.1. Doxee Company (Italy)



### **Company Focus.**

Established in 2001 as Ebilling SpA, Doxee headquarters are located in the town of Modena, Italy, with an office also in Rome. This is a company of engineers and innovators in the traditions of a region that is famed for its technological excellence and engineering progress.

The geographic area for the foreign operations of Doxee is Europe, North and South America. The social assets accounts for € 1.000.000,00. In 2011, Doxee reached the threshold of 15 billion Euro in revenues. The company's total staff is 130 employees, from which 100 employees are working in Italy and other 30 employees perform their duties abroad. For example, from 130 employees, 90% are university graduates with less than 33 years. The company also possesses the certification ISO 9001 2008 EA33 that is an essential strategy when entering new foreign marketplaces. Doxee invests some 15% of its total sales in research and development in order to stay in line with the changing market requirements.

Today, Doxee's clients include Global 500 corporations – Telecom Italia, Sky TV, British Telecom, Enel, UniCredit, Three Italia and numerous banks, telecommunication, insurance providers, cable and media companies, governments and utilities. The approximate total number of Doxee's customers accounts for over 300 businesses. Doxee produces over 2 billion documents annually that reach over 100 million end-users worldwide. Its mission is to deliver industrial-strength multichannel communication solutions based on its platform that is modular, customizable and highly secure.

As cited in the company's official website, Doxee's services enhance the value of every communication that an enterprise generates by dynamically adding information that is valuable to both the enterprise and their customers. Its main services are the following: Data Management, Document Composition & Production, Multichannel Distribution and Tracking and Reporting.

### **6.1.1 Doxee within the internationalization process**

**Findings on the internationalization extent and rhythm.** Therefore, as it was stated in the Company Focus, Doxee is a multinational company that was set up in Modena with a local branch in Rome as well.

Interestingly, in 2001 when the company was founded in Modena, the staff accounted for only five employees, but today it reached the number of 130 employees.

With regard to the company's services it should be pointed out that Doxee helps its customers to rethink and optimize the processes of generation of various documents (for example invoices, contracts, bank statements, forms, orders, books and records, etc.), ensuring the creation, the multi-channel distribution and multiprovider activity together with the document archiving and storage. Therefore, the Modena based company is specialized in digital document management and solutions for digital archiving.

In addition, speaking about customers related topics, the collaboration between Doxee and Banca Popolare dell'Emilia Romagna began in 2006 and had the aim of improving the bank's customer communication management. Therefore, Doxee helped Banca Popolare dell'Emilia Romagna to activate several printing and delivery operators in order to avoid the logic of specific vendor "lock-in". Therefore, Doxee became the partner of Banca Popolare dell'Emilia Romagna specialized in the creation of documents.

Another customer of Doxee is FASTWEB. Thus, FASTWEB has entrusted to Doxee the digital archiving of company's business processes and Customer Communication. For example, within FASTWEB the electronic invoicing and subsequent archiving has been activated since 2005, and then the digital archiving was extended to all business books and records in accordance with the Italian legal regulations.

While operating in Modena and Rome, the company also sells abroad and notably in the following countries: the United States, Check Republic, Slovakia, France and Brazil. Furthermore, the next presence abroad is going to be in Spain. The company made its first step abroad in 2009, thus establishing contacts firstly with the Central Europe markets and then with the US market. Respectively, in 2010, Doxee inaugurated its office in San Jose, California (United States) and in the same year, the company inaugurated its offices in Prague (Czech Republic) and Bratislava (Slovakia). Roughly, the international revenue compared to the total one counts for around 15%.

Conforming to the Partner & Corporate Marketing Director, the company decided to expand internationally in order to seek growth opportunities. This explanation on the drivers of internationalization goes in line with the findings of Kraus (2011) that see the international expansion of SMEs as a mean of achieving their growth. Before going abroad the TMT thought that in Italy there were still good business opportunities for Doxee services but at a smaller scale or, in other words, trying to add gradually to the usual customers list as well smaller companies. In this sense, the commercial division investigated the potential target customers but the domestic market was saturated and the emergence of excessive production capacity at home force it to look for growth opportunities in foreign markets. Therefore, it was chosen the prospective of the company growth abroad taking in mind the same dimensional criteria as in the domestic market. To such an end, in order to follow the continuity principle for acquiring that size of customers, the company started to search abroad for business opportunities. Thus, the findings about the cross-border activities of Doxee correspond also with those of Karen. The author sustains that overseas presence contributes not only for revenue growth but also for the exchange of knowledge and the enhancement of capabilities, thereby strengthening the long-term competitiveness of the firm. (Karen, 2006) Moreover, the gains from international operations for Doxee took the form bigger intangible benefits such as the enhancement of the firm's image from going international. This fact is also sustained by Kyvik and al. (2013)

As the Partner & Corporate Marketing Director stresses, although the company is still in the process of international expansion, the current economic crisis was a kind of advantage for Doxee because the international markets were certainly less affected by it, at least, considering those geographic areas where Doxee operates, such as: the United States, Latin America, Central Europe. The Central Europe region was certainly less affected by the crisis compared to Italy and this fact gave to the company the opportunity to diversify and to secure the profit sources.

As cited by one<sup>11</sup> of the founders, the crisis may contribute to the consolidation of the company's business in particular and, generally speaking, of the Italian economy. Furthermore, since in Italy it is difficult to manage growth paths, the internationalization is relevant for company's growth. Thus, the internationalization helped Doxee to reduce fluctuations in revenue by spreading risks over a number of countries. Additionally, substantial market and industry-specific knowledge are also gained in the process, greatly enhancing the competitiveness of firm. Hence, Doxee is following a path of internationalization that is a success story totally made in Italy. According to one of company's founder, Doxee has grown steadily over the course of these years and now aims at an even more ambitious goal: to consolidate its own role as a key referent for enterprises all around the world, with particular attention to the markets of the North and South Americas. For instance, as announced through a specialized website ([helloimpresa.com](http://helloimpresa.com)), the company recently appointed a new manager for the North and South Americas because Doxee prepares itself for the next wave of growth and expansion in the above markets.

As reported by the Partner & Corporate Marketing Director<sup>12</sup>, initially, the markets were not selected by chance but on the basis of specific business opportunities. For example, in the case of the United States, the CEOs perceived the interest from different American professional groups thus it was prepared the ground for a joint-venture. Instead, in Central Europe, the company got the opportunity of buying former competitors that have withdrew from those marketplaces. As a result, Doxee bought two branches from Prague and Bratislava. Then, from that moment forward, the company has structured its approach to internationalization and notably it was directed to better-targeted partnership channels. For instance, this model of entering foreign markets is pursued when trying to sell in France, Germany and Russia. Therefore, for Doxee, at the moment, the cooperation with local operators is the preferred internationalization mode. With regard to the above-mentioned foreign markets (German and Russian), the company is only at the stage of market knowledge acquisition and partner assessment.

For example in Brazil, Doxee found out casual partners in the system integrators sector who have included Doxee offering within their sale projects. Then, Doxee hired two commercial, residents of Latin America (that report to the US branch), for procuring business opportunities across Latin America. Therefore, as regards the Latin American region, TIM Brazil (the Brazilian subsidiary of Telecom Italy Mobile) selected Doxee for creating a new communication platform for around 55 million customers. The choice was not the result of a partnership created from scratch, it was the enlargement of a collaboration established in 2008, when TIM Brazil entrusted to Ebilling (the company's former name) solutions for their internal

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<sup>11</sup> The interviewed person

<sup>12</sup> The interviewed person

communication and reporting processes, thus, demanding the creation of a system capable of producing daily an average of 100 thousand documents on demand. It is important to underline the statements of the company's co-founder about the importance of BRIC countries for the company's growth. Respectively, the BRIC market, according to the CEO, is indicated by all observers as one of the main drivers of world economic development in the coming years. (IctBusiness, 2012)

Thus, as referred to in the on-line journal of Confindustria of Modena, Doxee is enjoying the confidence from the part of a large company from that geographic area like TIM Brazil was an important success for the Italian company on the international stage. The expansion of Doxee's activities to the market of Tim Brazil is an encouraging indicator for the implementation of the internationalization strategy that initiated few years ago. Accordingly, the second co-founder have sustained that significant investments in research & development implemented in the creation of a technology platform designed to meet the complex needs of enterprises is also allowing to expand the company's market penetration in different geographical areas. Consequently, the Modena based company continues its internationalization strategy in the field of Document Output Customer Communication Management. (IctBusiness, 2012)

Additionally, pursuant to the Partner & Corporate Marketing Director, it is also foreseen an internationalization strategy in so-called psychic distant countries like Russia. The driving forces for the company's intention to expand in the above country concern mainly the demographic and economic indicators. Thus, given the fact that Doxee sells their services to a B2C level, the number of final customers is very important as it determines the number of documents to be managed by Doxee. Since Doxee offering relates to the document management, in order to handle the client's requests, the company have to make big investments that have not yet been allocated because of the lack of market knowledge. Furthermore, in Russia the language barrier is a serious obstacle for company's operations because of the nature of their services. Therefore, Doxee is looking for a local partner that knows all language related issues and nuances. Moreover, the motivating force for Doxee's interest in the above market is explained by widespread economic restructuring, liberalization and financial deregulation since the fall of socialism. Respectively, the economic, political and regulatory environments in Russia changed considerably with time.

In addition, the top management of Doxee decided to outsource the market research on Check market to an American global consulting company specialised in the field of auditing, enterprise risk and financial advisory services.

Then, speaking about the US market, it is worth noting that the joint-venture with the American partner was the entry mode undertook by Doxee for its first international operation. In fact, Doxee tried to get direct contacts and established networks from the scratch with the above marketplace. According to the Doxee's experience, the American market is supposed to be a difficult one. However, it is a useful experience for Doxee to be present in the United States because of the access to up-to-date industry knowledge. For instance, the concentration of different consulting and sector analysis agencies provides *learning benefits* for Doxee as the firm might adopt new marketing techniques.

In this sense of ideas, Gartner has included Doxee in its quadrant named "Visionaries" in the first Magic Quadrant for Customer Communications Management(CCM) Software. (For

more details, Gartner is an American information technology research and advisory company providing technology related insight). Gartner considers Visionaries those vendors “that are forward-looking and focused on technical aspects. For instance, the CCM products may have unique capabilities or can set the direction of the market through their innovation and product development. "In order words, entering the US market presented new opportunities for *value creation* by providing access to new institutions and unique knowledge, even if the sales in this market are still to arrive. Additionally, gains could take several forms: bigger profits, greater knowledge over the long term that leads to intangible benefits such as enhancement of the firm’s image from going international.

As stated by the Partner & Corporate Marketing Director, the collaboration with several Americans multinationals has favored the access to the international networks. This kind of connections helped Doxee in being informed about trade shows, IT related workshops, etc. The networks allowed to the company to be inserted in a context that facilitated the internationalization process as opposed to the learning-by-doing strategy. However, the disadvantage of a partnership channel is that the distributor sells the company’s services but it does not promote its brand and does not transfer foreign market knowledge to that company (in this case for Doxee).

Moreover, according to the Partner & Corporate Marketing Director, usually many Italian SMEs, because of their small size and lack of recourses, opt for partnerships and indirect export as an entry mode strategy. However, the above-mentioned entry modes might have several disadvantages. For that reason, Doxee’s approach towards internationalization has been changed comparing to the initial entry mode. Therefore, the company adopts a business strategy that requires more presence, support and investments.

Then, as far as regards the markets from the Czech Republic and Slovakia, the company operates directly there and has customers transferred because of the acquisition of two branches from two competitors that went out from those markets.

In addition, in 2012, the company followed a growth strategy in those target foreign markets and implemented a consolidation plan on the company’s offering and assets. Furthermore, in 2012 Ebilling became Doxee. For instance, within the Doxee Global User Summit 2012, that took place at the Casa Ferrari Museum, in Modena, the new company announced its new brand, but with an absolute continuity of the previous operations. Thus, Doxee is the name of company’s subsidiaries abroad and of its entire group.

In few words, as stressed also in the on-line journal of Confindustria of Modena, Doxee is following an internationalization path that is an Italian success story all made in Italy, even in the current economic environment.

## **6.1.2 Assessment of the chosen determinants influencing the internationalization speed in the case of Doxee**

**A. Findings on entrepreneur’s experience and formation.** The CEO communicates in English (and sometimes according to him it is not sufficient) with the company’s international partners. Thus, the English proficiency was stressed to be an essential tool when interacting with different foreign companies. Accordingly, language proficiency is important from the standpoint

of effective communication, learning about foreign markets and reduced perceived psychic distance between home and foreign markets. Moreover, Eriksson et al. (1997) observe that language proficiency typically results in a more favorable assessment of the challenges and costs associated with internationalization and quicker internationalization on the part of SMEs. As stressed by the CEO, language proficiency also minimizes the likelihood of misunderstandings and cross-cultural conflicts and leads to other benefits that facilitate faster internationalization.

Then, as regards the formation of founders, one of the CEOs has a degree in Economics. Before the establishment of Doxee, he used to be manager of a company from the printing sector - domain that was indirectly related to the current activity of Doxee. Then, from that company the idea was to invent the document management. Therefore, as Federico (2011), states, entrepreneurs who found a new company in the same industry, where they used to work, have a more in-depth knowledge about the sector and the core technologies.

It is significant to underline that both founders did not spend any years abroad for work reasons before founding Doxee. Therefore, this finding is in contrast with the statement of several researchers (as for instance, according to the findings of Kraus) supporting that “training and education” obtained internationally are shown to be factors that fuel as well the internationalization process. (Kraus, 2011)

Moreover, regarding the global mindset of the CEO, it goes in line with the findings of Karen. Karen claims that willingness and ability of the CEO, owner/manager or strategic leader is seen as dependent on his/her exposure to a range of factors, including existing formal and informal international contacts, knowledge of foreign competitors, experience of foreign cultures, language skills and educational background. (Karen, 2006).

Instead, the other CEO used to work as Chief Informational Officer for an Italian company that is one of the most relevant in Europe in the field of printing, document management and business communication. In addition, the co-founder’s previous work experience was related to his current job. He as well holds a bachelor Degree. The co-founder of Doxee is on the board of directors of University of Modena and Reggio Emilia and is also on the board of Confindustria (an association that affiliates all the Italian companies on a voluntary basis). This finding is reliant to observations of Al-Laham that sustains the following “local clusters and networks are among the factors that are increasingly influencing internationalization patterns, especially because of the knowledge spillover.” (Al-Laham et al., 2008)

Furthermore, concerning the international experience of the company’s TMT (or Top Management Team), it is worth noting that the Partner & Corporate Marketing Director, before joining Doxee (in 2007), used to work for a European distributor of information technologies that operated directly in the entire Mediterranean region. Equally, the Partner & Corporate Marketing Director speaks proficiently in English with the company’s international partners.

**B. Findings on entrepreneurs’ networks.** As underlined by the CEO, thanks to personal connections it appeared an opportunity to acquire two companies that were similar to Doxee from a technological point of view.

The network of Doxee relates to companies like Accenture and different consulting firms. These networks indicated better to Doxee about the business environment in those foreign reference countries. However, the disadvantage of the international networks is that the company is always mediated by a third part (or by so-called partners).

Even if Doxee is at the initial phase of its internationalization path, the CEO stressed the company has to be able to transfer its messages in terms of history, values and mission when having to do with international partners. This fact may communicate more trust in international business. Therefore, the company must be able to transfer its seriousness abroad because there are many obstacles when it comes to an international expansion as, for instance, the lack of references and cultural barriers. The cultural aspect allows to an internationalizing company to simplify the business relations and to understand and speed the decision-making process, otherwise the risk is that the company might apply its own mindset in foreign markets.

The CEO's personal institutional networks also facilitated the understanding of the foreign market. Subsequently, the company tried to benefit from the collaboration with several specialized institutions/agencies such as the Italian Trade Agency (ICE- L'Agenzia per la promozione all'estero e l'internazionalizzazione delle imprese italiane), Export Credit Agencies (such as SACE-Servizi Assicurativi del Commercio Estero) and the Chambers of Commerce. However, those services were distant to the company's needs, eventually because of the overlapping roles they used to have. Meanwhile, the above institutions improved their services for supporting the internationalization process of SMEs.

For instance, Doxee is also member of the Italian-Czech Chamber of Commerce and Industry. Overall, Doxee actively participated to different ICT related conferences and workshops in Czech Republic and Slovakia in order to promote and legitimize the company's brand in this geographic region of the Central Europe and worldwide. Additionally, thanks to the Confindustria's support, in November 2013, Doxee participated in a trade mission to the United States. Then, concerning the international networks and affairs, they are managed and guided by the CEO. Accordingly, the Country Managers, Sales Executives or Regional Managers report to him.

Therefore, the findings about the determinants that speed up the internationalization path coincide partially with those of Oviatt and McDougall, as according to them, the knowledge-intensity of the opportunity combined with the know-how already available to the entrepreneurial actor, plus the *characteristics of the entrepreneur's international network* largely determine internationalization speed. The partiality refers to the fact his networks relate primarily to the domestic market. Furthermore, in the case of Doxee the *local clusters and networks* are among the factors that are increasingly influencing internationalization patterns and pace, especially because of the *knowledge spillover*. This enabling and driving factor for the internationalization rhythm of small companies was stressed also by Laham. (Al-Laham et al., 2008)

Pursuant to the Doxee's owner the internationalization pattern might be duplicated to other countries because of the unchanging content of their service; however, the communication does change in respect to different geographical regions (Latin America, Central Europe or North America) where the company operates in. It is entirely possible to duplicate the internationalization pattern especially when it regards the search for partners.

