

Master in International Management

Master Thesis

Conceived Global

A new Breed of Portuguese Explorer



Pedro Miguel da Silva Miranda

Supervisor:

Prof. José Paulo Esperança, Prof. Catedrático, ISCTE Business School

Cambridge, UK, October 2012

“As armas e os barões assinalados,
Que da ocidental praia Lusitana,
Por mares nunca de antes navegados,
Passaram ainda além da Taprobana,
Em perigos e guerras esforçados,
Mais do que prometia a força humana,
E entre gente remota edificaram
Novo Reino, que tanto sublimaram”

Os Lusíadas – Luis de Camões

Front-Cover Note:

The front-cover photograph, attributed to the reporter and photographer Mário Novais, depicts the original Monument to the Portuguese Discoveries designed by the architects Cottinelli Telmo and Leopoldo de Almeida for the Portuguese World Fair opening in June 1940.

Abstract

Since the concept of the Born Global was defined in 1993 there have been an extensive number of research papers and articles on this subject. Despite the large amount of research conducted in this area, we have found no clear evidence of papers studying the impact of the planning stage and of business model definition on the success of the internationalization process. For this study we make use of Portuguese Born Global companies and try to determine how the founders' initial planning, dynamic capabilities and networks contribute to shaping BGs' evolution and early internationalization patterns.

Based on the case studies evidence we conclude that neither a detailed business plan nor external financial support are indispensable conditions for successful internationalization. Instead, the evidence clearly shows that the entrepreneur's networks and dynamic capabilities together with the companies' adaptability to market unpredictability are the necessary conditions for a Born Global to be successful at the global stage.

Keywords: born global, international new venture, internationalization, lean start-up

JEL Classifications: F23, L26

Sumário

Desde que o conceito de Born Global foi definido em 1993 um número significativo de artigos e trabalhos têm sido elaborados sobre este assunto. Apesar da enorme pesquisa efetuada sobre este tema, não encontra-mos evidências concretas de artigos ou trabalhos estudando o impacto da fase de planeamento ou o impacto da definição do modelo de negócios no sucesso da internacionalização. Na presente pesquisa utilizamos casos de Born Globals Portuguesas e tentamos determinar de que forma o planeamento inicial efetuado pelos fundadores, as suas capacidades dinâmicas e redes contribuíram na evolução da empresa Born Global e no seu processo de internacionalização.

Baseando-nos nas evidências compiladas a partir dos casos estudados, concluímos que quer a existência de um plano de negócios detalhado ou o apoio financeiro externo à empresa não são condições necessárias para o sucesso no processo de internacionalização de uma Born Global. Por outro lado as evidências sugerem que as redes dos fundadores e as suas capacidades dinâmicas assim como a capacidade da empresa de se adaptar às imprevisibilidades dos mercados formam as condições necessárias para que uma empresa Born Global seja bem-sucedida no palco global.

Palavras-chave: born global, international new venture, internationalization, lean start-up

Classificação JEL: F23, L26

Acknowledgements

First and foremost, I would like to thank my wife Adriana for the unconditional support that she has given me throughout the entire master course and time it took me to research and write this thesis. I would like to extend my thank you to Sarah who constantly reviewed the document and gave me the necessary feedback to make the work comprehensible to anyone. Thank you also to my supervisor, Professor José Paulo Esperança for accepting my thesis subject and giving me the valuable steering during the conception and final stages and pointing me in the right direction. Finally I would like to thank Carlos Santos, founder of Frato, Inês Calado, creative designer and founder of Guava, Maria Gonçalves, from the marketing department of FiberSensing and Tiago Gonçalves, founder and managing director of InnoWave.

Index

Abstract	i
Sumário	iii
Acknowledgements	v
Index	vii
List of Figures and Abbreviations.....	viii
Introduction.....	1
Literature Review.....	5
Research Methodology	25
Case Studies	29
Discussion.....	43
Conclusions.....	51
References.....	55
Appendix A – Survey Questionnaire	67
Appendix B – Case Studies Survey Summary.....	71
Appendix C –Survey Main Results.....	75

List of Figures and Abbreviations

List of Figures

Figure 1 - Proposed dynamic capability model of born global firm accelerated internationalization.	13
Figure 2 - Portuguese Export Geographic Distribution.	18
Figure 3 - Portuguese exports major recipients.	19
Figure 4 - Portuguese FDI by country	19
Figure 5 - Taxonomy of behavioural rules in FDI decisions.	20
Figure 6 - Creation and Development of Born Globals: An Interpretation Framework.....	21
Figure 7 - Category-Maturity Life Cycle.....	27
Figure 8 - Necessary condition for the creation and development of Born Globals.....	53

List of Abbreviations

BG – Born Global

FDI – Foreign Direct Investment

INV – International New Venture

NTBF – New Technology-Based Firm

SME – Small and Medium-sized Enterprise

IAPMEI – Institute for Small and Medium-sized Enterprise and Innovation Support

INESC – National Institute of Engineering Computer Systems

TCO – Total cost of ownership

IB – International Business

MSF – Medium Sized Firm

HRM – Human Resource Management

Introduction

Inter-regional trade can be traced back to the beginning of the Bronze Age where the division of labour and the evolution of new crafts in some tribes spawned specialization in areas of production not present in others thus creating a need for exchange and trade (Cameron, 1993). This new concept continued to grow rapidly throughout the Ancient and Middle Ages fuelled by the development of City States, the Mesopotamia Sumer and the Akkadian, the Babylonian and Assyrian empires (Stearns 2001), the establishment of the Silk Road and the spice trade connecting the Chinese, Indian, Persian, Egyptian, Greek and Roman Empires (Shaw 2002; Donkin 2003; Rawlinson 2001; Young 2001; Corn 1999) and later Christian Europe and the Islamic nations (Donkin 2003; Crone 2004).

The real breakthrough in global international trade came in the early Modern Age at the hand of the Portuguese who, taking advantage of their superior naval abilities, opened sea trade routes stretching from Africa to the Far Eastern lands of India, China, Japan and The Americas (Arnold 2002; Boyajian 2007; Newitt 2005; Anderson 2000). The Portuguese were quickly followed in this international trade by the Spanish (McAlister 1984; Lockhart 1983), the Dutch (Donkin 2003; Hochstrasser 2007; Boxer 1970) and the English (Chaudhuri, 1965; Key 1993; Steensgaard 1974; Robins 2006). This gave these European Kingdoms a far greater control over world trade than had ever been seen before (Abernethy 2002; Furber 1976). This can be considered the first real stage of modern globalization. International trade suffered a slowdown between the beginning of World War I and the end of World War II but soon after it gained momentum and underwent an exponential growth fuelled by decreasing transportation and communication costs. Such growth created the need for a more global consensus and for regulatory policies on global trade. Several treaties and associations were created to regulate and define the laws and practices of international trade, such as the General Agreement on Tariffs and Trade in 1947 (Zeiler 1999), the establishment of the European Economic Community in 1958 (Monnet 1962), the European Free Trade Association in 1960, the North American Free Trade Agreement in 1994 (Weintraub 2004; Hufbauer & Schott 2005) and the World Trade Organization in 1995, the latter created to facilitate world free trade.

Despite the long history of international trade with detailed reports going back for centuries, the theoretical study of the subject only began in the 18th century with the work of Adam Smith. In his *Absolute Cost Advantage Model*, Adam Smith advocates that a country should specialize in producing and exporting commodities in which they have an absolute advantage. In other words, in commodities they can produce at a lower cost than their trading partners while importing commodities in which they have an absolute disadvantage (Ingham 2004). In his 1817 publication, *On the Principles of Political Economy and Taxation*, David Ricardo using an example involving England and Portugal, defines comparative advantage as the ability of a nation, company or individual to produce a particular good or service at a lower marginal and opportunity cost over another nation, company or individual, reasoning that both parties will benefit from the trade as long as they have different relative efficiencies (Sheffrin 2003).

In 1993 two researchers from the Stockholm School of Economics, Eli Heckscher and Bertil Ohlin, based their research on David Ricardo's comparative cost advantage to develop the, as it would later be called, Heckscher-Ohlin model: a general equilibrium mathematical model of international trade predicting patterns of commerce and production based on the factor endowments (amount of labour, capital, land and entrepreneurship) of a trading region (Blaug 1992). In 1952, while attempting to test the Heckscher-Ohlin theory empirically, Wassily Leontief found that the United States exported labour-intensive commodities and imported capital-intensive commodities, in contradiction of the theory. The currently named Leontief paradox revealed that the country with the world's highest capital-per worker has a lower capital to labour ratio in exports than it does in imports. Staffan Burenstam Linder, in 1961, hypothesizes that the more similar the demand structures of countries are, the more they will trade with one another. Furthermore, the trade will still exist even if both countries display identical preferences and factor endowments.

Influenced by the firm's growth theory (Penrose 1959) a group of researchers from Uppsala University in Sweden defined a model that aims to explain and predict how firms gradually intensify their activities in foreign markets (Johanson & Vahlne 1977). An empirical observation of international Swedish companies indicated that internationalization usually began with ad hoc exporting, followed by a subsequent entry mode through intermediaries already

representing the company in the foreign market. As sales grew, the agents would eventually be replaced by the companies' own sales organizations, followed by the transfer of manufacture to the foreign market in order to circumvent trade barriers thereby creating an establishment chain (Johanson & Vahlne 1977). They also found that internationalization followed a pattern of close psychic distance to the domestic market in the initial stages, allowing them minimize the liability of "foreignness", a concept that originally explained why a foreign investor needed to have a firm-specific advantage to more than offset this liability (Hymer 1976; Zaheer 1995); the larger the psychic distance, the larger the liability of foreignness.

Michael Porter in his famous publication *The Competitive Advantage of Nations* introduces the Diamond Model in which six critical factors, Factor Condition, Demand Condition, Related and Supporting Industries, Firm Strategy-Structure-Rivalry, Government and finally Chance interact with each other to create the conditions where innovation and improved competition occurs (Porter 1990). More recently, The Market Imperfection theory states that the use of goods and services or the allocation of production is inefficient in a free market (Krugman & Wells 2006).

The last 20 years have seen remarkable changes in international trade. Trade barriers have been systematically brought down while regional economic free trade areas as well as world trade regulatory organizations have been established. The rise of new world economies as well as access to a huge workforce has driven down the costs of labour while the falling cost of transportation and communication has reduced the financial impact of getting goods and services to market. All these factors have come together to create economic integration between countries, leading to the emergence of a global marketplace or a single world market.

As psychic distance between countries decreases, so does the liability of foreignness. Just as biological organisms adapt to their environment, so many companies adapt to this new global environment. They no longer need to be born in one country and gradually spread throughout similar markets as they grow, but are now able now to extend their global range much more quickly or even be born global.

The term Born Global (BG) was first coined in a survey for The Australian Manufacturing Council by the consultancy firm McKinsey (Rennie 1993). In this study aimed at

analysing Australian companies that had recently started to export, two groups of companies emerged: the well-established home market firms for whom internationalization is the major way/mechanism of choice for growth, and a second group, comprising approximately 25% of all firms in the study. These 25% were responsible for 20% of all exports and on average started to export only two years after their foundation. This group was tagged Born Global. Although Born Globals has been the most popular term to describe companies that that carry out a significant amount of their trade outside of the domestic market a few years after starting operations (Rennie 1993; Knight & Cavusgil 2004; Madsen & Servais 1997; Bell & McNaughton 2001; Madsen et al. 2000; Rasmussen et al. 2001; Larimo 2001; Aspelund & Moen 2001; Moen 2002), other names such as Global Start-ups (Oviatt & McDougall 1995), High Technology Start-ups (Burgel et al. 2000), Global High-Tech Firms (Roberts & Senturia 1996), Instant Internationals (Fillis 2001), and International New Ventures (INVs) (Oviatt & McDougall 1994; McDougall et al. 1994; Oviatt & McDougall 1997; Servais & Rasmussen 2000) have also been used for identifying these kind of firms. Rasmussen & Madsen (2002) discuss the usefulness of the Born Global concept from both a theoretical and an empirical point of view and address the questions “Can we really talk about new forms of international firms?” and “Why should we study these firms?”

The aim of this thesis is to understand what we call Conceived Globals, successful BG companies that were planned from the time of conception to be global, and test some existing propositions through their application to some case studies of Portuguese Born Globals. We aim to understand not only the traditional factors and conditions for the international success of these companies, such as the capabilities of the entrepreneurs, knowledge intensive resources, relational capital and unique or distinctive idea (Simoes & Dominginhos, 2001) but also to understand to what extent planning and preparing for internationalization prior to the creation of the company is relevant for its international endeavours.

Therefore our research question will be formulated as follows: How do founders’ initial planning, dynamic capabilities and networks contribute to shape BGs’ evolution and early internationalization patterns?

Literature Review

Born Global Fundamentals

The traditional stage model approach to internationalization has been subject to much questioning (Anderson 1993, 1997) and criticism for being too deterministic and mechanistic in nature (Reid 1983), leading the researchers of the Uppsala Model to publish a recent paper proposing a fresh investigation into the model (Johanson & Vahln 2009). These challenges to the stage model were upheld by several empirical research papers that uncovered new methods of internationalization and discovered a new breed of global companies.

In 1993 a joint research project by the Australian Manufacturing Council together with McKinsey examined Australia's high-value-added manufacturing sector (Rennie 1993). As one result of the study, a group of companies which began exporting, on average, only two years after their foundation and achieved 76% of their total sales through exports was identified and labelled as "Born Global". These companies accounting for around 25% of the research project sample were usually small and medium-sized enterprises (SMEs) with an average age of 14 years and were responsible for almost 20% of Australia's high-value-added manufacturing exports (McKinsey & Co. 1993). The study also endeavours to explain the reasons behind the unlikely success of such firms, given to the old belief that firms need to build a strong domestic base before venturing into overseas markets. This was thought to be due to the high fixed costs of entering a new market at a distance, including the costs of gaining market information and of managing agents or representatives to provide quick, effective sales and service response. The wide availability of information on export market thanks to improvements in the recording of public and private data throughout most of the world together with the widespread of information technology and the internet has substantially lowered storage and retrieval costs. Also international telecommunications have become significantly less expensive and more dependable and the decrease in transportation cost allows for a much cheaper and more reliable way to export goods and people around the world. The study also found that this new species of company is not constrained to particular technologies or sectors of the economy. Fast-growing firms were found in all industries, and even sectors considered to be declining in global terms had their share of these firms (McKinsey & Co. 1993). According to the research report:

“Born global companies are exposed to competition from international low-cost providers from the first day of their existence; to be successful, they need to compete on quality and value—with value created through innovative technology and product design. Cost competitiveness, though important, is taken for granted. Orders are won via superior quality and value at a competitive price.”¹

Another competitive advantage of these companies highlighted in the report is proximity to with the customer:

“Being close to customers was vital in creating the value that brought success. These firms “owned” customers, not products. By understanding and satisfying the needs of a particular group of customers better than anyone else in the world, they set out to create a market where they have virtually no competitors. Typically, they compete in niche markets, are very flexible, and move fast.”²

A series of other theoretical, empirical and case studies soon followed the McKinsey report.

(Oviatt & McDougall 1994) define and describe the growing phenomenon of firms that are international from inception, also referred as International New Ventures (INV), and present an explanatory framework. They define four elements all of which are simultaneously necessary and sufficient for the existence of new ventures that are instantly international:

- Organizational formation through internalization of some transactions
- Strong reliance on alternative governance structures to access resources
- Establishment of foreign location advantages
- Control over unique resources (knowledge)

They also outlined four types of INVs according to the number of countries involved and the coordination of value chain activities:

- Export/Import Start-up
- Multinational Trader

¹ McKinsey & Co.(1993) Emerging Exporters. Australia's High Value-Added Manufacturing Exporters, Melbourne: McKinsey & Company and the Australian Manufacturing Council.

