



**RAFAEL JOSÉ REIS
DE SOUSA**

**A DISCUSSION ON THE QUATENUS PLATFORM AS
WELL AS ON THE INTERNATIONALIZATION
PROCESS APPLIED TO OTHER TECHNOLOGICAL
PRODUCTS**

**UMA DISCUSSÃO SOBRE A PLATAFORMA
QUATENUS ASSIM COMO O PROCESSO DE
INTERNACIONALIZAÇÃO APLICADO A OUTROS
PRODUTOS TECNOLÓGICOS**



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Dissertação apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Mestre em Gestão, realizada sob a orientação científica do Doutor Manuel Luís Au-Yong Oliveira, professor auxiliar do Departamento de Economia, Gestão, Engenharia Industrial e Turismo da Universidade de Aveiro

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palavras-chave

Internacionalização de empresas tecnológicas, born global, internacionalização PME's, startups portuguesas, empreendedorismo internacional, NTBF.

resumo

Há poucos casos tecnológicos de Moçambique analisados na literatura. Este estudo procurou, assim, ajudar a preencher esta lacuna. Será que em Moçambique as empresas tecnológicas adotam o mesmo posicionamento do que aquele que se adotaria noutro país com outras características (sociais, económicas, políticas e culturais), como Portugal? Foi assim realizado um caso de estudo sobre a necessidade de adequação do posicionamento das empresas face ao contexto externo e interno da empresa – o caso da plataforma Quatenus. Por outro lado, desde 2010, devido à crise económica, Portugal tem combatido o desemprego promovendo um clima de empreendedorismo, tendo sido criadas milhares de startups. Apenas cerca de 10% destas exporta, embora exista uma estratégia do governo para aumentar estes números. Emerge então a importância de refletir sobre os fatores que levam estas empresas tecnológicas a terem sucesso na internacionalização (incluindo para Moçambique). Desta forma, quais os fatores relevantes para o sucesso da internacionalização das Novas Empresas de Base Tecnológica (NTBF)? Para responder a esta questão este trabalho envolveu realizar quatro casos de estudo, um dos quais referido em cima, da plataforma Quatenus, assim como a realização de inquéritos a 39 executivos de empresas tecnológicas distintas. Este estudo contribui com a perspetiva auto-etnográfica do autor, que trabalhou cerca de dois anos em Moçambique. Contribui também com uma discussão sobre a internacionalização de empresas tecnológicas portuguesas, que muitas vezes dependem desta internacionalização para sobreviverem. Confirma-se a literatura existente sobre o tema, destacando os seguintes fatores na internacionalização das NTBF's: *networking* (estabelecimento de uma rede), recursos humanos qualificados, capacidades de gestão, criação de conhecimento eficiente, proatividade, localização do negócio, e capacidade de ajustamento da estrutura ao contexto em constante evolução.

Keywords

Technology-based firms internationalization, born global, SME internationalization, Portuguese start-ups, international entrepreneurship, NTBF

abstract

There are few technological cases involving Mozambique in the literature. This study attempted to fill that gap. Do Mozambican technology companies adopt the same positioning, in comparison to those adopted in other countries with different characteristics (social, economic, political and cultural), for example Portugal? A case study about a company's necessity to adapt its positioning, taking into account the internal and external context was created – the case of the Quatenus platform. On the other hand, since 2010, due to the economic crisis, Portugal has fought against youth unemployment by promoting an entrepreneurship mind-set. This in turn has created thousands of start-ups. Only 10% of these, however, export therefore the government has created a strategy to increase these numbers. It is important to identify the factors that influence these companies to achieve internationalization success (including Mozambique). What factors need to be taken into account in order for companies to succeed in NTBF (New technology-based firms) internationalization? To answer this question this study includes four case studies, one of them being the above mentioned Quatenus platform case, as well as 39 questionnaires filled in by business persons from different Portuguese technological companies. This study contributes also with the author's auto-ethnographic perspective, who worked in Mozambique for around two years. Additionally, the study contributes to a discussion about Portuguese technology companies that often depend on internationalization to succeed. We confirm the data within the existing literature, highlighting the following NTBF's internationalization factors: networking, qualified human resources, management capabilities, efficient knowledge creation, proactivity, business localization and the ability to adjust the structure to the constantly evolving external context.

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1. Introduction

1.1. Initial considerations

This dissertation was written within the scope of the Master's in Management at the University of Aveiro.

This study involved four components:

- A review of the bibliography about internationalization, specifically for technology-based enterprises;
- In-depth interviews of internationalized technology-based start-ups;
- Questionnaires answered by business people with knowledge in the internationalization process;
- A case study of an enterprise "Quatenus" which sells a software-based service.

This chapter presents the theme, explaining the motivation behind it, defining the goals and finally, the organisational structure of the dissertation.

1.2. Motivation

The interest in this research was raised when the author worked in a software-based business in Mozambique and followed an internationalization process in South Africa. The author's curiosity of technology businesses, the desire to become an entrepreneur and their international orientation made this work beneficial.

The process of internationalization is dynamic and adjustable. The developments in technologies, communications and transportation have impacted on the way companies do international business. Consequently, the research themes, start-ups, born global, early internationalization, international new ventures and new technology-based-firms (NTBF) are current topics and have been increasingly referred by various authors. Hence, it is necessary to harmonize the terminology used in internationalization studies.

Another reason is that governmental institutions keep supporting entrepreneurial enterprises. Their encouragement of entrepreneurship will be maintained at high levels and, consequently, start-up creation is expected to also be high. The appearance of new

technology-based businesses is likely due to the substantial education and capabilities of the Portuguese working population and the growing trend for entrepreneurship (Startup Portugal, 2017).

Portugal is a small nation, made up by consumers with limited purchasing power, according to EU standards (INE, 2016). It is essential that Portuguese start-ups, based on technology, are able to internationalize their products and services, in order to reap the rewards of larger and more prosperous markets.

Mastering the internationalization process whilst developing innovative products suitable for international markets is a real challenge specifically when businesses are being set up. Recent examples have shown that it is difficult to develop technological products in Portugal, even though the companies were supported by investors, e.g. the Kinematix case (Pimentel, 2017), to name but one.

1.3. Objectives

The main goal of this research study was to identify and analyse the factors, which may contribute to internationalization success, minimizing mismanagement of Portuguese technology-based start-ups. The research intended to highlight the importance of these factors, describing how they can influence the entrepreneurial internationalization process.

In addition, and based on the identified factors, another objective was to design a conceptual framework. A schematic representation could make this work easier to understand and therefore could be utilised by entrepreneurs in their enterprises. For the literature to evolve, emphasis on the development of theories and the construction of conceptual frameworks is essential (Rialp, Rialp, & Knight, 2005).

According to Yin (2006), studies do not have to define any hypotheses. Exploratory studies should present a goal and their criteria used to conclude the success of the study. If the main internationalization factors have been identified and subsequently utilised to formulate a valid conceptual model, the study would be deemed successful.

1.4. Organizational structure

There are few technological cases involving Mozambique in the literature. This study attempted to fill that gap. Do Mozambican technology companies adopt the same positioning, in comparison to those adopted in other countries with different characteristics (social, economic, political and cultural), for example Portugal? A case study about a company's necessity to adapt its positioning, taking into account the internal and external context was created – the case of the Quatenus platform. On the other hand, what factors need to be taken into account in order for companies to succeed in NTBF internationalization? To answer this research question an additional three case studies were performed, as well as 39 questionnaires filled in by business persons from different Portuguese technological companies.

In sum, a total of four case studies were performed, to shed light on the research questions. One case study in particular was more in-depth than the others – that which involved the Quatenus platform – as the author worked at the firm promoting this technology for close to two years.

So, the second chapter introduces the main concepts: start-up, born global, micro and small enterprises. The relationship between the concepts was analysed and the conclusions drawn from the aforementioned topics were applied to the main research theme (New Technology-Based Firms).

In the third chapter, a schematic diagram suggesting the division between groups (Innate exporters, Born Global, Born exporters, Late exporters, Early internationalization) was developed based on the literature.

The fourth chapter identifies the factors with the most influence in the internationalization process from the bibliographic review. The impact of networking, management, human resources, proactivity, knowledge creation and market positioning in the internationalization process was determined.

The fifth chapter refers to the methodology used, namely in the interviews, case study and questionnaires.

In the sixth chapter, three case studies and the questionnaires are discussed and conclusions were arrived at.

In the seventh chapter, the Quatenus case study is discussed and analysed - a case study about market positioning. The culture, education and economic factors were represented as was their impact on product adaptation and positioning.

In chapter eight a conceptual model was built based on the research results. This illustrates the most important factors of the internationalization process specifically for new technology-based firms.

Chapter nine presents the most relevant conclusions of the study, suggesting possibilities for future research.

Finally, it is relevant to say that two publications (Au-Yong-Oliveira, Reis de Sousa and Gonçalves, 2017a, 2017b) resulted from this research (please see the appendices 1 and 2) – one in an international (Scopus and ISI Web of Science) conference and another in an international peer-review journal (JADI).

2. Concepts

2.1. Initial considerations

Through the literature review, the terminology used around the theme was identified. The following concepts were described: start-up, born global, micro and small enterprises and NTBF. A possible link between them was made, explaining how they are related. In addition, a schematic illustration of the referred terms was created to better understand how they are linked.

2.2. Start-up concept

Start-up is connected to the action of doing business by entrepreneurial actions, meaning “behaviour in response to a judgmental decision under uncertainty about a possible opportunity for profit” (McMullen & Shepherd, 2006). A start-up can be defined as a new company (or even one in the embryonic stage or still being constituted) which has promising projects linked to the research and development of innovative ideas. There is a high risk involved in creating a business, although they are highly scalable. In other words, they have high growth potential when things go well (Portugal Ventures, 2017).

2.3. Born Global concept

According to Oviatt & McDougall (1992) since the 1990’s international entrepreneurship is a distinct field of research. During that time, a peculiar group of businesses sparked the researchers’ attention. A significant number of small and medium-sized companies was identified that successfully competed against larger and established players in international markets. These companies had not followed a slow and gradual process of involvement with international trade. Contrarily, almost from the beginning, their operations were internationalized (Carneiro & Dib, 2007). These companies were lately named born globals.

In short, a business, which has a high level of international activities right after start-up stage, is referred to as ‘born global’. This phenomenon has become associated with

international entrepreneurship, which is the process of creating, discovering and exploring firms out of the domestic markets, in pursuit of competitive advantage (Knight & Liesch, 2015).

They have also been described as international new ventures (Acedo & Jones, 2007; McDougall, 1989), global start-ups (Phillips McDougall, Shane, & Oviatt, 1994), infant multinationals (Aspelund & Moen, 2001) and micro multinationals (Dimitratos, Amorós, Etchebarne, & Felzensztein, 2014).

The concept ‘Born Global’ lacks harmonisation relative to the characteristics that start-ups require. The percentage of international businesses, the speed to reach internationalization, the number and locations of markets served and the firms’ “management vision” are reasons used to define companies as born global (Choquette, Rask, Sala, & Schröder, 2016; Eurofound, 2012). “Since there is no consistency in the criteria laid down to test born global firms, it becomes all the more difficult to compare this phenomenon across different studies ”(Paul & Gupta, 2014).

2.4. Micro and small enterprises

More than 98% of Portuguese companies fit into the “Micro and small enterprises” category (INE, 2017).

Portugal followed EU recommendations and categorised companies by their size. These are summarised in table 1:

Table 1 - Size enterprise classification

| Company category | Staff headcount | Turnover | or | Balance sheet total |
|-------------------------|------------------------|-----------------|-----------|----------------------------|
| Medium-sized | < 250 | ≤ € 50 m | | ≤ € 43 m |
| Small | < 50 | ≤ € 10 m | | ≤ € 10 m |
| Micro | < 10 | ≤ € 2 m | | ≤ € 2 m |

2.5. NTBF

Regarding NTBF (New technology-based firms) the word “new” either could refer to the technology or it can refer to the firms’ age (Storey & Tether, 1998).

For this research, it was in our interest to focus on the linear model, which is a new business that has a technology-based idea. In short, the following steps occur in NTBF:

1. A technology-based idea is generated;
2. A new firm is established to exploit the new idea;
3. The new firm starts to amass resources, both human and financial, and starts developing a prototype based on the new idea;
4. If the business idea turns out to be viable, the new firm embarks on a rapid growth path (Autio, 1997).

Firms that develop new technological platforms (e.g. applications of biotechnology, nanotechnology and platforms) are simultaneously involved with growing a firm, commercializing a technology for potentially new markets, and developing internationalization (Onetti, Zucchella, Jones, & McDougall-Covin, 2012).

2.6. Interconnection of concepts and schematic assumption

Not all start-ups internationalize. In fact, they are normally distributed by different activity sectors (Dun&Bradstreet, 2016).

Born global companies are particularly interesting because they internationalize early. There are a plurality of conditions for start-ups to fit into the born global category (Eurofound, 2012). Choquette et al. (2016) concludes that they are different from other international start-ups in many dimensions but not in all of them. For example, they do not exhibit significantly higher growth in terms of turnover or productivity, which carries a large socioeconomic impact.

Born global firms are found in all industries, which is not confined to certain sectors such as technology or high technology. In fact, their occurrence by sector is indistinguishable from that of other start-ups. However, studies are often focusing technology on specific

sectors such as the computer, software or internet industry or other “high tech” industries (Choquette et al., 2016).

Technological start-ups are more prone to internationalize early (Onetti et al., 2012). Some of the conclusions/studies related to born global can be used to characterize NTBF (figure 1). Note that not all of NTBF are internationalized.

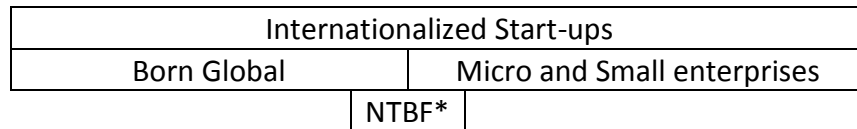


Figure 1 - Start-ups Internationalized division

* Although more prone to internationalization, not all of them are (Onetti et al., 2012).

3. A novel suggestion for categorizing firms - Based on the literature

In accordance with Choquette et al., (2016), we schematically conceptualized the groups previously defined in order to understand the concepts and to highlight the importance of correctly naming these categories. We suggested the division of micro and small enterprises into two groups, “born exporters” and “late exporters”. Additionally, we divided the “born global” group into “innate exporters” and “born global”.

Companies with a high internationalization speed (within three years) were named as “Early internationalization”.

The goal was to make a suggestion so that authors could utilise it to characterize their samples, as there are substantial differences between the groups. Standardization and harmonization of categories is necessary to eliminate redundant information.

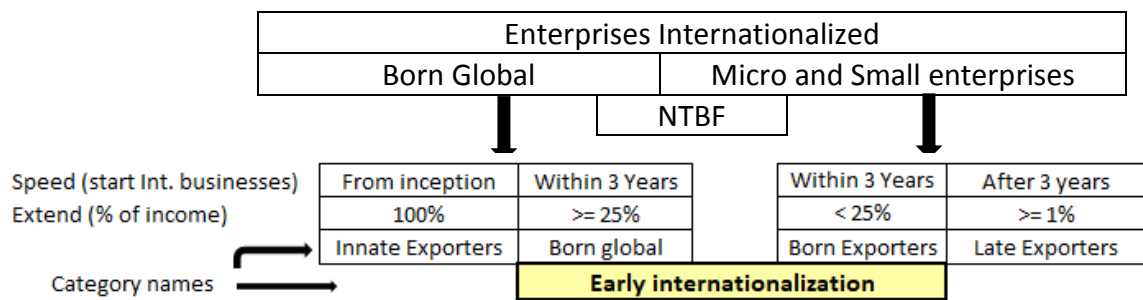


Figure 2 - Nomenclature and internationalisation groups

Adapted and based on (Choquette et al., 2016).

Relative to the accuracy of studies, Knight & Liesch (2015) identified some points that are absent from the literature:

- The importance of clarifying the speed of inception.

The time when companies start selling their products/services may be different from when they register their firm with governmental authorities. It is important to know the exact time when companies start to sell their products/services. The restriction is that only the founders have this information.