It is noteworthy to underline that given the fact Doxee has two owners it has the ability to have two different sources of contacts in a set. For example, the company is mainly owned by two persons and this goes in line with the findings of Westhead et al. (2001), that sustain the following fact: "this type of firms have a more diversified base of skills and other intangible

resources, which allow them to identify and exploit new opportunities in foreign market". Thus, this also was a prerequisite for Doxee networks and personal contacts.

Over the years, Doxee has successfully collaborated with the leading technology providers and management consulting organizations in the world. Doxee solutions have been integrated with the technologies of the leading providers of digital printing and communication solutions including Xerox, IBM, Oracle, Compart, EMC Documentum, Adobe, Arbor CRM, Siebel Systems, Xplor, etc.

As reported by the CEO, in the past, the company have had different views on the internationalization process. In other words, it was approached only as a tool to look around for business opportunities.

According to the founder when a PMI is going to expand its business overseas it has to have an internationalization plan. Furthermore, a firm must not start the overseas expansion in all foreign markets even if at glance, the managers think the above markets are very promising and there are no competitors, because there might be strong competition and lack of growth. Internationalization is important to the company's growth but it should be approached in a strategic manner otherwise the company could lose time, money, or block the internationalization path.

The internationalization strategy of Doxee could eventually change depending on the country in which it operates. For instance, there were chosen specific geographical regions for overseas operations. However, Italy is always a great laboratory for Doxee, even if the goal is to increase the share of foreign sales to 30-40 %.

According to the informant, the factor that could speed up the company's expansion abroad is the creation and management of networks. Firstly, Doxee decided to present itself to the foreign markets only with a specific offering. Secondly, the visibility of company's brand is mentioned to be the second speeding factor for the company's overseas success as it integrates the lack of trust between actors. Thirdly, acquisitions may also be designed to increase and speed up the internationalization process.

Moreover, following the statements of the Partner & Corporate Marketing Director, nowadays it may be feasible to learn from direct experience of other internationalising companies in order to speed up the internationalization process. However, it is a contextual and country related process that must not be generalized. In addition, according to the Partner & Corporate Marketing Director, an internationalization model that may potentially work is related to the direct presence in a given foreign marketplace because in this way the company creates stronger relations, simplifies the dialogue and facilitates the cultural exchange.

Summing up, the entrepreneurial actor is central to the dynamics of international explanation and his managerial experience together with the market characteristics are important drivers of a global mindset, which in turn is one of the key parameters of international performance. These findings are also pursuant to the theoretical framework of Oviatt et al., (2005) and Nummela (2004).

## 6.2. Expert System company (Italy)



### Company Focus.

Founded by three entrepreneurs and headquartered in Modena, Italy, in 1989, Expert System is a software company that develops semantic technologies to understand and manage unstructured information. The company has about 130 employees and it is in progress of staff growth.

The company's award-winning and patented Cogito® semantic technology relies on deep linguistic analysis and a rich semantic network to ensure a complete understanding of a text beyond the limitations of traditional keyword or statistics-based technologies. Cogito is available in different languages and contains more than 1 million concepts, more than 4 million relationships for the English language alone, and a rich set of attributes for each concept. The Cogito semantic network includes common words, which comprise 90% of all content, and rich vertical domain dictionaries including Corporate & Homeland Security, Finance, Media & Publishing, Oil & Gas, Pharma & Life Sciences, Public Sector and Telecommunications.

Many companies, including ENI, Unicredit, Chevron, Vodafone, Il Sole 24 Ore, Microsoft and various government organizations use Expert System products to create value through semantic search and natural language search, text analytics, development and management of taxonomies and ontologies, automatic categorization, extraction of data and metadata, and natural language processing. Therefore, as cited in the company's profile, Expert System serves corporate and governmental customers worldwide.

Speaking of domestic operations, the company has locations in Modena, Rovereto, Naples, Rome and Milan. However, for the future, even though the company still considers itself like a Modena based company, it intends to expand geographically. Firstly, the expansion is foreseen in the USA, by integrating the offices that the firm already has in Chicago and Washington. Secondly, being close to customers is a substantial business strategy and for this reason, the company aims to Switzerland, the UK and Germany.

### 6.2.1 Expert System within the internationalization process

**Findings on the internationalization extent and rhythm.** Speaking about one of the company's main service, its technology named Cogito, can be used even in elections. In an article retrieved from the journal Gazzetta di Modena, it is stressed that the Cogito Technology has been utilized to analyze the language used by President Barack Obama and his counterpart

Mitt Romney During throughout the second face-to-face television program. This experience probably could be replicated for the Italian elections.

In fact, as stressed by the founder, in the company's newsletter, Cogito technology is completely made in Italy and patented in the United States. This technology allows businesses to manage and accurately analyze huge amounts of texts (documents, emails, web pages, social media), obtaining strategic information from the part of companies. Cogito is a technology that is available in several languages and contains more than one million concepts and four millions relationships between concepts. Recently, in the on-line journal Economy Up, the VP Strategy & Business Development pointed out that the market for big data is mature and many sectors are opening up to it. For example, in Italy, the financial sector is very receptive, and in the U.S. the oil & gas, pharmaceutical and media advertising sectors are more and more awarded about the opportunities offered by the analysis of this information.

Therefore, as it was mentioned previously, three former classmates set up this company in 1989. They have decided to bet on the combination of linguistics and computer science, developing technologies and solutions that are unique in the world and that became, in a short period of timer, a success story in a particularly difficult moment for the Made in Italy services. The CEO of Expert System sustains that one of their first service was the grammar and spelling provided to Microsoft. This service is still the original one included in the programs of Microsoft Office.

It is very curios that, from a Modena based garage, Expert System has come to sell its intelligence to Microsoft, not only in Italian but also in all the languages of the world. The collaboration with Microsoft allowed to the company to invest in further research and development. Therefore, between 1998 and 1999, Expert System decided to direct their offering to the business market by creating solutions based on linguistic technology for managing unstructured information within companies.

Moreover, from the point of view of revenues growth, in 2011, the company accounted a total of € 12 million in sales and, in 2012, Expert System expected to exceed the above threshold. Furthermore, in 2012 the firm has more than doubled its turnover abroad, which was between 15 % and 20%. The CEO affirmed that the company has grown even during the economic crisis and the turnover for 2013 was over € 13 million (+20% compared to the previous year).

As was emphasized in the Company Focus, the staff of Expert System counts for around one hundred and thirty employees, including thirty graduates in foreign languages from the University of Modena and Reggio Emilia and Bologna.

Among its clients are major Italian companies such as Rizzoli, Corriere della Sera, Telecom, Bnl, Eni, Autostrade per l'Italia, several Ministries/public institution, and American companies such as Chevron, Shell, Eli Lilly and Nbs.

For instance, in 2007, KMworld<sup>13</sup> recognized Expert System among the most important 100 companies in the world in the field of Knowledge Management. Moreover, Gartner, the IT consulting company, in 2013 inserted Expert System in its Magic Quadrant of the 15 largest companies in the world with regard to the enterprise search (the search engines for companies), along with giants like Google, Oracle, and IBM. (Economy Up, 2013)

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<sup>13</sup> KMWorld is the leading publisher, conference organizer, and information provider serving the knowledge management, content management, and document management markets.

Following the statements of the VP, Strategy & Business Development<sup>14</sup>, Expert System started its first international venture in 2009. Alternatively, nineteen years later after its establishment (1989). The international revenue compared to the total one is roughly 20 %. The main reasons and motivations, why Exert System decided to expand overseas, are related to software characteristics. The early attempts have shown that Expert System has products able to successfully compete with those of well-known software companies.

Importantly, the most longstanding country market for Expert System is the US market. The entry mode for the US marketplace was the wholly-owned subsidiary. The US market, that is the biggest country market as percentage of total foreign revenues, represents around 90 % from the total turnover. Therefore, the entry modes change with respect to the marketplace. At the same time, in the future, the American subsidiary might be seeking also distributors. The entry mode in the United States remained unchanged with time; however, the company is looking for commercial agents. Instead, when entering the United Kingdom market, the company has started directly with a strategy of mixed entry modes, combining direct and indirect entry methods. The company believes the indirect entry mode could be more scalable compared to a direct one.

Therefore, following the affirmation of the company's Founder and CEO, the firm has a significant presence in the United States (where it has two offices and detains more than a third of its subsidiary called AdmantX) and in other English-speaking countries. However, the company points at consolidating its presence in the U.S., which is the richest and most receptive market for hi-tech solutions. Furthermore, Expert System aims to German-speaking countries and as well to the Middle East markets.

For example, a new headquarter was established in 2013, in Washington, with a new Manager of Federal Sales. The new Manager supports Expert System's projects in relation to the federal government and 1000 Fortune companies with the aim of applying the benefits of semantic technology to businesses and governmental agencies. For instance, in the ICT section of Confindustria of Modena, it is announced that in 2012 Expert System has increased by 150 per cent its foreign sales, thus enriching its range of semantic solutions. Located in Rockville, Maryland, the new office is dedicated to the technological development and support to companies and federal government through specific semantic solutions for information management, business intelligence and customer relationship.

The CEO states that Expert System's technology is a niche technology in Italy and abroad where competition is played with France; the language issue has meant that some companies were set up, especially with the United States. The Asian market is back enough, for more or less four to five years and, this is due definitely to different cultural background and goals of those country markets.

Summing up, the high-performance technology has enabled the company to successfully expand into new markets, such as into the English, American, German (since 2008), and Spanish (later on) markets. Future projects aim at a continuous expansion and conquest of a greater market share, particularly, in a well-defined time lag, in order to achieve the same percentage of turnover in the Italian and US markets within few years.

In an article released by Modena Economica, the VP Strategy & Business Development, Luca Scagliarini, announced the pleasant surprise of the immediate interest from the American

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<sup>14</sup> The interviewed person

market to Expert System's technology. This is because the company have signed collaboration agreements with leading-edge companies, both for the development of new applications for the Internet (or Web 2.0) as for services on mobile phones. This was declared to be definitely a unique case in the panorama of Italian companies from the ICT sector.

In addition, according to the Chief Executive Officer, it is important to be mentioned that the competitors of Expert System have managed to get results; however, the firm holds an advantage position because of its first-mover strategy. In addition, as mentioned previously, the company continues to consolidate its position in other markets, especially in the United States and United Kingdom as these international markets account for potentially 60-70% of the world market of information access.

In February 2013, Expert System subscribed for the Stock Exchange. The company has a project of quotation on Aim Italy (Mercato Alternativo del Capitale that is the market of Borsa Italiana) which is devoted to the Italian small and medium enterprises that wish to invest in their growth. This operation aims to gather resources for the internationalization process. Following the affirmations of the CEO, this project could improve even more the company's competitiveness and standing at the international level.

In conclusion, Expert System is an Italian leader in the above industry and has leading positions in the world. Then, above all, the company is the only Italian and among the few in the world to have among its clients Microsoft. Expert System provides to Microsoft advanced linguistic technologies employed in the most common applications.

## **6.2.2 Assessment of the chosen determinants influencing the internationalization speed in the case of Expert System**

**A. Findings on entrepreneur's experience and formation.** Without doubts, the TMT of Expert System is very professionally skilled as one could see from the company's official website at the section entitled Management.

The Founder and CEO has led Expert System to both global and industry wide recognition as a leader in semantic software. He helped found Semantic Valley, the European consortium of education, research and technology organizations dedicated to improving the quality of life by generating innovation and creativity through semantic technology. He holds an EMBA (Executive Master in Business Administration) from the Alma Graduate School of the University of Bologna, as well as, a degree in Computer Science from the University of Modena, Italy.

Then, the co-founder and CTO created the award-winning, patented Cogito semantic technology that is the basis for Expert System's semantic product family. He holds a degree in Computer Science from the University of Modena, Italy.

Finally, the third CEO oversees the R&D operations and leads an extensive team in the development of innovative semantic technology products. As co-founder, he contributed to the creation of the Cogito semantic platform being actively involved in the company's continued growth. He holds a degree in Computer Science from the University of Modena, Italy.

Summing up, the company is mainly owned by three persons and this fact goes in line which the findings of Westhead et al. (2001), that claim this type of firms have a more

diversified base of skills and other intangible resources, which eventually could allow them to identify and exploit new opportunities in foreign markets. Therefore, the company might enjoy more extensive social and business networks, as underlined as well, by the Belso-Martinez (2007). However, this was not a strong prerequisite for international networks and personal contacts of Expert System's international operations.

Moreover, the composition of the Top Management Team (TMT) was a strong pre-requisite for a rapid internationalization of the company. Therefore, the characteristics of the TMT are explained here below.

For instance, the VP, Strategy & Business Development is responsible for leading Expert System's worldwide sales. He has held leading positions at Hewlett Packard in Italy and in the US and at SiteSmith. In another company, he has served as CEO. The VP, Strategy & Business Development holds an Engineering degree from the Politecnico di Milano, Italy and a Master in Business Administration from Santa Clara University, California. He also used to work in the United States for around 10 years. Furthermore, his previous work experience helped him with his current job with Expert System. He is a minority shareholder and responsible for the internationalization process of the company.

Then, as regards the characteristics of another member of the TMT, it has to be underlined that the company's Chief Financial Officer plays a key role in guiding Expert System's continuing growth and expansion in Europe and internationally. For instance, he brings over 25 years of experience, joining the company from Hewlett-Packard (HP). He held executive finance positions in HP's InkJet and LaserJet businesses in Boise, Idaho; Portland, Oregon and San Diego, California. Previously, he held several senior financial roles at HP in the US and Europe. Thus, he held senior roles in HP's commercial and consumer markets for start-up and mainstream product life cycle stages. The CFO obtained his Master's degree in Economics from Bocconi University in Milan, Italy.

Thus, it is evident that the level of education and experience of the TMT is also very high: with undergraduate and post-graduate studies (for instance, our informant obtained his post-graduate studies in the United States). Therefore, this determinant goes in line with the findings of Nummela et al., (2004) on the role of human resource factors for speeding up the internationalization of SMEs.

Moreover, as it could be seen from the background of entrepreneurs and TMT, all of them have undergraduate degrees, or even post-graduate studies (one founder has an Executive Master in Business Administration, the VP Strategy & Business Development obtained his master degree abroad and, the Chief Financial Officer graduated with a master degree from Bocconi University, etc.

In conclusion, they all used to study and/or work abroad. The TMT's previous work experience is related to leading multinationals where they used to have leadership positions. Therefore, a concentrated set of networks were helpful for entering the U.S. marketplace. For example, according to Tihanyi et al., (2000), as quoted by Nielsen et al., (2011), international experience increases awareness of international opportunities and helps develop superior ability to manage operations in different countries. Specifically, the accumulated knowledge about foreign markets is important in overcoming the "psychic distance" when doing business abroad. In this way, international experience of the TMT may serve as a surrogate for cultural

knowledge that is necessary for successfully formulating and implementing an international strategy.

On the other side, it has to be underlined that none of the founders of Expert System studied and/or worked abroad and this fact is opposed to the findings of several researchers such as Kraus (2011), Musten et al., (2010), McDougall et al., (2003) that claim the international mindset or outlook of founders could derive from previous foreign work or education experience. However, the TMT of Expert System used to study abroad and have industry-specific work knowledge (notably in the United States), thus having positive attitudes towards international affairs and cultures. Respectively, this finding concludes with that of Loane (2007) positing that teams with a priori international experience and allied professional or social networks may have a positive influence on company's internationalization speed. Furthermore, in this case through experiential learning, Expert System might have overcome the distance between the domestic and foreign market and shortened the internationalization process (having an international turnover ratio equal to around twenty percent only in five years since the overseas operations started).

**B. Findings on entrepreneurs' networks.** With regard to *different partnerships* the company put in place, it is relevant to underline that Expert System partners with Oracle that has already set up a database for the semantic web. The semantic web could present business opportunities as well for Expert System as stated by the company's Chief Executive Officer.

For instance, the VP, Strategy & Business Development used to live in the U.S. for 10 years and accordingly he had some personal contacts there. The most useful source of information, obtained from networks of people that was useful for expanding overseas, was referred to was the introduction to potential contacts and clients.

Among many international projects, the firm takes part in, there is also a project entitled the Augmenting Technologies Clinical Insight, as announced by the on-line journal Eccellere-Business Community.

For example, as referred to in the company's newsletter, since February 2011, Expert System and VejoPark (the enterprise incubator for technology, new media and digital content), collaborate with the Crisis Unit for Italy's Ministry of Foreign Affairs for the development of a software platform in order to identify important information from the Web.

Expert System partner as well with Symbola that is the Foundation of Italian Qualities. It fits perfectly into the current development of Expert System that is capable of competing with the big companies in the world.

As an example of connections that contributed as well to the company's international venture, it could be listed the above institutions:

- National Italian American Foundation (NIAF), based in San Francisco (CA);
- Mind the Bridge that runs programs to support all actors in entrepreneurial ecosystems;
- Business Association Italy America (BAIA) is an open business network created by and for Professionals, Entrepreneurs and Managers operating between Italy and the United States, etc.

Moreover, it should be mentioned that Expert System participates actively to different international leading events. As announced by the company's official website, Expert System also participates actively to different ICT related conference, workshops and meetings. For instance for the coming year (2014), the firm is a participant to the above industry events on:

- Text Analytics World, in San Francisco, United States;
- Enterprise Data World in Austin, Texas, United States (The 18th annual Enterprise Data World is recognized as the most comprehensive and educational data management conference in the world);
- Infosecurity Europe in London, United Kingdom (Europe's number one Information Security event).