² McKinsey & Co.(1993) Emerging Exporters. Australia's High Value-Added Manufacturing Exporters, Melbourne: McKinsey & Company and the Australian Manufacturing Council.

- Geographically Focused Start-up
- Global Start-up

The same authors questioned the limitations of existing theories from the field of International Business (IB) in explaining the behaviour of INVs using a compilation of 24 exploratory case studies comparing INVs in at least 10 countries (McDougall, Shane & Oviatt 1994), and proposing a method of identifying any pattern underlying the creation-dynamics and success-characteristics of global start-ups (new firms that are virtually global from inception) versus new domestic ventures. Characteristics that the authors attribute to successful global start-ups are:

- A global vision exists from inception
- Managers are internationally experienced
- Global entrepreneurs have strong international business networks
- Pre-emptive technology or marketing is exploited
- Unique intangible assets are present
- Product or service extensions are closely linked
- The organization is closely coordinated worldwide

An empirical study by Bell (1997) analyses the relevance of the stages theory in the initial export decision and internationalization process of small firms in the high technology and service intensive sectors in Finland, Ireland and Norway. Its findings did not support incremental internationalization but rather suggested that the Network Approach better explains the frequently non-linear behaviour of computer software firms' internationalization process. The use of network relationships to pursue foreign market opportunities and conduct international marketing activities was subject of an empirical study using case studies of small, entrepreneurial firms in the New Zealand software industry (Coviello & Munro 1995).

Knight & Cavusgil (1996) conducted the first theoretical descriptive study on BGs in which the traditional Internationalization Theory (including both the Uppsala and Innovation models) is thoroughly reviewed. The authors argue that the growing evidence of the widespread emergence of BGs in numerous countries of the developed world suggests an important new challenge to traditional internationalization theory and they define six major trends promoting Born Globals' emergence:

- The growing role of niche markets
- Recent advances in process technologies
- Recent advances in communications technology
- Inherent advantages in SMEs (flexibility, adaptability, etc.)
- Means of internationalization much more accessible to all firms
- Global networks

Madsen & Servais (1997) continue the definition of a BG and the discussion of the trends behind the development of a rising number of such companies. The author's literature review and theoretical study aimed to interpret this phenomenon at a deeper theoretical level. A new conceptualization on the subjected is offered and propositions about the antecedents as well as the necessary and sufficient conditions for the rise of these firms are made. As in previous studies they advocate that the born-global phenomenon is not limited to high-tech industries and/or specific countries. Instead, these companies grow in a way which may be more in accordance with networking and evolutionary thinking. Indeed the propensity for success of such firms is likely to be affected by their environment and their founder/entrepreneur. A framework aiming at stimulating the discussion, plus theoretical and empirical efforts that may eventually lead to a contemporary dynamic theory of firm internationalization and its acceleration is proposed by Oviatt & McDougall (1999). Based on a prediction by The Organization for Economic Co-operation and Development that the internationalization of business would accelerate in the 21st century, Shrader, Oviatt & McDougall (2000) developed a study examining how the risk of accelerated internationalization could be managed. Basing the research on 212 marked entries from 87 new US ventures, they concluded that ventures' strategic international risk could be managed by the simultaneous exploitation of trade-offs among foreign revenue exposure, country risk, and entry mode commitment in each international target market.

Rasmussen and Madsen discuss the usefulness of the BG concept from both a theoretical and an empirical point of view (Rasmussen & Madsen 2002). They questioned if a new form of international firm has in reality been identified and if so, why these firms should be studied. Their conclusion was that the research showed a clear distinction between firms that still follow the stage approach on internationalization and companies that, by their speed of internationalization, size and dynamics fall into the category of BG. Rasmussen and Madsen's

investigation indicates that the majority of the research in this area has the clear objectives of both providing advice to management of small firms on internationalization and studying the societal aspect of internationalization. The authors conclude that:

“Because of the new challenges the Born Global firms rise – both for managers and for the society – we can argue that it is necessary to study the firms.” (Rasmussen & Madsen 2002)

An empirical analysis of INVs is presented by Knudsen & Madsen (2002; 2003) who analyse whether these firms differ from other comparable firms with respect to some basic economic characteristics. The researchers conclude that there is no significant difference between INV's and other similar firms with regard to their share of fixed- to total assets, variance in the share of fixed to total assets, levels of technology employed or performance. On the other hand, differences were found in the number of employees. INVs reached a level in the number of employees that remained stable for the remainder of the period analysed while the total of employees in similar firms continued to increase in the same period. But the most significant difference appears to be in what the authors called fast learning hypotheses, that in the short term INV's seem to be more light-footed than other firms.

A network view of the internationalization process of BGs is provided by Sharma & Blomstermo (2003). The authors argue that knowledge based behavioural internationalization process models can explain Born Global firms' internationalization process, that the internationalization of such companies is a matter of learning through networks and a willingness to adapt their internationalization strategy to the needs of the market. In a study on Born Globals, networking and entrepreneurship publications McDougall & Oviatt (2003) draw some parallels between the areas International Business and Entrepreneurship and urges scholars to extend their networks in order to benefit from each other's knowledge.

A detailed study of the most relevant research, between 1993 and 2003, into International Entrepreneurship (INVs, Global Start-Ups, Born Globals) was conducted by Knight et al. (2005). In the review the authors categorized each one of the 38 research papers as follows: 1) main objective and type of research, 2) theoretical framework/s of reference, 3) methodological issues, and 4) main findings and/or conclusions. The authors conclude the analysis with some

recommendations to future researchers on International Entrepreneurship advising them to try to rationalize and unify the multiple theoretical approaches to the subject, and they also make some recommendation to policy makers and managers:

“...we have found that a right combination of knowledge-based organizational resources together with an entrepreneur’s distinctive profile (showing a clear international outlook from the founding of his/her business and previous international experience), and optimization of both personal and interorganizational relationships (networking) seem to be key preconditions for securing further international development and more successful performance of born-globals/INVs. In contrast, for policy-makers, we would mainly highlight the increasing need existing to better address public policy in support the internationalization of these ‘instant exporters’, in the form of providing more tailor-made policies and programs according to the fast pace of their international development from inception.” (Knight, Rialp-Criado & Rialp-Criado 2005)

Born Globals, INV’s and Global Start-ups Further Research

Last decade saw an exponential growth in the research and publication of papers on Born Globals, INVs, Global Start-ups and International Entrepreneurship. With so many available resources it becomes difficult to filter relevant information. The present section reviews the most relevant research and publications between 2004 and 2012.

Born Globals’ internationalization process can be impaired by their lack of start-up resources and financial backing, and moreover are particularly vulnerable to serious business mistakes. In order to minimize risk, Gabrielsson & Kirpalani (2004) propose that BGs utilize the various channels provided by Multinational Companies (MNCs), networks, and the Internet in order to gain a substantial increase in revenue streams with concomitant increase in cash flow. The same channels can also provide learning, technology, and evolutionary growth. Knight & Cavusgil (2004) analyse several case studies in order to understand the phenomenon of early internationalization and reveal key orientations and strategies that engender international success among these innovative firms. Their findings reveal that born-global firms leverage a distinctive

mix of orientations and strategies that allow them to succeed in diverse international markets. Zahra's review compared Oviatt and McDougall's 'A Theory of International New Ventures' with subsequent research on the same subject (Zahra 2004). The authors contend that although most of the original arguments remain intact, later researchers have shown creativity in refining and extending Oviatt and McDougall's framework. Researchers used, for example, techniques from cognitive psychology to understand how INV entrepreneurs recognize and redefine the opportunities they pursue. Rialp et al. (2005) also map a relationship between the Born Global organization and their entrepreneurial founders stating that the:

"...distinctive and sophisticated entrepreneurial capabilities usually shown by born-globals' founding entrepreneurs and decision-makers allow them to take more advantage of the opportunities that others overlook, thus affecting both the path and pace of internationalisation." (Rialp et al, 2005)

The researchers also found that these companies make use of intangible assets, such as knowledge-management processes or the use of innovative and high-tech processes to enable them to supply highly differentiated products which capture worldwide attention.

Previous researchers defined Born Global as a firm that would show '25% export to total sales ratio in the 3 years after inception'. Gabrielsson et al. (2008) suggests that this definition overlooks important potential discrepancies in the context of BGs' home market, products, and in the receptivity of export markets. In his publication the author tries to clarify the definition of a Born Global firm and to describe the three phases—introductory, growth and resource accumulation, and break-out to independent growth as a major player—through which Born Globals progress. A set of verifiable propositions that better define a Born Global company is thus provided by the researcher.

The internationalization modes of Born Globals is the subject of a 2009 publication by Melen and Nordman:

"Based on longitudinal data from eight biotechnology Born Globals, we divided the firms into three subsets: the low committers, which use low commitment internationalisation modes in their initial and continued internationalisation; the incremental committers, which experience an increase from low to high commitment modes in their continued internationalisation; and the

high committers, which use both low and high commitment internationalisation modes from inception.” (Melen & Nordman 2009)

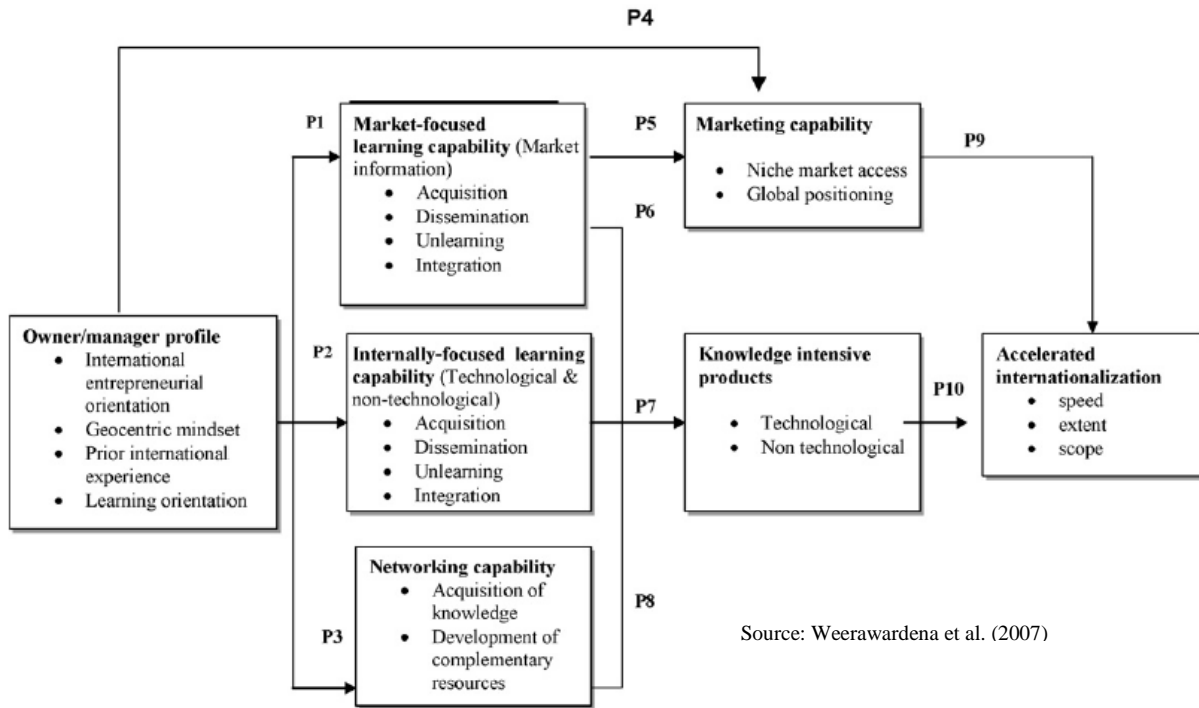
The close relationships between the success of Born Globals, their networks, and entrepreneurial founders are a common subject in the publications of the last decade.

As far as network-dynamics is concerned, a set of propositions regarding the network-dynamics of early-stage INVs, in a series of multi-site case research, was advanced in 2006 by Coviello. He proposed seven propositions regarding INVs’ network-dynamics importing entrepreneurship theory into the INV literature and integrating the theory with empirical case data from young INVs (Coviello 2006).

Using survey data from Small to Medium Enterprises (SMEs) in the largest emerging economy of China, Zhou et al. found some support for this mediating role of social networks in the form of Guanxi³ (Zhou, Wu & Luo 2007). The authors theorize that international business managers should consider social networks as an efficient means of helping internationally oriented SMEs to internationalize more rapidly and profitably.

A set of dynamic capabilities that are built and nurtured by internationally-oriented entrepreneurial founders which enabled these firms to develop cutting-edge knowledge intensive products and which paved the way for their accelerated market entry are the subject of an inquiry by Weerawardena et al. (2007). Each proposition depicted positively relates the dynamic capabilities that connect:

³ Guanxi describes the basic dynamic in personalized networks of influence, and is a central idea in Chinese society. Gold, Thomas, Douglas Guthrie, and David Wank. 2002. *Social Connections in China: Institutions, Culture and the Changing Nature of Guanxi*. Cambridge: Cambridge University Press



Source: Weerawardena et al. (2007)

Figure 1 - Proposed dynamic capability model of born global firm accelerated internationalization.

Karra and Phillips describe the “born global” entrepreneur as a business person with particular talents and ambition looking to sell products and services globally from inception, sometimes even without ever trading in their own domestic market (Karra & Phillips 2004). Their willingness to take risks, together with a cross-cultural competence, global vision and strong networking enables these entrepreneurs to explore markets and niches into which other types of company would be less willing to penetrate.

Oviatt & McDougall (2005) provide a model of forces which influence the speed of internationalization of entrepreneurs. They suggest that the speed of internationalization is a function of a variety of factors including the entrepreneur’s knowledge of the foreign market, their networks, their motivation, their sense of opportunity as well as a background in technology. On the same subject, Mathews & Zander (2007) propose that the newly internationalising firm is best captured within a framework found at the intersection of entrepreneurial and internationalisation perspectives. The framework is based upon three fundamental milestones in the internationalization process: (1) the discovery of new

opportunities, (2) the deployment of resources in the exploitation of these opportunities and (3) engagement with competitors. The theme of the Global entrepreneur is also addressed by Isenberg who identifies that more and more start-ups are being born global and that entrepreneurs are taking advantage of the potential to tap into resources and serve customers across nations in order to take on larger competitors while using distance and different cultural contexts to create new products and services (Isenberg 2008). This new breed of business person, according to the author, is able to forge alliances from positions of weakness, is able to manage global supply chains and is able to establish multinational organizations from the outset. In a later article, Isenberg calls for an entrepreneurial revolution and urges leaders to follow nine key principles—some of them counterintuitive—that will help build a vibrant business sector: (1) Stop Emulating Silicon Valley, (2) Shape the Ecosystem Around Local Conditions, (3) Engage the Private Sector from the Start, (4) Favour the High Potentials, (5) Get a Big Win on the Board, (6) Tackle Cultural Change Head-On, (7) Stress the Roots, (8) Don't Overengineer Clusters; Help Them Grow Organically and (9) Reform Legal, Bureaucratic, and Regulatory Frameworks (Isenberg 2010).

Global entrepreneurship is not a monopoly of the developed economies as Persinger et al. (2007) have shown. The authors explore the phenomenon of the Born Global entrepreneur within the context of an emerging market and consider the attributes that lead to their success, such as a strong desire for achievement, a proactive personality and a global orientation, that permit them to succeed on a global scale.

Rialp-Criado et al. (2010) attempts to offer a deeper conceptual understanding of the early and rapid internationalization process of born-global firms by applying the lens of the strategy-making. They proposed that Born Globals would develop strategies specifically aligned with different process-oriented strategic approaches in their various phases of development.