- Variables such as institutional environment, economic and market-level should be considered in the criteria to categorize firms

It is true that in terms of comparability, such variables can create substantial differences between countries. However, these facts as dynamic as they are, should be taken into account when individual research conclusions are made. Otherwise, the harmonization of concepts would be utopic, requiring different values and conditions for each nation.

In our view, studies would be more useful for companies if they identified patterns and findings regarding their higher international performance within the categories, rather than identifying patterns and conditions to define categories.

4. Internationalization factors

4.1. An initial look at the literature

Early internationalization or so-called born global is taking a significant share of export growth. The European Union recently estimated that 20 percent of new enterprises within Europe are born global firms. They contribute to national economic development by fostering innovation, creating stocks of skills and knowledge, supporting industrial growth, and enabling and promoting high-value-added activities (Eurofound, 2012; OECD, 2013)

The Uppsala theory, commonly known as the incremental internationalization model (Knight & Liesch, 2015), is the cumulative commitment to international activity. The theory focuses on the companies and its gradual acquisition, integration and use of knowledge about foreign markets and operations. In addition, these companies successively and increasingly commit to these markets through sequential stages. The order of selection of countries for internationalization is related to the "psychic distance" between the target country and the origin country. (Jan Johanson & Vahlne, 1977).

The Finnish-POM Model can be separated into four dimensions. They are: product, operation, market and organizational capacity (Senik, Isa, Scott-Ladd, & Entrekkin, 2010). "First is Product (P), which describes 'what' in terms of the firms' goods, services, know-how and systems. Second is the Operation mode (O) which relates to 'how' firms operate such as through agents, subsidiaries, licensing and management contracts. Third is Market (M), which describes 'where' in relation to the selection of markets and takes into account political, cultural and physical differences. The 'organizational capacity' dimension was a later addition to describe organizational structure, resources, finance and personnel (Welch & Luostarinen, 1988)" (Senik et al., 2010, p. 287). In summary, the Finnish-POM model compliments the Uppsala theory because it supports that firms should moderate their expansion speed abroad and should do so as they accumulate resources and international experience (Chang, 2007; Vermeulen & Barkema, 2002).

There is also the networking perspective, which explains how relationships within the business network lead small medium enterprises (SME) to internationalize. Companies

use their network as a source of knowledge and the opportunities to grow are related to the evolution of these networks (J. Johanson & Mattsson, 1988). Rutashobya & Jaensson (2004) concurs that the network theory is most relevant for explaining the internationalization process of small firms because it is convenient to explain ‘why’ and ‘how’ firms internationalize. Nonetheless, networking accelerates the internationalization process, explaining the emergence of International New Venture (INV) theory (Senik et al., 2010).

Evidence from a group of firms, with certain characteristics, contradict the Uppsala approach to the internationalization process (Oviatt & Mcdougall, 1992). This has been named the International New Ventures Theory (Oviatt & Mcdougall, 1992; Senik et al., 2010). The born global phenomenon does not fit into traditional models and theories about internationalization (Rialp et al., 2005). Recent evidence shows that some firms are able to expand successfully at a higher speed of internationalization which contrasts with older and conventional models (Zhou & Wu, 2014).

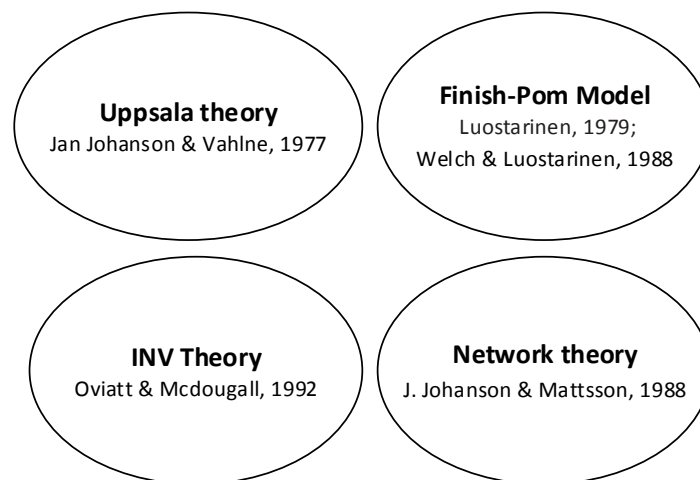


Figure 3 - Internationalization theories

The born global phenomenon could have a tendency to become the most natural internationalization process (Paul & Gupta, 2014; Rialp et al., 2005). Several studies identify both internal and external key driving forces that allow the continuous rise of small firms becoming international at or near founding. Now firms often choose rapid entry modes, skipping exporting in favour of foreign direct investment (FDI). The most common factors, triggering and giving significance to this growing phenomenon are: (1)

new market conditions in many sectors of economic activity (including the increasing importance of niche markets for small and medium enterprises worldwide), (2) technological developments in the areas of production, transportation and communication, (3) the increased importance of global networks and alliances, and (4) more capabilities of people, including those of the founder/entrepreneur who creates early internationalizing firms (Rialp et al., 2005).

Various authors who have identified various cases of early internationalization have noted changes in the internationalization process, although the older approaches are still contributing to this complex process. It still lacks conceptual clarity for other approaches to be completely theorised and less controversial (Knight & Liesch, 2015; Paul & Gupta, 2014).

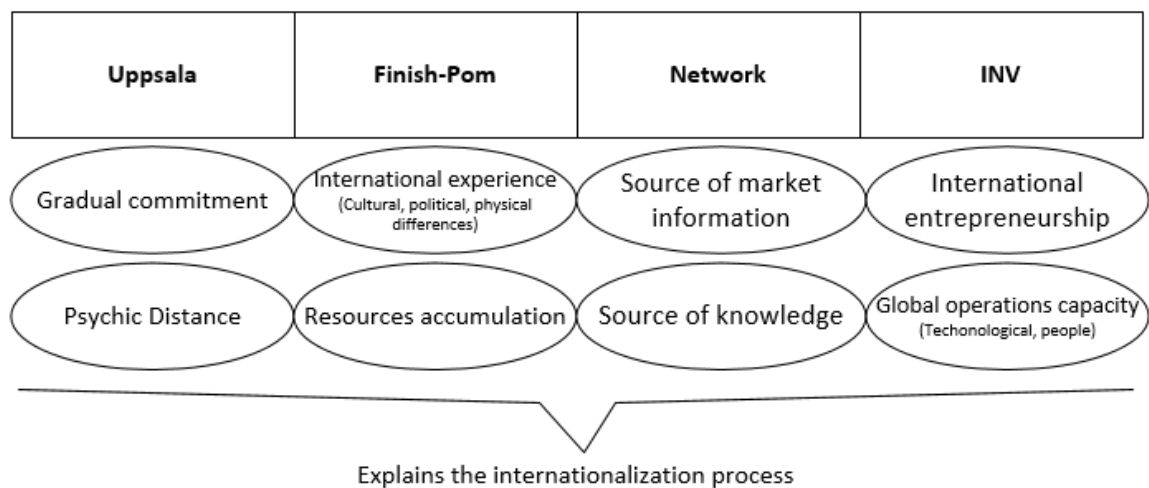


Figure 4 - Theories conceptualization of internationalization process

The researchers seek to analyse the key factors to explain why enterprises have different paths regarding internationalization and different outputs on economic and sociological matters (Choquette et al., 2016).

The OIL (Ownership, Internalization and location) theory explains why firms internationalize early. It suggests that the way firms choose to internationalize takes into account their advantages. The advantages are: Ownership - includes tangible (e.g. equipment and machinery) and intangible assets (e.g. property rights); Location-specific advantages meaning a place or country that has been chosen by a firm for pursuing a

possible business opportunity through that country's resources. Internalization means a perceived advantage by integrating various production and market activities within the firm or across different markets. However, although it makes sense to look into the advantages, the motivation for foreign market expansion may influence the entry-mode selection process, despite perceptions of the OIL advantages. Motivations can include market-seeking, resource-seeking, technology-seeking, cost-reduction seeking, and client following activities (Brouthers, Brouthers, & Werner, 1996).

Barriers can also influence the path towards internationalization. According to Cahen, Lahiri, & Borini (2016), the little knowledge of potential markets, absence of qualified export personnel, shortage of technical suitability, degree of competition in the sector, low financial assistance (governmental and financial institutions), and lack of qualified human resources are the main export barriers.

The internationalization process requires an adaptation of the firm's strategy, governance structure and resources (Calof & Beamish, 1995). It is a real challenge to execute an internationalisation process whilst setting up a business. Early internationalized firms face numerous constraints, such as, insufficient economies of scale, inexperience in international businesses, and general dearth of financial and human resources. However, they possess distinctive intangible resources and capabilities that give them advantages when it comes to flexibility and responsiveness to market changes (Knight & Liesch, 2015; OECD, 2013).

4.2. Networking and its influence on internationalization

Various authors consider "Networking" as the key factor for early internationalization (Johanson & Mattsson, 1988). According to them, the growing process of a firm is directly related to the evolution of formal or informal networks. Coviello & Munro, (1997) theorises that initially companies find an important contact with a larger company that allows them to find a mode of entry into other markets. Over time, more relationships are developed which facilitate international market development and sales growth.

A firm's initial capabilities are often limited and insufficient for successful business development. NTBFs' initially have few resources, therefore; alliances could play an

important role as they can contribute to enlarge NTBFs' competencies. It is important for NTBF to establish alliances, if the benefits of collaborating exceed the associated opportunity costs. The support offered by alliances with third-party organisations is extremely important because it provides access to competencies and resources that NTBFs lack and cannot build themselves (Colombo & Piva, 2012).

Vicarious learning (learning by observing others) plays a central role in the decision to internationalize early. Although few articles explicitly use the term "vicarious", many clearly indicate learning from observing others as a mechanism that influences early internationalization decisions, either through imitation or working alongside others (Bruneel, Yli-Renko, & Clarysse, 2010; Fernhaber & Li, 2013).

Networking theory argues that the presence or development of foreign contact increases the likelihood of early internationalization (Casillas, Moreno, Acedo, Gallego, & Ramos, 2009). Other researchers further distinguish or hypothesize which type of network links are most useful. Ties can be strong or weak. The strength is determined by the combination of time spent, affective intensity and reciprocal services (Pollack, Rutherford, Seers, Coy, & Hanson, 2016). Theoretically enterprises increase internationalization in correlation with a higher number and strength of relationships (Johanson & Mattsson, 1988). On other hand, Oviatt & McDougall (2005) theorizes that in terms of hastening early internationalization, the most important source of vicarious external information comes from weak ties, as they efficiently limit redundant information. This claim is empirically supported in a case study by Chandra, Styles, & Wilkinson (2009) who conclude that weak ties "are more likely to link a firm to diverse sources of information leading to the identification of international opportunities without deliberate search" (De Clercq, Sapienza, Yavuz, & Zhou, 2012).

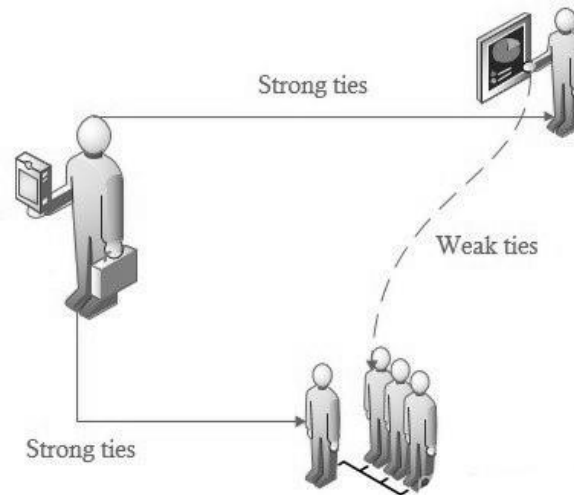


Figure 5 - Network ties

When new firms start international businesses, networks can help to mitigate risks. Some can be collaborative helping to develop competitive advantages and in many cases, they can provide access to markets and customers, financing, distribution channels and learning opportunities (Knight & Liesch, 2015).

4.3. The managerial competence

International orientation is indicative of deeper and broader education, linguistic capability, enjoyment of travel and international experience. It is likely, and supported by Acedo & Jones (2007) that internationally oriented individuals are generally better informed and therefore are more likely to behave proactively and be less concerned, or at least better informed about risk in relation to international opportunities. Firms might instantly acquire international orientation by hiring managers, known to have international experience, high levels of education and language abilities. According to Cahen, Oliveira Jr. & Borini (2016); Knight & Cavusgil (2004); Oviatt & Mcdougall (1992) executives with international management skills are the most likely to experience accelerated internationalisation. Bruneel et al., (2010) describes that the younger companies can compensate for their lack of corporative experience with learning through experience from the managers (Congenital learning). Alternatively, language training, travel and opportunities to gain experiential knowledge in international settings may help

increase international orientation and thus reduce perceptions of risk. Managers can circumvent this barrier by forming strategic alliances with other companies who have expertise in introducing new products internationally, however they partially lose control regarding internationalization success (Acedo & Jones, 2007; Cahen, Lahiri, et al., 2016).

4.4. The role of human resources in firms

Human Capital theory suggests that firms with higher education and expansive personnel experience achieve higher performance. The resources included within the theory are training, experience, judgment, intelligence, relationships, and insights of individual managers and workers in a firm. The Human Capital literature focuses on humans as resources of businesses. The resource-based viewpoint states that excellent employees provide a sustainable competitive advantage. This in turn create resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991).

NTBF's usually start their businesses with few individuals who are multi-skilled. This flexibility is a necessary characteristic for initial firms to survive. However, the literature suggests that for a company to develop international businesses, different core competencies are required. Specific and specialized skills are usually owned by different individuals (Lockett, Siegel, Wright, & Ensley, 2005).

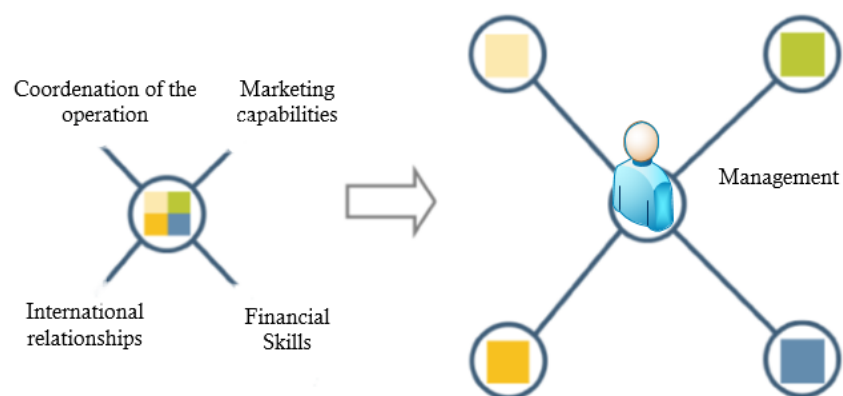


Figure 6 - Human resources specialization

For example, strong digital competencies have been important in the evolution of early internationalization and accessibility of information. In addition, communication technologies aid the internationalization process. It cannot be denied that good digital

marketing skills make small/Nano enterprises seem bigger. Early internationalized enterprises can reduce the uncertainties associated with further internationalization by developing digital marketing knowledge (Efrat & Shoham, 2012).

4.5. Entrepreneurial proactivity

Entering foreign markets involves significant challenges in terms of identifying and developing opportunities. An attribute commonly acknowledged as helpful for overcoming obstacles in the internationalization process is the firm's entrepreneurial orientation (Dai, Maksimov, Gilbert, & Fernhaber, 2014). According to McDougall & Oviatt (2000) a firm's entrepreneurial orientation is a combination of innovative, proactive and risk seeking behaviours.

Regarding entrepreneurial internationalization, Acedo & Jones (2007) constructed a model which elevates the importance of the individual's proactivity in the internationalization process. They conclude that cultivating a 'can-do, will-do' philosophy within the firm may help to increase proactivity, reduce risk and accelerate internationalization. Proactive firms are more receptive to foreign market needs and as a result their positioning changes to exploit overseas opportunities that fit their capabilities (Morris, Webb, & Franklin, 2011).

4.6. Knowledge creation

Technology enterprises are knowledge intensive firms (KIFs). The main characteristic of KIFs is their dependency on knowledge for creating competitive advantage. Such organisations are highly dependent on their principal assets – their employees. Moreover, the ability to 'grow knowledge' depends greatly on the sharing of that knowledge between employees, which requires their co-operation. This places a premium on satisfying the needs of employees – the owners of intellectual capital. Indeed, the success of the organisation depends on managing these knowledge workers so that they are attracted to the organisation, they want to stay and they are highly motivated to perform well (Swart & Kinnie, 2003).