Therefore, all these industry specific events could potentially offer network and business opportunities for Expert System.

Summing up, from this empirical study, it is possible to state that the connection between the managerial characteristics of Expert System and the speed of internationalization is positive.

### 6.3. New Boundary Technologies company (USA)



#### **Company Focus.**

Located in Minneapolis, Minnesota, New Boundary Technologies' products are sold worldwide directly and through key distribution partnerships. It has around 20 - 50 employees. Its revenue is within \$5 - 10M. Industry - IT Management Software. The SIC Classification<sup>15</sup> for this organization is 7372 - Prepackaged software. The NAICS Classification<sup>16</sup> for this organization is 5112 - Developer of Prism(tm), distribution and desktop management software. Software runs on Windows platforms.

Founded in 1985, New Boundary Technologies creates innovative software solutions that enable organizations to quickly benefit from emerging complex technologies. The company was formerly known as Lanovation. By providing the highest quality software, backed by unprecedented customer support, New Boundary Technologies has been recognized by Deloitte & Touche for five consecutive years as *one of the fastest growing technology companies* in Minnesota.

The company serves technology, legal, health care, government, entertainment/media, education, finance, systems integration, telecommunications, consumer goods, service, oil/energy, manufacturing, and travel industries. New Boundary Technologies provides technology for remotely installing, updating, and repairing software, and for using the Internet to remotely monitor and control equipment. New Boundary's Policy Commander package makes sure that users on a network follow security policies. Other applications in the Prism Suite help keep track of network security compliance, along with configuration, license, and regulatory compliance. (Hoovers International Company Database-Company Profile).

The company has a single location. New Boundary Technologies is an independent one and it now counts around *26 international distribution partners*. Products are sold to multiple industries. The main competitors of New Boundary Technologies are CA, Inc., Hewlett-Packard Company and Symantec Corporation.

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<sup>15</sup> The Standard Industrial Classification or SIC is a system for classifying industries by a four-digit code. Established in the United States in 1937, it is used by government agencies to classify industry areas.

<sup>16</sup> The North American Industry Classification System or NAICS is used by business and government to classify business establishments according to type of economic activity (process of production) in Canada, Mexico, and the United States of America. It has largely replaced the older Standard Industrial Classification (SIC) system

### 6.3.1 New Boundary Technologies within the internationalization process

**Findings on the internationalization extent and rhythm.** International sales are a growing segment of company's overall revenue and a significant contributor to the business success. This is due to the high quality of company's partners and their ability to deliver services that add value to the products of New Boundary Technologies and provide a complete solution based on the regional needs of company's mutual customers, as recalled in article of PRWeb Press Release. At the beginning the CEO (or, informant) was asked some introductory aspects about the internationalization process of his company in order to understand better which was the pace, scale and scope of the New Boundary Technologies' internationalization.

The *main reasons of the company's expansion abroad* could be listed as follows:

- diversifying the revenue streams;
- achieving profit growth;
- taking advantage of different business cycles;
- getting new product development ideas from users from outside North America, for example, because of a stronger competition in a given country market;
- benefiting from differences in competition intensity in different market country.

For instance, one of the motivations indicated by the informant is consistent with early findings concerning born global firms, which revealed that a major factor in born global internationalization was the domestic market's inability to meet the survival or growth needs of the firm. (Taylor et al., 2011)

Then, the informant (company's founder<sup>17</sup>) explained, more in details, some *drivers of the internationalization* for his company. For instance, because of the economic cycles and differences in industry growth rate in a certain country market, the company decided to benefit from these differences in the level of countries' technological and economic development. Accordingly, while in the North American market the sales could slow down in the Asian or European they might flourish, and vice versa. Another reason for adopting the international strategy could be the diversification of business risks as in the case of 2008 economic crisis, and thus balancing the company's revenues and keeping to enter new international markets for further profit growth.

Because of all these mentioned external factors, the company's performance was expected to be improved and to embarrass growth. In addition, the international expansion was about growth rate of certain markets. For example, you might have a growth rate of 40 % in the United States, but a 20 % growth rate in Australia. Obviously, this trend might change over time.

From a theoretical standpoint, it should be stressed that the product life-cycle theory of Vernon worked also in the case of New Boundary Technologies and, as it was explained, there was a continuous need of technologies adaptation in different countries that brought benefits to the company's prosperity given the fact that the above SME had a worldwide presence. For example, when a technology in one country was obsolete, and the sales were down, in another country market they could have been only at their boom. Accordingly, in this way, the service

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<sup>17</sup> The interviewed person

life cycle was prolonged. Moreover, once it might be that the company's service are new in Europe but obsolete in USA, but as well the opposite is true.

New Boundary Technologies started its first international venture in 1994, or, in other words, *9 years later after its inception*. The international revenue compared to the total one was *between 15 and 20 % roughly*, in the past 15 years. The *most longstanding country market* for New Boundary Technologies was the United Kingdom & Sweden. Therefore, to capture the *psychic distance concept*, the markets were relabelled in markets similar to the USA in term of language, cultural similarity and historical trade links (for example, like in this case was the United Kingdom and Sweden) and in markets less similar to US or psychic distant markets. This approach towards internationalization to less psychic distance market countries goes in line with the Uppsala model of internationalization of SMEs and, surprisingly, it is also in contradiction with the researchers supposition that Born Global Companies approach, suddenly after their inception, even very distant markets.

The CEO of New Boundary Technologies confirms the findings of the Scandinavian school on the internationalization stage. In other words, the small internationalizing companies need time and market knowledge in order to be successful in overseas markets and as well the distributors need time to promote the company's service after the first entry until the real sales flourish, as in the case of the German marketplace, and not only.

*The entry mode* used during New Boundary Technologies' first international operations was sales through key distribution partnerships. *The biggest country market* as percentage of the total revenue for the above company is Germany but the informant explained that this trend could change with time.

Interestingly enough since 1994 the mode of operation has not changed at all with time. In all these country markets, New Boundary Technologies has to do with international sales partners and the company continued to use continually non-exclusive distribution channels. Furthermore, it had to be mentioned that the entry mode was the same in all international markets, or, through indirect export.

Therefore, compared to the theoretical framework, New Boundary Technologies did not follow precisely the recipe of the Scandinavian School on internationalization stage model, where the internationalizing firm will start with indirect exports then it will continue with more committed operation modes. In the case of the above company, the CEO stressed that he was satisfied with those operation modes so there was not any necessity to follow the sequential model of the Scandinavian School. However, the internationalization experience of this firm did not go in line neither with the born global approach where a company expands internationally even in psychic distant marketplaces.

For instance, according to the U-model a company has to change gradually its entry mode in a given foreign marketplace (like for example in UK, Sweden or Germany), from a non-exclusive distribution strategy to a direct presence strategy, while according to the Born Global model, the company have had to eventually have opted for a more advanced entry mode, like wholly owned subsidiary, compared to its first international venture in 1994. Summing up, this internationalization behaviour of New Boundary Technologies does not concur completely neither with the U-model of internationalization of small companies nor with the born global phenomenon.

Thus, the success formula seems to be dependent on the industry characteristics or on that international operation mode, that suits better to a specific business. As regards the foreign locations, they were chosen according to the size of IT market. In addition, it was stressed by the informant that the customers prefer to buy from local distributors, that spoke their language and assisted them on a just in time need. Curiously, the time zone issue did not interfere with the needed support assistance, and respectively the quality of support they obtained was very high and eventually, only on a further step, New Boundary Technologies supported the client for a more complex need. However, mostly the sale assistance for New Boundary Technologies services was done from the part of distributors. Moreover, New Boundary Technologies maintained its flexibility in switching to other distributors as circumstances dictated. Firstly, the company was selling its product/ service through non-exclusive distributors and this entry mode was not changed with time when entering new foreign markets, thus being in contrast with the findings of many researchers. It could be deduced that this type of entry mode was the best for EB services and it satisfied the needs of international business growth. Eventually a change in other international business operation mode would bring the company's international business to the failure. This process is better known in the international literature as "de-internationalization", - a process that happened to many American companies from the same industry sector. In addition, according to our informant, the fact is that you have to adapt to local business practices and requirements in order to perform well in overseas markets, because American business culture and model do not work automatically in foreign marketplaces and this could be taken into consideration as empirical implication or recommendation for future internationalising firms.

For example, it took several years to the German distributor to build up its market and to be successful. For example, New Boundary Technologies could have started to sale indirectly and then to switch suddenly to the direct sales and open its own office down, but the company could have disconsidered all the business efforts and costs of that given distributor, and eventually undermine the sales to that given country market where it is trying to expand in. It took years to undertake effective sales in Germany.

Furthermore, the fact of choosing the non-exclusive distribution allowed to the company to search for more reliable distributors or eventual to end the partnership with those distributors that were not performing well or not promoting the business interest of New Boundary Technologies. The above company selected small distributors that have a range of services between three and fifteen services and have between five and twenty-five employees. In this way, the small international distributors had a real interest to sell the New Boundary Technologies' services.

Consequently, one important thing that helped to the oversee expansion and growth was the fact that many of these international partners at their turn were also were actively involved in international markets and this fact helped in finding new potential distributor in countries where the company was yet operating.

The company is trying to expand its distribution chain as well in the South American Market. The characteristics of the American business culture are also very important when expanding overseas as American companies are used to have to do only with the North American Business culture that not always goes well in other business cultures. An important

thing for a successfully international business is to be willing to adapt to different differences in cultures.

Also one interesting finding is that the company did not switched its entry mode to more committed one when expanding to new international markets after achieving a certain degree of experience, like for example, to wholly-owned subsidiary. The preferred entry mode was always – indirect exports. Furthermore, it was stated that there was no intention for the near future to change the operation mode in a given country to more resource and market commitment modes.

Thus, it has to be underlined with regard to the product adaptation that the company did not adjust and customize the services to different international markets, a part from the need to comply with the linguistic requirement for the German, French and Spanish market place. The product usually did not require adaptation to the local needs, except for technical translation mostly in French, German and Spanish, that was done on the expenses of distributors. As stated in the article released by Business Wire, "the French language version of Prism Deploy, along with the recently released German language version, demonstrates our commitment to provide the localization our international distributors need to succeed in their markets," according to the statements of Kim Pearson, president and chief executive officer of New Boundary Technologies. "International sales are a very important and rapidly growing part of our business, and we've had outstanding results from our international distributor program."

### **6.3.2 Assessment of the chosen determinants influencing the internationalization speed in the case of New Boundary Technologies**

**A. Findings on entrepreneur's experience and formation.** With regard to those pre-existing conditions, that so often put in evidence the role of entrepreneurs' experience and education in the internationalization process, it was found that the founder did not spent any years studying and/or working abroad. This fact is in contradiction with the findings of many scholars as Musteen and Francis (2004). For instance, according to Loane and Bell (2007), the innovative, proactive risk taking behavior of SME's key decision-maker is often influenced by prior experience, in terms of international travel, having studied or worked overseas, access to global networks or foreign language capabilities. (Loane et al., 2007)

Additionally, the presence of a post-graduate degree stressed the previous findings of Federico and Kantis (2011) and Shane (2000) that the soft skills of the founder, obtained thanks to his university degrees could explain his international business performance.

For example, the researchers Stuart and Abetti (1990) sustain that *entrepreneurs' previous work experience* influence on their early export behavior. However, it is very interesting to stress that the CEO has had no any previous experience related to his current work - the informant used to work as a Mechanical Engineer at General Electric. In this case the empirical evidence is not conclusive and in line with previous findings of several researchers. Even if his previous work experience was not directly related to his current job, this fact did not limited the founder's ability to be successful in having such a worldwide concentration of distributors. Furthermore, the founder's previous work experience did not help him substantially with his job in New Boundary Technologies.

Additionally, the informant was the sole owner of this company, therefore, it also does not confirm previous findings that state that usually if a company has more shareholders there is much more propensity towards internationalization.

Summing up, referring to the entrepreneur's educational background, it was enriching the firm's human capital platform, improving its chances of international growth and development. In addition, the founder's positive attitude towards international affairs seemed to be as well one of the main factors affecting the success of his international business. This global mindset of the founder was argued by Nummela and Saarenketo (2004) to be a pre-requisite for early internationalization of SMEs.

**B. Findings on entrepreneurs' networks.** According to our informant, the role of the networks (like for example, suppliers, competitors, customers and institutions) during the company's first international venture was not relevant, and accordingly, the company was not facilitated during its first international venture by the presence of those mentioned actors. Neither their networks of people were active internationally when New Boundary Technologies for the first time started to conquest other marketplaces. However, the importance of the above connections was stressed by the entrepreneur when speaking about the role of networks for further international expansion and growth.

More specifically, the most important source of information useful for expanding overseas was the recommendations provided by the US Department of Commerce (the Gold Key Matching Service) and the services offered by the Minnesota Trade Office, with regard to the selection of distributors in a given marketplace. The U.S. Commercial Service, named the Gold Key Matching Service, helps companies to find potential overseas agents, distributors, sales representatives and business partners. Respectively, Export.gov brings together resources from across the U.S. Government to assist American businesses in planning their international sales strategies and succeed in today's global marketplace.

This service usually arranges business meetings with pre-screened contacts representatives and distributors. These and others institutional consulting services were of excellent help for the company. For example, when expanding in India, thus, matching the right distributors for New Boundary Technologies. The two companies first made contact during the trade mission, who was led by Governor Tim Pawlenty and included visits to New Delhi, Bangalore, and Mumbai - three of India's largest cities. For instance, seventy-three business leaders and state officials attended U.S. Commercial Service briefings, had one-on-one meetings with potential partners and engaged in panel discussions geared at fostering stronger relationships between Minnesotan and Indian business markets. Accordingly, one new business relationship forged during the mission organized by Minnesota Trade Office. In the interview released to the journal *Twin Cities Business*, the president of New Boundary Technologies said that India in general is growing phenomenally, and really one of the catalysts is information technology. Also, India is not a market that the company had traditionally been in, so the management was specifically looking for an opportunity to partner with a local distributor.”

According to the article written by Minneapolis/Saint Paul Business Journal, the delegates also had a wide range of reasons for going on the trip to India. The majority of the business delegates on the trip told the Minnesota Trade Office that their primary objectives are to acquire market information, obtain business contacts or raise their company's profile in the country. Others wanted to obtain government contacts, attended site visits or identified potential business

partners. New Boundary Technologies CEO was looking for potential distributors and value-added resellers for its computer-security software. "We have about 20 distributors in countries outside of North America, but currently do not have representation in India, which was my motivation for going," he said.

Then, in a newsletter of New Boundary Technologies, it was stressed that the partnership with Taarak India is the result of New Boundary Technologies' participation in a State of Minnesota trade mission to India led by Governor Tim Pawlenty. The executive director of the Minnesota Trade Office said, "This partnership between New Boundary Technologies and Taarak India is a great example of how Minnesota businesses can expand and benefit from participating in the global marketplace."

For example, from 2005, 2G Technology will distribute New Boundary Technologies' Prism and Policy Commander™ solutions in Canada. With the addition of 2G Technology, New Boundary Technologies now counts 26 *international distribution partners* covering *North America, Europe, Latin America, Africa, Asia and Australia*. The president and chief executive officer of New Boundary Technologies announced that he is pleased to welcome 2G Technology (for the Canadian market) to his growing network of international distribution partners.

Furthermore, the company also is associated to *Minnesota High Technology Association (MHTA)*. MHTA is an association of more than 350 technology companies and organizations. This knowledge intense association fuels Minnesota's prosperity through innovation and technology. Its members include some of the world's leading corporations, mid-sized companies and start-ups and its common vision is to make Minnesota one of the country's top five technology states in the United States.

Also, the company organizes different meeting with its international distributors and this helps a lot in networking with other international distributors, like this the company endorse an environment of cooperation and promotion of NB' services, and of sharing of business ideas or, improvement in the service quality.

Minnesota Trade Office helped to find distributors, for example in the case of South American market in 2009. The goal of this mission was to assist small to medium sized companies from Great Lakes region with exporting products and services.

According to the network view, a company simply might internationalize because other companies in the network were internationalizing. In other words, the importance of networks is highlighted as a pervasive vehicle for *knowledge transfer* (Sharma, 2003). Other evidence, of Andersson and Wictor (2003), Coviello (2006), Knight and Cavusgil(1996), Oviatt and McDougall (1995), also supports the hypothesis that new firms with extensive networks are able to internationalize earlier and more successfully than their competitors. Finally, the internationalization of the company also enriched the base of firm resources, both financial and non-financial. (Federico et al., 2011) Accordingly, it could be emphasized that in this case the *acquisition of foreign market knowledge (learning)* was facilitated by the networks with the trade related state agency like Minnesota Trade Office.

In conclusion, the entrepreneur's perceptions about the opportunities offered by the foreign markets was important for the company internationalization. In addition, his social capital expressed in company's network with worldwide distributors was of a great relevance for the company's internationalization venture. Therefore, my intent was to understand the rapid internationalization phenomenon in relation to the managerial characteristics of the company.

## 6.4 TEAM Informatics company (USA)



### **Company Focus.**

TEAM Informatics, Inc. was formed in 1999 and is a software products and systems integration firm. Located in Minneapolis, Minnesota, TEAM Informatics' products are sold worldwide. It has around 65 employees.

The company has revenue within \$5-10M. The Industry is Information Technology. The SIC Classification for this organization is 7371 -Computer programming services. The NAICS Classification for this organization is 541511 - Custom Computer Programming Services. The top competitors of the company are Insight Enterprises, Inc., Stellent Inc., Itron, Inc.