Gabrielsson and Kirpalani's book 'The Handbook of Research on Born Globals' (2012) aims to provide a good coverage of the origin and evolution of BGs along with the historical changes in this sector. It discusses research publications across several areas of the BG phenomenon and proposes other areas that have been overlooked or less explored as candidates for future research. Several leading experts in the area have been invited to contribute to the book providing it with a diversity of perspectives (Gabrielsson & Kirpalani 2012).

Portuguese Companies' Internationalization

Perhaps the most famous reference to the Portuguese international trade in any publication comes from Adam Smith himself when addresses the economic side of the Methuen Treaty in his *"The Wealth of Nations"* publication. Only after the 1974 Portuguese revolution did Portuguese Firms' Internationalization became a relevant subject for academic study and publication within Portugal. In Rodrigues et al. (1977), the exporting sector of the Portuguese economy, with a focus on the external capital investment in that sector, is the object of an extensive analysis, soon followed by a series of publications on the same subject.

Several authors have undertaken an analysis of the international involvement of the Portuguese economy. The most relevant research came from Simões (1986, 1996, 1997), Esperança et al. (1996) and Simões & Castro (2001). The outward Portuguese FDI and the competitiveness of the country in the international arena is explored in a Phd thesis by Castro (2000) that served as a basis for Castro & Buckley's (2001) research paper. In the latter, the authors express some concerns that, although there is a clear trend in the internationalization of Portuguese firms, that trend is massively biased towards Portuguese-speaking countries, especially Brazil, followed by areas where Spanish is the official language. They also show evidence that the country has failed to compensate for increasing production costs with more attractive and creative products, concluding that Portugal is a country still at a very early stage of the investment development path. In the 28th EIBA conference Simões & Crespo (2002) presented a paper about the internationalization patterns of medium sized firms (MSFs). Based on an extensive review of the relevant literature up to that date and a sample of 241 Portuguese MSFs they found that:

"...firm size, product development capabilities and belonging to traditional industries were associated with higher levels of international involvement, while the adoption of cost-based strategies had a negative influence in this regard." (Simões & Crespo 2002)

Francisco Castro revisits the country stages model and based on the evolution of Portugal's competitiveness over previous years, estimates that Portugal has managed to:

“...join other late industrialising countries as a 'stage 4' country, but that this position may not be consolidated.” (Castro 2004)

The internationalisation of Portuguese SMEs is subject of Pereira's (2007) paper which provides an overview of the history of Portuguese entrepreneurship over the last century. Basing the investigation on the internationalisation of Portuguese businesses and the principal features of Portuguese entrepreneurship and SMEs in the domestic and foreign markets, the author analyses the importance of SMEs in the current competitive environment of international markets. The researcher concludes that:

“The economic wealth of countries is intertwined with the global shift of economic activities (Dicken 1998), thus for Portugal the future is on the development of her 99% of SMEs, and as the dimension of her domestic market is small and on the periphery, the challenge for the future is the internationalisation of SMEs and entrepreneurship made in a sustained competitiveness way with the governmental support and integrated in a European structure,...” (Pereira 2007)

An empirical study of the internationalization of firms in the north of Portugal in the light of the Upsalla model, Born Global and network model was conducted by Macedo (2011). The research concludes that the majority of the firms can be classified by using a stage approach to internationalization. A small segment can be considered Born Global and there is almost no record of companies using a network model in their globalization process. The author advises the creation of specific policies working towards the development and creation of company networks to take advantage of the latter model (Macedo 2011). Ana Simões' master thesis on the processes and destinies of the Portuguese firms' internationalization presents a very detailed study of the subject. The thesis' theoretical research together with the detailed statistical analysis provided by several Portuguese institutes lays out a realistic and complete picture of Portuguese Firms' internationalization drivers and current status (Simões 2010).

In term of sectors there has been research on the internationalization of the traditional Portuguese ceramic industry (Feio 1994; Pereira et al. 2009, 2011), the shoe industry (Teixeira 2001, 2003; Cardoso 2004; Abrantes 2004; Marcos 2011), textiles (Melo & Duarte 2001; Ramos 2004) and moulding (Brás 2011). The internationalization of the Wine industry is analysed by other authors (Macaes 2001; Pereira 2009; Azevedo 2010). The economic crises that afflicted

Portugal and to some extent the whole of Europe forced companies in the construction sector to look to expand into other nations less affected, namely the so called emergent markets. In his Master Thesis, Miguel Da Gama researches this trend and provides some examples of best practices in that sector to facilitate companies' successful adaptation to such psychically distant markets (Gama 2011). The search for global competitive advantage in the Portuguese banking system and the diplomatic role required to support such internationalization was the subject of a master thesis by Claudia Joaquim (2011). Portuguese new technology firms are also the subject of several research papers (Fontes & Coombs 1995, 1997, 2001; Fontes & Laranjeira 1998) with some authors alerting that internationalization, for the latter sector, could be the only way to survive in such a small market:

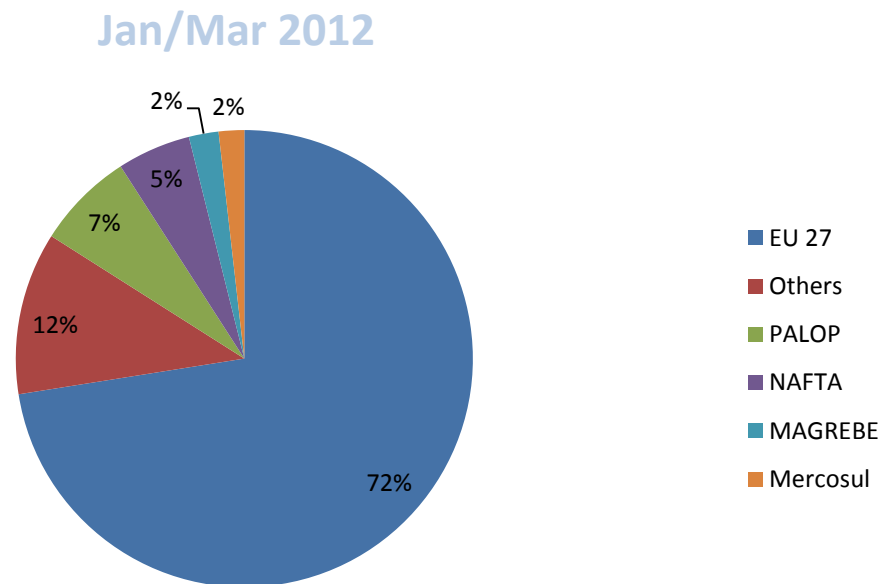
“The expansion into international markets can be a condition for NTBFs to overcome the pitfalls of imitation and adaptation orientated towards the domestic market.” (Fontes & Laranjeira 1998)

Even sectors not traditional in the Portuguese economy, such as management consultancy, have been the subject of internationalization studies. A master thesis by Marina Ishchenko studies the attractiveness of external management consultancy markets to understand the internationalization potential of Portuguese companies in this sector. The findings of this study focussing on Portuguese speaking markets suggest that Brazil is considered to be the most attractive destination for the internationalization of Portuguese management consulting SMEs (Ishchenko 2011).

Brazil is undoubtedly both one of biggest destinations of Portuguese firms' internationalization and the source of a plethora of research papers into Portuguese expansion (Silva 1998, 1999, 2003; Mateus 2000; Mendonça 2001; Mendonça et al. 2001; Costa 2001, 2003 Seabra 2002; Medeiros 2003; Silva et al. 2003; Silva 2005; Leal 2005; Guedes 2008; Cechella et al. 2009; Carvalho 2009; Fonseca 2012). Other work researches the internationalization to Portuguese speaking markets apart from Brazil (Ferreira 1994; Matos 2005; Moreira & Pereira 2007; Gonçalves 2009; Pina 2010). Spain, being one of the traditional markets for Portuguese firms, has also been widely researched (Santos & Aleluia 1995; Caetano 1996; Alves 2001; Reis 2002; Lima 2010). The most significant recent research comes in the form of an empirical analysis of Portuguese firms entering the Spanish market and is used by

Esperança et al. (2006) to elucidate the entry mode and HRM strategies of emerging multinationals.

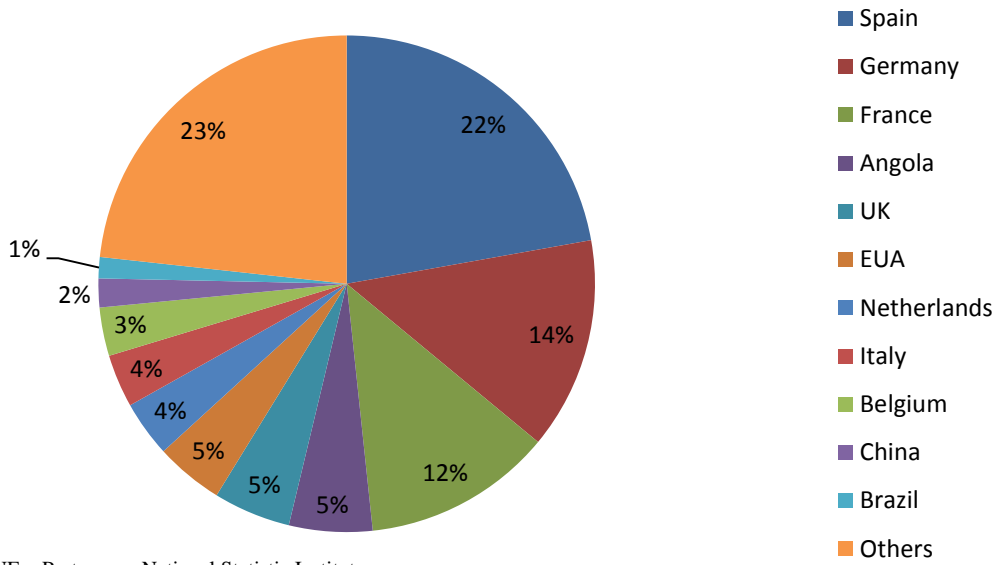
Despite the overwhelming research on the internationalization of Portuguese firms in Portuguese speaking countries, statistical data shows that the most significant slice of exports and FDI is channelled to the EU.



Source: INE – Portuguese National Statistic Institute

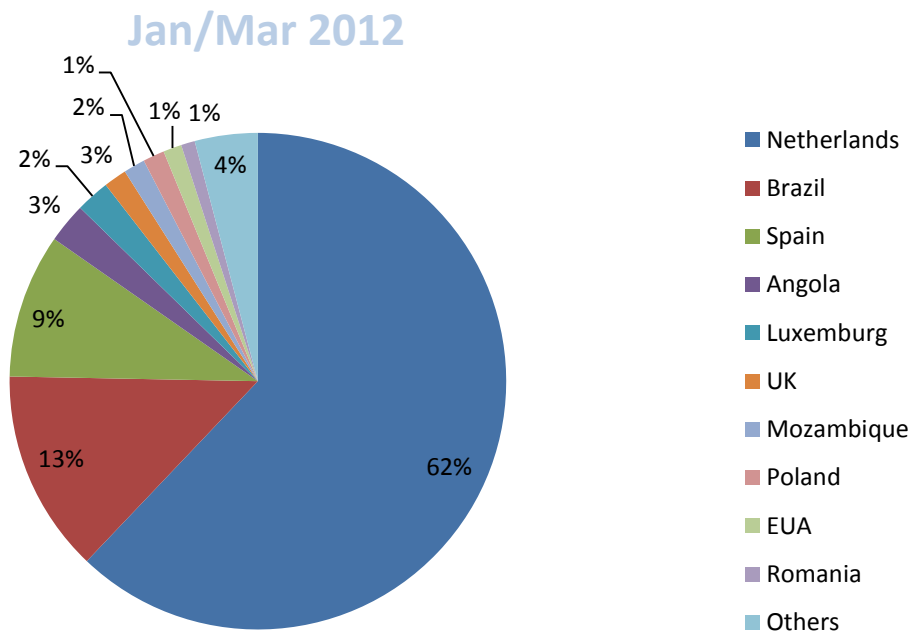
Figure 2 - Portuguese Export Geographic Distribution.

Jan/Mar 2012



Source: INE – Portuguese National Statistic Institute

Figure 3 - Portuguese exports major recipients.



Source: Banco de Portugal (Portuguese National Bank)

Figure 4 - Portuguese FDI by country

A research paper based on behavioural economics looking at how managers' behavioural patterns influence Portuguese firms FDI was conducted by Pinheiro-Alves (2011). The researcher argues that FDI theory seldom takes into account the manager's role in the internationalization process. According to the author:

"...managers have several motivational factors that are either intrinsic to their personality or shaped by their environment, and that their choices change with individual personal experience (Frey and Eichenberger, 2001). Although managers have checks on their performance (from competition, shareholders, customers and employees) and thus they often do make their choices more carefully than as if they acted as individuals, they are not immune to moral, cultural and other social influences usually disregarded by economic literature." (Pinheiro-Alves 2011)

The research demonstrates that behavioural literature has shown that rules of behaviour do exist in investment operations or similar situations.

Type time	Intrinsic	Extrinsic
Past	Learning, hindsight bias, sunk costs, mental accounting, break-even effect, house money effect	Historical anchoring, cultural anchoring
Present	Framing, representativeness	Availability, feelings, fairness, herding, cascading, signalling, false consensus bias, reputation-based herding, inter-expert inconsistency
Future	Strategic inconsistencies, Overconfidence, confirmatory bias	Strategic inconsistencies

Source: Pinheiro Alves (2011)

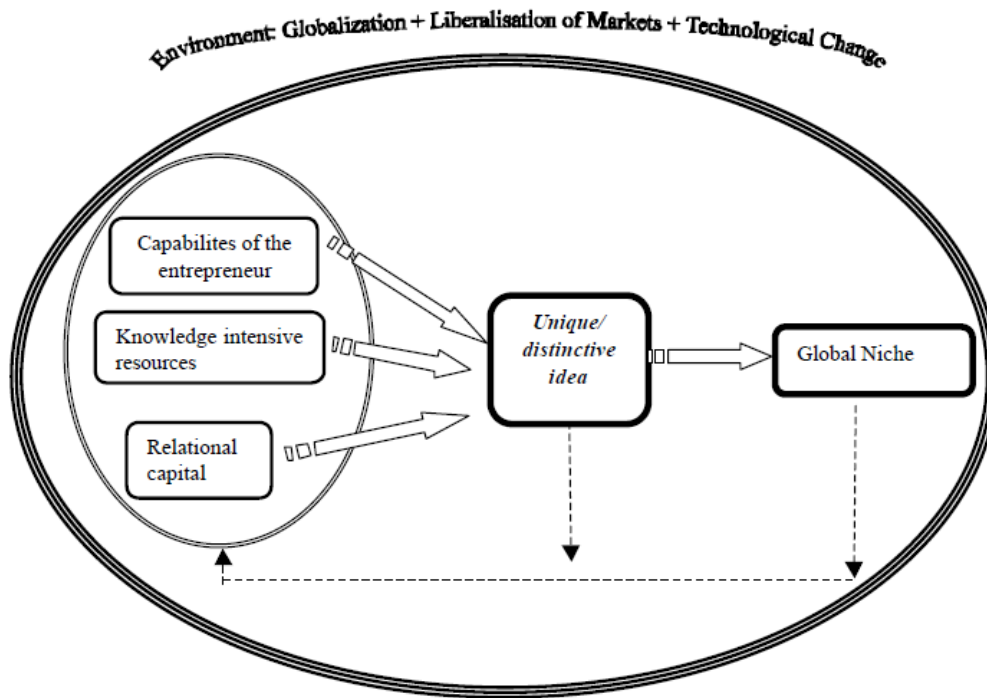
Figure 5 - Taxonomy of behavioural rules in FDI decisions.