Companies choose to locate near an academic institution so that they can potentially benefit from knowledge transfer and technology investment.

Absorptive capacity or receiver competence is crucial and represents the ability to scan and monitor relevant technological and economic information, to identify technical and market opportunities, and to acquire knowledge, information and skills needed to develop technologies. Absorptive capacity is more than the ability to master a new technology or innovation. It is the ability to adjust the firm's coordination to match the new technological opportunities. Firms rarely fail because they cannot master a new technology. They fail because they lack sufficient absorptive capacity. As a result, companies must invest in absorptive capacity. This explains the importance of locating research and development activities close to other firms in similar industries and to universities with relevant research capabilities (Mudambi, 2002).

4.7. Market Positioning

Firm's knowledge can be sourced by individuals or social capital (knowledge that is embedded within the organisational relationships and routines). Market positioning should take into account social capital because it provides important information for the business. Enterprises should retrieve information from their daily operation, namely from relationships between employees and experiences from client projects (Swart & Kinnie, 2003).

Understanding cultural and social reasons is still an instrument which helps enterprises to maximize profits (Au-Yong-Oliveira, Reis de Sousa, & Gonçalves, 2017a, 2017b).

5. Methodology

5.1. Initial considerations

A mixed methodology (qualitative and quantitative) was followed for this research project. In sum, and as mentioned above, this study attempted to fill a gap concerning the literature on Mozambique and technology companies established there (e.g. the Quatenus software platform). The research question was as follows: do Mozambican technology companies adopt the same positioning, in comparison to those adopted in other countries with different characteristics (social, economic, political and cultural), for example Portugal? On the other hand, what factors need to be taken into account in order for companies to succeed in NTBF internationalization? To answer this research question, an additional three case studies were performed, as well as 39 questionnaires filled in by business persons from different Portuguese technological companies.

So, this work was based on multiple case studies (four) and a questionnaire (aimed at executives in firms with internationalization knowledge). Firstly, an auto-ethnographic and participant observation article was written about the positioning in different geographic markets (Au-Yong-Oliveira et al., 2017a). Secondly, an internationalization literature review was conducted. From the latter research effort, a series of questions were formulated and used to interview (three) executives at internationalized start-ups. The data collected from these interviews was used to modify and focus an additional review of the literature. Then a questionnaire was designed to collect data from a significant number (over thirty responses, as suggested by Remenyi (2013)) of employees working within international enterprises (39 valid responses). This data would be used to confirm or deny the conclusions of the literature review and the exploratory interviews.

A thorough literature review was carried out to gain as much information about internationalization as possible. The following search engines were used: Scencedirect, Google and Google Scholar. The literature review was modified as the research evolved (Elharidy, Nicholson, & Scapens, 2008) and was the basis of the interview script (the result of the interviews was in turn the basis for the questionnaire, as mentioned below).

Summarising, an in-depth analysis of the theme was performed by confronting the literature review with exploratory data collected from Portuguese enterprises.

The information gathered was utilised to design a conceptual model. Models are always simplifications, if they were as complex as reality, they would not be useful. Focusing on conceptual models has a further beneficial side effect: it provides guidance to the writer about what details to exclude (Siggelkow, 2007). Visual elements can clarify and improve verbal texts and sometimes communicate information more clearly than verbal texts (Au-Yong-Oliveira & Pinto Ferreira, 2014). Concept maps can be used to simplify the representation of business processes that are often heavily descriptive (Mejri, Ghannouchi, & Martinho, 2016).

5.2. Quatenus case study

The methodology used in the Quatenus case study was based on participant observation and ethnography which produced qualitative data (Remenyi, 2013). As the adaptation of software positioning within national realities and cultures is a contemporary problem, it is possible to address this by analysing a concrete platform. Case studies may create important explanations and generalizations Yin (2003). The article data comes from the experience and field notes of the author in the company portrayed (where he was a business manager between 2015-2016), in addition to his teaching experience in Mozambique (in 2016). Another co-author (Au-Yong-Oliveira et al., 2017a, 2017b) was in Mozambique in an exchange of experiences at the higher education level (in 2017). An effort was made to triangulate the data, having also researched published sources. On the other hand, an effort was made to choose unusual and interesting cases - cases of "talking pigs", which are not just pigs like so many others (Siggelkow, 2007). This effort was made here, by choosing the cases from unusual countries - Mozambique, framed in Africa, and Portugal, within the European Union (although in the periphery).

According to Remenyi (2013) where possible, observation should be used together with interviewing and this was the case in this research project, as we shall see below.

5.3. Interviews

The diverse theoretical approaches gathered from the literature review were used to structure questions for the interviews. A qualitative approach was used to collect and analyse data from three international companies. These companies were selected from the author's network (a mixture of both convenience sampling, involving ease of access, and purposive sampling, whereby interesting and relevant cases were selected, as mentioned below). Due to privacy reasons the two companies where interviews were performed are referred to as "Born global and "Innate exporter". A non-probability sample was used to select the interviewees. Two companies (Uniplaces and Born Global) belong to the Born Global category and there is also an innate exporter case. They had varying characteristics therefore the triangulation of the data revealed interesting findings. It is much easier for the reader to imagine how the conceptual argument might be applied to one or more empirical settings (Siggelkow, 2007).

The information about Uniplaces was collected during a lecture on the 18th of April 2017, in Aveiro, a lecture which was given by João Ribeiro (marketing manager) and during different press interviews given by the founders. The interview script was filled-in based on this information.

The other two cases were two interviews planned via email. The interview script was applied equally in the two semi-structured interviews.

One contact was obtained through the author's approach to a gatekeeper "IEUA Board of Directors". The research goals and the selection criteria for the interviewees were explained to them. As part of the selection criteria, technological start-ups, which were already internationalized, were chosen. From the total amount of companies who met the criteria, only two were available. From this, only one was chosen based on the internationalization level and their commercialized product (component for telecommunications) aligned with the interview purposes (research into internationalized technology-based firms).

The other two contacts used in the interviews were obtained during lectures about entrepreneurship at the University of Aveiro and were selected as they are interesting cases.

The interviews were recorded and transcribed before analysis (please refer to appendices 7 and 8). According to Remenyi (2013) interviewers should convert the data collected from the interview into a written transcript before analysis is performed.

As the interview data was collected, efforts were made to improve the bibliographic review. According to Elharidy et al. (2008), collected data should be analysed before carrying out further data collection and analysis, until the research is complete and a theoretical understanding is reached.

5.4. Questionnaires

The questionnaire was based on the exploratory interview results. An additional bibliographic review was conducted to define questions to be used in the questionnaire.

Remenyi (2013) and Bryman & Bell (2011) were consulted to design the survey. The Likert-type scale was used in this case. It is commonly used, and its properties are well known (Bryman & Bell, 2011; Hartley, 2013; Krosnick & Fabrigar, 2012; Oppenheim, 2000; Remenyi, 2013).

Finally, the questionnaire was designed in Microsoft Word and converted to the “Google Forms” platform. The research supervisor reviewed the questions before the survey was piloted on two individuals to ensure its clarity and functionality. Further adjustments were made and it was re-piloted on two different individuals before reaching the final version, administered successfully to 39 firms.

A purposive and a convenience sample was utilised, as indicated above. These are examples of non-probability sampling.

As our goal was to identify internationalization factors for start-ups, our sample was not confined to people working in start-ups. People from internationalized firms of any age and any phase in the life cycle (including maturity and decline) were surveyed.

The author initially opted for a convenience sample, after preparing an invitation text which was used on social networks (Facebook and LinkedIn) to ask people to voluntarily fill in the form. Also, based on their positions and companies (technology-based) that the people represent, an effort was made to contact people individually to answer the questionnaire. As a result, some of the answers constitute a purposive sample (non-random sampling).

Difficulties were faced when collecting responses as most of the people contacted did not possess enough information about their company's internationalization process (so they did not finish the data collection process; despite this, 39 of 67 responses were validated).

In addition, the author asked the public institution Agência para o Investimento e Comércio Externo de Portugal (AIECEP) to share the survey on the “network contact”. This allowed access to more than four thousand people.

6. Results and discussion

6.1. Initial considerations

It is important to note that firms from different nations may not have the same tendencies to internationalize (Dib, da Rocha, & da Silva, 2010). Country size is an important factor in influencing internationalization. Specifically, economies with small domestic markets seem to encourage the internationalization of indigenous firms (Rialp & Rialp, 2007).

The Portuguese government continues to follow the path of the previous government and to keep supporting start-ups with a new program that intend to ensure their longevity and increase their impacts in terms of economic value and job creation. Portugal seeks to be recognized internationally for the potential of its start-ups (Startup Portugal, 2017).

Entrepreneurship has been growing in Portugal and there are conditions and resources necessary for companies to succeed. At present, the press often publishes news regarding the growing number of technology start-ups created (*Jornal Público*, 2017).

Between 2010-2014, only 6% of the start-ups created were financed by investor entities and some of them are micro-enterprises managed by their founders (Dun&Bradstreet, 2016). Successful exploitation of opportunities requires the integration of complementary, context-specific knowledge (Colombo & Piva, 2012).

All these facts support the utility of the present study.

6.2. Discussion and results

6.2.1. Case study – Innate exporter

The company is headquartered at IEUA (Incubadora de empresas da Universidade de Aveiro) and develops a telecommunication electronic component. It has six full-time workers and three more people that work in the scope of their academic research. The departments are not thoroughly defined, but each worker knows their function. The person interviewed controls the financial and operational areas. The CEO knows a little

about each area. There is also a head programming engineer and all the other workers are development engineers. All workers have a Master's degree and three of them are obtaining a doctoral degree.

They did not need to be very proactive to find channels for internationalization. The company quickly obtained contacts by participating in some trade shows and conferences. From there, they focused on product development using these contacts.

The business idea came from both a teacher and a student. The teacher continues following and supporting the business as a coach.

The product development is in accordance with the requirements given by a few American customers. At the time of the interview, the company exported directly to the USA.

The company produces a specific and advanced technology, for that reason it was mandatory to start selling to other countries. Internationalization to additional countries is likely to take more time, for technological reasons.

Questioned about the key resources, which allow the company to internationalize, it was answered that "The key is what we are developing. It is obvious that we have to be able to do it. We must have the financial resources, people with the capacity to do this, but the focus, the main thing, that makes us get a foot on the other side of the world is what we developed effectively, the technology".

Concerning managerial experience, the CEO does not have a lot of commercial experience but he has knowledge in the internationalization area and is involved in all international relationships. As the interviewee stated: "But he [the CEO] is always involved in the development of international contacts, because he has great knowledge in this area. His mind-set supports internationalization. We are only here because we are Portuguese. Our market is out there. Our product is international".

In their case, they do not consider the importance of increasing their knowledge of the country they are selling to because they sell to a limited number of companies (due to the

specificity of the product). “If I make a Formula 1 car I do not need to know if all the people will accept it”, stated the interviewee.

6.2.2. Case study – Born Global

The company was founded in Lisbon, there is also a sales office in London, but the production unit is based in Évora. They do “digital delivery”, in other words they develop digital solutions such as websites and mobile apps.

At the moment, the company has about 30 employees aged between 27 and 35 years old. All the workers have higher education diplomas. Most of them studied IT or related courses, but they also have some workers from management and marketing courses. They also receive students for academic internships.

They are organized in five departments (production, design, administrative/financial and commercial).

They have a representative office in London and they have exported to more than ten countries. The company was founded in 2010 and they quickly started exporting. Two years later a subsidiary in London was created. The CEO said that it was necessary to streamline the whole project in Portugal before establishing the firm abroad. The first step was to hire externally within the UK, which took some time. They had to create a portfolio to get foreign customers, because without a portfolio and credibility, it would be much harder to close deals abroad.

They started to internationalize by exporting to Brazil, a contact raised through a national customer.

The most important contacts came through client partnerships who invited the company to go to certain projects. They already participated in trade shows, but that did not give them the necessary boost. For this company to start an international business they ideally needed to have partners abroad or to hire locals. According to them It is complicated going alone abroad because they have to make new contacts. They also have to comply with local policies that may differ from the originating country therefore local people with this knowledge need to be hired.

Questioned about their proactivity the CEO affirmed “No doubt the company has been proactive and this is completely necessary.”

They evaluated the possibility of opening a sales office in France and Spain but England met the business strategy and therefore was an obvious choice. It is also a more mature market digitally with huge investments in this area. Additionally, it has the same time zone as Portugal, which is a great asset, as the operation is provided from Portugal.

For the company, the international markets are much more interesting because the profit margins are higher. In addition, they consider themselves more competitive abroad. These were the reasons for them to internationalize.

In their opinion, people are obviously the key resource for successful businesses. The potential of a company is related to the way companies select people (employees, partners, customers). The company production unit is located in Évora. They looked for a constant source of qualified people and they found it close to the University of Évora. It is a city located in a less developed area, where there are fewer companies therefore there is less staff turnover and there is less competition to hire these human resources.

As the interviewee stated: “We seldom design internationally, clients do it and we do the implementation. In Portugal, we do everything, from consulting, design, [to] implementation and maintenance. Out there, cultural differences exist, therefore, customers ask us to make the digital implementation, by developing the whole technological part.”

The CEO considers that the crises in Portugal forced companies to leave in search of new opportunities and fortunately, nowadays there is positive press about Portugal and its companies. “I always had this conviction that Portugal had a competitive element and could position itself internationally as a strong player in these areas and it was not doing so.”, stated the CEO.

6.2.3. Case study – Uniplaces

Uniplaces is a platform for student accommodation. It is headquartered in Lisbon, developing their business based on a platform. The firm provides a website linking the

property owners with student tenants. These business models are called a marketplace because they enable and support transactions between independent supply and demand side participants. The business relies on independent participants to co-create value (Täuscher & Laudien, 2016).

The company was founded in 2012 and in 2014 it was present in six different countries. The company has more than 125 employees from 14 nationalities. Sixty-five per cent of the workers have international experience and almost forty per cent are foreign.

Three young people founded the company and at the time of this research, it is still managed by them. The principal is Miguel Santo Amaro. He did his bachelor's degree in the United Kingdom where together with the other founder Ben Grech they created a Consortium of University Entrepreneurs. Mr Amaro then did his Master's degree at the Babson College in the United States, however he spent some time learning in France and China. Additionally, he also volunteered in Africa and worked in Bangladesh.

João Ribeiro - Marketing Manager for Uniplaces Portugal. In a course given at the University of Aveiro (in 2017, as mentioned in the methodology section) he affirmed that the company grew too quickly and it was difficult to deliver quality and support to their customers. At a certain moment, their expansion had some setbacks and they decided to focus on the following markets: Lisbon, Porto, Madrid, Barcelona, Berlin and Milan.

"This ends up creating serious growth problems where the culture of the company is not controlled, recruitment becomes more complicated and strategy becomes blurred because markets are different (to win in Germany or Italy the strategy is not the same). You cannot win everything, you have to choose the battles"(Silva, 2016).

Uniplaces internationalized their business through representative offices. However, there are many geographies where the service is provided over the internet. They have more than 35,000 rooms in 165 different countries (Uniplaces, 2017).

The marketing manager supported that it is important for the company to have representative offices to get more suppliers (meaning landlords) and also to provide better support to customers (Ribeiro, 2017).

In an interview when talking about the success of Uniplaces Miguel Amaro said: “The best option when creating a start-up is to utilise your own capital because gaining investors not only complicates the management of the organization (strategically the more people there are to think, the higher the opportunity is for differing opinions) but also affects the motivation of the founders”.

Miguel Amaro justified the choice of accepting investors’ capital saying that without big investments it is much harder to grow and become successful: “in Europe, the so-called digital unicorns have raised an average of \$150 million to get where they are. Timing is very important and if a competitor enters with more ambition and more aggressiveness, they run the risk of losing opportunities” (Silva, 2016).

6.2.4. Conclusions - case studies

“Networking” is the key factor for early internationalization. Coviello & Munro (1997) theorises that companies find an important contact with a larger company that allows them to find a mode of entry to other markets. Over time, more relationships are developed which facilitate international market development and sales growth. That was what was verified in the innate exporter and in the born global case.