TEAM collaborated with Stellent (acquired by Oracle in 2000). The company helped localize Stellent UCM and support expansion into the Asian distribution channels. TEAM has continued its partnership with Oracle to deliver world-class enterprise solutions to its customers. On January 26, 2010, the company acquired Frontline Logic, Inc., a software engineering firm focused on Oracle Universal Content Management (UCM) solutions (formerly Stellent), Google enterprise search, and Kofax document imaging. (Computer Business Review magazine - Company Overview)

The company started its first international venture in 2007. The company formed a wholly-owned subsidiary in Australia in 2007. TEAM is striving *to expand its reach to all corners of the globe* and provide access to best-in-class enterprise solutions. The company most recently branched out to the Europe-Middle East-Africa Market. These advances align with TEAM's mission to produce high-impact and accessible business results for the company's clients and partners across the globe, as stated in the company's official website. It intends to expand his business as well in South and Central America. The overall international revenue compared to the total one is roughly 30%.

### **6.4.1 TEAM Informatics within the internationalization process**

**Findings on the internationalization extent and rhythm.** The company decided to expand abroad because of a combination of things. According to the informant (Global Sales Manager and Partner<sup>18</sup>), he used to work for a software company previously and he has had a

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<sup>18</sup> The interviewed person

professional group down in Australia and New Zealand, and he used to work in Japan and Korea.

The company had a business partner in Australia and they saw many opportunities down in Australia and New Zealand for the services that TEAM Informatics provided. Initially they were flying in and out there some times a year, and his business partner did as well, then the company found a joint venture with another company in New Zealand, in 2008. That kicked to start the business within a 50 /50 ownership between the company from New Zealand and the US company. In 2010, the management bought their 50 % away from their joint-partner and by a year and half; the company formed their own subsidiary in New Zealand. Team Informatics founded as well a subsidiary in Australia.

The company has chosen its locations mostly on a customer-based approach but then also based on the management team ability. Accordingly, language commonality enabled easier communication, facilitated mutual understanding and resulted in strong learning about foreign environments. However, sometimes the company's staff works in the middle of the night to support a colleague 10,000 miles and six time zones away.

The first office was in Sydney, then it was opened another one because of a huge amount of clients in Australia, and consequently in New Zealand because the company started to work with the New Zealand Government. Therefore, the most longstanding country market for TEAM Informatics was Australia.

The company first entered Australia because of the need for the services that Australian clients had and because of the US expertise TEAM Informatics possessed. Australia was also the biggest international market for the above company (as of 2013). Clearly, this fact might change because of the new contracts that the company is getting in place with New Zealand. Importantly, the operation mode in Australia changed over time as the relationships between entities did. Accordingly, there were formed wholly owned subsidiaries in Australia and the New Zealand.

My findings highlight the interesting point that the born global firm from high-technology industries appears to consider, and continue to enter, markets based on cultural similarity and not just strategic opportunity. So the choice of market adhered to the concept of 'psychic distance sustained by Johanson and Vahlne (1977), Oviatt and McDougall (2005), or in other words the choice of a market that was close to and similar to national market like in this case was Australia. (See the Attachment 7)

More precisely, as stated by the Minneapolis/Saint Paul Business Journal, the company is partnering as well with local New Zealand based IS Company Asparona, today announced that it has been appointed to a panel of suppliers to provide content, records, collaboration and library services to *New Zealand government agencies*. Known as "ContentWorX", the service supports the Government ICT Strategy and Action Plan to 2017 enabling content centric solutions "on-demand" and delivered as a managed service offering. So, it will serve eligible New Zealand government public and state sector agencies as well as a number of approved non public sector eligible agencies.

## **6.4.2 Assessment of the chosen determinants influencing the internationalization speed in the case of TEAM Informatics**

**A. Findings on entrepreneur's experience and education.** The TEAM Informatics is an employee-owned company and its leadership team boasts an average 20 years' experience in information technology. Each individual brings unique experiences in software engineering and information access.

The founder collaborates with a firm that has co-founded several IT-related businesses in the past decade. Prior to TEAM, he was Manager of a technology based company and managed a joint venture to market US software products to Japan and Asia, and held various positions for other two high-tech companies.

Then, the second of the founders of TEAM has co-founded several IT-related businesses in the past decade. Prior to TEAM, he was President and vice-president of different companies that worked with IT and Telecommunications industry.

For instance, another member of the Board of Directors within the above company co-founded a company that later was renamed and acquired by Oracle to form the basis for one of their core business. He also worked in different companies specialized in content management.

Then, the Global Sales Manager has had prior to the job in this company a variety of sales and leadership roles. This Global Sales Manger leads the company's sales team with territories in South America, Europe and Asia. He oversees specific territories in Australia and New Zealand. Importantly, he worked for a multinational from the software sector in different positions related to support for clients in Europe, North America, Asia, and Australia and New Zealand in consulting, pre and post sales activities.

The informant has a bachelor degree in Computer science and has worked a lot abroad, he spent 23 years abroad. He spent a lot of time working in Europe. He was away to Amsterdam, to Switzerland, to London, to France. He spent also time in Asia (Japan and Korea) and the last seven years he have spent mostly in Australia and New Zeeland but he travelled internationally as well. Summing up, the international experience helped him a lot like for example how to emigrate into different cultures and how to deal with different national institutional things.

Summing up, in case of this company it could be found that there is a positive correlation between the company's managerial characteristics and the speed of internationalisation, as supported by Numella and Saarenketo (2004). It is very evident that the global mindset of the manager was the pre-requisite for an early internationalization of Team Informatics. In addition, in the case of this company the industry specific-knowledge and the previous work-experience of founders were relevant to its internationalization behaviour. Furthermore, the soft skill of the founders, obtained thanks to their university degrees could explain their international business performance as stated by researchers like Federico and Kantis (2011). According to the informant, the founders had a positive attitude towards international affairs and perfect abilities to adjust to different environments and cultures. As in the case of the born-global model, the managers had internationalization knowledge before the firm ventures abroad because they developed their entrepreneurial capabilities for managing across countries by working in other companies (Oracle, other IT companies) before joining the firm. Therefore, another emergent finding was the importance of international orientation of managers, which was linked to past international experience. My findings show that the fact that the business was owned by teams,

it has a more diversified base of skills and other intangible recourse being in line also with the suppositions of the researchers D'Angelo et al., (2013). These managers saw the global market as one big marketplace.

**B. Findings on entrepreneur's networks.** According to the informant, the way the company entered the New Zealand was not as successful as they entered Australia, so that definitely changed their approach to entering a new market place. For example, this will change the company's approach when entering South America /Central America, an approach based on their experience in New Zealand. In New Zealand, TEAM Informatics did not have relationships and it was a challenge entering as well as in Central America as it was again more a relationships driven model. Speaking about the type of relationships during their first international venture, it should be explained that, the connections were mostly professional or better, there were mixed relationships. Furthermore, the company's network of people were active internationally during the TEAM Informatics first international venture. It was like a small community that is very reliable and trustworthy with professional and personal contacts.

For instance, TEAM is a global member of the *Oracle Partner Network* and *Oracle Software Reseller*, specializing in areas such as portal and enterprise content management. Offerings include expert professional services, managed services such as support and data center hosting, and a growing set of ECM-related products. In addition, TEAM is a *Google Enterprise Partner* and *Reseller for the Google Search technologies*. As stated in the company's official website, TEAM has developed and markets a productized Connector that interconnects Oracle Universal Content Management with the Google Search Appliance. The company also partners with other leading technology and solution providers including *Kofax (Global Partner Program)* for content capture software and *WAND DataFacet* for precision search and classification, among others. The company partners also with *Microsoft*. Accordingly, it should be supposed that *large multinationals* that have been successful in the global arena like, for example, Oracle and Google, that are typically willing to discuss opportunities overseas with the owners or managers of small firms. (Hill, 2009) This could have been also the case of our company. Moreover, as *regards the institutional networks*, PR Newswire announced that in April 2013, the company announced its continued growth and success with customers in North America's Public Sector at Collaborate 13 in Denver, CO. Collaborate13 is the largest independent technology and applications forum for the Oracle User Community, bringing together the world's top IT professionals. TEAM was participating in the event as an exhibitor.

My finding is that the membership within different networks, like Oracle Partner Network, Google Enterprise Partner and Reseller and institutional networks in New Zealand supported considerably TEAM during its first international venture and as well speeded up the internationalization process. For instance, I found out that networks helped founders of TEAM Informatics, to identify international business opportunities and they had more influence on the founders' country choices; however, the company decided to approach very close psychic distant countries like Australia and New Zealand.

With regard to this born global firm from high-technology industries, psychic distance remains relevant, as born globals predominantly enter markets with minor cultural differences based on the experiences and networks of the founders. Regardless, the certainty of operating in a known or familiar international environment (because of previous work experience) was considered essential to any prospects of strategic success.

## CONCLUSIONS AND FINDINGS

This thesis is based on a qualitative study of four in-depth case histories. After collecting and analysing information, through primary and secondary data, I performed a cross-case analysis by adopting the techniques suggested by several scholars. (Miles et al., 1994) Therefore, in this doctorate thesis, I present a cross-case study by underlining the common and different traits among Doxee, Expert System, New Boundary Technologies and TEAM Informatics in their internationalization pace, and as well, the main findings on the relevance of entrepreneur's experience and networks to the internationalization speed.

Respectively, the sample was composed of four SMEs. (See Attachment 7) They were established between 1985 and 2001. Then, concerning their locations, the two Italian SMEs are from Modena (Emilia Romagna) and the two American ones are from Minneapolis (Minnesota). All of them are knowledge-based or knowledge-intensive firms from the ICT sector.

As mentioned during the entire thesis, the goal was to find out the importance of the entrepreneur's social capital on the internationalization rapidity. Consequently, following the conceptual framework, it is reasonable to expect that firms which have a more accelerated internationalization process are probably managed by more pro-international human resources.

The structure of the conclusions follows the key dimensions of the research questions:

- the way in which entrepreneurs' experience speed up a company's international expansion;
- the effects of entrepreneurs' networks on the speed of company's international expansion.

Initially, as an introductory base, the companies' internationalization speed (extent, scope and rhythm of overseas operations) is analyzed. Thus, the results for three SMEs support the internationalization model followed by born global-firm because they demonstrate a variety of *entry modes* (the exception is New Boundary Technologies that adopted a single entry mode through indirect distribution channels in all overseas markets). For example, it was found that New Boundary Technologies used agents and intermediaries for their entry modes, while other companies choose more committed entry modes such as wholly owned subsidiaries (for TEAM Informatics and Expert System) and acquisition (for Doxee). Moreover, in the case of Expert System a mix of indirect and direct presence is going to be used. Ultimately, all four firms chose entry modes that were the most suitable for their product/service consistent with their industry's characteristics and even related to the company's connections.

All four firms revealed that the limitation of the domestic market was one of the main drivers for their internationalization behaviour. This is consistent with early findings concerning born global firms of Oviatt and McDougall (1994), Taylor et al., (2011) and other authors, which revealed that a major factor in born globals was the domestic market's inability to meet the survival or growth needs of the firm. For instance, New Boundary Technologies was looking for diversification of revenue streams and prolongation of the product business cycle, while Expert System's international venture was facilitated by software characteristics. It is evident that these SMEs operate within a narrowly defined market niche that necessitates specialization. Therefore, specialization necessitated international expansion for achieving sales growth. Moreover, for the ICT services, the competition is intense and services become obsolete very quickly.

Then, it is interestingly to mention that, for instance, Expert System, entered the international markets after establishing itself domestically (nineteen years later), thus, benefiting from home-market experience that was eventually a ground for a firm's products before internationalization. Therefore, the findings concur with those of the Scandinavian school on a step-by-step (learning-by-doing) internationalization model.

Overall, the main findings on the internationalization behaviour and speed of field companies are the following:

- *Industry sector.* The results indicated that all these firms are knowledge-based or knowledge-intensive, niche focused, aggressive, and ambitious, with strong international visions.

- *Age.* The two firms are young (Doxee and TEAM Informatics), aged between twelve and fourteen years old, while other two (Expert System and New Boundaries Technologies) have twenty-four and respectively twenty-eight years old.

- *Number of employee.* Utilizing employee numbers as a measure of SME size, the two Italian firms could be classified as medium as they employed one hundred and thirty employees while the two American firms employed less than 65 employees and respectively are considered small firms.

- *Type of founding.* All of the firms in the study were independent. They were neither corporate spin out, nor university spin out.

- *Percentage of foreign sales.* All four firms are actively engaged in international operations. Their overseas sales intensity, as measured by export ratio to the total turnover, ranged from 15 % to 30 %. TEAM Informatics is on the top of the list with 30 %, while Doxee is only at the beginning of its international expansion with 15 %.

- *Internationalization pace.* TEAM Informatics and Doxee had started their first international venture within eight years after their establishment (with the same, more or less, age, fourteen and twelve years old) and New Boundaries Technologies started its internationalization venture within nine years after its inception. The exception is, however, Expert System that started its foreign operations within nineteen years after the company's start-up. It is important to mention that Expert System has more or less the same age as New Boundaries Technologies (twenty-four and twenty-eight years old), but their internationalization pace differ substantially (nineteen and nine years after their inception).

- *Internationalization scope.* In respect to market diversification, the firms are active especially in close geographic markets (or, close psychic markets) notably because of the specificity of their offering that is conditioned by market entry barriers such as the language proficiency issue (for Doxee and Expert System). Only, New Boundary Technologies has a worldwide presence in twenty-six markets, thus, having a broad geographic scope (or, market diversification). Instead, TEAM Informatics, Doxee, and Expert System have a quite narrow geographic scope, but with future intention to expand their business in new geographic areas. For instance, the low psychic distant countries for the above companies are: Central Europe and the United States for Doxee; the United States, United Kingdom, Germany, etc. for Expert System; Australia and New Zealand for Team Informatics.

By considering the internationalization speed and path of the case firms, I present the findings in relation to the following research questions:

A. “In what way the entrepreneurs’ experience and education influence the speed of entering the international markets?”

B. “How relevant are the networks for the internationalization speed of SMEs?”

Therefore, the findings and conclusions are drawn as follows:

**A. Entrepreneur’s experience.** Some findings concur with those of Federico et al. (2011), Nummela et al. (2004), Loane et al. (2007) and other scholars in relation to entrepreneur’s international experience and education and the internationalization velocity. For example, the findings on TEAM Informatics and partially those on Expert System (partially, because of the relevance of the TMT’s experience and networks to the internationalization pace was more significant than that of the founders) confirm the above research question because there is a positive relationship between the entrepreneur’s international experience and internationalization speed.

From the other part the CEOs of New Boundaries Technologies, Doxee and Expert System did not spent any years abroad. This fact does not concur with the theoretical framework of the above authors. Furthermore, it should be mentioned that the composition of the TMT had a big impact on the market selection and entry mode, because of their previous work experience either abroad or previously dealing with international contacts, like in case of Expert System and TEAM Informatics. Therefore, when analyzing the social and relational capital of Expert System and TEAM Informatics, it is relevant to underline that the founding team had significant prior overseas experience; with individual members having, either worked, studied abroad, or had previous experience working for an international firm in the domestic market or for a multinational abroad.

Then, also in relation to the companies’ education, it is relevant to note that all Italian CEOs speak in English proficiently (New Boundaries Technologies and TEAM Informatics are American companies), and this fact facilitates the information flow between the domestic and overseas market.

It is also worthy to note that the CEOs of Doxee, Expert System and TEAM Informatics had relevant experience of the industry they were currently operating in. Therefore, this finding may support previous findings on the influence of entrepreneurs’ previous work experience on their early internationalization behaviour. Thus, the founders’ relevant technical skills combined with business and networking skills were important for the division of labour based on who had the best skills to perform particular tasks.

In addition, members of the management team in the case firms were generally well educated, and many had national or international post-graduate scientific training and education (notably when speaking about Expert System). Then, analyzing also the composition of TMT, close examination revealed that each member brought a specific set of skills and competencies to the firm (for example, international work experience for the TMT of TEAM Informatics and Expert System).

Typically, the firms were founded by two (Doxee and TEAM Informatics), or even three entrepreneurs (Expert System) and, eventually, because of the founder’s intangible resources, they had internationalized more rapidly. However, with regard to what are saying scholars on founding team versus alone founders, it should be pointed out that even if New Boundary Technologies was owned by one person, the company also showed intensive overseas trajectories (the number of international markets accounts for twenty-six). In conclusion to these

dimensions of the findings it is worthy to stress that there is no consensus on a “prescribed” formula for international success amongst firms in relation to the businesses owned by teams versus businesses owned by a single entrepreneur.

The interview data revealed that each internationalization pace was related directly to the founders’ entrepreneurial drive and international mindset, but, as well, indirectly to the professional experience of the TMT. This finding is consistent with other born global studies as this factor was seen to be important in each firm’s rapid internationalization. From the entrepreneur experience perspective, the TMT who adopted a positive orientation towards internationalization had gained prior work experience at managerial level within large multinational firms in marketing and selling functions (TEAM Informatics and Expert System). Additionally, in the case of TEAM Informatics the founder and the co-founder had strong previous international experience. Accordingly, the achieved international experience had a big impact on entrepreneur’s perception about their international potential. This international business experience provided exposure to and knowledge of how businesses operated in different countries are managed, which proved very relevant when internationalizing their own business activities.

Moreover, the role of entrepreneurs was extremely important and even small decisions were under their direct control. Overall, the internationalization pace of these firms appears to be determined by the international outlook and decision-making of their entrepreneurs (or TMT), although the influence of factors such as technology, competition and the size of the domestic market remain considerable.