Pinheiro-Alves' research, based on a total of 112 operations abroad representing at least 6% of the total FDI, concluded that:

"...FDI determinants arising from the behavioural approach were helpful in influencing 55% of the locations chosen by Portuguese managers. There were several situations where managers repeated the same behaviour in a consecutive way and kept unchanged non maximizing decisions for a long period." (Pinheiro-Alves 2011)

Portuguese Born Globals Research

A substantial number of studies dedicated to the internationalization of Portuguese firms have been conducted over the last 3 decades. Although excellent research papers on areas such as the internationalization of Portuguese New Technology Based Firms (NTBFs) have been published (Fontes 1996; Fontes & Coombs 1997; Teixeira 2000; Teixeira & Laranjeira 2001), the first study focusing on Portuguese Born Globals was conducted by Simões & Dominginhos (2001). After an extensive review of the literature on BGs Simões and Dominginhos propose an interpretation framework for the creation and development of BGs.



Source: Simões & Dominginhos (2001)

Figure 6 - Creation and Development of Born Globals: An Interpretation Framework

The framework is based upon the assumption that a combination of globalization, the liberalization of markets and recent technological changes created an environment where the capabilities of the entrepreneur, their relational capital and a knowledge intensive pool of resources would translate into a unique or distinctive idea capable of fulfilling the needs and desires of a particular global niche market. The authors also suggest that the proposed framework works as a two-way feedback process:

“The framework shows how in responding to market demands, firms may develop new sources of competitive advantage, which may in turn lead to enhanced competitive positions.” (Simões & Dominginhos 2001)

The study also presents three case studies of Portuguese companies which exhibited a swift internationalization process with foreign sales reaching 25% of total in a period of three years after creation. In an attempt to prove that the concept of BGs does not apply only to technological companies one of the case studies focused on one of the traditional Portuguese industries, footwear. Simões & Dominginhos (2001) conclude that of the main factors defined in the framework the capability of the entrepreneur is salient in the initial phase of the internationalization process. In each of the case studies analysed, the following essential characteristics emerged: i) Basic technological and/or business knowledge giving rise to the creation of a unique and innovative concept that enables the firm to enter the international competitive arena and earn an international reputation; ii) Visionary thinking of entrepreneurs in terms of identifying global windows of opportunity and in taking an outward-oriented approach from the beginning; and iii) Management skills in combining resources and in promoting their international development. The researchers also found evidence that the companies analysed in the case studies make use of relational capital by participation in R&D consortia, new technological developments and by gaining institutional “flagship” customers. All the above factors, together with the exploration of market niches by both the technological and traditional companies leads the authors to assume that the proposed conceptual framework can be used to define the BG internationalization process.

Moutinho’s (2010) PhD thesis analyses seven Portuguese INVs from both technological and traditional industries. The thesis focuses on the initial characteristics, motivations and internationalization process as well as on the structure of the companies. Across the firms studied, some shared characteristics were identified, these are: innovative products, entrepreneur mind-set, inter-organizational integration and strategic flexibility. The author also categorized three main types of INVs:

- a) **International from conception** – Companies which from creation have globalization at the heart of their development process. These companies show a strategic

internationalization method, based on the entrepreneurs' networks and international knowledge and/or experience.

- b) International from creation** - Companies which become international immediately after inception. These firms benefit from having innovative products and an entrepreneur with a global mind-set. They begin by following an opportunistic approach to internationalization that evolves to a strategic approach to internationalization.
- c) International after creation** – Companies that become international in the first 6 years of existence. These entities do not possess innovative products, and their entrepreneurs or founders have no particular knowledge of their global sector. They tend to have an internationalization process dependent on third parties that define the “when”, “where” and “how” the process is going to start and evolve.

Simões (2012) contributes to Gabrielsson and Kirpalani's (2012) publication *Handbook of Research on Born Globals* with a chapter exploring the relationship between the founder-entrepreneur's links with the company's evolution and the patterns of geographical internationalization. Simões shares the opinion with Keupp & Gassmann (2009, p. 613) that the current BG literature reveals ‘*a serious gap in our knowledge regarding how the process of entrepreneurially driven internationalization evolves*’. The author considers that such a gap exists ‘due to an insufficient understanding of the relationship between the entrepreneur and the firm at early stages in its life cycle’ (Simões 2012, p. 309). Using six cases studies of Portuguese Born Globals in the technology-intensive sector with a theoretical basis based on the dynamic capabilities approach (Teece et al. 1997; Eisenhardt & Martin 2000; Helfat et al. 2007; Teece 2009), Simões intend to address this gap. The researcher argues that the life of the firm pre-dates its creation and that in both that pre-birth as well as the ‘infant’ phase the entrepreneur's capabilities may be stronger than those of the firm. Both phases suffer from a lack of research and Simões set himself the task of providing a contribution to this area.

Simões' (2012) conclusions can be summarized around four main themes:

- 1) A successful internationalization process is to some extent anchored to pre-birth features, such as, how the business opportunity is framed. But it is also dependent on later internal as well as external events. The main thread linking the ‘pre’ and ‘post’ firm

creation is provided by the founders who see their role as increasing in importance when the firm is born.

- 2) Entrepreneurial projects, after they are conceived, are bound to change as a consequence of market exposure. This is especially true for firms whose founders come from a research/academic background. Market validation of entrepreneurial ideas is critical for company growth and sustainability. It is very important for the entrepreneurs to be aware of this factor and be ready to adapt their initial ideas to fit the needs and wants of the market.
- 3) The ability to build bridges across networks is also a critical factor in the success of the organization. Being able to use their scientific/academic, professional and even personal networks, combining them together and sharing ideas between them allows for a spill-over effect that will be extremely important in an international context.
- 4) Rapid internationalization is best ensured by international customers, namely multinational players, who provide levers and networks for expanding into international space. Having internationally homogeneous products, though important, is not a necessity for internationalization. As the author suggests: “when a firm is able to follow an ‘adaptation’ approach, combining adaptation and replication, a fast internationalization process may also be achieved” (Simões 2012).

Simões suggests further research be conducted in this area, and shows a particular curiosity in the study of: “...the process of company revision of *ex ante* projects and adaptation to unexpected challenges.” (Simões 2012).

Research Methodology

Methodology

As stated before, the extensive literature on BGs provides different naming conventions and definitions to classify these types of organizations (Luostarinen & Gabrielsson 2004; Gabrielsson & Kirpalani 2004). The exact age of the organization, exporting dates, export ratios and the speed of internationalization are dependent on the size of the BG domestic market, initial resources and other factors such as the type of industry. For this research we will follow Oviatt & McDougall's (1994) definition of Born Globals as an entity that *"from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple counties"*.

Our study uses a qualitative research method based on case studies (Mack et al. 2005). Case studies are an appropriate method to study the application of the theoretical frameworks to real business world scenarios by answering the question "How" companies really behave in a free market (Eisenhardt 1989; Ghauri et al. 1995). Case studies also help to study recent, under-researched or green field areas (Yin 2009). Our study also aims to respond to Coviello and Jones's (2004) call to develop further case studies in order to help understand the social phenomenon of BG's.

The target focus of our research was organizations that have been conceived to be global from the planning stage of their inception. To find relevant candidates for the research we used the database of the Portuguese governmental Agency for External Investment and Commerce (AICEP) containing over 6,000 exporting companies. We filtered through the database and asked 174 potential candidates to fill an online survey that would provide us with the necessary information for further select the companies reflected in the case studies. With this method we tried to select companies based on their potential contribution to answer our research question: How do founders' initial planning, dynamic capabilities and networks contribute to shape BGs' evolution and early internationalization patterns? The main criteria in case study selection was based on a relevance basis rather than on representativeness, focusing more on the quality of the information and knowledge gathered from it than on quantity (Mort & Weerawardena 2006; Gassmann & Keupp 2007). Our findings indicate that fast internationalization is not an exclusive

behaviour of high-tech companies, and although there is a clear positive move towards a more technologically based economy in Portugal, there are cases of successful BGs which arises from the innovation and the discovery of new external markets by traditional sectors. The case studies selected for this research were split evenly among high-tech and traditional sectors, by doing this we tried to provide empirical evidence that corroborates the hypothesis that BGs are not restricted to the high-tech sectors. Information for the case studies was collected via a thorough analysis of websites, magazines and the press, supported by an online survey followed by, when possible, semi-structured interviews with members of the initial entrepreneurial team in order to further enrich the information provided by the survey.

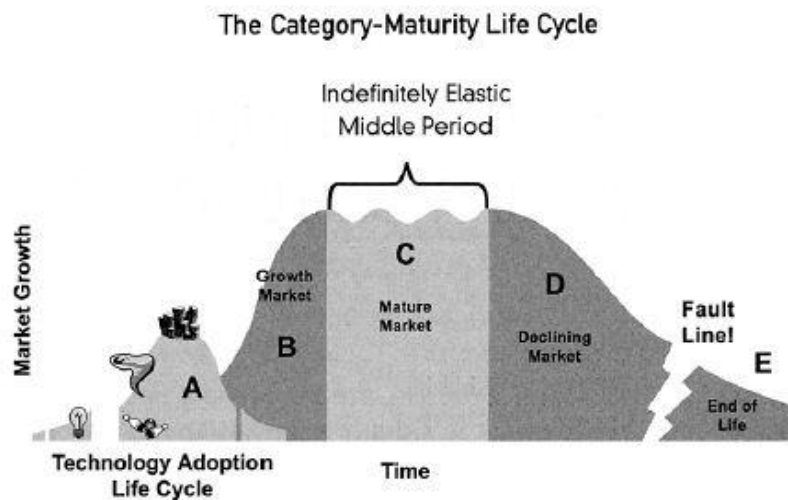
The main objectives of case study research is to derive a better understanding of the planning stage as well as the entrepreneurs' role in sensing and seizing business opportunities besides gaining greater insight into the influence that the founders' networks had in the initial stages. We also aim to understand more clearly how often and in what ways adjustments were made to the initial plan to respond to the challenges and unpredictabilities of the market.

Some of the questions we explored in the interviews with the chosen companies for the case studies allowed us to gather information regarding factors such as:

- How detailed was the initial internationalization plan?
- How important were the founders' dynamic capabilities?
 - The capability to sense opportunities
 - The capability to seize opportunities
 - The capacity to manage threats through the combination, recombination, and reconfiguring of assets inside and outside the firm's boundaries
- How did the founders' networks, professional, academic or personal, influence the success of the internationalisation process?
- What kind changes or adjustments were needed to the initial plan and why?

Sectors

The Category-Maturity Life Cycle model (Moore 2005) defines five phases of a sector or market. It starts with disruptive innovative products or services provided to the market, with which only a few early adopters will engage, such as for example Virgin Galactic suborbital flights. This is followed by a growth market where the innovation is adopted by visionaries; electric and hybrid cars are a good example of such a stage. The subsequent mature market phase is when products lose their innovative characteristics and become mass commodities; good examples of these are laptop computers or smartphones. Occasionally some new technology comes along that causes some markets to decline: broadcast television is an example of such a declining market which was toppled by the internet. Eventually the declining markets end up either becoming extinct, such as mechanical typewriters, or occupying a residual market niche as the photography film industry can attest.



Source: (Moore 2005)

Figure 7 - Category-Maturity Life Cycle

During our initial analysis of the AICEP database we found that the majority of companies function in either the maturity market stage or in a declining market. We also found some companies operating in growth markets but in our research we did not find any examples

of companies that have disruptive innovative products live in the very initial stage of the Category-Maturity Life Cycle.

The sectors addressed in these research case studies follow much the same Category-Maturity Life Cycle distribution as that of the Portuguese economy. Shoe and Furniture industries are mature markets, surviving in the indefinitely elastic period due to the nature of their products and to the demand of the markets. IT and Electronics sectors, by their own nature, cover several markets across different stages, but we found that the majority of the companies provide products and services for growth and mature markets.

Survey Results

After reviewing the information contained in AICEP's database we concluded that it did not contain all the appropriate information necessary for our study. We also found some data discrepancies in the database which led us to decide that we needed a different source of information which would provide consistent and up-to-date data. We then devised an online survey with relevant questions for our study and using AICEP's database, pre-selected 174 companies as potential respondents to the survey who were then asked to fill in the online questioner.

We received 25 valid survey replies which represents a 14.3% success rate. Although not statistically significant, thus not enabling generalizable conclusions to be drawn the survey, it did give a rich set of information to work with. It also allowed us to choose companies from different sectors providing our research with case studies from a range of industries.

Although the low rate of replies does not permit us to generalize the results to the entire population of Portuguese Born Globals, we still judge that important information can be drawn from our survey. In Appendix C we present a statistical analysis of the information provided by the survey replies.

Case Studies

Frato - Luxury furniture Made in Portugal

Created in 2010 and having generated revenues of €2M in the first two years of operation from a customer base almost exclusively from outside its country of origin, Frato would not stand out from other fast growing Born Globals were it not for the fact that it operates in the interior design sector. Its products include sofas, furniture and lamps.

Although Frato is still a baby, there are important historical and environmental circumstances that help explain the company's success. Carlos and Patricia Santos' academic backgrounds are in Mechanical Engineering and Law respectively but they only practised their professions for a short time as this couple's dream was to have their own company. Having the entrepreneurial gene in their DNA, Carlos and Patricia took their dream into their hands and, 15 years ago and with only €10K, created a company that imported decorative items from China and sold them in the European market. Soon after they were creating their own product designs and outsourcing the manufacturing to China.

The presence that the company has had at international decor fairs for the past 10 years allowed the company not only to establish a strong international partnership and customer network but also to open up a new world of opportunities that the couple was quick to grasp and take advantage of. The couple's next step was to create a company targeting the interiors global solutions sector which allowed them to dip the toes into the furniture sector. Frato was not only the result of their years of experience and their presence in international fairs, but also the outcome of the capacity of these entrepreneurs to spot opportunities, to read the market sector and its trends as well as to be in possession of a sound understanding of the world economy.

High end luxury markets are rarely affected by world crises, instead demand in these markets tend to move between countries or world regions, as the last decade has shown with financial capital migrating from western economies to those of the Middle East and Asia. On the other hand, the gap between labour costs in Asia relative to those in Western countries has reduced significantly. This, together with the rise of the Yen against the Dollar has made the manufacturing costs of countries like Portugal almost as competitive in price as those in China or other Asian economies.

Taking advantage of the fact that furniture manufacturing is one of the traditional industries in Portugal with high quality standards and a sizable cluster of companies in the north of the country, Carlos and Patricia needed only to insert the most significant missing piece of the puzzle, a strong brand, in order to launch the products on the world market.

“We didn’t even consider [producing] in the Far East. We have offices and production in Portugal which is a big strategic advantage. Portuguese production of furniture and sofas is very good and very flexible, for example we don’t have sofas with specific lengths. If the customer wants a 2,65 meter sofa we can produce one unit, and our manufactures are able to produce at this low scale which fits well into the luxury market. The major difficulty is to raise the quality standards to what we call the Frato standard, it takes time but it’s achievable.”⁴

Frato’s founders were swift to understand that the luxury niche customer buys design, quality and brand, the latter took less than 2 years and they were able to create a business network that took the company’s products to more than 35 countries.

“In this [luxury] segment people don’t associate so much the companies with the country of origin. They buy brand. In the Paris fair, the stand were we were did not specify the country of origin because companies there are by nature thought to be global.”⁴

Even the company’s name was a fortunate coincidence, named after the initials of the couple’s two sons; Frato is the Esperanto word for brother which leads many visitors of the fairs to think that its origins are Italian (Fratelo).

“We have customers that only realize that we are Portuguese after having started working with them. And almost all of them think we are Italians because the name sounds Italian. As a matter of fact it’s named after our two sons: Francisco and Tomas. During an interview with a journalist in Singapore he asked us what made us different from other Italian companies? That one was easy to answer...”⁵

⁴ Translation from Frato CEO, Carlos Santos interview to Jornal de Negocios, 3 July 2012 (http://www.jornaldenegocios.pt/home.php?template=SHOWNEWS_V2&id=565867).