In accordance with the findings by Acedo & Jones (2007), in the innate exporter case, even though the manager does not have international experience, he has the opportunity to travel and opportunities to gain experiential knowledge in international settings. These facts increase his international capabilities, orientation and experience.

Concerning the internationalization possibilities, the innate exporter highlights the importance of the business idea and concept. In contrast, the born global firm focuses on the human resources role in overall development. Both are located close to universities collecting benefits such as knowledge transfer and a constant source of qualified human resources, as Mudambi (2002) referred.

In the innate exporter case, we observed that the human resources have flexibility in performing different tasks. It is important to note that different stages could mean different needs in terms of human resources. Theoretically as firms evolve, with more sales, they have more opportunities to specialize their resources (Eriksson, Johanson,

Majkgard, & Sharma, 1997). According to Lockett et al., (2005) this is a necessary transformation for companies to develop international businesses.

The born global firm proactively made efforts when selecting the market to establish a representative office as well as to select the partner abroad. The entrepreneurial orientation of the CEO influenced the decision to internationalize and the way they did it (Dai et al., 2014).

In the innate exporter case, although the firm had low proactivity in creating market opportunities it compensated by acquiring knowledge and making stronger relationships by serving key customers in a foreign market (Rosenbusch, Brinckmann, & Bausch, 2011).

The born global recognizes the importance of good market knowledge and, incidentally selected an experienced local worker. On the other hand, the innate exporter supports that products, which have very specific technology and a limited number of buyers, can exclude the necessity of “knowing” other countries better.

Uniplaces interestingly chose markets closer to Portugal, where national culture is also closer. They verified here that the Uppsala model continues to be applicable even in companies with different and more recent business models.

In the Uniplaces case we saw the importance of proactivity to get funding for quick and necessary expansion. It was verified that a higher speed of internationalization sometimes is not beneficial because it does not allow the processes to solidify properly.

6.2.5. Questionnaires

We collected 39 valid responses representative of 39 different (in size and services they provide) technology companies.

The respondents have different positions (13 are managers and the other 26 are in diverse positions) and their qualifications are distributed as shown in figure 7 below.

Respondents qualifications

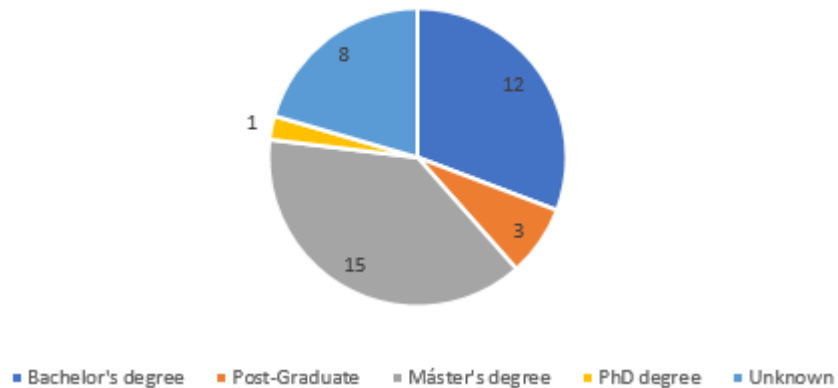


Figure 7- Qualifications of the respondents

Below was summarized all the answers in table 2.

Table 2 - Questionnaire detailed responses

| International businesses | | Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|---|---|-------------------|--------------------|----------------------------|-----------------|----------------|
| Why abroad? | The domestic market is insufficient | 2 | 3 | 14 | 11 | 8 |
| | The profit margins obtained abroad are higher | 3 | 0 | 6 | 11 | 19 |
| Key resources | Qualified human resources with relevant experience | 3 | 2 | 3 | 16 | 15 |
| | Contacts and networking | 1 | 2 | 3 | 15 | 18 |
| | Management - Ability to create knowledge and apply it across borders | 2 | 2 | 4 | 16 | 15 |
| Success | The company has sought / sought to better understand (culturally, the economic and social conditions) the countries for which it intends to grow internationally in order to adapt market positioning or adapt products, in order to maximize sales opportunities | 1 | 1 | 10 | 16 | 11 |
| Penetrate abroad because | The innovation or specificity of the technology produced | 3 | 1 | 8 | 17 | 9 |
| | The price tag | 3 | 5 | 16 | 11 | 3 |
| | The influence that the partner has in the destination markets | 2 | 3 | 9 | 13 | 11 |
| | Internationalized products are sold towards niche markets | 2 | 9 | 9 | 13 | 5 |
| Boosted by | International experiences and mindset of the manager | 3 | 4 | 8 | 11 | 13 |
| | Existence of specific competences in the team that allow internationalization | 2 | 2 | 5 | 18 | 12 |
| | By the knowledge / contacts of the partner established in the destination country | 1 | 4 | 11 | 14 | 8 |
| | Relations with clients that triggered opportunities abroad | 1 | 3 | 12 | 9 | 13 |
| | Establishment of alliances / partnerships in national territory | 4 | 7 | 10 | 9 | 8 |
| | By participating in fairs and events | 4 | 8 | 8 | 11 | 7 |
| | Traveling abroad to establish contacts with potential partners and clients | 3 | 2 | 8 | 12 | 13 |
| | Direct search of potential clients/partners abroad (Social networks, online surveys, database) | 4 | 6 | 13 | 12 | 3 |
| By institutional or government support for internationalization | 5 | 7 | 12 | 10 | 4 | |

We compiled the arguments that are favourable and not favourable to facilitate the viewing of the results.

Table 3 - Questionnaire compiled responses

| International businesses | | Total | Favorable | Neutral | Not Favorable |
|--------------------------|---|-------|-----------|---------|---------------|
| Why abroad? | The domestic market is insufficient | 38 | 19 | 14 | 5 |
| | The profit margins obtained abroad are higher | 39 | 30 | 6 | 3 |
| Key resources | Qualified human resources with relevant experience | 39 | 31 | 3 | 5 |
| | Contacts and networking | 39 | 33 | 3 | 3 |
| | Management - Ability to create knowledge and apply it across borders | 39 | 31 | 4 | 4 |
| Success | The company has sought / sought to better understand (culturally, the economic and social conditions) the countries for which it intends to grow internationally in order to adapt market positioning or adapt products, in order to maximize sales opportunities | 39 | 27 | 10 | 2 |
| Penetrate abroad because | The innovation or specificity of the technology produced | 38 | 26 | 8 | 4 |
| | The price tag | 38 | 14 | 16 | 8 |
| | The influence that the partner has in the destination markets | 38 | 24 | 9 | 5 |
| | Internationalized products are sold towards niche markets | 38 | 18 | 9 | 11 |
| Boosted by | International experiences and mindset of the manager | 39 | 24 | 8 | 7 |
| | Existence of specific competences in the team that allow internationalization | 39 | 30 | 5 | 4 |
| | By the knowledge / contacts of the partner established in the destination country | 38 | 22 | 11 | 5 |
| | Relations with clients that triggered opportunities abroad | 38 | 22 | 12 | 4 |
| | Establishment of alliances / partnerships in national territory | 38 | 17 | 10 | 11 |
| | By participating in fairs and events | 38 | 18 | 8 | 12 |
| | Traveling abroad to establish contacts with potential partners and clients | 38 | 25 | 8 | 5 |
| | Direct search of potential clients/partners abroad (Social networks, online surveys, database) | 38 | 15 | 13 | 10 |
| | By institutional or government support for internationalization | 38 | 14 | 12 | 12 |

- “The domestic market is insufficient” – 19 out of 38 (50%) companies partially or strongly agree;
- “The profit margins obtained abroad are higher” – 30 out of 39 (77%) companies partially or strongly agree;
- “International business – key resources – management – ability to create knowledge and apply it across borders” – 31 out of 39 (close to 80%) companies partially or strongly agree;
- “International business – key resources are contacts and networking” – 33 out of 39 (85%) companies partially or strongly agree;
- “International business boosted by the knowledge and contacts of the partner established in the destination country” – 22 out of 38 (58%) companies partially or strongly agree.
- “International business boosted by the international experiences and mind-set of the manager” – 24 out of 39 companies (62%) partially or strongly agree.

We confirm that Portuguese companies have chosen to internationalize because of the higher profit margins obtained. The majority identifies that insufficient domestic market is also a reason but this factor it is not so consensual.

Through the collected answers we confirm that the possession of qualified human resources, the capabilities of management and the company networking are the key resources that allow companies to succeed.

Our sample gave us insight that in the technological market, the price is not the most important factor. In comparison, innovative products/specific technologies allow companies to enter in other geographic markets.

The results show that the partners' influence seems to play an important role when companies are trying to internationalize.

One of the questions included in the survey was: Has the company had success in its international business because it has sought to improve its understanding (cultural, economic and social conditions) of the countries in which it intends to grow internationally in order to adapt market positioning or adapt products and maximize sales opportunities? Thirty-nine answers to the question above were collected and divided. We thus see a considerable amount of answers (a total of 27 out of 39, or close to 70%) at levels 4 and 5 (partially or strongly agree) – which means that adaptation (of positioning and products) is important in international markets, according to the questionnaire sample.

In the open question asking which barriers prevent a higher level of internationalization, there were six answers related to rules, bureaucracy and tax, which indicates the importance of financial capabilities during the internationalization process.

The answers to another (open) question “What would you do differently if you were to start the process again?” were very diverse. They reinforced the importance of choosing good partners and developing relationships, the importance of cultural differences and the need to study the market. Also, the importance of solidifying domestic relationships before going abroad is referred to which is in line with the findings of the Uniplaces case study.

The study reveals that the Portuguese companies in the sample have internationalized due to better profit margins registered abroad (77%); the domestic market being insufficient for half of the sample. Contacts and the desired network (85%), as well as experience (62%) and a management competency applicable across borders (close to 80%), are factors that allow for successful company internationalization.

We use the chi-squared test to identify the importance given to the networking factor by the consultant enterprises and the others.

Table four shows a double entry table for categorical variables.

Table 4 - Networking - consulting and other types of services

| Type of service | Strongly disagree | Partially disagree | I do not agree or disagree | Total |
|-----------------|-------------------|--------------------|----------------------------|-----------|
| CONSULTING | 7 | 3 | 0 | 10 |
| OTHERS | 10 | 13 | 4 | 27 |
| Total | 17 | 16 | 4 | 37 |

Null hypothesis H(0): There is no association between the types of business and the network appreciation in the internationalization process.

Alternative hypothesis H(1): There is an association between the types of business and the network appreciation in the internationalization process.

The chi-squared test was performed testing for statistical significance (table 5).

Table 5 - Chi squared test - networking

| O | E | O-E | O-E ² | O-E ² /e |
|----|--------|--------|------------------|---------------------|
| 7 | 4,595 | 2,405 | 5,786 | 1,259 |
| 3 | 4,324 | -1,324 | 1,754 | 0,406 |
| 0 | 1,081 | -1,081 | 1,169 | 1,081 |
| 10 | 12,405 | -2,405 | 5,786 | 0,466 |
| 13 | 11,676 | 1,324 | 1,754 | 0,150 |
| 4 | 2,919 | 1,081 | 1,169 | 0,400 |
| | | | | 3,763 |

Chi-squared statistic = Sum table 5 (1.259 + 0.406 + 1.081 + 0.466 + 0.150 + 0.400) = 3.763
= X²

Interpretation of results: statistical significance

Degrees of freedom = (number of columns-1).(number of rows-1) = 1 ⇔

$(3-1).(2-1) = 2$

5% (Significance level)

Critical value of X2 from tables: 5.991

Comparison: 1) Calculated value = 3.763; 2) Critical value = 5.991

$X2 > X1$ therefore we accept the null hypothesis (H0) of independence at the 5% significance level.

In conclusion, the Chi-squared test shows that there is no difference in terms of how the consultancy firms appreciate networking (as a factor to succeed internationally) in comparison with other types of firms.

7. The Quatenus case study

This is a case study, based on participant observation, which focuses on a digital platform, which manages and controls assets mainly using the GPS system. This platform is for sale in different countries, including Portugal and Mozambique.

We herein discuss the adaptation of products and services to the cultures and institutions of each environment, for the optimization of sales and product positioning. The data of the case study comes mainly from the experience of one of the authors, who lived in Mozambique for close to two years, linked to the selling there of the digital platform. A review of the existing literature was also performed.

7.1. Introduction - Main concepts and definitions of the study

Technology is constantly changing and it is a source of competitive advantage in industries (Porter, 1980). If it is a technological product then its life cycle will require a continuous investment in innovation, in order to remain relevant in the market and relevant for the consumers and users (Burgelman, Christensen, & Wheelwright, 2009). Technology has also opened completely new horizons in areas of knowledge, namely in marketing (Sousa, Teixeira, & Gonçalves, 2011) Technology has also opened new possibilities in terms of support for business decisions (Branco, Gonçalves, Martins, & Cota, 2015). Task automation reduces costs in many areas, and in others it allows for the implementation of activities that previously were simply not possible. Social networks, for instance, have created a reality that profoundly modified the functioning of society. Now we see people in very different geographic locations communicating with each other with an ease that was once unthinkable. This ease of communication has spread to other domains due to technology and now there is a greater and instantaneous control of events. This is what happens with the product and service described in this case study where we try to show that the same technological product must have different selling approaches in different countries.

Software and computer platforms are a good business model, since you only need to manufacture the product once and it can be sold many times. It is not by chance that the youngest billionaires in the world, at the time of writing, the Collison brothers, born in

rural Ireland, achieved worldwide fame and fortune for having founded Stripe – a competitor of PayPal. Patrick and John Collison are individuals connected to technology products and who “built software that businesses could plug into websites and apps to instantly connect with credit card and banking systems and receive payments. The product was a hit with Silicon Valley startups. Businesses such as Lyft, Facebook, DoorDash, and thousands that aspired to be like them turned Stripe into the financial backbone of their operations.” (Vance, 2017). This type of computer products can be adapted to different realities with relative ease. Sage software for business enterprises is another example that could be mentioned (Oliveira, M.A., Barandas, H., Barros, 2007).

As concerns Mozambique, in the 2016-2017 Global Competitiveness Report, published by the World Economic Forum: “Mozambique scored 3.13 points out of 7” (Mozambique Competitiveness Index, 2017), which shows that there is much room for improvement, as this placed it in 133rd place among 138 countries. Regarding corruption, Mozambique was placed 142nd out of 175 countries, which is also a serious problem (Mozambique corruption rank, 2016). A lack of competitiveness, in tandem with corruption, leads to poor productivity and low wages, in a vicious circle. In the 2015 HDI (Human Development Index), Mozambique is ranked 181st out of 188 countries and territories, the same place as South Sudan, signifying a low level of development (United Nations, 2016). Up from 43.2 years in 1990, life expectancy at birth is currently 55.5 years (a big improvement) (United Nations, 2016). Mozambique has a population of 28 million and a GDP (Gross Domestic Product) of 15 billion USD and a GDP per capita of 534.9 USD (WEF, 2016).

Mozambique has a couple of issues it urgently needs to improve. It lacks competitiveness in business, and the wages and overall human development are at low levels. The country also has deficient transportation infrastructures which are barriers to the transportation of people and goods (Au-Yong-Oliveira et al., 2017a).

In this perspective, there will have to be greater control of corporate assets, to protect the companies from their own associates and potential abuses. The Quatenus software and platform were developed against this background, to ensure the control of your

business. It should be noted, however, that in very poor conditions any country in a deep crisis and putting pressure on its citizens, such as Portugal in 2016 and 2017, may need this type of platforms, given the despair of certain people – in the work context but also in the family context. Therefore, product innovation – the invention of something new and of value, which arises at the right moment – can be linked to internal processes of companies and not necessarily linked to consumption and other more usual areas.

In the *Global Competitiveness Report 2016-2017* (WEF, 2016), Portugal is ranked 46th, falling 8 places in a year (among a total of 138 countries). In Portugal rates and taxes continue to be the problematic factors for business and a concern for entrepreneurs. Political instability rose three places on the list and became the third most troubling factor behind the bureaucracy (PME Magazine, 2017). With regards to corruption, Portugal fell to 29th place (among 176 countries) (Expresso, 2017). Portugal thus shows a negative trend in two indicators crucial for economy – and for the confidence placed in Portugal at an international level. Portugal passed through a deep crisis with budgetary imbalances, and high levels of unemployment, which led to higher taxes for their citizens. In this scenario, where people saw their income reduced, while at the same time Portugal experienced pressure to be competitive – in order to increase exports and find new ways to generate income – will asset control tools, such as Quatenus, gain more relevance? The purpose of this study is to show that this will definitely be the case, not only in Mozambique but also in Portugal, although with a slightly different positioning (Au-Yong-Oliveira et al., 2017a).