**B. Networks.** In all studied cases, the correlation between networks and rapid internationalization is also positive. The findings on the case companies suggest strong evidence of the network approach to the internationalization velocity as underlined by several international business scholars (Al-Laham et al., 2008, Oviatt et al., 2005, Musteen et al., 2011 etc.)

Overall, I found out also that personal connections of founders and TMT tended to speed up the internationalization expansion because of international market knowledge transfer, for instance, with regard to where and how to grow internationally.

For example, New Boundary Technologies was not facilitated by its networks during the company’s first international venture, however, it got important information from several American governmental and private institutions (US Commercial Service and Minnesota Trade Office) and industry associations (Minnesota High Technology Association).

Then, the entry mode of TEAM Informatics was a relationships driven model because of the company’s personal and professional contacts. Moreover, this SME partners with several multinationals (Microsoft, Oracle, Google) that at their turn have considerable operations worldwide. Therefore, this kind of cooperation may have favored to some extent the knowledge exchange on overseas business opportunities.

Additionally, Expert System, thanks to its TMT composition that used to study and work abroad, was able to identify and exploit new opportunities in those foreign markets. The company also collaborates with some governmental institutions (Crisis Unit of the Ministry of Foreign Affairs) and several foundations (National Italian Foundation, Mind the Bridge, Business Association Italy America, etc.) It also used to have amongst its clients a multinational like Microsoft and partners with another multinational named Oracle.

Finally, Doxee's founders have also a rich set of professional and institutional ties either at national (Confindustria of Modena, University of Modena and Reggio Emilia, etc.) or international level (Italian-Czech Chamber of Commerce and Industry, Xerox, Oracle, etc.)

Summing up, all four companies have links across national borders between subjects that want to conduct international business with each other. I found out that partnerships and participation to different international leading events stressed their visibility in the national and international marketplace and offered networking and business opportunities. Additionally, these contacts convey trustworthy information and experiential learning that may shorten the time needed for understanding different business practices. Therefore, this kind of internationalization approach challenges and complements the gradual internationalization model. The gradual internationalization model (or step-by-step internationalization) seems to fit the best Expert System's internationalization strategy. However, at the same time, Expert System's internationalization approach appears to be in line also with the born-again model as the company did not have precocity but internationalization speed is implicit.

Interestingly, even if the province of Modena is well known for its international clusters, the ICT industry is not a key industry for the region. However, the above case companies proved to be successful on their international venture.

Accordingly, policy-makers and public agencies may benefit from these results: networking and knowledge-based activities should be constantly encouraged in order to accelerate the internationalization process of SMEs. Therefore, entrepreneurs' and managers' international orientation and capabilities should be promoted if more rapid internationalization process is desirable.

*General and research related cross-country findings: Italy versus USA.* At the beginning of the research, I supposed that USA and Italy are distinct in terms of economic development and culture. I believed that a comparison between these two nations, where export-focused SMEs play an important role in their respective economies could potentially reveal interesting insights on the internationalization speed and their main factors, in general, and the relevance of the entrepreneur's experience and networks, in particular.

Moreover, exploring the above-mentioned cases I was directed to understand the cross-national differences or similarities when analyzing the role of networks of people in the internationalization process and the importance of entrepreneurs' education and experience for a quicker penetration of foreign marketplaces. Accordingly, I found differences and similarities in the business culture of these countries concerning some dimensions: business culture, trade barriers, society structure, competition, etc.

- Cultural factor. For the explanation why many American companies (including our field companies) are internationally active in close psychic distant countries like Canada, Australia and New Zealand, this could be explained eventually by the relationship between the culture and the cost of doing business in a country and a region. Even if for example Australia and New Zealand are part of the Commonwealth, however, the language barrier does not persist and different costs associated with it are eliminated from the start. In the case of the Italian companies, as stressed previously, primarily, close psychic country markets were also chosen like, for instance, the European Union market or United States. However, those companies are also looking for an internationalization strategy in so-called emerging markets.

- Trade barriers. Then, for example, the explanation why many American small companies are operating in Canada could be related also to the geographical closeness and free trade agreement between Canada and the United States. Key elements of this agreement include the elimination of tariffs, the reduction of many non-tariff barriers, and it was among the first trade agreements to address trade in services. The same explanation could be given when speaking about the Italian case companies, where the European Union market still plays a key role for them.

- Competition. For instance, it is worthy to outline that between the American companies, there is a stronger competition for market share compared to Italian companies; accordingly, this aspect might have a positive role when referring to the success of companies' international operations. Alternatively, a company will better manage to survive and be successful abroad if within the domestic market was used to a high level of competition. However, TEAM Informatics, New Boundary Technologies and Doxee seem to be similar on the internationalization scale parameter.

- Individuals and Groups. Generally, the United States tend to emphasize the primacy of individual, whereas groups tend to figure much larger in Italy. American society seems to have a low degree of stratification and the mobility is high. For instance, following the thinking of Hill, the emphasis on individual performance finds expression in an admiration of rugged individualism and entrepreneurship. One can argue that the dynamism of the US economy and innovation owes much to the philosophy of individualism. Interestingly, individualism also find expression in a high degree of managerial mobility between companies. The lack of loyalty and commitment to an individual firm and the tendency to move for a better offer, can results in managers that have good general skills but lack the knowledge experience, and *network of contacts* to find solutions to the problems. (Hill, 2009)

Instead, quite the opposite thing could be seen in Italy, where the mobility between companies is very low and group membership is very important and, this fact may have a certain impact on the establishment of professional networks between its members. For example, in the case of Italian companies, lifetime employment is more a norm than an exception. In addition, it seems that the values of group identification have an important role into society and this fact might discourage managers and workers from moving from company to company. Therefore, this could be perceived as having a negative impact when speaking about the internationalization pace of SMEs, as eventually an outsider probably with a substantial international experience and mindset will not be allowed to enter the TMT of that given company. However, this fact might have also advantages, as probably it is easier to build a more stable network of business and personal contacts when the managerial mobility between companies is lower.

Then, Italy seems to have high power distance and high collectivism as opposed to USA, which have low power distance and high individualism. These aspects might have a significant impact when related to "*connections*" in USA or "*conoscenze*" / "*contatti*" in Italy. From the other part, because Italy has a high collectivism level, the role of networks in the internationalization pace might have been more significant than for the American firms.

Finally, as regards the **essential added value of the research**, the thesis intends to address the gap described in the paragraph "State of the art and goals", as well as in others paragraphs on the analysis of the main determinants of the internationalization speed in technology-based

companies. The focus was on describing and explaining the relevance of social capital to a rapid and successful internationalization process through a cross-country research. It intends to require attention for more in depth cross-nation studies on the relationship between the entrepreneur's background and the internationalization dynamics.

As a **recommendation**, new companies that target internationalization should locate themselves in "internationalized" clusters in order to benefit from local knowledge spillovers effects. Secondly, if founders lack significant international experience, they should hire experienced TMT (external managers) with extensive international contacts instead of deploying family managers. In spite of the consistent evidences revealed, this investigation is not exempt of certain **limitations** because its findings may not be generalized and are not transferable to other companies, as they regard only the above companies and the research questions are very contextual and specific to their business environment.

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## Attachment 1. An overview on the research content of some journals

Authors	Journal	Year	Research content
Zhang et al.	Information Systems Journal	2013	Paper presents the findings about the effects of IT capabilities on the export performance of Chinese and US Born-global firms.
D'Angelo et al.	International Marketing Review	2013	Paper argues that networking and external managers exclusively exert their positive impact respectively on regional and global export performance. It tests these hypotheses on a sample of 2,657 Italian manufacturing firms.
Kyvik et al.	Journal of International Entrepreneurship	2013	Paper investigates the relationship between the global mindset of small-firm decision makers and their firms' internationalization behavior.
Falize	Working Paper Series, Louvain School of Management	2012	Paper addresses how international networks acts to reduce internationalization risks for BGs and BAGs.
Lin	European Management Journal	2012	Paper addresses rapid pace, narrow scope and an irregular rhythm of internationalization of SMEs when there is high level of the family ownership.
Kuivalainen et al.	European Management Journal	2012	Paper investigates the literature on BG and BAGs, and on traditional patterns trough tree dimension: time, scale and scope of internationalization of SMEs
Hilmersson et al.	Journal of International Marketing.	2012	Paper answers the research question on the role of experiential knowledge in reducing the uncertainty effect when entering foreign market as Russia and China.
Kalinik et al.	International Business Review.	2012	Paper explains how within the last 20 years, the SMEs have accelerated their international commitment despite limited market knowledge, limited use of networks, and limited international experience of entrepreneurs.
Federico et al.	Semana della Integration	2011	Paper analyses the entrepreneur's human and relation capital and its impact on early or late internationalization process.
Nielsen et al.	Journal of World Business	2011	Paper analyses the top management team's international experience with regard to the entry mode choice.
Cuervo-Cazura	Journal of World Business	2011	Paper investigates the three types of foreign market knowledge in order to overcome market expansion difficulties like internationalization, business and institutional knowledge.
Kraus	African Journal of Business Management	2011	Paper applies sustains that international entrepreneurship, sustaining that the research on international entrepreneurship is influenced by the scientific fields of international business, entrepreneurship theory, SME internationalization, and born global/international new venture theory.
Taylor et al.	International Small Business Journal	2011	Paper examines the pace, scale and pattern of BG internationalization and underlines the key factors in determining the pace with which a firm internationalizes.

Musteen et al.	Journal of World Business	2010	Paper bases on social capital theory and reveals structural, cognitive and relational aspects of the international network of SME CEOs to two internationalization outcomes, like speed and performance.
Briga	Irish Journal of Management	2010	Paper explains the SMEs internationalization, the choice of international markets and their main challenges by the qualitative approach method.
Morgan-Thomas et al.	International Small Business Journal.	2009	Paper addresses the speed of internationalization on a sample of 200 newly internationalizing firms compared in relation to their knowledge intensity, their reliance on ICT and their international diversification strategy.
Schwens et al.	International Business Review	2009	Paper presents the types of learning: from direct experience, from experience of others, from paradigms of interpretation with reference to the late and early internationalizing SMEs
Al-Laham et al.	Journal of Business Venturing	2008	Paper shows that firms located in clusters with higher “international alliance intensity” have a higher probability to form international research alliances.
Acedo et al.	JWB	2007	Paper examines four aspects of managerial cognition among firms, as differentiated by speed of market entry
Belso-Martinez	Working Paper, University Miguel Hernández	2007	Paper reviews previous research on internationalization of SMEs, thus not finding greater differentiation for rapidly internationalized Spanish manufacturing firms.
Loane et al.	Journal of World Business	2007	Paper presents the findings of a cross-national study conducted in Australia, Canada, Ireland and New Zealand in order to analyze the impact of the management team on SME’s internationalization
Ruzzier et al.	Journal of Small Business and Enterprise Development.	2006	Paper reviews the main theory of internationalization: the transaction cost approach, the eclectic paradigm, stage models of internationalization, innovation related models, network approach, etc.
Arenius	Journal of International Entrepreneurship	2005	Paper focuses on the relationship between the psychic distance and the speed of market penetration
Oviatt et al.	Entrepreneurship: Theory & Practice	2005	Paper presents a model of how the speed of entrepreneurial internationalization is influenced by various forces.
Nummela et al.	Canadian Journal Of Administrative Sciences	2004	Paper sheds some lights on the global mindset of small Finish ICT companies scrutinizing both the drivers of the global mindset and its relationship to the firm’s export performance.
Arenius	Working Paper Series, Helsinki University of Technology	2002	Paper distinguishes between depth, distance and diversity of the firm’s international activities with particular concentration on BGs.
Petersen et al.	Working Paper, Copenhagen Business School	2001	Paper presents firms’ internationalization pattern and explain the main characteristic of the Uppsala Model especially from point of view of specific market knowledge.

## Attachment 2. Linee guida per l'intervista: domande generali e specifiche <sup>19</sup>

PMI:

Amministratore delegato/Imprenditore:

Sede:

Data:

Durata:

### *Velocità, grandezza e ambito del processo di internazionalizzazione: aspetti introduttivi*

1. Da quanti anni l'azienda è presente sui mercati internazionali?
2. Perché l'azienda ha deciso di espandersi all'estero? Ragioni e motivi?
3. Approssimativamente qual è la percentuale della quota che corrisponde alla quota del fatturato estero?
4. Come sono stati scelti i mercati esteri?
5. Nel futuro l'azienda intende aumentare la quota del fatturato estero?
6. Qual è il mercato estero di più lunga durata?
7. Ecco una lista con le modalità di entrata nei mercati esteri. Quale è stata la modalità di entrata utilizzata nel mercato estero X?

Export/ Import
Turnkey contracts
Licensing
Franchising
Outsourcing abroad
Joint-venture with a foreign partner
Wholly owned subsidiaries
Other

8. Qual è il più grande mercato estero come percentuale sul fatturato totale?
9. Approssimativamente che percentuale rappresenta il mercato estero X?
10. La modalità di entrata nel caso del mercato estero X è stata cambiata nel tempo?
11. La modalità di entrata è stata la stessa nei diversi mercati esteri?
12. È stata mai modificata la modalità di entrata dell'azienda nei nuovi mercati rispetto al suo primo ingresso nel mercato internazionale?
13. Qual è stata la motivazione che ha provocato una modifica delle modalità di entrata nei mercati internazionali?

### *L'importanza delle reti di contatti (fornitori, competitori, clienti, istituzioni) durante la prima espansione internazionale*

14. Può fornire un esempio di reti di contatti che hanno facilitato la sua prima espansione internazionale?
15. Le sue reti di contatti erano già attivi all'estero durante la sua prima espansione nel paese di riferimento?
16. Esemplifichi la più utile fonte di informazione ottenuta tramite reti di contatti che ha favorito la sua espansione estera.
17. Come valuta la qualità di tali fonti di informazioni?
18. Come sono distribuite le vostre reti di contatto dal punto di vista geografico?
19. All'interno dell'azienda chi gestisce i contatti con l'estero?

### *La rilevanza dell'esperienza professionale e del percorso di studio dell'imprenditore nel processo di internazionalizzazione*

20. Qual è il livello dei suoi studi? Laurea/post-laurea?
21. Quanti anni ha trascorso all'estero per motivi di studio o/e lavoro?
22. In che lingua comunicate con i vostri partners internazionali?
23. La Sua esperienza lavorativa precedente era attinente all'attuale settore di attività aziendale?
24. Lei è socio unico di quest'azienda?
25. Si considera una persona con un orientamento internazionale?

<sup>19</sup> Data as of 2013 and 2014.

### Attachment 3. Interview guideline: general and specific questions<sup>20</sup>

SME:

Answering CEO/Founder/Co-founder:

Headquarter:

Date:

Timing:

#### *Pace, scale and scope of the internationalization process: introductory aspects*

1. When did you start your first International venture?
2. Why has your company decided to go abroad? Reasons and motivations?
3. What is the international turnover ratio compared to the total one? In percentage roughly?
4. How your foreign locations were chosen?
5. In the future, does the company intend to increase the share of its foreign sales?
6. What is the most longstanding country market?
7. Here is the list of entry modes. What was the entry mode used during your first international operations when entering X marketplace?

Export/ Import
Turnkey contracts
Licensing
Franchising
Outsourcing abroad
Joint-venture with a foreign partner
Wholly owned subsidiaries
Other

8. What is the biggest country market as percentage of the total revenue?
9. What percentage X represents roughly?
10. In country X, did the mode of operation change over time?
11. Was the entry mode the same in different country markets?
12. Did your entry mode change with time when entering new markets compared to the initial international venture?
13. What was the motivation for changing the entry modes over time?

#### *The importance of the network (of suppliers, competitors, customers, institutions) during your first international venture*

14. Can you give me an example of networks of people that facilitated your first international venture?
15. Have your networks of people been active internationally during your first international venture?
16. Which is the most important source of information obtained from networks of people that is useful for expanding overseas?
17. What do you think of the quality of this information?
18. In which way are your contacts distributed from geographical point of view?
19. Who does manage the relations with foreign markets?

#### *The relevance of entrepreneurs' experience and education in the internationalization process*

20. What is your level of education? Undergraduate or post-graduate?
21. Have you spent any years studying and/or working abroad? If yes, how many?
22. In which language do you communicate with your international partners?
23. Has your previous work experience helped you with your current job?
24. Are you the sole owner of this company?
25. Do you consider yourself as a person with an international mindset?

<sup>20</sup> Data as of 2013 and 2014.

#### **Attachment 4. Conversation with one of the international trade representatives from Minnesota Trade Office: general and thesis related information**<sup>21</sup>

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1. Why Minnesota based companies decide to expand overseas?
2. On average, do Minnesota companies approach distant country markets, like in term of differences in language, regulation, culture, etc., or, do they export to similar country markets?
3. In which way the Minnesota small companies could draw on the large amount of experience, skills and information of Minnesota Trade Office?
4. What kind of information/services about market opportunities are you providing, for example, to the novice exporters?
5. Speaking about lack of resources, how do you help Minnesota-based companies to successfully sell their products/services worldwide?
6. Do you have IT companies that are affiliated to the Minnesota Trade Office?
7. What are the main country markets for Minnesota SMEs from IT industry?
8. In your opinion how important, is the international experience and education of the CEO in a successful internationalization process?
9. Do you think that thanks to the communication technologies, dismantling of trade barriers, etc, the internationalization process of small companies is accelerated?

What do you think about the international potential and growth of small companies from Minnesota?