⁵ Translation from Frato CEO, Carlos Santos interview to Jornal de Negocios, 3 July 2012 (http://www.jornaldenegocios.pt/home.php?template=SHOWNEWS_V2&id=565867)

Perhaps one of the most interesting concepts adopted by the Frato entrepreneurs is the recent concepts of the Lean Startup (Ries, 2011). Lean Startup advocates that the initial stage of a company life should be treated like a scientific experiment, with hypothesis followed by a set of low cost empirical tests intended to either validate or discard those initial hypotheses. It also defines the concepts of perceiving (continuing) or pivoting (changing) the initial plan. Frato was itself created as an experiment, tipping the toes in the water for 6 months before the initial hypotheses were validated and the company officially created.

For two years in a row Frato has kept growing with growth perspectives of 50% by 2013. The company business model is B2B mainly through interior decorators, architects, stores or hotel chains. Among some of the most successful projects, a special mention must be made of the collection's creation and production for the luxury French furniture brand Roche-Bobois, the design and creation of furniture for the Four Seasons hotel chain and the supply of luxury furniture to Harrods (London) and Al Tayer (Dubai).

But Frato's management team plan to soon have more stores to add to the recently opened 70m² store in Singapore, as Carlos Santos puts it:

“Another thing that would give us enormous pleasure would be to add a second point of sale to the store in Singapore, preferably in the Middle East or a big European city.”⁶

The entrepreneurial spirit of this young couple is not satisfied with the success in the luxury furniture market, instead they are thinking of taking advantage of Frato's existing brand presence in the luxury market and are already thinking of moving into the luxury jewellery sector, but that is for a future story.

⁶ Translation from Frato CEO, Carlos Santos interview to VidaEconomica 13 July 2012 (<http://www.vidaeconomica.pt/gen.pl?p=stories&op=view&fokey=ve.stories/83234>)

Guava – London, New York, Lisbon, São João da Madeira

As a kind of therapy, while designing luxury furniture for a company in Washington DC, Inês Caleiro was also sketching and designing shoes in her spare time. This young Portuguese woman soon realized that she had designed an entire collection and as soon as she found herself back in Portugal began looking for a manufacturing partner; something that did not took too long to achieve. Petasil, a shoe manufacturing company from S. Joao da Madeira, the shoe capital of Portugal, took up the challenge of making Inês Caleiro’s dream come true. One might think that this is where it all began, but it is not.

This young entrepreneur does not settle for the opportunities to come and knock at her door, while taking her bachelor degree in Design from the Institute of Visual Arts, Design and Marketing (IADE) in Lisbon, she also enrolled on a part-time jewellery course. As soon as she finished her degree, Inês enrolled on a post-graduate course in Fashion and Product Design at the London College of Fashion. Taking the advice of one of the college tutors to invest in shoe design led Inês to win the “Best Student” award.

“During my studies, I focused on the footwear classes in particular - which I found incredibly inspiring...Travelling to Paris, being in London during Fashion week, and having the opportunity to meet professionals from industry were highlights of my time at LCF and gave me the vision for my future business.”⁷

Thanks to that award, the young student received an offer to become a trainee at Jimmy Choo, one of the best known luxury shoe brands.

“To work at Jimmy Choo made me see refinement and excellence in another perspective. It was an amazing learning experience, probably the best “school” to learn a mixture of business, marketing, quality and design.”⁸

⁷ London college of Fashion Student testimonials
(<http://www.fashion.arts.ac.uk/studyabroad/showcase/studenttestimonials/inescaleiro>)

⁸ Translation from an interview with Ines Caleiro given to CTCP
(<http://www.sapato.org/sapatonoticias/noticias.asp?opcao=2&idnot=2237&id1=13&site=yes>)

After 6 months, the young designer was invited to stay for another unpaid internship period of 2 years, something that Inês could not afford to accept, instead Inês moved to Washington D.C. taking advantage of the Portuguese Governmental program INOV.

“On completing the internship I moved to Washington D.C. to work for a prestigious luxury furniture design brand, as product designer. The combination of my design background (graphic design, fashion/accessory design/product design) combined to create a complete understanding of my vision, my design ethic and my ambition.”⁷

It was during her stay in Washington that the idea of “Guava” took form. With drawings for an entire collection and a detailed business model defined, a detailed plan and a business model defined, as soon as she got back to Portugal the entrepreneur began to contact several shoe manufacturers in order to present them with the ideas and concepts of “Guava”.

“I previously had a accessories line called Berries and Cherries, so I decided to once again use a fruit for the name of the company. I decided to use the name “Guava” since it is my favourite fruit.”⁹

Having found a manufacturing partner, established the company and made an initial investment of €15K, “Guava” launched its first Autumn/Winter collection in 2011, with a production of around 10 to 15 models totalling 600 pairs of shoes.

“I arrived in Portugal, where high quality shoemakers are based and put my dream into production. This is where 'GUAVA' started to become real. Six months later, the 'Guava' brand has made a strong impact and we have been contacted by fashion magazines and bloggers. We've had our first public article in 'Time Out' Lisbon and have been contacted by fashion designers wishing to collaborate for fashion shows and catwalk shows...all very exciting!”¹⁰

The new Spring/Summer collection, named Pixel, is available in several stores in Portugal, Angola, The Netherlands, Spain, Belgium and USA as well as in the company web store with

⁹ Translation from an Interview by Ines Caleiro to AICEP in February 2011
(<http://www.portugalglobal.pt/PT/PortugalNews/Paginas/NewDetail.aspx?newId={A131F244-4F50-4FD7-99F0-F721C9246E38}>)

¹⁰ London college of Fashion Student testimonials
(<http://www.fashion.arts.ac.uk/studyabroad/showcase/studenttestimonials/inescaleiro>)

around 75% of the total production being exported outside Portugal. A men's shoes collection was launched in 2012 and Inês has plans to open her first Guava store in 2 or 3 years.

Guava's founder considers that the design and novelty of the brand are its competitive advantage. In such a competitive industry, with very short product lifecycles it is not only important to be ahead of the fashion trends but also to provide added value to the consumer in the form of innovative and appealing designer shoes. For this Inês draws on her academic experience as well as on an absolute passion for the industry.

“Guava was and has been like a boom of innovation in the Portuguese footwear industry, and it is very good to feel that the public was looking forward to seeing something as contemporary as Guava. Recognition at international level has been a motivation for me to keep on coming up with and developing new challenges for the brand.”¹¹

With an innovative and attractive design, a large pool of experienced shoe manufacturers available and a virtually infinite demand for shoes, Guava is putting on high heels to seduce the world of shoe fashion.

“When I'm asked why women love shoes, I simply answer: “Just blame Cinderella””¹²

¹¹ Translation from an Interview by Ines Caleiro to Portuguese Soul Magazine, 2012

¹² Translation from an interview with Ines Caleiro given to CTCP

(<http://www.sapato.org/sapatonoticias/noticias.asp?opcao=2&idnot=2237&id1=13&site=yes>)

InnoWave Technologies – Portuguese smartest-sourcing Company

InnoWave Technologies was born from the entrepreneurial desire of the founders who used all their professional expertise and previous experience in international consultancy companies in creating a Portuguese company whose ambition is to become a big player in the world of Information Technologies.

Before founding InnoWave Technologies, Tiago Gonçalves and Fernando Correia worked for over 14 years in several IT consultancy companies throughout Europe developing their competencies, knowledge and professional networks. Both also have academic backgrounds in the Information Technology sector, Tiago Gonçalves possesses a BSc in Electronic and Computer Engineering, an MBA and a post-graduate degree in Innovation and Entrepreneurship, while Fernando Correia has BSc in Computer Science. The academic background, professional experience and the professional networks created while working for other companies gave the entrepreneurs the ability to fulfil a long awaited wish.

Although sharing the desire to found their own company, they nevertheless lacked the financial support in Portugal to do so, a common obstacle faced by several Portuguese entrepreneurs.

“Only when things are going well [two years after the company’s inception], or with real guarantees is the financial supported provided, and even so it requires personal guarantees.”¹³

Trying to get access to governmental funding turned out to be virtually impossible, leading the entrepreneurs to doubt the morality of the process.

“They are a farce. The only approved applications are either owned by the same people who evaluate the [QREN] applications, or absurd blocking mechanisms are created to undermine it, like for example the requirement of IEFP internship, or worse, the projects are not approved because they are deemed not to contribute to the re-structuring of the Portuguese economy, even if they have been ROI and are contributing to the country’s exports.”¹³

¹³ Interview with Fernando Correia, manager from Innowave, to Jornal de Negocios, July 2010

While this type of adversity might demotivate some entrepreneurs, that was not the case for the InnoWave founders, who decided to pursue their dream without any kind of external financial support and with a total of €10,000 of their own, decided to open their company. This initial financial constraint required tight control on costs and a rigorous analysis of the investments to be made. With this type of self-investment, success was only possible due to an aggressive export strategy, and the fact that in the target markets, payments from customers usually ranged between 30 to 60 days. Such short payment deadlines would be unthinkable in Portugal.

“We looked especially for business opportunities and estimated the return against the necessary investments regarding the discounted cash-flows on a 5 year horizon.”¹⁴

The company made their first international deal with a Belgian telecommunication company in January 2008, just one month after its inception. This early internationalization was a major gain for the company and a month later in February was already entering the Polish and Brazilian markets where they also provided services for the telecommunication sector.

The growth of the company, according to the founders, is a reflection of the company’s positioning in providing services to advanced international technology markets. The kind of services provided by the company can be defined as “smart-sourcing”, a concept that goes beyond the outsourcing or offshoring that other companies provide.

“InnoWave goes a step further than outsourcing, allowing its customers’ organizations not only to cut costs, but also to increase innovation. Instead of simply moving the work to where the least expensive workers are. Smart-sourcing enables cost cutting while increasing innovation, productivity and efficiency, growing the business and maintaining accountability, even when moving operations offsite. Additionally it permits our customers to focus on core operations while InnoWave takes responsibility for innovating change and cost-control in non-core operations.”¹⁵

¹⁴ Translation from Tiago Gonçalves’ master thesis survey reply

¹⁵ Taken from InnoWave Technologies web site in October 2012 (http://www.innowave-technologies.com/index.php?option=com_content&view=article&id=14&Itemid=19)

After just over 4 years of existence, the company has grown to 50 employees and has a remarkable track record of revenue growth, starting at €519K in the first year of operation and reaching €2.1M in 2011. The company is now present in Portugal, Spain, Belgium, the UK, Poland, Denmark and the USA with more than 50% of its revenue coming from business outside their country of origin.

InnoWave's main differentiators, or competitive advantages, are its innovative model of service delivery (smart sourcing), strong business and technological know-how, innovative thinking, flexible and competitive pricing models, TCO solutions and time-to-market, quality of service and a real partnership with customers.

The company has been also exploring other business opportunities, according to Tiago Gonçalves:

“In the beginning the company did not offer any products, it was mainly services but the strategy for products was already there. Throughout all this time, and because the strategy was already defined, we have been able to develop innovative products that are financed by the profit generated from the services.”¹⁶

This constant focus on innovation and the decision to move towards a product strategy supported by services work have been fruitful for the company. In 2012 the company entered the mobile devices game industry by developing a free game available to any Samsung device such as smartphones, tablets and connected TV. This partnership with Samsung allowed both companies to begin what the entrepreneurs think is a profitable and long term relationship between the two companies. Leveraging on their previous partnership with Samsung, a new partnership with LG, has just been forged through the launch of Yubuy, an online shopping platform for smart TVs which they soon expect to extend to other platforms. Targeting the IPTV sector, the company recently launched a comprehensive suite of T-Commerce applications for the US market. The IPTV platform is currently deployed by two cable-package providers in Portugal and one in Minnesota, USA.

¹⁶ Translation from Tiago Gonçalves' master thesis survey reply

Another recent partnership was established with jBilling, a company that has developed open-source billing software which allowed InnoWave to win the bid to implement jBilling for Estradas de Portugal to collect and bill highway tolls in Portugal.

“InnoWave is very pleased to establish a partnership with jBilling. The jBilling solution leverages InnoWave’s billing expertise and allows us to provide our worldwide customers with a comprehensive open source billing solution.”¹⁷

Despite the extraordinary success of the company so far, Tiago Gonçalves mission is to continue to expand the company on the international stage, as he says *“We want to be one of the largest companies in the world.”¹⁸*

¹⁷ Tiago Gonçalves’, managing director of InnoWave, interview to PRWeb (<http://www.prweb.com/releases/2012/3/prweb9307645.htm>)

¹⁸ Tiago Gonçalves’, managing director of InnoWave, interview to Jornal de Negocios, July 2012 (https://www.eiseverywhere.com/file_uploads/9e2482aaa45ea3b8f73b76879b24068a_seccao14junho.pdf)

FiberSensing – Light years ahead monitoring the world

FiberSensing is one of the world leaders in advanced monitoring systems based on optical Fiber Bragg Grating (FBG) technology. The company is a spin-off from INESC, a not-for-profit engineering research centre formed from a joint venture between the private sector, universities and governmental organizations. The company was the result of the work of four optical electronic physicists, engineers and researchers. This would be an unremarkable story among spin-offs from institutions such as MIT, Princeton, Berkeley or any other North American university, were it not for the fact that FiberSensing was spawned from a Portuguese research centre.

Fibre Bragg Grating (FBG) technology, a type of distributed Bragg reflector introduced into a short segment of optical fibre that reflects particular wavelengths of light and transmits all others, has been around since the late 70's. Furthermore, the use of measuring instruments for structural monitoring existed as a mature market. The innovation that FiberSensing brought to the market was the application of FBG technology in those instruments, which had been achieved through electrical systems up to that time.

“Bragg optical fibre sensor technology is currently considered one of the most adequate and reliable ways of monitoring structural integrity, with unquestionable advantages over the conventional technology. The Bragg optical fibre sensors have a huge application potential, since they permit the known performance deficiencies that the electric sensors show in the most extreme monitoring conditions to be overcome.”¹⁹

Using their years of research on FBG technology and sensing the market opportunity in structural measuring instruments, the four researchers decided to seize that opportunity. After creating an initial prototype and with the help of INESC they started looking for investors. The investment came from IAPMEI, a governmental institute set up to support Portuguese SMEs and to innovators, and PME Capital, a semi-governmental risk capital firm which took an active part in the launching of risk capital in Portugal.

¹⁹ Source: Interview by email provided by Maria Gonçalves from FiberSensing marketing department, 7th September 2012

“The individual promoters, together with INESC Porto, IAPMEI and PME Capital, today known as Portugal Ventures, financed the start of the project that initially consisted of the development of prototypes. Later on in a second phase of financing, another investor, PME Investments, joined in order to help leverage the transition to the industrialization phase.”¹⁹

The company makes extensive use of research partnerships, one such example was the partnership established with a partner company in Brazil, at the time of both companies’ inception. This allowed the joint development of a solution to measure pressure and temperature at the bottom of oil drilling pits; these products were later used by the Brazilian oil company, Petrobrás and other companies such as Schlumberger and Shell.

The application of innovative technologies to a mature market usually comes bundled with some competitive advantages that, as in the case of FiberSensing, drive the company to become a world leader in that market. However, this was not an easy task.