What is the positioning of a product or service? Positioning can be defined as a strategic choice that seeks to give a credible, different and attractive position to an offering (product, brand or insignia) within a market and in the clients' minds (Lendrevie, Lévy, Dionísio, & Rodrigues, 2015). As there are different national cultures – facing different problems and which will benefit from the promoting of different approaches – this could be the reason for a company wanting to position its products and services in different countries, taking into account the local requirements.

7.2. Study questions and goals

This study intends to show that there is currently no global culture and that reality leads to the implementation and promotion of tools, services and products adapted to

local circumstances. There are richer countries where the wages of newly graduated college students stand at approximately 3,500 Euros per month (such as Finland and the Netherlands). In Portugal, the wages of new Master's graduates (nowadays generally accepted as the "minimum" qualification entry level to the job market) are around 800 Euros per month. The wage level will also depend on the region of the country and the course and industry concerned. If a citizen does not have a college degree, wages are certainly lower (except for, perhaps, the case of one joining a family business or being an agent who starts his/her own business and start-up). In Mozambique the minimum wage would be close to 40 euros per month. Will the aforementioned economic realities affect the behavior of a company's employees and how they treat the company's assets? It would appear so. If consumption is affected by economic crises – which results in an increase in the consumption of low-cost products, for instance (Hitt, Ireland, & Hoskisson, 2012) – and having access to a company's valuable assets, then additional precautions will have to be taken in certain environments, in order to protect them.

7.3. Case and research background

The company in Mozambique has 10 employees and is part of the Sinfic Group, S.A.. The field of business is the geo-localized management of assets using a computer platform. Sinfic S.A. is a Portuguese company with headquarters in Lisbon (where all the software is developed) and with offices in Mozambique, Angola, Brazil and South Africa. Sinfic, with about 100 employees (varying according to the seasonality of the projects), is a leading company in the computer field and the company was developing software for the Angolan elections.

The computer platform is called Quatenus – see available information (Quatenus, 2016a). More and more companies are opting for this online information channel (Gonçalves, Martins, Branco, Perez-Cota, & Oliveira, 2016; Martins, Gonçalves, Pereira, & Cota, 2012). The positioning in the Portuguese domain site serves the purpose of cost control and theft protection, as well as protection against misuse through communication and automatic processing (Quatenus, 2016b).

The growing use of these platforms only occurred due to the evolution of the mobile Internet in Mozambique. It is growing significantly. Before, the geolocation of assets was only possible through the use of satellite Internet, which was too expensive.

Simple tracking platforms such as 'Cartrack' have had greater market penetration because of their lower price, but also due to the struggling availability of resources to use and understand the benefits of advanced management platforms.

On Quatenus (2016a) it is shown how Quatenus products can be used by the management team, but also by operators (sales, service) "who need accurate and real-time geo-referenced information about the reality of business activity" (Quatenus, 2016a). The Quatenus service is intended for mature, medium and large commercial management companies (over 50 vehicles), which monitor operations and productivity and make planning decisions (Quatenus, 2016a).

With evolution and maturity, companies tend to rely more and more on the ability to lower their costs and stay competitive. Savings are one of the key benefits of the product, leading to higher productivity and profitability of client companies. By lowering their costs, customers' companies can pass on these gains to their own customers in the form of lower prices, which means they can gain more market share than rival companies. "The rigorous planning of fleet activity allow it to increase productivity and profitability by more than 30%" (Quatenus, 2016a).

The main purpose of using the system in Mozambique, with a positioning slightly different from the Portuguese case, described above, was the management of the fleet in such a way that allows the identification of drivers, compliance with routes and various alerts such as for speeding, hard braking, etc. The goal is to minimize costs for customers by enabling greater control over assets. In Mozambique the annual turnover is around 12 million Meticaïs (about 160 382 Euros).

The software platform access service costs 8 thousand Meticaïs annually (around 100 Euros, given the crisis environment and the devaluation of the local currency). The hardware costs, in its most basic form, 200 USD. The hardware equipment is always indexed to the dollar. Companies pay every year 12 000 Meticaïs for the software (about

160 Euros). This provides for full management of the fleet. The price is per unit (per asset, or per car).

The advantage of using this advanced platform is the possibility of extracting real time information and thus compiling important management indicators in standardized reports (cost per km travelled, driver ranking, identification of periods of affluence, etc.) in Excel or PDF, according to the user's desire.

Society in Mozambique is quite different from that in Portugal, which involves a completely different cultural adequacy. It is necessary to ensure the control of the employees' use of a company's resources. In the Mozambican case, the focus was on cars. A company's car is often used as a taxi to make money in post-work hours, something that has to be mitigated. The biggest concern is fuel control, because there are still high rates of theft. The company tested and developed a fuel probe with live information and alerts (immediate).

The company in Mozambique is based in Maputo and has partnerships all over the country. The manager (and author of this dissertation) had to accompany the partners to carry out business in the provinces, a very important factor in that country, given its size and given the difficulty of traveling between the various provinces.

The author also taught a course on an accounting course and he noted that there are still big barriers to education, low levels of education and qualified human resources are lacking. Mozambique's higher education is quite different from the Portuguese case (Luís & Gouveia, 2013), as it is hard to get the student's active and relevant participation. They are poorly prepared when they reach higher education and have difficulties in performing and delivering low-difficulty work. Some students have difficulty reading and interpreting texts. This is due to the teaching of Portuguese, which is not their mother tongue. They speak dialects at home and only have contact with Portuguese at the age of six, when they go to school. Teachers in many countryside universities are the students of the previous year. This gives rise to a problem of accuracy and pertinence of the information given. On the other hand, another co-author of this study found that post-graduate higher education in Mozambique is expensive and not available to everyone.

With respect to safety, public security entities (police) continue to have very limited resources and insufficient salaries to live a normal lifestyle and therefore are corrupt most of the time. It was never possible to find a police officer who was not in the compensation system, rather than the normal fine application (the concept exists of “soft drink” in Mozambique versus the concept of “fizzy drink” – which consists in obtaining capital from individuals in exchange for “letting go”). The reporting of any crime remains very expensive because justice works by monetary incentive. A company employee used a card to spend 1,500 Euros on private communications through a mobile device (this situation really happened) and when the complaint was filed, an amount was immediately requested to arrest the person. The crime was to watch videos all night, of all kinds, with company material, and that cost the company money.

The manager (the author of this study) was in Mozambique for a year and ten months, having finished functions in December 2016. It was a very rich and international experience at a top management level in a micro-enterprise that drew attention to the difference in national cultures and the functioning of institutions. Different cultures imply different technological and management tools to control and mitigate losses. Liability, as well as the responsible actions, vary according to reality. Only those who are close and live day-to-day, in the specific context, can understand the difficulties to achieve a meritocratic society that promotes, at the same time, the equality of opportunities. Transaction costs, or hidden costs, exist, which means that the current system has nothing to do with the formal rules created to institute it (Nobel prize, 2014).

Mozambique is an attractive country for Portuguese companies, first of all because they speak the same official language but, mainly, because of the underdevelopment of its businesses and industries. Allied to these facts and taking into account that Mozambique has a shortage of qualified human resources, there is room for Portuguese people to enter into this society. Often, Portuguese citizens hold positions with responsibility, with salaries much higher than the local population. Young Portuguese people much like the author, come to Mozambique with little experience and are offered opportunities to take on responsibilities within companies, because they have much higher levels of education/training than the locals.

In order to defend the interests of Mozambicans and to take advantage of the presence of skilled workers, the Mozambican government imposes quotas (5% to 8% depending on the total number of workers) on companies when hiring foreigners. The Mozambican people accept the presence of foreigners, much because they have the financial power to allow them to subsist – by creating employment for people responsible for cleaning, security and deliveries (in the latter case allowing for the avoiding of queues for daily necessities, such as the changing of the ownership of a car – which, if done by a foreigner, could take longer and be subject to corrupt practices and extortion). That is the key cultural particularity. Foreigners need to understand the society they are living in and be able to motivate the locals to achieve targets – which may have to be done financially.

Mozambique is a desirable labour market for the Portuguese, however, it is also necessary to mention the difficulties encountered. The supply of consumer goods comes from imports, mainly from South Africa, but also from Portugal, which results in high prices. Sanitary conditions are bad, there is refuse in the streets (one may often find rubbish which was dumped at the roadside or at a beach) and there are no public toilets. Public entities (such as the police or border control) are run poorly, and more often than not the only way to solve many situations is through corruption. Such an environment is, often, a true test of character, to say the least. Technology is a form of putting society in check, and firms, in the case of Quatenus, hope to add a degree of control with such a platform – in a society that values freedom, above all else, and is desperately searching for a financial solution to its woes.

With contact networks and organizational subcultures, technology is a means of control to fight against those who escape the established rules.

Defining culture as *“the accumulated shared learning of a given group, covering behavioral, emotional, and cognitive elements of the group members’ total psychological functioning.”* (Schein, 1992), and national cultures being responsible for the establishment of the rules of conduct and institutions, it will take a lot of effort in countries, according to Nobel Prize co-winner in Economics in 1993, Douglass C. North, and as he later reported (North, 2005), it will take a lot of concerted effort to lead to the further development of

nations. If culture influences the behaviours of groups that has a direct impact on how companies should position their products

On the other hand, it will require a lot of prior analytical work before attempting to sell and implement computer solutions in certain environments, as the case presented in these articles shows (Au-Yong-Oliveira et al., 2017a, 2017b). The problems experienced in Mozambique will not be evident in countries within the European Union, such as Portugal, France or Germany. It does not mean that they cannot be sold there, but simply they will be sold for different main purposes. That is why management control must exist as well as asset protection tools that respond to the diverse needs of each market. Assuming also that there are different market positions.

7.4. A final auto-ethnographic account on South Africa and Mozambique

The author, based in Mozambique, participated in the Quatenus brand internationalization to South Africa. At that time, the company was already present in Africa (Angola, Democratic Republic of Congo, Guinea-Bissau and Mozambique). There are many differences between South Africa and the above-mentioned countries mainly because South Africa has a much more mature market with different needs in terms of IT systems. As Mozambique is geographically close to South Africa, it was easy and practically costless to probe their market and therefore realize the market differences and business opportunities (there were some South African truck companies, which were customers in Mozambique, to work with initially). The best option, to speed up the expansion process to South Africa whilst minimizing risk, was to find a local partner. The opportunity and decision to internationalize to South Africa was due to the geographic proximity with Mozambique. On the other hand, some years ago the company invested directly in Angola prior to expansion to Mozambique (which is geographically distant) without any local partner. This decision was taken because there are similarities between these countries (both former Portuguese colonies, for example, and thus speaking the same language – Portuguese; and both having similar work conditions as well as human resource and structural difficulties).

The author concludes that companies that are internationalized can benefit from their experience and increased cultural and geographic proximity to new markets.

In another stage of internationalization to South Africa, the company faced some difficulties in adapting their products because it required investment that initially was not predicted. Additionally, the selected partner used unauthorized branding (adding a Father Christmas to the company logo, and thus altering it) and, in general, the company felt difficulties to compete with other systems already implemented in South Africa because there were not enough significant advantages in our system – when compared with these rivals, who had been in the market longer and were thus more mature.

Internationalization through a partner is very important though in order to be successful firms must plan the knowledge exchange, as well as have a clear definition of the relationship between the parent entity and the partner (meaning what each one can and cannot do).

In more mature markets a strong value offer is required, together with a robust and detailed value proposition – and with the service and product well positioned – depending on either being low-cost or differentiated. South Africa, a former British colony, is a more advanced nation when compared to Mozambique and the Quatenus platform was ineffective in stealing customers away from the competition there. So, we learned, we could not apply the businesses model equally, and for different reasons – including cultural, social, market demand, religious reasons – and due also to brand recognition (our brand was unknown in South Africa). We found, in practice, that it is easier for more developed nations to internationalize their products to less developed nations, rather than the opposite (South Africa is one of the most advanced nations in Africa). Furthermore, though in some areas industry may be well developed, this reality did not find a parallel in the development of the local community – often still living in what would be considered inhumane conditions in the Western world (e.g. in houses, or huts, with no access to electricity or running water). Tuning a business strategy to a particular geographic area requires developing a business plan, however the local knowledge/framework described in it could be hard to identify, perceive and implement by foreigners.

In essence, what we are describing is the process of franchising as a form of international expansion of companies. The definition of franchising is that of a business practice

involving the right to use a firm's successful and proven business model, its brand name and business processes and products – for a prescribed period; or, in a more formal definition: “when a firm (the franchisor) sells the right to use its trade name, operating systems, and product specifications to another firm – the franchisee” (Watson, Dada, Grünhagen, & Wollan, 2016 citing Castrogiovanni, Combs & Justis, 2006, pp.27-28).

7.5. Discussion of the Quatenus case as well as of other related cases

Internationalization involves developing a strategy in order to improve sales of the goods and services offered by the firm in international markets (markets external to the firm's domestic market) (Hitt et al., 2012; A.-Y. Oliveira, Gonçalves, Martins, Moreira, & Branco, 2016). A significant number of companies in smaller countries, particularly in certain industries, need to internationalize to survive (Pinho & Martins, 2010). Internationalization can be achieved through the sale of standardized products in international markets - a global strategy – which involves offering standardized products across national boundaries, with the head office dictating competitive strategy (Hitt et al., 2012). In other areas, as example The cement company CEMEX can pursue a global strategy (Hitt et al., 2012). In terms of software and computer platforms, there are several philosophies that can be followed, not just the global strategy. Oliveira, Barandas, & Barros (2007) write about Sage's case. To sell their management software, Sage adopted a multi-domestic international expansion strategy. They recognized that national cultures are different, collected knowledge about them, and enabled decentralized decision-making in each country, as decisions are seen to be best made by experts and natives to that culture. The multi-domestic strategy allows to act on the perspective that each country is different, making it necessary to adopt different strategies in each country. This is what we observed using the Quatenus platform, with different positioning in Mozambique and Portugal. In Mozambique, Quatenus protects companies from the detrimental use of their assets by employees. In richer countries, the positioning is more focused on optimizing assets and lowering operating costs, as a result of greater competitiveness in the market. In African countries, there will be loyalty to the family, even if it is enlarged, not to the state or company. The concept of “xitique” (Coutinho, 2007) is an example of this and reflects the informal networks existing in Mozambique and their importance. A xitique may provide

access to populations in rural areas to locally generated finance and savings and thus function as a cushion in harder periods of economic fluctuation, and thus promoting the creation of cooperatives and providing an increased sense of community (Coutinho, 2007). In Europe, we will see greater identification of employees with their companies, which in turn will lead to more "responsible" behaviors from an organizational point of view.

Another author writes about the semi-globalized world (Ghemawat, 2007), as we witness great differences between countries and peoples in the 21st century. The authors who participated in this study are proponents of this approach, even within Europe, where there are large differences between, for example, the northern and southern countries (e.g. Nordic countries versus Greece and other Mediterranean countries). The differences between continents (e.g. Europe and Africa) aggravate the differences felt and the need to adapt products and market positions.

Examples of different positioning, from Europe to Africa, include Inditex Group stores. For example, Zara in Morocco has a more elitist position than in Europe, since in Europe Zara is considered a more accessible fashion brand. In Portugal and England, Lacron is seen as a top brand in the swimming pool industry, while in Spain, also due to the more distant relationship with the English culture and its products, it does not benefit from a positioning despite the commercial efforts undertaken (Oliveira, Moreira, & Ferreira, 2012). Thus, in a commercial effort, the points of sale and the benefits of a product should be focused on in order to meet organizational goals, considering how knowledgeable one is about local cultures and institutions.