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<sup>21</sup> The interview was accomplished by phone for around 30 minutes. The information provided during this talk refers to the paragraph on “*International potential and growth of American SMEs (Minnesota)*”

**Attachment 5. The Minnesota (USA) based companies invited to be part of the research.** <sup>22</sup>

No.	Companies	Founded /HQ	Empl oyees	General email and/or emails of CEOs or Co-founders	CEOs or Global Sales Managers	International operations
1.	<b><u>Third Wave Systems</u></b> <i>www.thirdwavesys.com</i> 6475 City West Parkway Minneapolis, MN 55344	1993, Minneapolis	30	sales@thirdwavesys.com	Troy Marusich	Technical support: South Korea, Japan, Taiwan, China, Germany; Distributors: Germany
2.	<b><u>Data Sciences International</u></b> <i>www.datasci.com</i> 119 14th St NW, Suite 100 St. Paul, MN 55112 U.S.A. 1-800-262-9687 (U.S.)	1984, Saint Paul	185	Sales@datasci.com djonson@datasci.com	Bert Harman D. Johnson	European Offices: France, Germany Italy, United Kingdom, Netherlands; Regional office in Shanghai that supports the Asia Pacific region
3.	<b><u>Sopheon Corporation</u></b> <i>www.sopheon.com</i> 3001 Metro Drive, Bloomington, MN 55425 Tel: +1 952-851-7500 Fax: +1 952-851-7599	1984, Bloomington	90	info@sopheon.com Barry.Mence@sopheon.com Arif.Karimjee@sopheon.com Andy.Michuda@sopheon.com	Barry Mence Barry Mence Arif Karimjee Andy Michuda	United Kingdom, Netherlands (Amsterdam and Maastricht), Germany, France
4.	<b><u>Quantum Retail Technology</u></b> <i>www.quantumretail.com</i> Campbell Mithun Tower 222 South Ninth Street, Suite 900, Minneapolis, MN 55402	2006, Minneapolis	45	info@quantumretail.com talent@quantumretail.com Wyndham. Albery@quantumretail.com	Steven Buege, Morgan Day, Wyndham Albery	Quantum North America Quantum Europe
5.	<b><u>EmergingSoft</u></b> <i>www.emergingsoft.com</i> 6365 Carlson Drive, Suite D, Eden Prairie, MN 55346	N/A, Eden Prairie	N/A	info@emergingsoft.com busdev@emergingsoft.com	N/A (General email)	Australia Customers European Customers Asia Pacific Customers
6.	<b><u>Tightrope Media Systems</u></b> <i>www.trms.com</i> 800 Transfer Road, Suite1B,	Saint Paul, 1997	15	jay.kirtley@trms.com sales@trms.com	Nicole REED	Asia Canada Middle East

<sup>22</sup>In order to be qualified companies have had to be US-based, privately held, for profit, and independent – not subsidiaries or divisions of other companies – as of July 31, 2013. The data were taken from different databases, like Business Source Premier and LexisNexis Academic Search from the Bush Memorial Library and Unworldly Database, Hoovers International Company Database, Reference USA Database from James J. Hill Library. The information required integration with other database because some data were missing or were not fully updated.

	St.Paul, Minnesota, Phone: 866-866-4118 (205)			kelli.smith@trms.com pete.tufigno@trms.com	K. SMITH	Europe Latin America
7.	<b>New Boundary Technologies</b> <i>www.newboundary.com</i> 3433 Broadway Street N.E., Suite 150, Minneapolis, MN 55413	1985, Minneapolis	30	kpearson@newboundary.com sales@newboundary.com	Kim Pearson	International sales partners worldwide
8.	<b>Mariner Software</b> <i>www.marinersoftware.com</i> PO Box 1912, Minneapolis, MN 55311, Phone: 800-240-6562	Minneapolis	N/A	sales@marinersoftware.com lryan@marinersoftware.com bpaar@marinersoftware.com Mwray@marinersoftware.com	Logan Ryan Bill Paar Michael Wray	Retailers worldwide
9.	<b>Warecorp</b> <i>www.warecorp.com</i> 400 South 4th Street, Suite 401- 103, Minneapolis, MN. 55415 Phone: 952-938-5448 Fax: 612-573-6488	Minneapolis, 2005	70	info@warecorp.com Chris.Dykstra@warecorp.com Lee.Rogas@warecorp.com	Chris.Dykstra Lee.Rogas	Belarus
10.	<b>WiseSoft</b> <i>www.wise-soft.com</i> IDS Tower, 80 S. 8th Street, 9th Floor, Minneapolis, MN 55402, Phone: (612) 568-7259	Minneapolis, 1996	25	corpmail@wise-soft.com Awahi@wise-soft.com	Atul Wahi	India
11.	<b>Kinetic Data</b> <i>www.kineticdata.com</i> 235 East Sixth St., Suite 400B St. Paul, MN 55101, Phone: 1-651- 695-8566	Saint Paul, 1998	10	sales@kineticdata.com Unus.Gaffoor@kineticdata.co m John.Sundberg @kineticdata.com	Unus Gaffoor Unus Gaffoor John Sundberg	Australia International Sales
12.	<b>Lancet Software</b> <i>www.lancetsoftware.com</i> 11980 Portland Avenue South, Burnsville, Minnesota 55337	Burnsville, 1997	36	tniccum@LancetSoftware.co m choltan@lancetsoftware.com	Tom Niccum Chris Holtan	Asia and Pacific (India)
13.	<b>Team Informatics</b> <i>www.teaminformatics.com</i> 3900 Northwoods Drive Suite 350, Arden Hills, MN 55112 United States	Arden Hills 2001	65	Dave.Shannon@teaminformat ics.com Doug.Thompson@teaminform atics.com	Dave Shannon Doug Thompson	Australia New Zealand United Kingdom

**Attachment 6. The Modena (Italy) based companies invited to be part of the research.** <sup>23</sup>

No	Companies	Employees <sup>24</sup>	General email and/or emails of CEOs or Co-founders	CEOs/ Co-founders	International operations
	<b><u>Doxee spa,</u></b> www.doxee.com, Virgilio 54/A str., 41123 Modena, Italy, Tel: 059 88680, Fax: 059 8860087	C	pcavicchioli@ebilling.it	Paolo Cavicchioli, Sergio Muratori Casali	Brasil, Romania, Czech Republic, Slovak Republic
2.	<b><u>Progea srl,</u></b> www.progea.com, S.Anna 88/E str., I-41122, Modena, Italy, Tel. 059 451060, Fax.059 451061	A	info@progea.com pfiorani@progea.com	Paolo Fiorani	Germany, Switzerland, India, France
3.	<b><u>Melazeta srl,</u></b> www.melazzeta.com, Tacito 55 str., 41123, Modena, Italy, Tel. 059 847320, Fax. 059 885245	A	info@melazeta.com	Franco Bondi, Lara Oliveti	Luxemburg
4.	<b><u>Expert System spa,</u></b> http://www.expertsystem, Virgilio 56/Q str., 41123, Modena, Italy, Tel. 059 894011, Fax. 059 894099	C	info@expertsystem.it, mvarone@expertsystem.it	Marco Varone, Stefano Spaggiari	USA, Germany, Ireland, United Kingdom
5.	<b><u>Ax Informatica srl,</u></b> www.axinformatica.it, Piazza De Gasperi 15, 41042 Fiorano Modenese, Modena, Italy, Tel. 0536 830086 Fax. 0536 832776	A	info@axinformatica.it dnovi@axinformatica.it lguidi@axinformatica.it	Domenico Novi, Luigi Guidi	Spain
6.	<b><u>Apex srl,</u></b> www.apex.it, Emilia Est 985 str., 41122 Modena, Italy, Tel. 059 346284, Fax. 059 356632	A	apex@apex.it ibenetti@apex.it	Ilario Benetti	China, Singapore, Luxemburg, Switzerland
7.	<b><u>Corso Roma srl,</u></b> www.corsoromasrl.com, Liguria, 1 str., 41012 Carpi Modena, Italy, Tel. 059 8381737	A	davide@corsoromasrl.com info@corsoromasrl.com	Davide Lugli	USA
8.	<b><u>Objtec srl,</u></b> www.objtec.it, Liguria 3 str., 41012 Carpi Modena, Italy, Tel. 059 8381737	A	info@objtec.it	Lucio Morbilli	Romania

<sup>23</sup> Confindustria of Modena, Communication-Information Technology, <http://www.confindustriamodena.it/repository/upload/annuario/Annuario.pdf>. Industry;

<sup>24</sup> Number of Employees: A from 0 to 50; B from 51 to 100; C from 101 to 250.

## Attachment 7. Companies' selection <sup>25</sup>

DIMENSIONS	New Boundary Technologies	TEAM Informatics	Doxee	Expert System
<b>Company Data</b>				
<b>Age</b>	28 years	14 years	12 years	24 years
<b>Size of firms (No. of employees )</b>	20-50 employees	65 employees	130 employees	130 employees
<b>Type of founding</b>	Independent company	Independent company	Independent company	Independent Company
<b>Industry</b>	Software solutions	Software Publishers <sup>26</sup>	ICT <sup>27</sup>	ICT
<b>Main product</b>	IT Management Software	Software products	BCPortal	Semantic Software
<b>Establishment of firm</b>	1985	1999	2001	1989
<b>The first international venture</b>	1994	2007	2009	2008
<b>Speed of internationalization (to first market)</b>	9 years	8 years	8 years	19 years
<b>% of foreign sales</b>	20-25%	30 %	15%	20 %
<b>Number of international markets entered</b>	26	3	5	4
<b>Psychic distance</b>	Low psychic distance markets	Low psychic distance markets	Low psychic distance markets	Low psychic distance markets
<b>Entry mode</b>	International distribution partners	Wholly-owned subsidiaries	Joint venture, acquisition, and distribution channels	Wholly-owned subsidiaries, a mix of direct and indirect sales

<sup>25</sup> Data as of December 2013.

<sup>26</sup> According to SIC (Standard Industrial Classification)

<sup>27</sup> According to Confindustria of Modena

## Attachment 8. Conceptual framework and “proof” quotes<sup>28</sup>

Determinants	New Boundary Technologies <sup>29</sup>	Team Informatics <sup>30</sup>	Doxee <sup>31</sup>	Expert System <sup>32</sup>
<b>Introductory facts</b>	<p><i>We expanded abroad because of diversifying the revenue streams, getting new ideas from clients that are operating in very competitive markets, ...</i></p> <p><i>...you need time and market knowledge in order to sell overseas...</i></p> <p><i>We are using international sales partners...</i></p> <p><i>...for example, it took several years for our German distributor in order to build up his market share and to be successful.</i></p>	<p><i>Our company decided to expand abroad because of a combination of things: I have worked for a software company previously and we had a professional group down in Australia and new Zealand...</i></p> <p><i>...we saw a lot of opportunities down in Australia and New Zealand for the services that we provided.</i></p> <p><i>Our international venture started in 2007.</i></p> <p><i>Initially we were flying in and out there some times a year; my business partner did as well...</i></p> <p><i>...that helped to start the business within a 50 /50 ownership between the company from New Zealand and the USA.</i></p> <p><i>...roughly, 30 % of our revenue is internationally.</i></p> <p><i>Australia is the biggest international market for our company that may be changing with</i></p>	<p><i>Per cercare opportunità di crescita per l'azienda.... Era più conveniente per noi andare all'estero rimanendo sul target delle grandi aziende. (Partner &amp; Corporate Marketing Director)</i></p> <p><i>I mercati sono stati scelti non per caso, ma sulla base di opportunità puntuali. (Partner &amp; Corporate Marketing Director)</i></p> <p><i>Essere presente direttamente negli Stati Uniti anche in chiave marketing e brand awareness è stato molto utile. (Partner &amp; Corporate Marketing Director)</i></p> <p><i>La presenza diretta crea un ponte più forte, semplifica il dialogo e crea più scambio culturale col nuovo mercato estero. (Partner &amp; Corporate Marketing Director)</i></p> <p><i>...poi quando si tratta dell'investimento stesso da fare all'estero, si deve capire a che livello di maturazione è il mercato. (Partner &amp; Corporate Marketing Director)</i></p>	<p><i>L'azienda è presente all'estero dal 2008 dunque direi da 5 anni.</i></p> <p><i>...il mercato per il nostro software non è limitato all'Italia e i primi tentativi hanno dimostrato che abbiamo una serie di prodotti in grado di competere con successo anche con software di aziende più note.</i></p> <p><i>Il nostro software è un software di analisi linguistica quindi abbiamo scelto i mercati in funzione delle lingue già sviluppate (oltre l'italiano abbiamo l'inglese) e alla potenzialità dei mercati (USA e UK in primis).</i></p> <p><i>Alcuni clienti sono internazionali..., però non è che ci abbiano aiutato molto dal punto di vista dell'internazionalizzazione.</i></p>

<sup>28</sup> Data retrieved from interviews.

<sup>29</sup> Founder and CEO.

<sup>30</sup> Global Sales Manager and Partner.

<sup>31</sup> Founder and CEO; Partner & Corporate Marketing Director.

<sup>32</sup> VP Strategy & Business Development.

		<i>the contracts that we are getting in place with New Zealand...</i>		
<b>1. Entrepreneurs' experience and education</b>	<p><i>...I've worked as a Mechanical Engineer at General Electric...</i></p> <p><i>No, I haven't studied, neither worked abroad.</i></p> <p><i>Yes, I am the sole owner of the company...</i></p>	<p><i>I've worked a lot abroad, I spent 23 years.</i></p> <p><i>I spent a lot of time working in Europe: I have been away to Amsterdam, to Switzerland, to London, to France.</i></p> <p><i>...last seven years I have spent mostly in Australia and New Zealand...</i></p> <p><i>So, like one of my business partner, he spent a lot of time in Korea and Japan, he has that international experience.</i></p>	<p><i>Comunico in inglese con i partner internazionali. Questo è fondamentale ma a volte non è sufficiente. (Founder and CEO)</i></p> <p><i>Non ho lavorato all'estero prima di Doxee.(Founder and CEO)</i></p> <p><i>Oggi l'idea è quella di riuscire a crescere coll'estero...(Founder and CEO)</i></p> <p><i>...il mindset è quello di aver i poli aperti anche in chiave internazionale, dunque cambiare a seconda dei paesi in cui si opera.(Founder and CEO)</i></p>	<p><i>I CEO sempre hanno lavorato in Italia.</i></p> <p><i>Sì, i CEO parlano in inglese...</i></p> <p><i>Sì, comunico in inglese con i partner internazionali.</i></p> <p><i>...però la mia rete e poi quella delle persone che sono venute a bordo ci hanno aiutato durante la prima espansione internazionale.</i></p> <p><i>Io ho dedicato una gran parte della mia carriera proprio a questo (riferito al mindset internazionale)...</i></p>
<b>2. Networks</b>	<p><i>Minnesota Trade Office helped us a lot to find distributors in South America.</i></p> <p><i>We organize frequently meetings with international distributors ...this is an environment of networking and of sharing business idea.</i></p> <p><i>Yes, our international distributors, they were as well active internationally, we obtain a lot of knowledge transfer from them.</i></p> <p><i>...we are collaborating with reliable international distributors.</i></p> <p><i>The Gold Key Matching Service helped us in finding international business partners...</i></p>	<p><i>...in Australia I was working down so I had entire networks</i></p> <p><i>In New Zealand, we did not have relationships and it was a challenge and entering Central America it is again more a relationships driven...</i></p> <p><i>...the people that we knew that we worked with and stay in my network are very reliable and have professional contacts...</i></p> <p><i>...I think for the most part it is a small community of both internationally contacts...</i></p>	<p><i>Queste relazioni ti aiutano a conoscere le fiere di settore, di inserirti in un contesto che ti facilita invece di dover fare tutto da solo.</i></p> <p><i>Dooxe è nella fase iniziale di un percorso di internazionalizzazione e deve coinvolgere le figure chiave dell'azienda per costruire più trust nei rapporti internazionali. (Founder and CEO)</i></p> <p><i>Queste reti di contatti ti possono indicare meglio che cosa avviene nel paese estero di riferimento. (Founder and CEO)</i></p> <p><i>È assolutamente possibile costruire un modello di replica dell'internazionalizzazione soprattutto quando impatta nella ricerca di partnership come nel nostro settore. (Founder and CEO)</i></p>	<p><i>...ma in realtà li abbiamo conosciuti dopo la prima espansione all'estero (BAA, NIAF, Mind The Bridge in USA). La principale conoscenza del mercato americano deriva dal fatto che io ho lavorato lì per tanti anni...</i></p> <p><i>Avevo qualche contatto personale avendo vissuto in USA per 10 anni.</i></p> <p><i>All'inizio dell'espansione all'estero di Expert System principalmente avevo dei contatti personali...</i></p> <p><i>...a noi sono serviti contatti con potenziali prospects.</i></p> <p><i>Abbiamo lavorato in passato con Microsoft, lavoriamo adesso con Google. La partnership con Google è un pochino più commerciale.</i></p>

## REFERENCES

ACOCELLA N., SCHIATTARELLA R. *Teorie della internazionalizzazione e realtà italiana*, Liguori, Napoli, 1989, p. 389.

AIELLO G. *L'internazionalizzazione delle imprese del dettaglio*, Collana Economia, Sez. 4, F. Angeli, Milano, 2005, p. 207.

ALESSANDRINI S. *I servizi reali all'internazionalizzazione delle imprese: aspetti teorici e metodologie di analisi*, Il Mulino, Bologna, 1997, p. 289.

ALESSANDRINI S., SECCHI C. *Il ruolo delle trading company nel processo di internazionalizzazione dell'economia italiana*, F. Angeli, Milano, 1986, p. 175.