“The initial difficulties were mainly to do with its global positioning, targeting several markets while at the same time being a small company. Most of those markets are quite conservative and we were not equipped with a commercial department to cope with such factors. Furthermore, the industrialization of such technology represents new and demanding challenges. It was necessary to establish a controlled production process in order to guarantee the reproducibility of characteristics on all manufactured products as well as having a competitive price. We aim also to increase our competitiveness by a reduction of costs through process optimization without any loss of quality.”²⁰

The technology developed by FiberSensing does not restrict itself to any one area, but rather provides the possibility of application in several markets. This characteristic was crucial to sustaining the company through the 2009 global depression which strongly affected the construction market and was reflected in a decrease of 11% in its revenue in comparison with the previous year.

²⁰ Source: Interview by email provided by Maria Gonçalves from FiberSensing marketing department, 7th September 2012

By adapting their products to the energy market, by for example, creating products to monitor large electrical machines, generators and transformers, which were only possible with fibre optic technology, the company managed to minimize their risk by targeting a market that was, at that time, less impacted by the crises. Today FiberSensing products are used in markets such as construction, transportation, aviation, the aerospace industry and the energy (power generation and distribution including thermonuclear power stations).

The company is expected to exceed the €2million mark in revenue by the end of 2012. Of that sum more than 85% will have come from selling their products outside of their country of origin. Among the biggest consumers of FiberSensing technology are countries such as USA, France, China, Brazil, Spain, Germany, Switzerland, Italy, Singapore, Canada, Russia, Australia, Japan or Taiwan.

Having its roots in a research centre, the company knows that in order to keep its edge in these markets it needs to constantly innovate. To accomplish that goal, FiberSensing has its annual innovation cycle, where goals are defined for the achievement of new sensors, measuring instruments and supporting software. This innovation cycle is usually undertaken by a small team of researchers that complete the entire lifecycle of a product development, from research, design, development, and production to sales. The planning of which of the new products should go through the product development lifecycle is usually defined two years in advance. These constant, short cycles have a spill-over effect of producing a steady stream of new products while also taking advantage of the short time-to-market thereby capitalizing on the investment very quickly.

FiberSensing currently has 35 employees, with 84.5% of its shares being held by Portugal Ventures (former InovCapital), while the second largest shareholder is the Institute for Systems and Computer Engineering of Porto (INESC TEC) which holds 10.3% of the company. The remaining 5.2% is owned by the founding entrepreneurs and other private investors.

Discussion

Despite the fact that the rate of replies to our online survey was lower than we initially expected, the majority of them came directly from the founder, CEO or director, with only a small proportion of the surveys being filled out by the marketing department of the companies. This gave us a high level of confidence that the answers to our questions were accurate and represented, in most cases, the views and decisions made by the founders. One of the interesting results seen from the survey is that it seems that there is an apparently optimal number of founding entrepreneurs, with the majority of the companies having two (37%) or three (29%) founders. The single entrepreneur model was only reported by 17% of the companies followed by companies founded by four entrepreneurs (13%). Only 4% of the companies surveyed reported being founded by more than 5 individuals.

Another relevant survey result regarding the founder is that, in 62% of surveyed companies, there was previous professional experience in other firms in the same target sector, with the academic background of the entrepreneurs being relevant in 29% of the companies. Only 3% of the respondents provided a family background in the sector of activity as relevant to the company's conception. Independently of their backgrounds, the entrepreneurs were fundamental to the sensing of the business opportunity, with 88% of the surveyed companies stating that the founders actively discovered the market need, and only 4% taking a passive role with the opportunity being suggested by a partner or customer.

Similar results to those of the entrepreneur's background can be seen when looking at the kind of networks used by the founders when the company initiated its activity. 55% of the companies were found to have previous professional networks established by the entrepreneurs as one of their means of achieving success. Academic networks were used by 21% of the companies, while 15% made use of the founder's personal networks to establish themselves in the market.

It is also interesting to note that 52% of the companies are relatively small, with less than 10 employees, while on the other end of the spectrum, only 12% of the companies that replied to

our survey have more than 50 employees. The remaining companies are split between having from 10 to 25 employees (16%) and from 25 to 50 employees (20%).

That the majority of the companies started their internationalisation process fewer than 4 years after their inception does not come as a surprise since we initially pre-selected the companies that filled the criteria of Born Global. What is interesting to note is that 84% of the companies that become international in the same year of inception had been formed after 2006. Again we cannot draw any conclusion from the small sample, but it leads us to suspect that new Born Global companies are beginning their internationalization process earlier. It also demonstrates a clear increase in the international business of the companies researched with the majority deriving more than 50% of their revenue from international trade.

We also noticed that most companies increased their percentage of international revenue from inception while only a few maintained an unchanged ratio. It is important to note though, that the latter group already derived more than 75% of their revenue from their international business from inception.

The majority of the companies surveyed (92%) stated that the internationalization was a planned process, with the most significant factors considered to be company name (23%), product branding and marketing (21%), target market analysis (36%) and target market cultural idiosyncracies (16%). What surprised us was that, although almost all the surveyed companies had planned their internationalization since conception, only 27% clearly stated that a business model was used when planning the firm. This led us to suspect that the use of business models such as the business model canvas, business reference model or others are not as widespread among the Portuguese entrepreneurial landscape as they could be. Despite the low use of business models, 54% of the companies managed to achieve the goals set for the first years of international activity, 34% stating that the goals were partially met and 8% confessing that the goals set in the planning stage of the company were not met in the first years of internationalization.

With 85% of the companies surveyed targeting niche markets, more than half of them (61%) consider their products to be innovative and to be competing in the market with well-known competitors. There is, nevertheless, a smaller sample of companies (25%) providing

innovative products without any other known competitor, and 8% provide products and services to mature markets.

The choice of the initial target countries and regions in which to operate also provided some insight into the mind-set of this new breed of entrepreneurs. We were expecting to see a trend towards markets that were culturally close but this in fact, accounted for only 18% of the companies as a decisive factor for target market choice. The main factor considered was, in reality, the target market analysis (33%) closely followed by the economic growth of the target market (24%). 16% of the surveyed companies also considered their previous professional experience in those markets as a factor of choice.

When in the target markets, 55% of the surveyed companies rely on local partnerships as a key for their success, while partnerships with customers and governmental agencies both account for 10% each as key success factors.

The most striking result came from analysing the responses to our question about external (non-entrepreneurial) financial support. While 24% of the surveyed companies relied on initial private funding through business angels and venture capital, 12% on banking and 8% on governmental and EU financial support, 40% of the entrepreneurs did not revert to external help. Although surprised, we cannot draw any conclusion from these numbers and instead we would like to see a future study addressing the reason for such financial patterns.

When we set ourselves the task of choosing companies to be part of the case studies we followed Simões & Dominginhos' (2001) advice to study both technology and traditional sectors. We wanted to go even further and focus on Born Global companies from traditional Portuguese sectors. We were fortunate to have the possibility of interviewing Frato's founder, Carlos Santos, who provided us with the information required to compile a case study of the furniture sector, and Guava's founder, Inês Caleiro, who gave us material to study the shoe sector.

An interesting note on both Frato and Guava is that these companies do not manufacture their products, but rather rely on experienced partners to take care of that portion of the supply chain. This allows the companies to be dynamic in terms of production, sizing the production based on demand. Since they don't have to own all the manufacturing facilities and assets or the

productive labour they are able to reduce their overall fixed costs. Companies adopting this strategy usually incur high production costs since they are leaving that role to third parties, but in the case of both companies this has less impact in their profitability since both firms target the high-end and luxury market where the profit margins are relatively high.

Although Guava's products can already be purchased by end-customers on the company's web-store and both companies have plans to open their own stores, they still rely heavily on the B2B model with partners being the main vehicle for selling their products. Both founders are aware of the difficulties and dangers of such a transition and are carefully planning where and when to open their own physical stores.

With both the manufacturing and retail sections of the supply chain outsourced to partners, Frato and Guava are able to focus on the section of the supply chain that provides both companies with their main competitive advantages: the product design stage.

All the above characteristics were part of the initial plan of both companies.

Inês Caleiro, founder of Guava, started to define the company business model while still working in the United States of America. Having made use of her academic and professional experience in product design, with emphasis in shoe design, and with collections already sketched, the entrepreneur was able sense a business opportunity by putting the pieces of the puzzle together, the founder's own academic and professional background, a pre-designed shoe collection, and an experienced pool of shoe manufactures. The next step was to seize the business opportunity, for that the young entrepreneur travelled to Portugal and begin to contact potential manufacturing partners and, with such great experience and design quality, it did not take long before Inês found the partnership she was looking for. The entrepreneur's previously established academic and professional networks were crucial in the early stage of the company conception since working in the high-end sector requires a strong and recognisable brand. This was the biggest challenge to Guava; it required some strategic changes to the initial plan as well as the invention of ways to enhance the brand marketing and communication strategies were required.

Frato also share a similar business model, and draws advantages from being part of a group of companies owned by Carlos and Patricia Santos. The marketing capabilities of the

entrepreneurs surfaced with the decision not to use an existing company in the group to target the luxury market but rather create a new company for this segment. This is a marketing strategy that companies use when attempting to target different segments of the market by taking advantage of the brand awareness that high-end segment customers usually have. The sensing of the business opportunity came from the many fairs that the entrepreneurs attend, and from that awareness to seizing the opportunity was an easy step. With a pool of skilled furniture manufacturers available in the region it was simply a matter of showing their new brand and product at world fairs and establishing the necessary networks. In this case Frato's founders had to establish a new professional network since their previous networks targeted different sectors and segments. Carlos and Patricia Santos were quite ingenious in the way they started the company, selecting an experimental approach to verify if their initial hypothesis could be substantiated by empirical evidences. Only when they got good feedback from potential customers did they effectively launch the company. Frato is especially dynamic in adapting its initial plan based on customer and partners' feedback as well as feedback from the fairs.

Both Frato's and Guava's success is a clear reflection of their founder's determination, perseverance and investment. Although it is the quality and design of the products that provide the companies with necessary competitive advantages, the factor behind these two companies' success is the result of the planning, sensing and seizing of the business opportunity and once conceived the enterprises feed on their founder's professional or academic networks to survive and grow.

FiberSensing is a different class of Portuguese Born Global firm, both in its genes and structure. With its origins in a university and governmental research it stands out as a case of a university start-up.

Based on the academic work of university PhD students, the original founders, having researched and worked with the FBG technology, eventually sensed the competitive advantages of applying the technology to the market of structural measuring instruments. This innovative product introduction into a mature market allowed the company to have competitive advantages against traditional electrical equipment and hence elevated the company to market leaders in this segment.

The next step, seizing the opportunity, was not an easy one to take since this type of solution requires a significant amount of start-up capital. The necessary funding came from the research institute itself, InovCapital, the new venture capital company, made up of capital from the Portuguese Ministry of the Economy and Innovation and FSCR PME-IAPMEI , an agency for risk-sharing between operators, currently managed by PME Investimentos. This is the only company in our case study in which the main financial investment came from outside of the founding group. In the case of FiberSensing the original founders still occupy significant roles within the management team, with Luis Ferreira being the CEO, despite only owning a very small share of the company. Beside the management team and the board of directors, comprising a representative from INESC as president, a representative from Portugal Ventures and Luis Ferreira as the CEO, the company also has an advisory board whose members are well-known experts in the field and are from universities in Portugal, Spain, the UK and the USA.

The founders and management team were faced with several challenges throughout the lifetime of the company. These started with the need to adapt the company's manufacturing process that of a global company, taking advantage of a standardization of the manufacturing processes to enable cost saving and thereby a more competitive price structure. The management team was also quick both to adapt to market unpredictability and to explore different markets for their products once the main initial market, civil construction, had begun to suffer due to the global economic crisis. This expansion of target markets is continuing and is allowing the company to spread risk and therefore minimise the impact of a potential crisis in any one market.

InnoWave Technologies is a clear example that although important, external financial support is not one of the key factors required for the creation and the success of a company. It did, nevertheless, have an impact on the initial plan of the company in that it necessitated a focus on providing services which allowed the company to have a constant flow of revenue. In this matter the choice of countries where the company provided the services was critical. Focusing on both technologically and economically advanced areas of the globe allowed the company to benefit from short payment cycles which in turn provided the essential revenue to continue to operate.

Sensing the opportunity of the new trend of outsourcing services, smart sourcing, together with an emphasis on the provision of high quality services and most importantly the

establishment of strong partnerships with customers, allowed InnoWave to be highly competitive even against low cost labour IT companies based in India or China. Portugal in this sense is probably one of the best kept secrets in this area up to this moment. The country's geographical location provides time-zone benefits that the companies in the Far East lack. It is also a very technologically advanced country, having been one of the first countries to adopt mobile and later FTTH services on a national scale. All these factors, together with a strong educational focus on excellence in science and engineering, from which the InnoWave founders themselves benefitted, makes Portugal an excellent platform for providing high quality IT services at competitive prices.

InnoWave's founders took advantage of their extensive professional experience and professional networks, and without being demotivated by the lack of governmental or private external financial support, jumped at this opportunity and founded the company. Both the founders' previous experience and more importantly, the prior establishment of professional networks were crucial to the company's sustainability and growth. With a successful model for the services industry providing a stable revenue stream, the company could then open other revenue streams by focusing some of the resources in the long planned objective of providing products.

As with each company that we have studied, InnoWave had to make some adjustments to its plan, as Tiago Gonçalves told us:

“Adjustments are done on a daily, weekly or monthly basis and the business model is not static. It's important to have a strategy with defined paths, but more important is the flexibility to adapt to variable circumstances and be open to new opportunities that were not initially perceived.”²¹

²¹ Translation from Tiago Gonçalves' master thesis survey reply

Conclusions

We believe that free markets are subject to the same rules as life on earth itself. Organizations living in these free markets are subject to the Darwinian evolution theory of natural selection. They evolve (LG started as a hygiene and cosmetics company), mate (P&G with Gillette), establish symbiotic relationships (Nissan and Renault partnership) and eventually die and become extinct (Pan Am or Enron). As in animal species, so organizations' diversity in a free market system tends to diverge rather than converge, as the growing number of different companies with different products²² in the world can attest.

Nevertheless, some features, or mutations to use a biological term, such as the eyes or mouth in living beings, are successfully inherited by the vast majority of species, so some features of economic entities have been so successful that they now form part of the DNA of today's organizations (the double accounting system, for example). Our study corroborates the above assumptions as we found successful companies in very distinct areas of the economy and at different stages of the Category-Maturity Life Cycle (Moore 2005).

There is one significant difference between companies and living beings however, and that is that the former are planned and designed by a creator, or group of creators.

Our research objective was to understand how the founders' initial planning, dynamic capabilities and networks contribute towards shaping Born Global company evolution and early internationalization patterns.

Of the four companies that we have researched, none had a detailed business plan developed at the time of the conception of the enterprise, instead the initial plan was based on a lightweight path to where the company should be heading. We found that more important than having a detailed business plan was that the company had sufficient flexibility to change any initial plan in order to respond to market unpredictability.

²² Walmart Supercenters have an average offer of 142,000 different items. There are on the other hand around 1.9 million known species in nature.

Sources: <http://www.walmartstores.com/pressroom/news/5038.aspx> and <http://www.guardian.co.uk/environment/2009/sep/29/number-of-living-species>

The evidence from our research also led us to conclude that, although important, external financial support at the moment of the company's inception is neither a necessary, nor a sufficient condition for the success of the internationalization process, as the three companies financed exclusively by their founders clearly illustrate.

Adaptability to the environment by rapidly re-directing resources towards opportunities sensed to be profitable is then one of the critical key factors that the companies inherit from their founders and is in our opinion one of the necessary conditions for a successful internationalization process.

This adaptability is the result of the founder's dynamic capabilities, in particular the entrepreneur's capability to sense opportunities, followed by their ability to seize those opportunities. Another dynamic capability coupled related with the company's ability to adapt is the capacity of the management team to manage threats through the combination, recombination, and reconfiguring of assets inside and outside the firm's boundaries.