A global culture does not exist, although social networks and social media have brought many countries closer, especially the younger Millennials, who are the ones who use technology more (Au-Yong-Oliveira & Gonçalves, 2017; Gonçalves & Oliveira, 2010). However, even the access to these platforms is not as widespread as one might think. Internet access quality varies according to geography, and there is still no access in some places. On the other hand, low incomes lead to despair, and that is why the individuals and institutions that have such power should continue to fight for equality and the elimination of extreme poverty, which exists on a large scale in Africa. Even the most optimistic estimates foresee that practices that presuppose a greater approximation between

cultures and countries may take more than a century to be in force (Hofstede, 2001) – with all the possible advantages and disadvantages for companies located in every corner of the planet.

The strategic notion of positioning is central to the success of organizations and should differ from context to context, where necessary. Namely, different economic and education conditions lead to distinct behaviors, which have a repercussion on the position to be adopted in order to sell products.

This study concludes that the local circumstances (of economic development and related local culture) justify the adaptation of services and products, in order to maximize sales and optimize positioning in international markets.

8. Conceptual process for internationalization

This section was written as a result of the research – namely, the case studies and questionnaires – and to sum up.

Young firms that aim to achieve internationalization normally search for global market niches or focus their efforts and resources on creating viable product offerings (Knight & Cavusgil, 2004). By accumulating market knowledge, they are able to adapt their product development and structure. The first international businesses tend to be opportunistic, but enterprises can act proactively in search of markets demanding their products (Efrat & Shoham, 2012).

We define the following steps for technology start-ups to succeed in establishing their businesses whilst they aim to achieve internationalization quickly and successfully:

1 – Location of the business

The entrepreneur needs to choose the best location for his business and take into account the following factors:

- The possibility of profit from institutional technology investments;
- Availability of consultant expertise and support for free or low cost;
- Easy access to qualified and desired human resources;
- Access to a network (possibility to interact with other enterprises and quickly create business relationships).

2 – Amass the necessary resources (human and financial)

There are a couple of institutions, governmental and non-governmental that provide financial support for start-ups (e.g. Incubators, Startup.pt). In order for the start up to gain money, efforts should be made to present the idea attracting possible investments.

Being located close to a university can facilitate the process of gathering human resources to quickly develop the idea at low cost. In the beginning, start-ups should have flexible human resources and if possible combine experienced employees with graduates.

Managerial competencies are essential especially when the start-ups want to internationalize at the same time that they are establishing the company. For quicker penetration in international markets, start-ups should hire experienced international managers. Alternatively, founders should search for advisory services, language classes and ways they can increase international interaction (to understand how different markets work).

In addition, good digital marketing competencies are important to show that small companies are available against bigger players (Morais, Mendonça, & Borges Gouveia, 2000).

3 – Select markets & entry mode.

The small firm commences operations with the intent to internationalize and the management's attention centres on the creation of innovation and finding markets.

An initial relationship needs to be developed. Often in an opportunistic or reactive manner for purposes of product development. This relationship can provide a mode of entry. Alternatively, that relationship is a result of the effort put in to find a partner or clients in a market niche or specific market.

Over time, a network of formal and informal contacts should be developed, usually facilitated by an initial relationship (both strong and weak ties can help to develop networks). These network relationships provide market knowledge and potential access to markets around the world. It facilitates international market development and sales growth.

4 – Management knowledge creation

At this stage, firms should enter into a progressive (there are limits for the firm's growth to be beneficial as we saw in the Uniplaces case) growth period and it is essential to have good management and organizational skills. Management should put effort into writing down processes and technical standard operating procedures. Losing some experienced employees could result in some setbacks in the enterprise development. Careers and positions should be efficiently managed. The passage of information and the co-operation between workers needs to be ensured in order for the enterprise to grow and develop.

In addition, observing other enterprises could be an important source of information (how they have their internationalization structure, how they are organized and attract human resources) (Morais et al., 2000).

5 - Market positioning

The growth then leads to increased visibility for the small firm in international markets, as well as an increase in both financial and human resource capabilities. Managerial experience in international markets should continue to increase, leading to greater knowledge in different markets and confidence in relationship decisions. Experienced partners present within target markets can be beneficial. Companies should have as much information as they can from the markets in order to modify and develop their products and services to maximize the selling opportunities.

6 – Adjustment of the firm’s organization

Increased experience with network relationships, combined with strong market performance, leads to small firms wishing to increase autonomy and control over their market development activities.

Organizational structure (departments) may need to be reviewed to match the actual needs (E.g. Financial, Commercial, International sales, Marketing)

It may be necessary to adjust core products or diversify their supply with new products. The firm should proactively pursue new markets and the development of new network relationships, and/or establish its own sales and marketing offices overseas (all independent from existing network partners). Management should continue to invest in research and development activities adjusting the firm’s coordination to align with new technological opportunities.

Considering the results and taking into account all the information reviewed, we found it necessary to better understand the conclusions, to build and illustrate a conceptual model (figure 8). This may be useful for companies beginning the internationalization process or for companies already in the process.

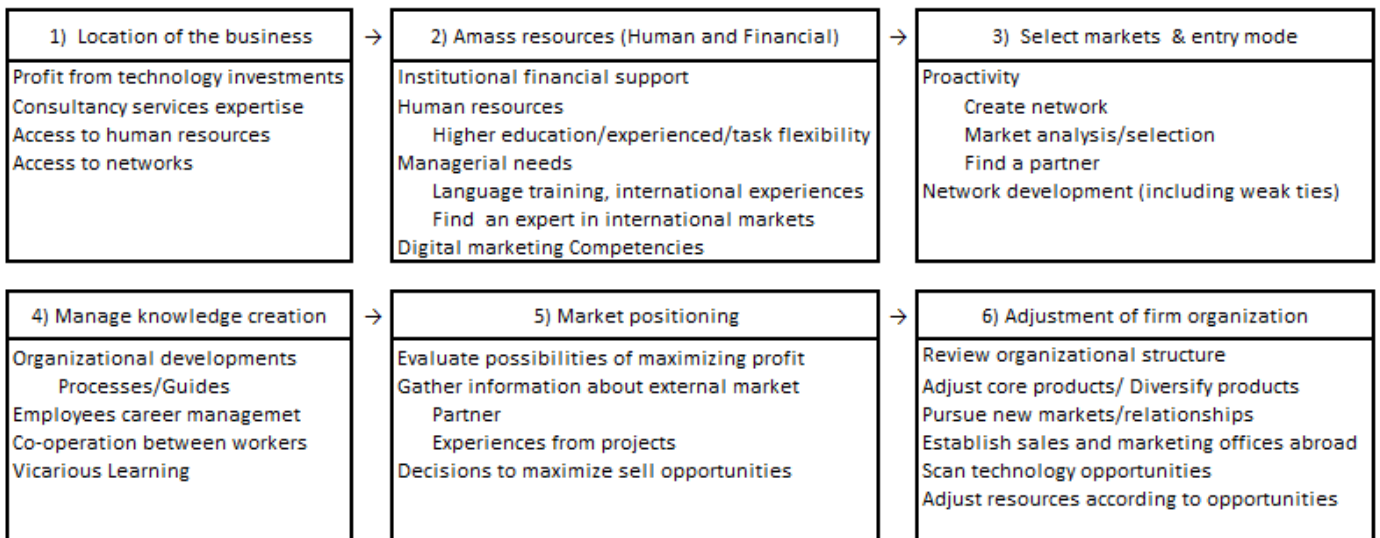


Figure 8 - Conceptual model scheme

9. Final conclusions

It is relevant to refer that the author embraced a challenge to work abroad, in Mozambique, a few years prior to this study, as a senior executive in a small and medium enterprise, and part of the experience is narrated in this study (Au-Yong-Oliveira et al., 2017a, 2017b). Portugal, and Portuguese workers and executives, maintain close ties to former Portuguese colonies, such as Mozambique, where many employment opportunities are to be found, in general, by Portuguese speakers. Despite speaking the same language (Portuguese), however, many differences exist between Portuguese citizens and People born and bred in Mozambique. National culture is thus seen to be a predominant factor related to professional success while working abroad – namely, being able to understand the challenges of working in a country which lacks a widespread public transportation network, basic sanitation, qualified human resources, and where the minimum wage is around 40 US dollars (per month). In such an environment, where one's wage is not high enough to get by, and thus where corruption is an integral part of society, at various levels, from private to public, an acute sense of business acumen is necessary to avoid tragedy and the succumbing to local traditions and practices. We hope with this research to have contributed to a greater understanding of what working in Mozambique entails, thus providing a basis from which to construct a successful career in Mozambique, if so desired, by Portuguese citizens. Literature on the sale of technology products in Mozambique is lacking, and so our case study on Quatenus software (Au-Yong-Oliveira et al., 2017a, 2017b) fills a gap, however small, in the list of publications linked to Africa and high tech environments there.

For Portuguese technology companies the identified factors that influence internationalization performance are: management and the creation of a network, managerial capabilities including knowledge creation, competent and qualified human resources, entrepreneurial proactivity including superior market knowledge, location of the business and the firm's adjustment capability.

In accordance with Knight & Liesch (2015) the findings are in line with the literature and suggest that, managerial capabilities, particularly managerial experience and business

competence, filter the external drivers of failure. Prior knowledge is a critical factor that facilitates early successful internationalization Portugal depends strongly on the export orientation of their SMEs (Pinho & Martins, 2010) and this study intended to help entrepreneurs to increase their internationalization knowledge

When we talk about internationalization, we see that the literature categorises companies into groups based on their identified characteristics such as the speed, extent and the scope within a number of countries. In order to associate concepts, make comparisons and find patterns of each group it would be helpful if the literature correctly categorised their samples. We made our novel suggestion for categorizing firms for this purpose, to categorize companies in the groups: Innate Exporters, Born Global, Born Exporters and Late Exporters.

Herein we discussed certain problems unique to particular national cultures and environments, as in the Quatenus case study (Au-Yong-Oliveira et al., 2017a, 2017b). Differing national cultures as well as differing states of economic development may well mean that software products will have to be positioned differently in differential geographical contexts.

Findings on the relationship between early internationalization and international performance have been inconclusive and contradictory (Knight & Liesch, 2015). Future research comparing the profitability of enterprises, with different speeds of internationalization, would be well received.

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Appendix 1 - Published paper – O software e a adaptação à cultura local: O posicionamento da plataforma Quatenus

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O software e a adaptação à cultura local: O posicionamento da plataforma Quatenus

Software adaptation to local cultures: The positioning of the Quatenus platform

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Resumo — Este artigo é um caso de estudo, baseado na Observação Participante, que foca uma plataforma informática de gestão de ativos. Esta plataforma está à venda em diversos países, incluindo Portugal e Moçambique. Sendo as culturas nacionais e as instituições muito distintas em diferentes países e sendo de forma geral isto ainda mais verdade quando se tratam de continentes diferentes, discute-se a adaptação dos produtos e serviços às culturas e instituições de cada meio envolvente, para a maximização de vendas e a otimização de posicionamento nos mercados. Os dados do caso de estudo são maioritariamente fruto da experiência de um dos autores, que viveu em Moçambique durante cerca de dois anos, e ligado à comercialização da plataforma informática naquele país; e da literatura existente. A noção estratégica de posicionamento é central para o sucesso das organizações e deverá ser diferente em diferentes contextos que assim o justifiquem. Nomeadamente, diferentes condições económicas e educacionais levam também a comportamentos distintos, que têm repercussão na postura a adotar da venda de produtos.

Palavras Chave – software; cultura nacional; adaptação; posicionamento; Portugal; Moçambique.

Abstract — This article is a case study, based on Participant Observation, which focuses on a digital platform which manages assets. This platform is for sale in different countries, including Portugal and Mozambique. As national cultures and institutions differ from country to country and as this is all the more the case when different continents are at stake, we herein discuss the adaptation of products and services to the cultures and institutions of each environment, for the optimization of sales and product positioning. The data of the case study comes mainly from the experience of one of the authors, who lived in Mozambique for close to two years, linked to

the selling there of the digital platform. A review of the existing literature was also performed. The strategic notion of positioning is central to the success of organizations and should differ from context to context, where necessary. Namely, different economic and education conditions lead to distinct behaviours, which have a repercussion on the posture to be adopted for the selling of products.

Keywords - software; national culture; adaptation; positioning; Portugal; Mozambique.

1. INTRODUÇÃO - DEFINIÇÕES E CONCEITOS CENTRAIS AO ESTUDO

A tecnologia está em constante mudança e é fonte de vantagem competitiva nas indústrias [1]. No caso de se tratar de um produto tecnológico este terá um ciclo de vida que pressuporá um investimento contínuo em inovação, de forma a manter-se relevante no mercado e para os consumidores e utentes [2]. A tecnologia abriu inclusive horizontes completamente novos em áreas de saber, nomeadamente no marketing [3]. Em termos de suporte de decisões de negócio a tecnologia abriu também novas possibilidades [4]. No entanto, o objetivo principal deste estudo é mostrar que um mesmo produto tecnológico deve ter abordagens de venda diferentes em países diferentes.

A automação de tarefas vem baixar custos em muitos domínios, e noutros possibilita atividades que antes simplesmente não eram possíveis. Agora com as redes sociais, por exemplo, uma realidade que modificou profundamente o funcionamento da sociedade, vemos pessoas em locais geográficos muito distintos a comunicar com uma facilidade antes impensada. Esta facilidade de comunicação alastrou-se a outros domínios, devido à tecnologia,

havendo agora maior controlo de eventos e de forma instantânea. É o que acontece com o produto e serviço aqui descrito, neste caso de estudo.

O software e as plataformas informáticas constituem um bom modelo de negócio no sentido que poderá fabricar-se uma só vez o produto e este poderá ser vendido muitas vezes. Não será por acaso que das pessoas mais ricas do mundo estão incluídas individualidades da indústria das aplicações e das plataformas informáticas. Será o caso de Bill Gates (Microsoft) e de Mark Zuckerberg (Facebook e outras plataformas como Instagram e WhatsApp). Mesmo aquela que é considerada a start-up mais valiosa do mundo – o unicórnio Uber, com uma valorização de 70 biliões de dólares [5] – é uma plataforma informática que revolucionou o mercado do transporte pessoal (introduzindo inovação radical numa indústria madura, onde já não se inovava há muito tempo – a indústria dos táxis). Produtos informáticos deste tipo podem ser adaptados a realidades diferentes com relativa facilidade. O caso do software de gestão Sage, tendo cada país e região onde está presente um valor para o IVA (Imposto sobre o Valor Acrescentado), assim como para os outros impostos, é um exemplo a referir [6].

No que diz respeito a Moçambique, o país focado nesta pesquisa: “Mozambique scored 3.13 points out of 7 on the 2016-2017 Global Competitiveness Report published by the World Economic Forum” [7]. A classificação de Moçambique, em termos de competitividade, neste relatório, foi o lugar 133 (em 138 países). Em termos de corrupção Moçambique classificou-se no lugar 142 (total de 175 países) [8]. A conjugação destes dois fatores indica que o país será pouco produtivo, em termos internacionais, o que terá como consequência salários baixos, num ciclo difícil de quebrar. A falta de competitividade e os salários baixos estarão ligados ao segundo fator – a corrupção – sendo este o meio procurado para suplementar ganhos numa economia débil e incapaz de satisfazer os seus agentes económicos. No índice HDI (Human Development Index), de 2015, Moçambique está no lugar 181 em 188 países e territórios, empatado com o Sudão do Sul, o que os coloca num nível de desenvolvimento baixo [9]. A expectativa de vida à nascença está em 55,5 anos (em 1990 era de 43,2 anos, tendo por nisto melhorado muito) [9]. Em termos de competitividade Moçambique está no lugar 133 em 138 países analisados; com uma população de 28 milhões; e um PIB (Produto Interno Bruto) de 15 biliões de USD e um PIB per capita de 534,9 USD [10]. Nesta perspetiva, terá que haver um maior controlo dos ativos das empresas, incluindo para se protegerem contra os próprios colaboradores e eventuais abusos. É neste contexto que surge o software e a plataforma Quatenus – para assegurar o controlo do seu negócio. Note-se, no entanto, que em condições extremas, qualquer país em crise profunda, e que está a exercer pressão sobre os seus

cidadãos, como é o caso de Portugal, em 2016 e 2017, poderá passar a precisar deste tipo de plataformas, dado o desespero de determinadas pessoas – no contexto do trabalho, mas também no contexto das suas famílias. Assim, a inovação de produto – a invenção de algo novo e de valor, que surge no momento certo – pode estar ligado a processos internos das empresas e não necessariamente ligada ao consumo e outras áreas mais usuais.