AL-LAHAM A., SOUITARIS V. *Network embeddedness and new-venture internationalization: Analyzing international linkages in the German biotech industry*, *Journal of Business Venturing*, September 2008, Vol. 23(5), p. 567-586.

ARENIUS P. *The psychic distance postulate revised: From market selection to speed of market penetration*, *Journal of International Entrepreneurship*, 2005, Vol. 3 (2), 115-131.

ARNOLD S., CHADRABA P., SPRINGER R. *Marketing strategies for Central and Eastern Europe*, Ashgate, 2001, p. 306.

AUTIO E., LUMMAA H., ARENIUS P. *Emergent "Born Globals": crafting early and rapid internationalization strategies in technology-based new firms*, Working Paper Series, Finland 2002, p.14.

BANSAL P., CORLEY K. *The coming of age for qualitative research: embracing the diversity of qualitative methods*, *Academy of Management Journal*, April 2011, p. 233-237.

BELLANTE F. *Il controllo degli equilibri valutari nelle imprese industriali internazionali*, Giuffrè, Milano, 1987, p.129.

BELSO-MARTINEZ J.A. *Why are some Spanish manufacturing firms internationalizing rapidly? The role of business and institutional international networks*, *Entrepreneurship and Regional Development: An International Journal*, 20 February 2007, p.22.

BELTRAMINI E., GAETA G. *Il trade marketing: il mercato, i canali distributivi, i rapporti industria e distribuzione, il mix, la comunicazione*, ETAS, Milano, 1994, p. 228.

BENEVOLO C. *L'internazionalizzazione delle imprese di servizi: produrre ed erogare per i mercati esteri*, Giappichelli, Torino, 2003, p. 281.

BJORKMAN I., MATS F. The nature of the international firm: Nordic contributions to international business research, Copenhagen studies in economics and management, Copenhagen Business School Press, 1997, p. 500.

BLOMSTERMO A., SHARMA D.D. Learning in the internationalisation process of firms - Elgar, Cheltenham (UK) Northampton (MA), 2003, p. 293.

BRANCK A. E. Export practice and management, 3 ed., Chapman & Hall, London, 1994, p. 456.

BRIGA B. International Small Business Growth: A Process Perspective, Irish Journal of Management, 2010, Vol. 29 Issue 2, p. 87-106.

CAFFERATA R., GENCO P. Competitività, informazioni e internazionalizzazione delle piccole-medie imprese, Il Mulino, Bologna, 1997, p. 378.

CANNAVALE C. Strategie di internazionalizzazione delle imprese nell'est europeo: determinanti e modalità di attuazione, Giappichelli, Torino, 2008, p. 260.

CARLINO A. Marketing e strategie di posizionamento internazionale, F. Angeli, Milano, 2005, p. 98.

CAROLI M. G. Il processo di internazionalizzazione delle piccole imprese: un'indagine empirica sulle aziende del Lazio, F. Angeli, Milano, 2007, p. 428.

CAROLI M.G., FRATOCCHI L. Nuove tendenze nelle strategie di internazionalizzazione delle imprese minori: le modalità di entrata emergenti tra alleanze e commercio elettronico, Angeli, Milano, 2000, p. 296.

CASELLI C. L'avventura della internazionalizzazione: logiche e strumenti per le imprese, Giappichelli, Torino, 1994, p. 386.

CHIRICO F., BRUNO A. M., PIRONTI M. Strategie di crescita e di internazionalizzazione delle family SMEs nel contesto globale e distrettuale, CEDAM, Padova, 2008, p. 224.

COEURDEROY R., COWLING M., LICHT G., MURRAY G. Young firm internationalization and survival: Empirical tests on a panel of “adolescent” new technology-based firms in Germany and UK, International Small Business Journal, August 2012, Vol. 30, N. 5, p. 22.

COMBA D., GARELLI G. Vendere all'estero: guida pratica per l'export manager, Il Sole 24 Ore, Milano, 2002, p. 373.

Commission Recommendation 96/280/EC of 3 April 1996 concerning the definition of small and medium-sized enterprises, Official Journal L 107, 30 April 1996, p. 4-9.

CUERVO- CAZURA A. Selecting the country in which to start internationalization: The non-sequential internationalization model, *Journal of World Business*, 2011, Vol. 46, p. 426-437.

D'ANGELO A., MAJOCCHI A., ZUCHELLA A., BUCK T. Geographical pathways for SME internationalization: insights from an Italian sample, *International Marketing Review*, March 2013, Vol. 30(2), p. 80-105.

DELLA BELLA C., PAGLIACCI F. Servizi reali e finanziari per l'internazionalizzazione delle imprese: un'analisi dinamica della domanda, Angeli, Milano, 2009, p. 239.

DENZIN N. K., LINCOLN Y. S. Handbook of qualitative research, 2 ed., Sage Publications, 1994, p. 643.

DEPPERU D. L'internazionalizzazione delle piccole e medie imprese, *Scritti di economia aziendale*, EGEA, Milano, 1993, p.342.

DESCHAMPSNEUFS H. Come vendere all'estero: principi di marketing internazionale e di promozione delle vendite all'estero, 2 ed., Angeli, Milano, 1982, p. 371.

DEVECCHI C., FRAQUELLI G. Dinamiche di sviluppo e internazionalizzazione del family business, Il mulino, Bologna, 2008, p. 566.

DIMITRATOS P., PETROU A., PLAKOYIANNAKI E. Strategic decision-making process in internationalization: Does national culture of the focal firm matter? *Journal of World Business*, 2011, Vol. 46, p. 194-204.

EFRAT K., SHOHAM A. Born global firms: The differences between their short and long-term performance drivers, *Journal of World Business*, 2012, Vol.47, p. 675-685.

EISENHARDT K.M. Building theories from case study research, *Academy of Management Review*, 1989, Vol. 14, p. 532-550.

ENET D. La PME et l'exportation: guide pratique à l'usage des nouveaux exportateurs, 2 ed., *Entreprise Moderne D'Edition*, Paris, 1980, p. 166.

FALIZE M. COEURDEROY R. The network approach to rapid internationalization among Born-Global and born again Global firms: The case of the “global Innovation network”, *Research in Entrepreneurship and Small Business*, Lyon, 2012, p. 33.

FARCHIONE A. Internazionalizzazione non vuol dire esportazione, *PMI: Il mensile della piccola e media impresa*, Febbraio 2010, N.2, p. 43-49.

FEDERICO H.S., KANTIS H., RAILP A., RIALP J. Does entrepreneurs human and relational capital affect early internationalization? *European Journal of International Management*, Inderscience Publishers, 2009, p. 199-215.

FERDINANDI M. Internazionalizzazione: le sue forme, l'analisi delle diversità e gli investimenti diretti esteri, McGraw-Hill, Milano, 2009, p. 136.

FIDELI R. Metodologia delle scienze umane. La comparazione, Franco Angeli, Milano, 1998, p. 304.

FIGUERA-DE-LEMOS F, JOHANSON J., VAHLNE J.E. Risk management in the internationalization process of the firm: A note on the Uppsala model, *Journal of World Business*, 2011, Vol. 46, p. 143-153.

FLYVBJERG F. Five Misunderstandings about Case-Study Research, *Qualitative Inquiry*, April 2006, N.12, Aalborg University Denmark, p. 219-245.

HAGEN B., ZUCHELLA A. A longitudinal look at the international entrepreneurship dimensions: cases and predictions, *International Journal of Management Cases*, 2011, Vol. 13, Issue 3, p. 484-504.

HILL C.W. L. *Global business today*, 7th ed., McGraw-Hill Irwin, New York, 2009.

HILMERSSON M., JANSSON H. Reducing Uncertainty in the Emerging Market Entry Process: On the Relationship Among International Experiential Knowledge, Institutional Distance, and Uncertainty, *Journal of International Marketing*, December 2012, Vol. 20, Issue 4, p. 96-110.

JICK T. Mixing Qualitative and Quantitative Methods: Triangulation in Action, *Administrative Science Quarterly*, December 1979, Vol. 24 (4), p. 602-611.

JOHANSON I., VAHLNE J. E. Commitment and opportunity Development in the Internationalization Process. A note on the Uppsala Internationalization Process Model, *Management International Review*, March 2006, Vol. 46, Issue 2, p. 165-178.

JOHANSON I., WIEDERSHEIM-PAUL F. The internationalization of the firm – four Swedish cases, *Journal of Management Studies*, October 1975, Vol. 12, Issue 3, p. 305–323.

KALINIK I., FORZA C., Rapid internationalization of traditional SMEs: between gradualist models and born globals, *International Business Review*, 2012, Vol. 21, p. 694-707.

KAREN W. Encouraging the internationalization of SMEs, *OECD Papers*, 2006, Vol. 6, Issue 12, p. 43-66.

KEVIN B. The international manager, Economist books, London, 1991, p.192.

KRAUS S. State-of-the-art current research in international entrepreneurship: A citation analysis. Full Length Research Paper, African Journal of Business Management, 4 February 2011, Vol. 5(3), p. 1020-1038.

KUIVALAINEN O., SAARENKETO S., PUUMALAINEN K. Start-up patterns of internationalization: A framework and its application in the context of knowledge-intensive SMEs, European Management Journal, 2012, Vol. 30, p. 372-385.

KUO A., KAO M.S, CHANG Y.C., CHIU C.F. The influence of international experience on entry mode choice: Difference between family and non-family firms, European Management Journal, 2012, Vol. 30, p. 248-263.

KYVIK O., SARIS W., BONET E., FELÍCIO J. The internationalization of small firms: The relationship between the global mindset and firms' internationalization behavior, Journal of International Entrepreneurship, June 2013, Vol. 11(2), p. 172-195.

L'avventura della internazionalizzazione: logiche e strumenti per le imprese, Giappichelli, Torino, 1994, p. 386.

LEACH P.T. Export lead the way, Commerce, September 2012, Vol. 13, Issue 1, p. 62-66.

LIN W. T. Family ownership and internationalization process: Internationalization pace, internationalization scope, and internationalization rhythm, European Management Journal, 2012, Vol. 30, p. 47-56.

LOANE S., BELL J.D., MCNAUGHTON R. A cross-national study on the impact of management teams on the rapid internationalization of small firms, Journal of World Business, 2007, Vol. 42, p. 489-504.

LORUSSO S. La internazionalizzazione delle imprese: implicazioni economiche e tecniche connesse con la realizzazione del mercato interno europeo, Angeli, Milano, 1990, p. 170.

MAJOCCHI A. Economia e strategia dei processi d'internazionalizzazione delle imprese, Collana di diritto ed economia, Giuffrè, Milano, 1997, p.164.

MANOLOVA T. S., MANEV I. M., GYOSHEV B.S. In good company: The role of personal and inter-firm networks for new-venture internationalization in a transition economy, Journal of World Business, 2010, Vol. 45, p. 257-265.

MARANGONI G. D., SOLARI S. Aggregazione industriale e internazionalizzazione della produzione: l'evoluzione del modello veneto, Cedam, Assago, 2009, p. 172.

MARBACK G. Le ricerche di mercato, 5 ed., UTET, Torino, 2000, p. 473.

MARCONI M. R. La strategia internazionale delle piccole e medie imprese, Giappichelli, Torino, 2007, p. 174.

MARIOTTI S. La crescita internazionale per le PMI: strumenti, modelli e strategie per conquistare i mercati, Il Sole 24 Ore, Milano, 2003, p. 350.

MATS F. Managing the internationalization process: the Swedish case, Routledge, London, 1989, p. 114.

MELCHERS K., LIENHARDT N., VON AARBURG M., KLEINMANN M. Is more structure really better? A comparison of frame-of-reference training and descriptively anchored rating scales to improve interviewers' rating quality, *Personnel Psychology*, 2011, Vol. 64 (1), p.53-87.

MELÉN S. New Insights on the Internationalisation Process of SMEs. A Study of Foreign Market Knowledge Development, Doctoral thesis, The Economic Research Institute, Stockholm School of Economics, 2009, p. 256.

MILES M.B., HUBERMAN A. M. Qualitative data analysis: An expanded source book. Sage Publications, 1994, Thousand Oaks, CA, p. 418.

MISTRI M. Saggi su internazionalizzazione, piccola impresa, economie locali, Cedam, Padova, 1998, p. 268.

MORGAN-THOMAS A., JONES. MARIAN V. Post-entry Internationalization Dynamics: Differences between SMEs in the Development Speed of their International Sales, *International Small Business Journal*, 2009, p.27-71.

MUSTEEN M., FRANCIS J., DATTA D. K. The influence of international networks on internationalization speed and performance: A study of Czech SMEs, *Journal of World Business*, 2010, Vol. 45, p.197-205.

MUSTILLI M. Finanza aziendale internazionale per le PMI: i vantaggi dell'internazionalizzazione - strategie e strumenti, Egea, Milano, 2003, p.152.

NARDIN G. Piccole imprese e internazionalizzazione: il caso dell'industria meccanica dell'Emilia Romagna, *Economia e politica industriale*, Angeli, Milano, 1993, p. 134.

NIELSEN B.B., NIELSEN S. The role of top management team international orientation in international strategic decision-making: The choice of foreign entry mode, *Journal of World Business*, 2011, Vol. 46, p. 185-193.

NUMMELA N., SAARENKETO S., PUUMALAINEN K. A Global Mindset-A Prerequisite for Successful Internationalization? *Canadian Journal of Administrative Sciences*, March 2004, Vol. 21 (1), p. 51-64.

OJALA A. Internationalization of knowledge-intensive SMEs. The role of network relationships in the entry to a psychically distant market, *International Business Review*, Vol. 18, p. 50-59.

OVIATT B., MCDOUGALL P. Defining International Entrepreneurship and Modelling the Speed of Internationalization, *Entrepreneurship: Theory & Practice*, September 2005, Vol. 29(5), p. 537-553.

PAOLUCCI S. L'internazionalizzazione dell'impresa italiana: finanziamenti e strumenti nel sistema europeo- nazionale, Giappichelli, Torino, 2002, p. 273.

PETERSEN B., PEDERSEN T. Fast and slow resource commitment to foreign markets. What causes the difference? *Journal of International Management*, 1999, Vol. 5, p. 73-91.

RASMUSSEN E.S., MADSEN T. K. The Born Global concept, Paper for the EIBA conference, University of Southern Denmark, Department of Marketing, December 2002, p.27.

SCHWENS C., KABST R. How early opposed to late internationalizers learn: Experience of others and paradigms of interpretation, *International Business Review*, 2009, Vol. 18, p. 509-522.

SCOTT. W. G. Strategie d'impresa e mercati internazionali: un'analisi preliminare, Vita e pensiero, Milano, 1979, p. 95.

SETHI M.G. Piccole e medie imprese di fronte alle esportazioni, F. Angeli, Milano, 1982, p. 429.

Strategie di internazionalizzazione dell'impresa: guida all'imprenditore che opera nel mercato globale. Interprofessional Network, Il sole 24 ore, Milano, 2008, p. 439.

Strategie multinazionali: imprese, ambiente, opportunità: primo rapporto, Università Bocconi e Camera di Commercio Industria Artigianato e Agricoltura di Milano, Sole 24 Ore, Milano, 1987, p. 415.

SWEENEY P. SMEs Tough out the economy, *Financial executive Journal*, January 2010, Vol. 26, Issue 8, p.44.

The new SME definition: user guide and model declaration, European Commission, European Union, Publications of the European Communities, 2005, p.50.

TIZIANO B. I processi di internazionalizzazione delle piccole e medie imprese della provincia di Modena: il ruolo degli investimenti diretti all'estero, F. Angeli, Milano, 2007, p. 187.

VERNON R., WELLS L. T. The manager in the international economy, 7 ed., Prentice-Hall, Englewood Cliffs, 1996, p. 498.

VONK F. What role for the internationally minded in SMEs? HAN Business Publications, December 2009, N. 2, p. 79-104.

YIN, R. K. Case Study Research. Design and Methods, 4 ed., Sage Publications, Thousand Oaks, 2009, p. 240.

ZHANG M., SARKER S., SARKER S. Drivers and export performance impacts of IT capability in 'born-global' firms: a cross-national study, Information Systems Journal, September 2013, Vol. 23 (5), p. 419-443.

ZUCHELLA A. I nuovi percorsi di internazionalizzazione: le strategie delle piccole e medie imprese italiane, Giuffrè, Milano, 1999, p. 245.

### **Websites**

Adeguamento alla disciplina comunitaria dei criteri di individuazione di piccole e medie imprese, DECRETO 18 aprile 2005, GU Serie Generale n.238 del 12-10-2005, [http://www.gazzettaufficiale.it/atto/serie\\_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2005-10-12&atto.codiceRedazionale=05A09671&elenco30giorni=false](http://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2005-10-12&atto.codiceRedazionale=05A09671&elenco30giorni=false), (Accessed 12 July 2013).

ARZENI S. Small Business: the Heart of the Global Economy, OECD: Plenary session, <http://www.oecd.org/countries/qatar/arzenidohaspeech.htm>, (Accessed 1 June 2013).

Attrazione Usa per Doxee ed Expert. Continua il cammino di internazionalizzazione e di crescita delle due aziende modenesi, EmmeWeb. Il giornale on-line di Confindustria Modena, <http://www.emmeweb.it/it/attrazione-usa-per-expert-e-doxee.html>, (Accessed 21 September 2013).