We also found evidence throughout the researched companies that another necessary condition for the success of the internationalization process is that of the entrepreneurs' networks. We have observed that the company feeds on the academic and professional networks from its founders to establish itself and grow.

In summary we believe that neither an initial business plan nor external financial supports are necessary conditions to the success of the internationalization process of Born Global companies. They are rather auxiliary conditions that might speed up the internationalization process.

On the other hand, we found evidence that there are necessary conditions for the success of such companies; these are the entrepreneurs' networks, the entrepreneurs' dynamic capabilities and the ability of the company to adapt to an ever changing market environment.

Based on the interpretation framework for the creation and development of Born Globals (Simões & Dominginhos 2001), we define a model that attempts to characterise the necessary conditions for the creation and development of Born Globals.

As we show in Fig. 9, both the necessary and the auxiliary conditions allow for a unique or distinctive idea to take advantage of a global niche market. In the case we also found evidence that potential enablers in accessing these markets might be the provision of a competitive position, of higher quality, perceived value or of competitive prices.

As suggested by Simões & Dominginhos (2001) there is a feedback loop in our proposed model. As the global markets change, the company is constantly adapting, feeding on the continual increase of its founders' or managers' networks and enhanced dynamic capabilities. This creates new distinctive or competitive products or services that provide competitive solutions to the same or other niche markets.

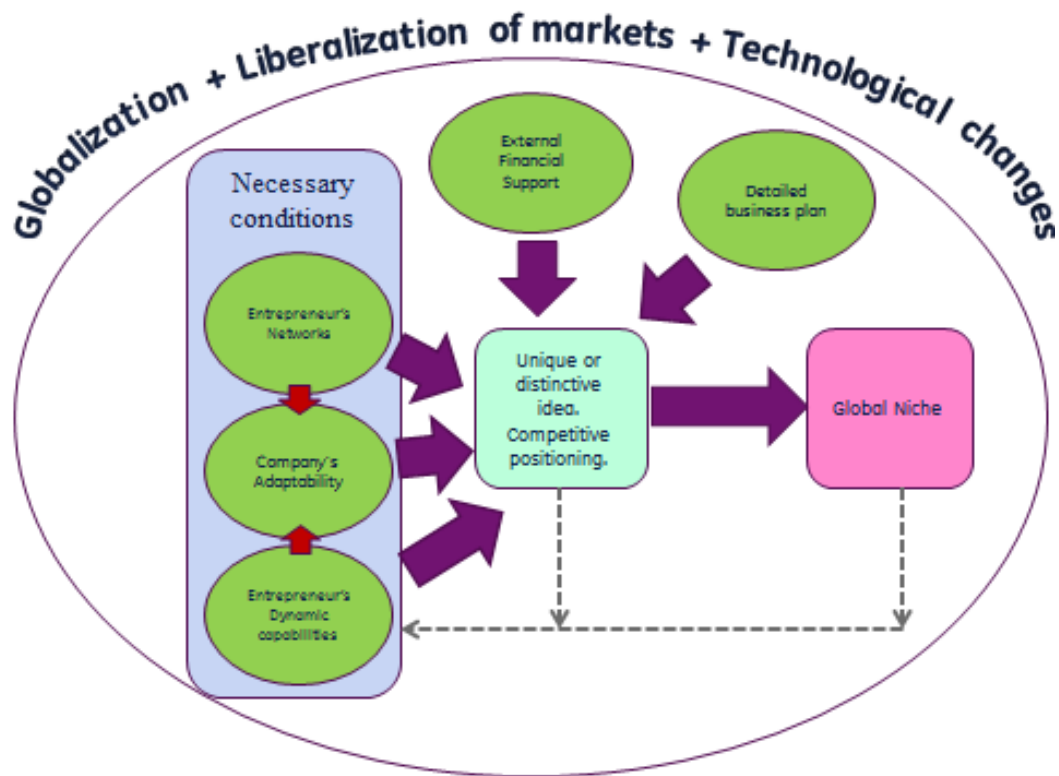


Figure 8 - Necessary condition for the creation and development of Born Globals

For future research we would like to recommend researchers to continue investigating both technology and traditional companies, if for no other reason than the fact that the distinction

between the two has been gradually shrinking and we believe that eventually there will only be technology companies targeting several sectors in which traditional sectors would be included.

Another suggestion we would like to make for future work is to try to find examples of less successful internationalization processes and to attempt to identify patterns behind these outcomes in order to compare them with our conclusion with the purpose of defining a control group to scientifically prove or refute our conclusion. We are aware that such task is not an easy one since most of the unsuccessful stories are usually not recorded, after all history does not care for the weak

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Appendix A – Survey Questionnaire

Company Identification and Characterization

Company Name: _____

Company Foundation Date: _____

Interviewee Name: _____

Interviewee Role: _____

How many employees does the company currently have? _____

What is the main international activity of the company?

- Products and/or Services exports
- FDI
- Both
- Other: _____

Internationalization Profile

How many years after its foundation did it take the company to become international?

In the first three years of international activity what percentage of revenue came from international activity?

What is the current percentage of revenue from international activity?

Was the company's internationalization planned prior to the foundation of the company?

How many Entrepreneurs/Founders founded the company?

How many of the original Entrepreneurs/Founders are still within the company?

Would you describe the initial international opportunity as active (the founders discovered a market need), passive (opportunity came from a partner's or customer's idea), or other? If the latter please specify which.

What kind of background did the Entrepreneurs/Founders have in the company sector?

- Academic
- Professional in previous companies
- Family
- None
- Other: _____

What type of Network was used by the Entrepreneurs/Founders to develop the company's international activity?

- Previously established professional networks
- Previously established academic networks
- Previously established family and personal networks
- Others: _____

Which of the factors below were considered from the point of view of internationalization when the company was initially planned:

- Company Name
- Products/Services branding and marketing
- Target Market economic analysis
- Target Market cultural idiosyncrasies
- Others: _____

What type of Business Model framework was used for the internationalization planning?

- Business Model Canvas
- Business Reference Model
- Component Business Model
- Industrialization or Services Business Model
- None
- Other: _____

Were specific goals defined in the planning stage for the first years of international activity?

- Yes, and they were met
- Yes, but not all of them were met
- No

What kind of adjustment or change to the initial internationalization plan was made to cope with market needs and uncertainties?

Internationalization Process

Are the company's products and/or services targeted for niche markets?

Would you describe the company's initial products and/or services as:

- Innovative and without known competitors
- Innovative but with some known competitors
- Mature market products or services
- Other: _____

What were the competitive advantages of the company's initial products or services?

What type of external financial support did the company have access to before its foundation?

- Private financial support (business angels, venture capital, etc)
- Government or EU financial support
- Bank Financial support
- None
- Other: _____

Which of the following key partnerships were drivers for the internationalization success?

- Partnerships in target markets
- Partnerships with government agencies
- Partnerships with customers

Other: _____

What were the reasons behind the choice of the initial target markets?

- Cultural proximity
- Target market analysis
- Previous professional experience
- Economic growth of the target markets
- Other: _____

Which target markets did the company initially address?

In which markets is the company currently active?

Appendix B – Case Studies Survey Summary

FRATO	
Sector	Luxury Furniture
Foundation date	2010
Number of employees	?
Main activity	Products exports
Internationalization date	2010
% of international revenue in the first 3 years	97%
Current % of international revenue	97%
Number of founders	2
Planned internationalization	Yes
Number of founders still in the company	2
Opportunity discovery	Active
Entrepreneurs background	Professional in other companies
Entrepreneurs Networks	Previously established professional networks
Planning factors	Branding and Marketing; Target market economic analysis
Planning business model	None
First years goals	Fully met
Planning adjustments	Yes, based on feedback from international fairs
Operates in niche markets	Yes
Products categorization	Mature markets
Competitive advantages	Products quality, design and creativity
External financial support	None
Key partnerships	Partnerships in local markets
Target markets choice criteria	Economic growth of the target markets; Target market analysis
Initial target markets	?
Current operational markets	Sales to 30 countries, some of the major customers located in Singapore, France, Saudi Arabia and UK.

GUAVA

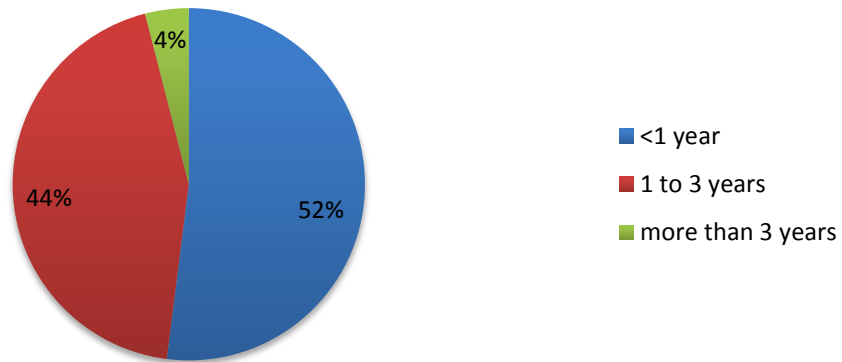
Sector	Shoes
Foundation date	2011
Number of employees	<10
Main activity	Products export
Internationalization date	2011
% of international revenue in the first 3 years	50%-70%
Current % of international revenue	50%-70%
Number of founders	1
Planned internationalization	Yes
Number of founders still in the company	All
Opportunity discovery	Active
Entrepreneurs background	Academic; Professional in other companies
Entrepreneurs Networks	Previously established academic and professional networks
Planning factors	Target Market economic analysis
Planning business model	None
First years goals	Goals were all met
Planning adjustments	Marketing and Communication
Operates in niche markets	Yes
Products categorization	Innovative and without known competitors
Competitive advantages	Product Innovation and novelty
Financial support	None
Key partnerships	Partnerships with customers
Target markets choice criteria	Target market analysis; Economic growth of the target markets
Initial target markets	EUA, Angola, Brazil and Japan
Current operational markets	EUA, Angola, Spain, The Netherlands, Belgium and Portugal

Innowave	
Sector	Information Technology
Foundation date	2008
Number of employees	50-100
Main activity	Export of products and services
Internationalization date	2008
% of international revenue in the first 3 years	50% to 75%
Current % of international revenue	50% to 75%
Number of founders	3
Planned internationalization	Yes
Number of founders still in the company	2
Opportunity discovery	Active
Entrepreneurs background	Professional in other companies
Entrepreneurs Networks	Previously established professional networks
Planning factors	Cultural characteristics of the target market; Target market analysis
Planning business model	Own Model
First years goals	Goals were all met
Planning adjustments	Frequent updates based on flexibility and be aware of new opportunities not initially planned
Operates in niche markets	Yes
Products categorization	Innovative products with known competitors
Competitive advantages	In the beginning the company was only providing services but already had the creation of products in their plan. Currently the company products are spawned and financed by this services work.
Financial support	No external financial support
Key partnerships	Partnerships in the target markets and with customers
Target markets choice criteria	Previous professional experience and analysis of some target markets
Initial target markets	North and Central Europe, EUA
Current operational markets	Belgium, UK, Denmark, EUA

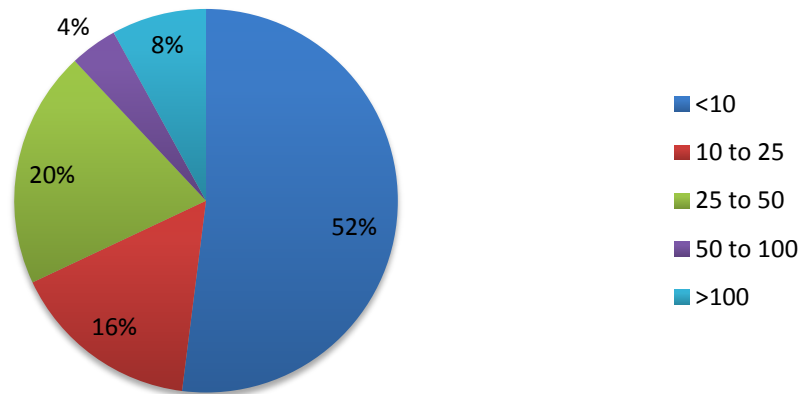
FiberSensing	
Sector	Electronics
Foundation date	2004
Number of employees	20 to 50
Main activity	Products export
Internationalization date	2004
% of international revenue in the first 3 years	25%-50%
Current % of international revenue	>75%
Number of founders	4
Planned internationalization	Yes
Number of founders still in the company	3
Opportunity discovery	Active
Entrepreneurs background	Academic
Entrepreneurs Networks	Academic research networks
Planning factors	Company name, target market analysis, international conferences and partnerships with world renown research groups in the company's technology.
Planning business model	n/a
First years goals	Partially achieved
Planning adjustments	Adjustments to the manufacturing process in order to be able to produce several types of equipment's with the same characteristics at lower prices.
Operates in niche markets	No
Products categorization	Innovative products with known competitors
Competitive advantages	Innovative use of the fibre technology in structural measurements and the ability to apply the same concepts for products to new markets.
Financial support	Private and Governmental
Key partnerships	Partnerships in the target market, Partnerships with Customer, Partnership with world renown research groups
Target markets choice criteria	Target markets analysis
Initial target markets	Europe and USA
Current operational markets	EUA, China, Brasil, Espanha, Alemanha, Suíça, França, Grécia, Itália, Hungria e Taiwan.

Appendix C – Survey Main Results

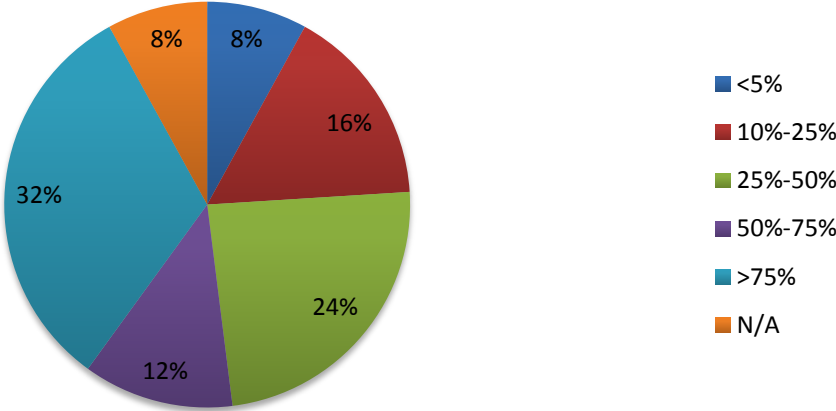
Number of years from inception to internationalisation



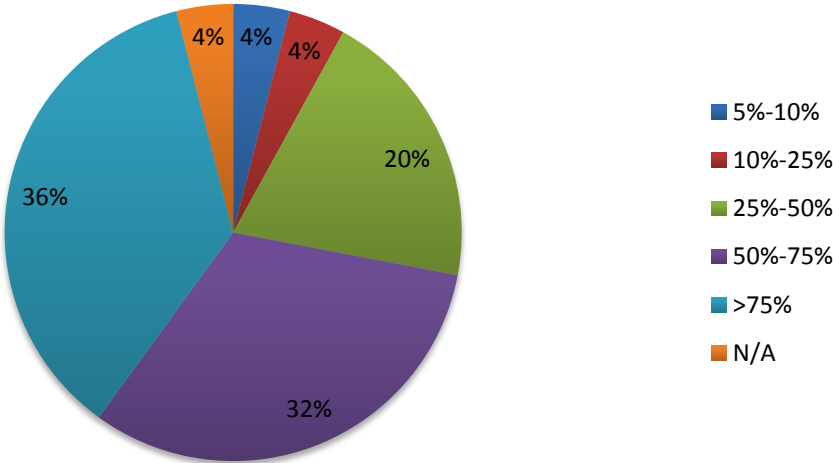
Number of employees



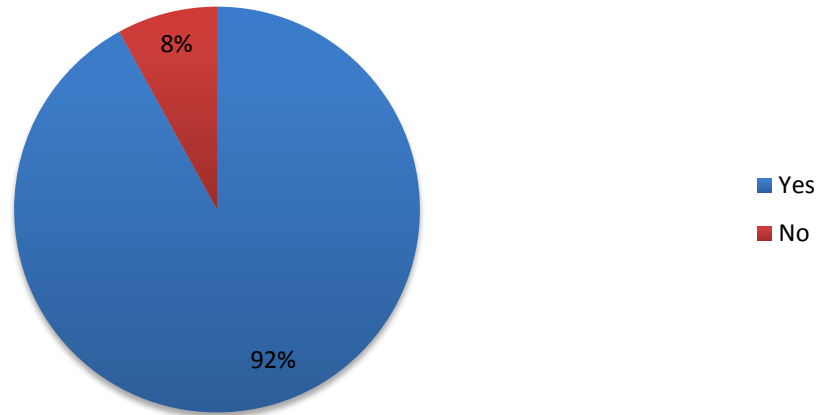
International sales over the first 3 years of the company