Portugal, no *Global Competitiveness Report 2016-2017* [10], surge no lugar 46, tendo caído 8 postos num ano (num total de 138 países). “Em Portugal as taxas e impostos continuam a ser os fatores problemáticos para os negócios e preocupação dos empresários. A instabilidade política subiu três lugares na lista e passou a ser o terceiro fator mais preocupante, atrás da burocracia.” [11]. Em relação à corrupção, Portugal cai para o lugar 29 (entre 176 países) [12]. Assim, Portugal mostra uma tendência negativa em dois indicadores cruciais para a economia – e para a confiança depositada em Portugal, a nível internacional. Neste cenário macroeconómico ganharão as ferramentas de controlo de ativos maior relevância? Este estudo pretende mostrar que este será realmente o caso, não só em Moçambique, como também em Portugal, embora com um posicionamento um pouco diferente.

No que consiste o posicionamento de um produto ou serviço? “Pode definir-se posicionamento como uma escolha estratégica que procura dar uma posição credível, diferente e atrativa a uma oferta (produto, marca ou insígnia) no seio de um mercado e na mente dos clientes” [13]. Havendo culturas nacionais diferentes, com problemas distintos, e valorizando, por outro lado, abordagens diferentes – poderá ser a base para uma empresa querer posicionar os seus produtos e serviços em diferentes países atendendo às especificidades locais em causa.

Em termos de transporte Moçambique tem uma só linha aérea – a LAM – Linhas Aéreas de Moçambique (em posição de monopólio, a nível doméstico) – que é algo variável no seu fornecimento de serviço (cancelam voos e não se restringem a horários pré-definidos). A LAM tem uma posição de poder uma vez que é difícil ou impraticável ir de automóvel entre algumas cidades importantes (poderá demorar algumas dezenas de horas em vez de duas horas de avião). Existem estradas de asfalto em Moçambique, porém grande parte do país tem estradas em terra, com piso irregular que por si só culmina em maiores gastos de manutenção das viaturas. O automóvel preferido nestas condições será o SUV (Sports Utility Vehicle), por ser o mais resistente. Veículos de tração às quatro rodas são mais apropriados (em tempo de seca fica arenoso, em tempo de chuva fica lamacento). A existência de táxis não é uniforme em Moçambique. Estas realidades foram observadas

pelos coautores referidos e na Observação Participante.

2. OBJETIVOS E QUESTÕES DE PESQUISA

Pretende-se mostrar com este estudo que não existe uma realidade e cultura global que leve ao uso e implementação de ferramentas globais e que as circunstâncias locais são motivo de adaptação dos serviços e produtos. Há países mais ricos, onde salários à saída do ensino superior são da ordem dos 3.500 Euros mensais (os casos da Holanda e da Finlândia, por exemplo). Em Portugal, os salários, após sair do ensino superior, com mestrado (o nível geralmente aceite como “mínimo”, na atualidade), serão da ordem dos 800 Euros. Dependerá o nível salarial também da região do país e do curso e indústria em causa. No caso de um cidadão não ter curso superior, é certo (sem contar com condicionamentos invulgares, como por exemplo ingressar numa empresa familiar, ou sendo um agente que inicia o seu próprio negócio e start-up), os salários serão mais baixos. Esta realidade económica afetará o comportamento dos colaboradores das empresas e o seu tratamento dos ativos das mesmas? Tudo indica que sim, pois se o consumo é afetado pelas crises económicas – levando ao aumento do consumo de produtos *low-cost*, por exemplo [14] – então havendo acesso a ativos valiosos das empresas terão que ser tomadas precauções adicionais, em certos ambientes, para os proteger.

3. METODOLOGIA – CASO DE ESTUDO

A metodologia seguida neste trabalho é o do caso de estudo descritivo [15], da Observação Participante e da Etnografia, na coleta e criação de dados qualitativos [16]. Tratando-se de um problema contemporâneo e dos nossos dias, a adaptação do posicionamento de software às realidades e culturas nacionais é tratada analisando-se uma plataforma concreta. Um caso de estudo único pode ser a base de explicações e generalizações importantes [15]. Os dados advêm da experiência e notas respetivas (*field notes*) de um dos autores na empresa retratada (onde foi gestor de negócio, entre 2014-2016), assim como da sua experiência de docência em Moçambique (2016-2017); houve ainda um outro coautor que esteve também em Moçambique numa troca de experiências igualmente ao nível do ensino superior (2017). Foi feito um esforço de triangulação dos dados, tendo-se pesquisado também fontes publicadas. Por outro lado, deverá haver um esforço para escolher casos invulgares e interessantes – casos de “porcos que falam”, e que não sejam simplesmente porcos iguais a tantos outros [17]. Foi aqui feito esse esforço, ao se ter escolhido o caso de países invulgares – Moçambique, enquadrado em África; e Portugal, enquadrado na União Europeia (embora na periferia).

4. ENQUADRAMENTO DO CASO E DA PESQUISA

O caso trata de uma empresa com representação local em Moçambique, onde um dos coautores foi gestor de negócio. A empresa em Moçambique conta com 10 colaboradores e faz parte do Grupo Sinfic, S.A. e a principal área de negócio é a gestão de ativos com base na utilização de uma plataforma informática, visando a sua gestão geo-localizada. A empresa Sinfic SA é portuguesa, tem a sua sede em Lisboa (onde se desenvolve todo o software) e encontra-se com representações em Moçambique, Angola, Brasil e África do Sul. A Sinfic, com cerca de 100 colaboradores (variando de acordo com a sazonalidade dos projetos), é uma empresa de relevo do ramo informático estando a empresa a realizar o desenvolvimento de software para as eleições de Angola.

A plataforma informática chama-se Quatenus – ver informação disponível [18], pois cada vez mais empresas optam por este canal de divulgação online ([31, 32]). O posicionamento no site de domínio português é o de controlo de custos e de proteção contra roubo, assim como contra utilização indevida – através de comunicação e processamento automático [18].

A crescente utilização destas plataformas só acontece por consequência da evolução da Internet móvel em Moçambique. Esta está a massificar-se. Antes, a geolocalização de ativos só era possível através da utilização de Internet por satélite, que era demasiado dispendiosa.

Plataformas de rastreamento simples como a da “Cartrack” tiveram maior penetração de mercado, pelo seu preço ser inferior, mas também devido aos recursos terem dificuldades na utilização e compreensão dos benefícios das plataformas avançadas de gestão.

Em [19] lê-se como produtos Quatenus poderão ser usados pela equipa de gestão, mas também por operacionais (vendas, assistência) “que necessitem de informações fidedignas georreferenciadas e em tempo real sobre a realidade da atividade do negócio” [19].

O serviço Quatenus destina-se a empresas maduras, médias e grandes (mais de 50 veículos), de gestão comercial, que monitorizam as operações e a sua produtividade, e que fazem planeamento [19].

Com a evolução para a maturidade os negócios tendem a depender, de forma crescente, de conseguir baixar os seus custos, para se manterem competitivos. A poupança é um dos benefícios principais do produto, levando a maior produtividade e rentabilidade das empresas clientes. Ao baixar os seus custos as empresas clientes poderão passar esses ganhos para os seus próprios clientes, na forma de preços mais baixos, o que significa poder ganhar mais quota de mercado que as empresas rivais.

“A tipificação de usos dos veículos, a definição de padrões de desempenho, e o rigor da planificação da atividade da frota permitem-lhe aumentar em mais de 30% a produtividade e a rentabilidade” [19].

A principal finalidade da utilização do sistema em Moçambique, com um posicionamento um pouco diferente do caso português, descrito em cima, era a gestão de frotas que permite a identificação de condutores nas viagens efetuadas, cumprimento de rotas, alertas diversos como excesso de velocidade, travagens bruscas, entre outros. O objetivo é minimizar custos para os clientes possibilitando um maior controlo sobre os ativos. Em Moçambique a faturação anual é de cerca de 12 milhões de Meticais (cerca de 160.382 Euros).

O software custa para um particular 8 mil Meticais anualmente (cerca de 100 Euros, dado o ambiente de crise e a desvalorização da moeda local) – pelo serviço de acesso à plataforma. O hardware custa, na sua forma mais básica, 200 dólares. O equipamento hardware está sempre indexado ao dólar.

O software custa para uma empresa 12 mil Meticais por ano (cerca de 160 Euros). Dá direito a gestão completa de frota. O preço é por unidade (por ativo, por automóvel).

A vantagem da utilização desta plataforma avançada é a possibilidade de extração em tempo real de informação compilada em relatórios padronizados, em Excel ou PDF, conforme a vontade do utilizador, sendo indicadores importantes de gestão (custo por km percorrido, ranking de condutores, identificação de períodos de afluência, etc.).

Em Moçambique testemunhamos uma sociedade bastante diferente da portuguesa, envolvendo uma adequação cultural completamente distinta. É necessário assegurar o controlo da utilização dos recursos disponibilizados pelas empresas aos colaboradores. No caso Moçambicano o enfoque era nos automóveis. Dá-se frequentemente o caso de se usar o automóvel da empresa para fazer de táxi a ganhar dinheiro em horário pós-laboral, o que tem que ser mitigado.

A maior preocupação é o controlo de combustível pois continuam a existir elevados índices de roubo. Sendo que a empresa testou e desenvolveu a utilização duma sonda de combustível com informação e alertas em tempo real (imediate).

A empresa em Moçambique está sediada em Maputo e tem parcerias por quase todo o país. O gestor teve como função acompanhar os parceiros para a realização de negócios nas províncias, fator muito importante naquele país, vista a dimensão do mesmo, e dada a dificuldade na mobilidade entre as diversas províncias.

Um dos autores lecionou uma unidade curricular numa licenciatura de Contabilidade. Constatou que o ensino superior é bastante diferente do português na medida em que é difícil conseguir a participação ativa e pertinente dos alunos. Há falta de preparação quando chegam ao ensino superior e têm dificuldades em realizar e entregar trabalhos de baixa dificuldade. Há mesmo alunos com dificuldades de leitura e de interpretação de textos. Isto acontece devido ao ensino do português, que acaba por não ser a sua língua materna, em casa falam os dialetos, somente tendo contacto com o português aos seis anos de idade, quando entram para a escola. Em muitos dos casos de universidades no interior do país os professores são os alunos do ano transato (ano anterior). Há falta de recursos humanos qualificados. Obviamente isto cria um problema de exatidão e pertinência da informação lecionada. Por outro lado, outro coautor deste estudo constatou que o ensino superior pós-graduado em Moçambique é caro e não está ao alcance de todos.

O aspeto segurança – as entidades públicas de segurança (policia) continuam com recursos muito limitados e com salários que não são suficientes para a realização da vida quotidiana normal e, portanto, nunca se deu o caso de se encontrar um policia que não estivesse dentro do sistema de compensação, ao invés da aplicação de multas formais (existindo o conceito de “refresco” em Moçambique, versus o conceito de “gasosa” em Angola – que consiste em conseguir capital de particulares em troca de “deixar seguir”). O reporte de qualquer crime continua a ser muito caro porque a justiça funciona na base do incentivo monetário. Um indivíduo colaborador da empresa gastou 1.500 Euros em comunicações, com um cartão, na utilização particular e através de um dispositivo móvel (situação real que ocorreu) e quando foi apresentada a queixa foi de imediato solicitada uma quantia para prender a pessoa. O delito foi ver vídeos toda a noite, de toda a espécie, com material da empresa, e que custou dinheiro à empresa.

O gestor esteve em Moçambique durante um ano e 10 meses, tendo terminado funções em dezembro de 2016. Foi uma experiência muito rica e internacional, ao nível da gestão de topo, numa microempresa, que chamou a atenção para a diferença de culturas nacionais e do funcionamento das instituições. A experiência levou a uma maior aproximação das plataformas informáticas e a uma maior sensibilidade do meio envolvente, enquanto influenciador dominante dos negócios (modelo de *Industrial Organization* – ver [14]). Diferentes culturas pressupõem diferentes ferramentas tecnológicas, e de gestão, para as controlar e minorar perdas. A responsabilização, assim como os atos responsáveis, variam de realidade para realidade, e somente quem está próximo e vive o dia-a-dia, no contexto específico, consegue ver e perceber as dificuldades para se chegar a uma sociedade meritocrática, mas ao mesmo tempo que

promova a igualdade de oportunidades. Os custos de transação de que fala o recetor do Prémio Nobel, em Economia, em 1991, Ronald Coase, levam a custos escondidos e que significam que o sistema em vigor nada poderá ter a ver com as regras formais criadas para a instituir. A motivação do prémio teve a ver com: "*his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy*", um contributo que atravessa as áreas da economia, da lei e da organização [20].

Havendo também redes de contactos e subculturas organizacionais a tecnologia perfaz um meio de controlo e de combate a quem foge às regras instituídas.

Por fim, será precisa muita maturidade política para corrigir determinadas situações de desigualdade, que levam a tantos outros atropelos dos direitos dos cidadãos. Sendo a cultura definida como "*the accumulated shared learning of a given group, covering behavioural, emotional, and cognitive elements of the group members' total psychological functioning*." [21], e sendo as culturas nacionais o que levam à definição das regras de conduta, e das instituições, nos países, segundo o co recetor do Prémio Nobel, em Economia, em 1993, Douglass C. North, e segundo nos relatou mais tarde [22], será preciso muito esforço concertado para levar ao maior desenvolvimento das nações.

Por outro lado, será necessário muito trabalho de análise prévio, antes de se tentar vender e implementar soluções informáticas em determinados ambientes, tal como mostra o caso neste artigo. Num país como Portugal, a França, ou a Alemanha, países situados no seio da União Europeia, não se evidenciarão os problemas sentidos em Moçambique. Não significando que são melhores, mas simplesmente que são diferentes. Por isso terá que haver ferramentas de controlo de gestão e proteção de ativos, que deem respostas às diversas necessidades de cada mercado. Pressupondo assim também que haja posicionamentos distintos por mercado.

5. DISCUSSÃO E CONCLUSÕES

A internacionalização envolve "*a strategy through which the firm sells its goods or services outside its domestic market*." [23, 34]. Uma parte significativa de empresas em países mais pequenos, e em certas indústrias em particular, precisam de se internacionalizar para sobreviver. O caso da construção civil, em Portugal, foi um caso extremo desta realidade, a crise estendendo-se até ao ano de 2017, embora com algumas melhorias. Quem não se internacionalizou, e face à estagnação da indústria da construção civil em Portugal, verificado até ao nível da educação (tendo alunos optado por outras áreas do ensino, para evitarem o desemprego), desapareceu do mercado [24]. Uma das vias da internacionalização é através da venda de produtos estandardizados em mercados internacionais

(estratégia global): "*A global strategy is an international strategy through which the firm offers standardized products across country markets, with competitive strategy being dictated by the home office*." [25]. A empresa CEMEX, de cimentos, segue uma estratégia global [14]. No caso do software e das plataformas informáticas, há diversas filosofias que podem ser seguidas, e não somente a estratégia global. [6] escrevem sobre o caso da Sage, que segue, para a venda do seu software de gestão, uma estratégia de expansão internacional multidoméstica – reconhecendo que as culturas nacionais são diferentes, juntando conhecimento sobre as mesmas, e possibilitando a tomada de decisões em conformidade, descentralizadas em cada país. A estratégia multidoméstica permite agir sobre a perspetiva de que cada país é diferente, havendo por isso estratégias diferentes por país. É o que verificamos com a plataforma Quatenus, havendo posicionamentos diferentes em Moçambique e em Portugal. A Quatenus, em Moçambique, protege as empresas de um aproveitamento pelos colaboradores dos seus ativos. Em países mais ricos, o posicionamento será mais virado para a otimização dos ativos e para a baixa de custos de operação, por uma questão de maior competitividade no mercado. Em países africanos existirá lealdade para com a família, mesmo que alargada, e não para com o Estado ou empresa. O conceito de "xitique" [28] é exemplo disso e reflete as redes informais existentes em Moçambique e a sua importância. "Providenciam às populações rurais o acesso a poupanças geradas localmente e funcionam como uma certa almofada em períodos de flutuação económica, encorajando a formação de cooperativas e reforçando o sentimento de comunidade." [28]. Na Europa assistiremos a uma maior identificação dos colaboradores com as suas empresas, o que levará por sua vez a comportamentos mais "responsáveis" do ponto de vista organizacional.