Aziende e mercati esteri. Export, il modo migliore per crescere, EmmeWeb. Il giornale on-line di Confindustria Modena, [http://www.emmeweb.it/\\_index.html?\\_id1=93&\\_id4=107&\\_id5=2029&\\_id6=db\\_articoli&\\_id9=8419f31b94?mobile](http://www.emmeweb.it/_index.html?_id1=93&_id4=107&_id5=2029&_id6=db_articoli&_id9=8419f31b94?mobile), (Accessed 12 July 2013).

Booklet of standardised small and medium enterprise definition, USAID, 22 August 2007, [http://pdf.usaid.gov/pdf\\_docs/PNADM845.pdf](http://pdf.usaid.gov/pdf_docs/PNADM845.pdf), (Accessed 12 August 2013).

CESARONI F. M. Le dinamiche internazionali delle piccole-medie imprese nella provincia di Pesaro-Urbino, [http://www.api.pu.it/attachments/157\\_IntUnivEdApi.pdf](http://www.api.pu.it/attachments/157_IntUnivEdApi.pdf), (Accessed 1 June 2012).

Communication-Information Technology, Confindustria of Modena, <http://www.confindustriamodena.it/repository/upload/annuario/Annuario.pdf>, (Accessed 1 August 2013).

Doxee nomina Jay Ainslie nuovo Americas General Manager, <http://www.helloimpresa.com/business-people/doxee-nomina-jay-ainslie-nuovo-americas-general-manager>, (Accessed 20 October 2013).

Ebilling cresce e diventa Doxee, Gazzetta di Modena, <http://gazzettadimodena.gelocal.it/cronaca/2012/09/22/news/ebilling-cresce-e-diventa-doxee-1.5738290>, (Accessed 23 September 2013).

Ebilling si rafforza in Tim Brasil, Emme Web. Il giornale on-line di Confindustria Modena, [http://www.emmeweb.it/\\_index.html?\\_id1=93&\\_id4=107&\\_id5=1901&\\_id6=db\\_articoli&\\_id9=4e84588b7d?mobile](http://www.emmeweb.it/_index.html?_id1=93&_id4=107&_id5=1901&_id6=db_articoli&_id9=4e84588b7d?mobile), (Accessed 11 March 2013).

Ebilling, telecom in viaggio da Modena al Brasile, IctBusiness, <http://www.ictbusiness.it/cont/news/ebilling-telecom-in-viaggio-da-modena-al-brasile/29008/1.html>, (Accessed 20 September 2013).

Emilia Romagna: Le aziende esportatrici vanno in rete, PMI-Dome: Il network per le piccole e medie imprese, <http://www.pmiblog.it/index.php?/archives/2488-Emilia-Romgna-Le-aziende-esportatrici-vanno-in-rete.html>, (Accessed 11 August 2013).

Emilia-Romagna prima regione in Italia per export pro capite, EmmeWeb. Il giornale on-line di Confindustria Modena, [http://www.emmeweb.it/\\_index.html?\\_id1=93&\\_id4=107&\\_id5=2206&\\_id6=db\\_articoli&\\_id9=eef6197637?mobile](http://www.emmeweb.it/_index.html?_id1=93&_id4=107&_id5=2206&_id6=db_articoli&_id9=eef6197637?mobile), (Accessed 11 March 2013).

Emilia-Romagna stands first among the Italian regions in the Financial Times attractiveness ranking, Invest in Emilia Romagna, [http://www.investinemiliaromagna.it/wcm/investiner\\_en/notizie/notizie\\_2012/march/fdi\\_ranking\\_FT.htm](http://www.investinemiliaromagna.it/wcm/investiner_en/notizie/notizie_2012/march/fdi_ranking_FT.htm)

Expert System: da un garage alla Silicon Valley, Modena Economica, <http://www.symbola.net/din/adminphp/doc/12.12.07.articolo%20modena%20economica.pdf>, (Accessed 25 January 2013).

Expert System, la risposta italiana a Google, Economy Up, [http://www.economyup.it/made-in-italy/673\\_expert-system-la-risposta-italiana-a-google.htm](http://www.economyup.it/made-in-italy/673_expert-system-la-risposta-italiana-a-google.htm), (Accessed 25 January 2013).

Export and Trade Statistics, Minnesota, Department of employment and economic development, [http://www.positivelyminnesota.com/Data\\_Publications/Data/Export\\_Statistics/index.aspx](http://www.positivelyminnesota.com/Data_Publications/Data/Export_Statistics/index.aspx), (Accessed 11 August 2013).

Google e il Made in Italy, 100 eccellenze in un clic. Il Messaggero, <http://www.ilmessaggero.it/articolo.php?id=465142>, (Accessed 20 January 2014).

Hoovers International Company Database, [http://www.hoovers.com/company-information/cs/company-profile.New\\_Boundary\\_Technologies\\_Inc.92f315b4a25790f6.html](http://www.hoovers.com/company-information/cs/company-profile.New_Boundary_Technologies_Inc.92f315b4a25790f6.html), (Accessed 20 July 2013).

Internationalisation of European SMEs, Final Report, European Commission, Enterprise and Industry DG, 2010, [http://ec.europa.eu/enterprise/policies/sme/market-access/files/internationalisation\\_of\\_european\\_smes\\_final\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/market-access/files/internationalisation_of_european_smes_final_en.pdf), (Accessed 1 June 2012).

Internazionalizzazione PMI: bando in Emilia Romagna, Piccole e Medie Imprese, <http://www.pmi.it/economia/finanziamenti/news/65191/internazionalizzazione-pmi-bando-in-emilia.html>, (Accessed 11 December 2013).

Internazionalizzazione, Il portale delle Camere di Commercio d'Italia, [http://www.camcom.gov.it/cdc/id\\_pagina/26/id\\_dominio/8/t\\_p/Internazionalizzazione.htm](http://www.camcom.gov.it/cdc/id_pagina/26/id_dominio/8/t_p/Internazionalizzazione.htm), (Accessed 11 January 2014).

Italia che vuole crescere, Expert System, la risposta italiana a Google. Economy Up. [http://www.economyup.it/made-in-italy/673\\_expert-system-la-risposta-italiana-a-google.htm](http://www.economyup.it/made-in-italy/673_expert-system-la-risposta-italiana-a-google.htm), (Accessed 14 July 2014).

L'intelligenza semantica di Expert System al servizio delle aziende, Eccellere Business Community, <http://www.eccellere.com/rubriche/impresedisuccesso/expertsystem.asp>, (Accessed 10 January 2014).

La Expert System vola oltre quota 12 milioni e si espande all'estero, Gazzetta di Modena, <http://gazzettadimodena.gelocal.it/cronaca/2012/10/25/news/la-expert-system-vola-oltre-quota-12-milioni-e-si-espande-all-estero-1.5922901>, (Accessed 12 January 2014).

L'export traina l'economia modenese, EmmeWeb. Il giornale on-line di Confindustria Modena, [http://www.emmeweb.it/\\_index.html?\\_id1=93&\\_id4=107&\\_id5=2281&\\_id6=db\\_articoli&\\_id9=fc47598382?mobile](http://www.emmeweb.it/_index.html?_id1=93&_id4=107&_id5=2281&_id6=db_articoli&_id9=fc47598382?mobile), (Accessed 19 July 2013).

Marco Varone di Expert System vince il premio Ragno D'Oro, Official Website, <http://www.expertsystem.net/notizie/comunicati-stampa/marco-varone-di-expert-system-vince-il-premio-ragno-doro>, (Accessed 23 January 2014).

MARTIN A. SME internationalization: the case of the German electrical and electronic industry in India, [http://management-class.co.uk/public\\_html/courseware/readings/smeinternationalisation.pdf](http://management-class.co.uk/public_html/courseware/readings/smeinternationalisation.pdf), (Accessed 1 June 2012).

Minnesota - A Great Place to Do Business, Area Development Online, <http://www.areadevelopment.com/LocationUSA/LocationUSA2010/Minnesota-economy-finance-insurance-biosciences-98787.shtml>, (Accessed 17 September 2013).

Minnesota to open trade office in Dusseldorf, Germany, Twin Cities, [http://www.twincities.com/ci\\_23494692/minnesota-open-trade-office-dusseldorf-germany](http://www.twincities.com/ci_23494692/minnesota-open-trade-office-dusseldorf-germany), (Accessed 16 August 2013).

Minnesota Trade Office Services and Staff, Fact Sheets, Minnesota, Department of Employment and Economic Development, [https://www.positivelyminnesota.com/Business/Exporting\\_Trade/PDFs/Miscellaneous\\_-\\_MTO/About\\_MTO\\_Services\\_Staff\\_List.pdf](https://www.positivelyminnesota.com/Business/Exporting_Trade/PDFs/Miscellaneous_-_MTO/About_MTO_Services_Staff_List.pdf), (Accessed 18 September 2013).

Mission to India. Plotting a new trade route, Minneapolis/Saint Paul Business Journal, <http://www.bizjournals.com/twincities/stories/2007/10/15/story10.html?page=all>, (Accessed 23 September 2013).

Modena in cifre, Modena Statistiche, Provincia di Modena, <http://www.modenastatistiche.it/page.asp?IDCategoria=180&IDSezione=4316&ID=77122>, (Accessed 18 September 2013).

New Boundary Technologies Expands International Channel with New Canadian Distributor 2G Technology, PRWeb, <http://www.prweb.com/releases/2005/02/prweb212801.htm>, (Accessed 11 September 2013).

New Boundary Technologies Issues French Language Version of Prism Deploy 6; Award-Winning Solution Improves Deployment Performance and Security, Business Wire, <http://www.businesswire.com/news/home/20041102005028/en/Boundary-Technologies-Issues-French-Language-Version-Prism>, (Accessed 19 August 2013).

New Boundary Technologies Partners with Taarak to Distribute Automated IT Solutions in India, Minneapolis, Official Company's Website, <http://www.newboundary.com/company/prelease/2008-07-17/new-boundary-technologies-partners-taarak-distribute-automated-it-soluti>, (Accessed 29 September 2013).

Opportunities for internationalization. European Commission, DG Enterprise and Industry Publications, [http://ec.europa.eu/enterprise/policies/sme/market-access/files/web\\_internationalisation\\_opportunities\\_for\\_smes\\_final\\_report\\_aug\\_2011\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/market-access/files/web_internationalisation_opportunities_for_smes_final_report_aug_2011_en.pdf), (Accessed 11 December 2012).

Osservatorio Unicredit piccole imprese. La ricerca di nuovi mercati: la sfida delle piccole imprese: tra cambiamento e tradizione, Piccole e Medie Imprese, <http://www.pmi.it/file/whitepaper/000539.pdf>, (Accessed 11 November 2013).

PETERSEN B., PEDERSEN T., SHARMA D. The role of knowledge in firms' internationalization process: wherefrom and whereto? Department of International Economics and Management, <http://openarchive.cbs.dk/bitstream/handle/10398/6595/linkwp01-5.pdf?sequence=1>, (Accessed 1 June 2012).

Promec - Azienda speciale per l'internazionalizzazione, Camera di Commercio di Modena, <http://www.mo.camcom.it/servizi-estero/internazionalizzazione/promec-azienda-speciale-per-internazionalizzazione>, (Accessed 20 June 2013).

Promoting entrepreneurship and innovative SMEs in a global economy: towards a more responsible and inclusive globalization. Facilitating SMEs access to international markets, OECD, 2004, <http://www.oecd.org/cfe/smes/31919223.pdf>, (Accessed 12 June 2013).

Provincia di Modena in cifre, Confindustria di Modena, [http://www.confindustriamodena.it/it/provincia-di-modena-in-cifre\\_0.html](http://www.confindustriamodena.it/it/provincia-di-modena-in-cifre_0.html), (Accessed 10 January 2013).

Rapporto sulle tendenze nel sistema produttivo italiano, Banca d'Italia, Eurosystema, Questioni di Economia e Finanza, Aprile 2009, N. 45, p. 59-69, [http://www.bancaditalia.it/pubblicazioni/econo/quest\\_ecofin\\_2/qf\\_45/QEF\\_45.pdf](http://www.bancaditalia.it/pubblicazioni/econo/quest_ecofin_2/qf_45/QEF_45.pdf), (Accessed 22 June 2013).

Reference USA Database, <http://www.referenceusa.com>, (Accessed 19 June 2013).

RUZZIER M., HISRICH R.D., ANTONCIC B. SME internationalization research: past, present, and future, *Journal of Small Business and Enterprise Development*, 2006, No. 13, <http://www.emeraldinsight.com/journals.htm?articleid=1581921&show=html>, (Accessed 1 June 2013).

SCHLÖGL H. Small and medium enterprises: Seizing the potential, OECD, [http://www.oecdobserver.org/news/archivestory.php/aid/1252/Small\\_and\\_medium\\_enterprises:\\_Seizing\\_the\\_potential.html](http://www.oecdobserver.org/news/archivestory.php/aid/1252/Small_and_medium_enterprises:_Seizing_the_potential.html), (Accessed 12 November 2012).

Small and medium sized enterprises, Bankpedia, <http://bankpedia.org/index.php/en/126-english/s/23362-small-and-medium-sized-enterprises-smes>, (Accessed 19 June 2013).

Small and medium sized enterprises, OECD: Glossary of statistical terms, <http://stats.oecd.org/glossary/detail.asp?ID=3123>, (Accessed 28 June 2013).

Small and Medium-Sized Enterprises: Overview of Participation in U.S. Exports, United States International Trade Commission, January 2010, <http://www.usitc.gov/publications/332/pub4125.pdf>, (Accessed 12 November 2012).

SME definition. User guide and model declaration, Enterprise and Industry Publications, European Commission, [http://ec.europa.eu/enterprise/policies/sme/files/sme\\_definition/sme\\_user\\_guide\\_en.pdf](http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_en.pdf), (Accessed 19 June 2013).

State of Minnesota mission to South America delegation, The Chilean-American Chamber of Commerce, [http://www.amchamchile.cl/sites/default/files/Minnesota%20Delegation%20List\\_0.pdf](http://www.amchamchile.cl/sites/default/files/Minnesota%20Delegation%20List_0.pdf), (Accessed 19 July 2013).

SUMMO G., TERZULLI A. Internazionalizzazione delle imprese e crescita economica. Il ruolo di SACE. p. 11-18, [http://www.sace.it/GruppoSACE/export/sites/default/download/DMG/WP\\_SACE\\_11\\_Summo\\_Terzulli\\_finale.pdf](http://www.sace.it/GruppoSACE/export/sites/default/download/DMG/WP_SACE_11_Summo_Terzulli_finale.pdf), (Accessed 12 March 2012).

TAYLOR M., JACK R. Understanding the pace, scale and pattern of firm internationalization: An extension of the 'born global' concept, *International Small Business*

Journal, Macquarie University, Australia 2011,  
<http://isb.sagepub.com/content/early/2012/01/18/0266242611431992>, (Accessed 19 June 2013).

TEAM Informatics announces growth in North American Public Sector with continuing success in Oracle WebCenter, PR Newswire, <http://www.prnewswire.com/news-releases/team-informatics-announces-growth-in-north-american-public-sector-with-continuing-success-in-oracle-webcenter-202547431.html>, (Accessed 24 November 2013).

TEAM Informatics appointed as one of three on the New Zealand cross-government ICT panel for the provision of Enterprise Content Management-as-a-Service, Minneapolis/Saint Paul Business Journal,  
[http://www.bizjournals.com/twincities/prnewswire/press\\_releases/Georgia/2013/11/26/MN23582?ana=prnews](http://www.bizjournals.com/twincities/prnewswire/press_releases/Georgia/2013/11/26/MN23582?ana=prnews), (Accessed 16 October 2013).

The Athens action plan for removing barriers to SMEs access to international markets, OECD-APEC Global Conference in Athens, <http://www.oecd.org/cfe/smes/37818332.pdf>, (Accessed 11 November 2012).

The Gold Key Matching Service, U.S. Department of Commerce's Commercial Service, [http://export.gov/salesandmarketing/eg\\_main\\_018195.asp](http://export.gov/salesandmarketing/eg_main_018195.asp), (Accessed 1 October 2013).

Top Barriers and Drivers to SME Internationalisation, OECD Centre for Entrepreneurship, SME and Local Development, <http://www.oecd.org/industry/smes/43357832.pdf>, (Accessed 10 December 2012).

Trade Mission at Work, Twin Cities Business, <http://tcbmag.com/Leadership/Economic-Development/Trade-Mission-at-Work>, (Accessed 14 September 2013).

Uniworld Database, <https://www.uniworldbp.com>, (Accessed 19 September 2013).

Venetto Internazionale. Rapporto sull'internazionalizzazione del sistema economico regionale, Unioncamere Veneto,  
[http://www.unioncameredelveneto.it/pubblicazioni/internaz\\_2010/Venetointernazionale2010\\_web.pdf](http://www.unioncameredelveneto.it/pubblicazioni/internaz_2010/Venetointernazionale2010_web.pdf), (Accessed 17 December 2012).

What is SBA's definition of a small business concern? U.S. Small Business Act, <http://www.sba.gov/content/what-sbas-definition-small-business-concern>, (Accessed 21 December 2013).

WOODS P. Qualitative Research, University of Plymouth, 2006.  
<http://www.edu.plymouth.ac.uk/resined/qualitative%20methods%202/qualrshm.htm>, (Accessed 21 September 2013).

Worldwide customers include Chevron, Eni Group, ANSA, Telecom Italia, Microsoft and Raytheon, Expert System official website: Company Profile,  
[http://www.expertsystem.net/request-download?file=expert\\_system\\_company\\_profile.pdf](http://www.expertsystem.net/request-download?file=expert_system_company_profile.pdf), (Accessed 25 January 2013).