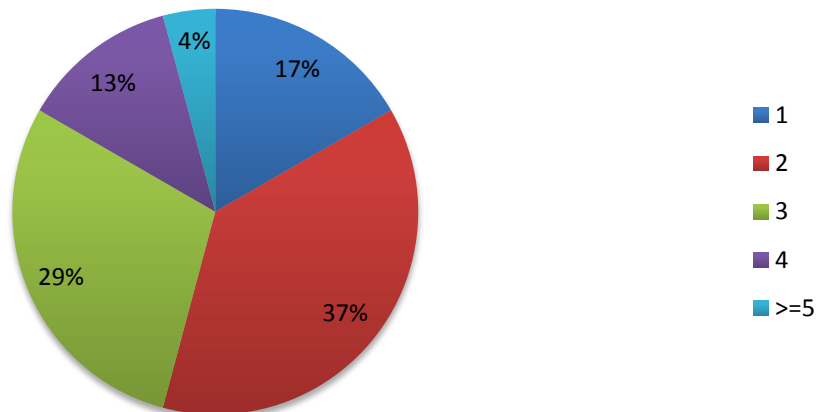
International sales in 2012



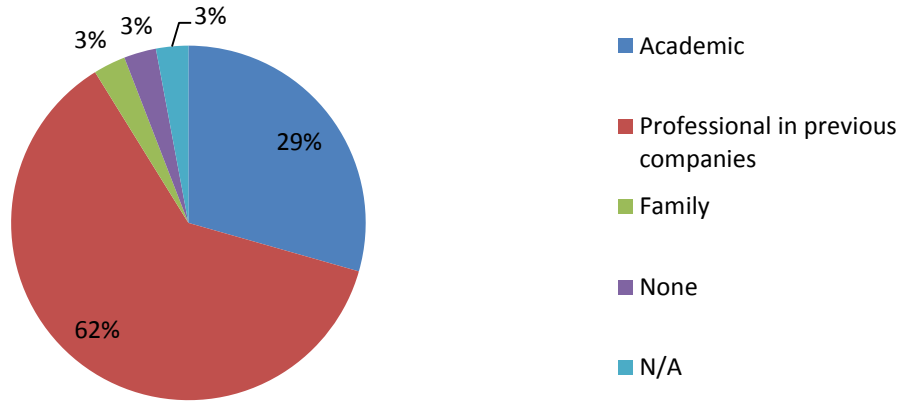
Was the internationalisation planned during the company's conception?



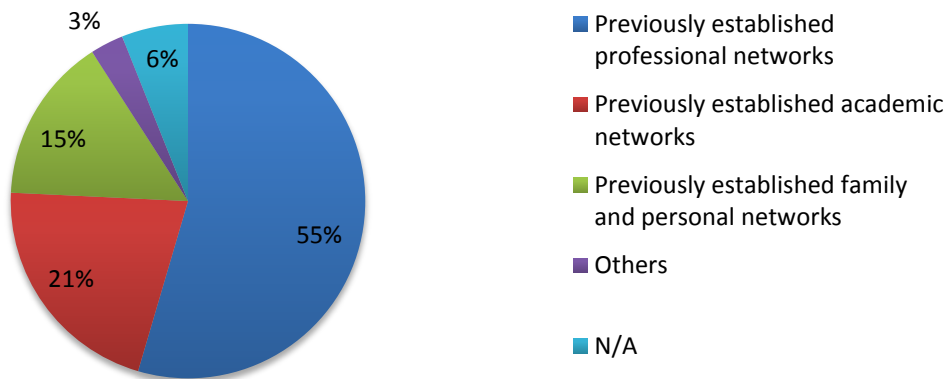
How many Entrepreneurs/Founders founded the company?



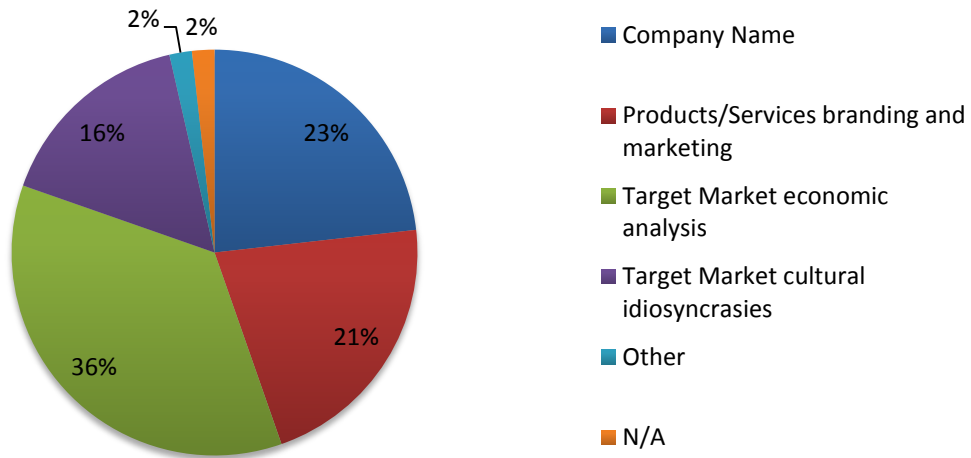
What kind of background did the Entrepreneurs/Founders have in the company sector?



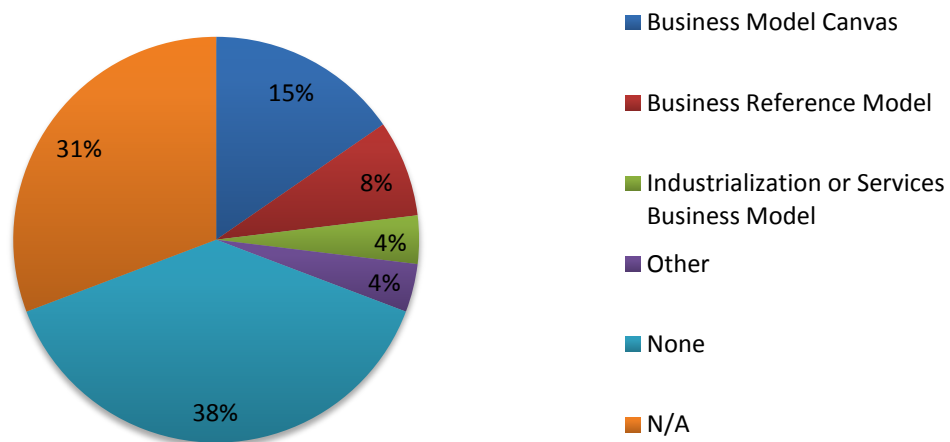
What type of Network was used by the Entrepreneurs/Founders to develop the company's international activity?



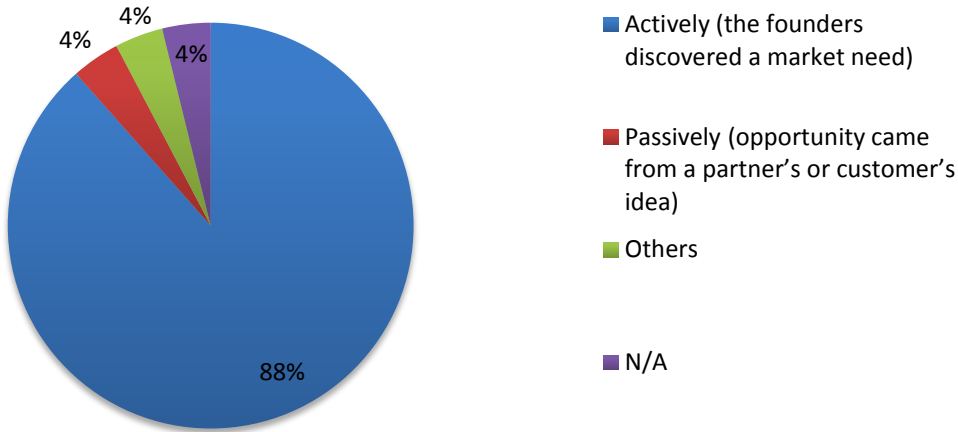
Factors considered when the company was initially planned



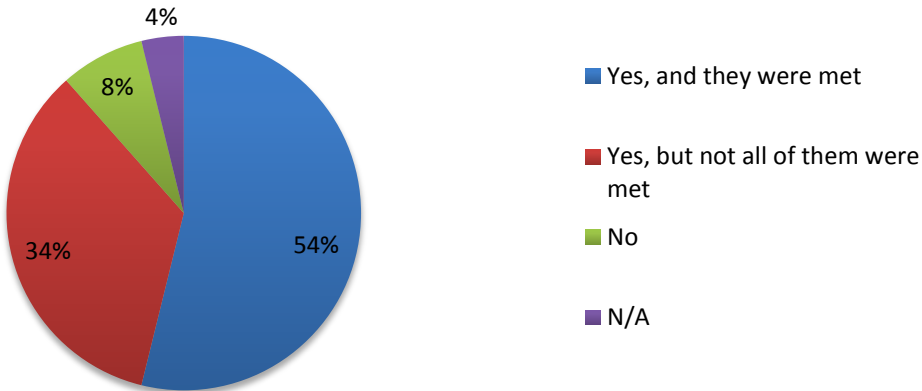
What type of Business Model framework was used for the internationalization planning?



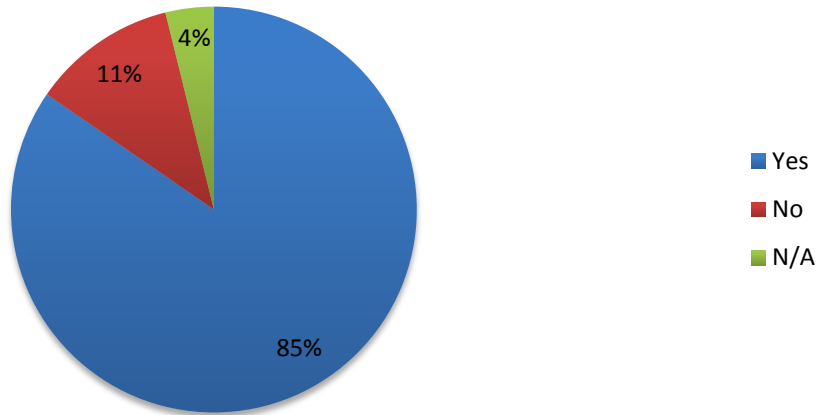
How was the business opportunity sensed by the founder?



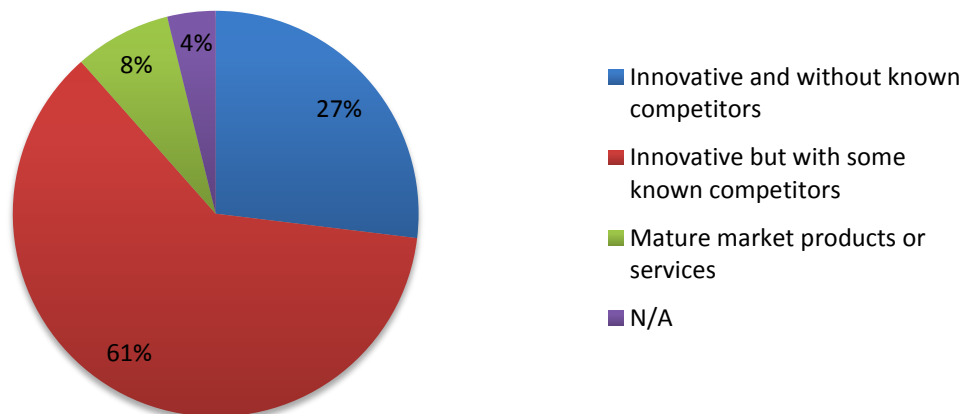
Were specific goals defined in the planning stage for the first years of international activity?



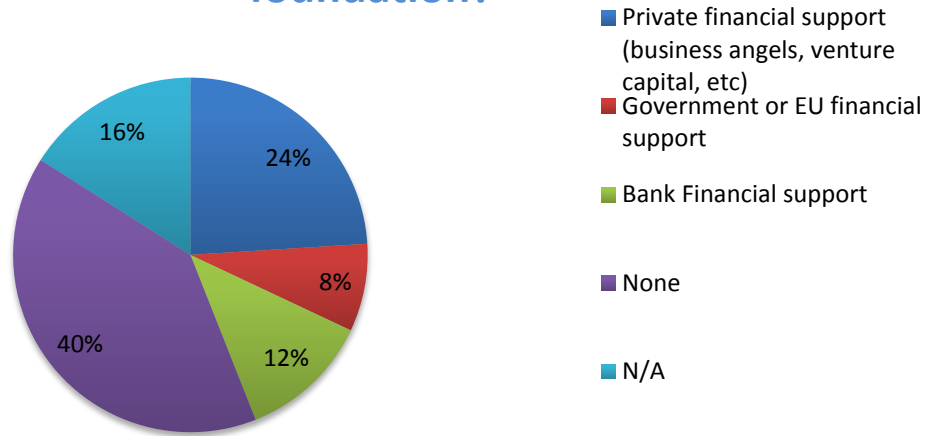
Are the company's products and/or services targeted for niche markets?



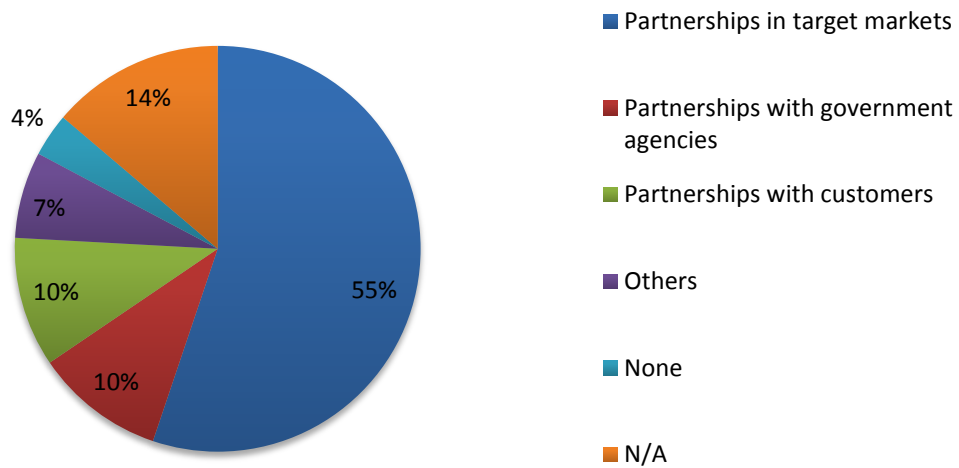
How would you describe the company's initial products and/or services?



What type of external financial support did the company have access to before its foundation?



Key partnerships for the internationalization success.



What were the reasons behind the choice of the initial target markets?