Há um outro autor que escreve sobre o mundo semiglobalizado [26], na medida em que ainda no século XXI testemunhamos grandes diferenças entre países e povos. Os autores deste artigo são defensores desta abordagem, mesmo dentro da Europa, onde se registam grandes diferenças entre, por exemplo, os países de norte e de sul (países nórdicos versus a Grécia e outros países mediterrânicos, por exemplo). As diferenças entre continentes (por exemplo, da Europa para África) agravam as diferenças sentidas e a necessidade de adaptação de produtos e seus posicionamentos nos mercados.

Exemplos de posicionamentos diferentes, da Europa para África, incluem lojas do Grupo Inditex. Por exemplo a Zara, em Marrocos, beneficia de um posicionamento mais elitista do que na Europa, uma vez que na Europa a Zara é vista como sendo uma marca de moda, mas mais acessível. Também a Lacron, em Portugal e em Inglaterra, é vista como uma marca de topo, dentro da indústria das piscinas,

enquanto que em Espanha, até pela relação mais distante que tem com a cultura inglesa e os seus produtos, não beneficia de um posicionamento vincado, apesar de esforços comerciais desenvolvidos naquele país [27]. Assim, os pontos de venda e os benefícios de um produto, no esforço comercial, deverão ter um enfoque que vá de encontro dos objetivos da organização considerando o conhecimento que esta detém das culturas e instituições locais [33].

Não existe uma cultura global, apesar das redes sociais e o social media terem aproximado muitos países, em especial os mais jovens Millennials, sendo estes mais tecnológicos [29]. No entanto, mesmo o acesso a estas plataformas não é tão generalizado quanto se poderia pensar. O acesso à Internet varia na sua qualidade de geografia para geografia, havendo ainda espaços sem acesso nenhum. Por outro lado, os baixos rendimentos levam ao desespero pelo que as individualidades e as instituições com esse poder deverão continuar a lutar pela igualdade e pela eliminação da pobreza extrema, que existe em larga escala em África. Prevê-se que, mesmo segundo as estimativas mais otimistas, que práticas que pressuponham uma aproximação maior entre culturas e países, poderá demorar mais de um século a chegar [30] – com todas as vantagens e desvantagens que isso significa para as empresas localizadas nos quatro cantos do mundo.

Conclui-se com este estudo que as circunstâncias locais (de desenvolvimento económico e referentes à cultura local) são motivo de adaptação dos serviços e produtos, para poder maximizar a sua venda e otimizar o seu posicionamento nos mercados.

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Appendix 2 - Published paper - Cultural differences still matter: Adapting products and positioning for international success

The article is reproduced in full, bellow, with the knowledge of the *Journal on Advances in Theoretical and Applied Informatics (JADI)*

Cultural differences still matter: Adapting products and positioning for international success

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Abstract — This article focuses on technology-based companies and the way they perceive the influence of cultural and social differences on their internationalization process. As national cultures and institutions differ from country to country and even more so between different continents, we herein discuss the adaptation of products and services to the cultures and institutions of each environment, for the optimization of sales and product positioning. An in-depth example of a platform that is for sale in different countries, including Portugal and Mozambique, was described. In addition, results from interviews and a questionnaire administered to Portuguese internationalized companies were analyzed. A review of the existing literature was also performed. The strategic notion of positioning is central to organizational success and should differ from context to context, where necessary. Namely, different economic and education conditions lead to distinct behaviors, which have a repercussion on the position to be adopted in order to sell products abroad.

Index Terms— adaptation, internationalization, Mozambique, national culture, Portugal, positioning, software

I. INTRODUCTION

Technology is constantly changing and it is a source of competitive advantage in industries (Porter, 1980). If it is a technological product then its life cycle will require a continuous investment in innovation, in order to remain relevant in the market and relevant for the consumers and users (Burgelman, Christensen, & Wheelwright, 2009). Technology has also opened completely new horizons in areas of knowledge, namely in marketing (Sousa, Teixeira, & Gonçalves, 2011). It has also opened new possibilities in terms of support for business decisions (Branco, Gonçalves, Martins, & Cota, 2015). The main purpose of this study is to show that cultural and social aspects have an impact on the internationalization success of technological products and different countries require different selling approaches.

Task automation reduces costs in many areas, and in others, it allows the implementation of activities that previously were simply not possible. Social networks, for instance, have created a reality that profoundly modified the functioning of society. Now we see people in very different geographic locations communicating with each other with an ease that was once unthinkable. This ease of communication has spread to other domains due to technology and now there is a greater and instantaneous control of events. This is what happens with the products and services described in this case study.

Software and computer platforms are a good business model, since you only need to manufacture the product once and it can be sold many times. It is not by chance that among the

richest people in the world are individuals from the industry of applications and computer platforms. Good examples of this are Bill Gates (Microsoft) and Mark Zuckerberg (Facebook and other platforms such as Instagram and WhatsApp). Even the start-up that has been considered to be the most valuable in the world – the unicorn Uber, valued at 70 billion dollars (The Economist, 2016) – is a computer platform that has revolutionized the transport market (introducing a radical innovation in a mature industry that had not innovated in a long time – the taxi industry). This type of computer products can be adapted to different realities with relative ease. Sage management software is an example that may be mentioned. Although each country and region where Sage is present has its own VAT (Value Added Tax) and other different tax values the product adaptation is quick and costless (Oliveira, Barandas, & Barros, 2007).

II. FOCUS OF INTERNATIONALIZATION THEORIES

Internationalization theories such as the Uppsala and the Finnish-POM Models highlight the importance of market, social and cultural knowledge for international businesses. More recent theories (Networking and INV-International New Ventures) empathize other factors as sources of knowledge and global entrepreneurship.

The Uppsala theory, commonly known as the incremental internationalization model (Knight & Liesch, 2015), is the cumulative commitment to international activity. The theory focuses on companies and their gradual acquisition, integration and use of knowledge about foreign markets and operations. In addition, these companies successively and increasingly commit to these markets through sequential stages. The order of selection of countries for internationalization is related to the “psychic distance” between the target country and the origin country (Jan Johanson & Vahlne, 1977).

Another theory is the Finnish-POM Model and it can be separated into four dimensions. These are: product, operation, market and organizational capacity (Senik, Isa, Scott-Ladd, & Entekin, 2010). “First is Product (P), which describes ‘what’ in terms of the firms’ goods, services, know-how and systems. Second is the Operation mode (O) which relates to ‘how’ firms operate such as through agents, subsidiaries, licensing and management contracts. Third is Market (M), which describes ‘where’ in relation to the selection of markets and takes into account political, cultural and physical differences. The ‘organizational capacity’ dimension was a later addition to describe organizational structure, resources, finance and personnel (Welch & Luostarinen, 1988)” (Senik et al., 2010,

p. 287) . In summary, the Finnish-POM model complements the Uppsala theory because it supports that firms should moderate their expansion speed abroad and should do so as they accumulate resources and international experience (Chang, 2007; Vermeulen & Barkema, 2002).

Networking with customers, suppliers and other stakeholders constitutes a source of market information and knowledge, which accelerates and unrolls the internationalization process (Johanson & Mattsson, 1988). On the other hand, INV attribute significance to the new market conditions, (1) technological developments, developments in transportation and communication, (2) the importance of global networks and alliances, and (3) more capabilities of people, including those of the founder/entrepreneur who creates internationalized firms (Rialp, Rialp, & Knight, 2005).

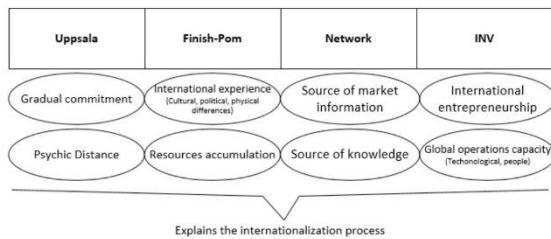


Figure 1 - Internationalization theories

A. Proactivity

Regarding entrepreneurial internationalization, Acedo & Jones (2007) constructed a model, which elevates the importance of the individual’s proactivity in the internationalization process. They conclude that cultivating a ‘can-do, will-do’ philosophy within the firm may help to increase proactivity, reduce risk and accelerate internationalization. Proactive firms are more receptive to foreign market needs and as a result their positioning changes to exploit overseas opportunities that fit their capabilities (Morris, Webb, & Franklin, 2011).

B. Knowledge creation capacity

Technology enterprises are knowledge intensive firms (KIFs). The main characteristic of KIFs is their dependency on knowledge for creating competitive advantage. Such organizations are highly dependent on their principal assets – their employees. Moreover, the ability to ‘grow knowledge’ depends greatly on the sharing of that knowledge between employees, which requires their co-operation. This places a premium on satisfying the needs of employees – the owners of intellectual capital. Indeed, the success of the organization depends on managing these knowledge workers so that they are attracted to the organization, they want to stay and they are highly motivated to perform well.

Knowledge can be sourced in individuals or Social Capital (knowledge that is embedded within the organizational relationships and routines.). Market positioning should take into account Social Capital because it provides important information for the business. Enterprises should retrieve information from their daily operations, namely from relationships between employees and experiences from client projects (Swart & Kinnie, 2003).

III. METHODOLOGY

A mixed methodology (qualitative and quantitative) was followed for this research project.

This work draws conclusions based on a case study

(Quatenus), two interviews (company A/B) and a questionnaire (aimed at 40 executives in firms with internationalization knowledge).

The interviews and the questionnaire were undertaken within the scope of a Master’s dissertation (about the internationalization process of technology firms). The most pertinent results of this research effort were selected.

Firstly, an auto-ethnographic and participant observation article was written about the positioning in different geographic markets (Au-Yong-Oliveira, Reis de Sousa, & Gonçalves, 2017). Secondly, an internationalization literature review was conducted. From the latter research effort, a series of questions were formulated. They were used in the interviews and in the questionnaires.

A. Quatenus case study

The methodology used in the quatenus case study Yin (2003) was based on participant observation and ethnography which produced qualitative data (Remenyi, 2013). As the adaptation of software positioning within national realities and cultures is a contemporary problem, it is possible to address this by analyzing a concrete platform. Case studies may create important explanations and generalizations Yin (2003). The article data comes from the experience and field notes of one author in the company portrayed (where he was a business manager between 2014-2016), in addition to his teaching experience in Mozambique (2016-2017). Another co-author was in Mozambique in an exchange of experiences at the higher education level (2017). An effort was made to triangulate the data, having also researched published sources. On the other hand, an effort was made to choose unusual and interesting cases - cases of “talking pigs”, which are not just pigs like so many others (Siggelkow, 2007). This effort was made here, by choosing the cases from unusual countries - Mozambique, framed in Africa and Portugal, within the European Union (although in the periphery).

According to Remenyi (2013) where possible, observation should be used together with interviewing and this was the case in this research project.

B. The interviews

A qualitative approach was used to collect and analyze data from three international companies. These companies were selected from one of the author’s networks (a mixture of both convenience sampling, involving ease of access, and purposive sampling, whereby interesting and relevant cases were selected, as mentioned below). A concrete example of every group (companies A and B have differing opinions when it comes to market knowledge) was considered because it is much easier for the reader to imagine how the conceptual argument might be applied to one or more empirical settings (Siggelkow, 2007). The interviews followed an interview script, were recorded in audio, with permission, and were fully transcribed for analysis purposes.

C. Questionnaire

The questionnaire had the same questions as the exploratory interviews. Remenyi (2013) and (Bryman & Bell, 2011) were consulted to design the survey. The Likert-type scale was used in this case. It is commonly used, and their properties are well known (Bryman & Bell, 2011; Hartley, 2013; Krosnick & Fabrigar, 2012; Oppenheim, 2000; Remenyi, 2013).

Business people from internationalized firms of any age and any phase in the life cycle (including maturity and decline) were

surveyed, based on their positions and companies (technology-based) that the people represent, and furthermore an effort was made to contact people individually to answer the questionnaire. As a result, some of the answers constitute a purposive sample. A total of 40 technology-based companies were surveyed.

IV. RESULTS

A. Case study – Quatenus

With regard to Mozambique, the country addressed in this research: “Mozambique scored 3.13 points out of 7 on the 2016-2017 Global Competitiveness Report published by the World Economic Forum” (Mozambique Competitiveness Index, 2017), which is poor. In this report, Mozambique’s ranking in terms of competitiveness was 133 (among 138 countries), near the tail end of the sample. With regard to corruption, Mozambique was ranked 142nd (total of 175 countries) (Mozambique corruption rank, 2016), similarly leaving much room for improvement. The combination of these two factors suggests that the country will produce poorly at the international level, which will in turn result in low wages, and this is a cycle which is difficult to break. The lack of competitiveness and low wages are linked to the second factor – corruption – and this is the means sought to supplement gains in a weak economy that is unable to satisfy its economic agents. Regarding the 2015 HDI (Human Development Index), Mozambique is ranked 181, among 188 countries and territories, tied with South Sudan, which means a very low level of development. Life expectancy at birth is 55.5 years (it was 43.2 years in 1990, so a big improvement has been registered) (United Nations, 2016). In terms of competitiveness, Mozambique is ranked 133 in 138 countries analyzed, with a population of 28 million and a GDP (Gross Domestic Product) of 15 billion USD and a GDP per capita of 534.9 USD (WEF, 2016). Following this perspective, there will have to be greater control of corporate assets, to protect the companies from their own associates and potential abuses. The Quatenus software and platform were developed against this background, to ensure the control of your business. It should be noted, however, that in extreme conditions any country in deep crisis and putting pressure on its citizens, such as Portugal in 2016 and 2017, might need this type of platform, given the despair of certain people – in the work context, but also in the family context. Therefore, product innovation – the invention of something new and of value, which arises at the right moment – can be linked to internal processes of companies and is linked to consumption (Claudiu-Cătălin & Dorian-Laurențiu, 2014).

In the Global Competitiveness Report 2016-2017 (WEF, 2016), Portugal was ranked 46th, having fallen 8 places in a year (among a total of 138 countries). “In Portugal rates and taxes continue to be the problematic factors for business and a concern for entrepreneurs. Political instability rose three places on the list and became the third most troubling factor behind the bureaucracy.” (PME Magazine, 2017). In relation to corruption, Portugal fell to the 29th place (among 176 countries) (Expresso, 2017). Portugal thus shows a negative trend in two indicators crucial for the economy – and for the confidence placed in Portugal at an international level. Will the asset control tools gain more relevance in this macroeconomic scenario? The purpose of this study is to show that this will definitely be the case, not only in Mozambique but also in Portugal, although with a slightly different positioning.

What is the positioning of a product or service? “Positioning can be defined as a strategic choice that seeks to give a credible, different and attractive position to an offer (product, brand or insignia) within a market and in the clients’ minds” (translated

from Lendrevie, Lévy, Dionísio, & Rodrigues, 2015, p.187). As there are different national cultures facing different problems and promoting different approaches, this could be the reason for a company wanting to position its products and services in different countries, taking into account the local requirements.

With respect to transport, Mozambique has only one airline – LAM, Mozambique Airlines (in a monopoly position, at the domestic level) –, which is somewhat inconstant in the provision of its services (flights are cancelled and are not restricted to default schedules). LAM is in a position of power, since it is hard or even impossible to drive between some of the major cities (it may take, for example, 30 or 40 hours instead of two hours by plane). There are asphalt roads in Mozambique, yet much of the country has dirt roads with uneven floors that generate higher vehicle maintenance costs, especially after heavy rainfall. The ideal car to use in these conditions is the SUV (Sports Utility Vehicle), as it is the most resistant. Four-wheel drive vehicles are more appropriate (in dry weather it gets sandy, in rainy weather it gets muddy). In addition, the existence of taxis is not uniform in Mozambique. These realities were analysed by the said co-authors and in the Participant Observation effort.

B. Case study questions and goals

This study shows that there is no global culture and reality that leads to the implementation of global tools and those local circumstances are a reason for adapting services and products. There are richer countries where the wages of newly graduated college students stand at approximately 3,500 Euros per month (such as Finland and the Netherlands). In Portugal, the wages of new Master’s Graduates (nowadays generally accepted as the “minimum” entry level to industry) from major accredited universities are around 800 Euros. The wage level will also depend on the region of the country and the course and industry concerned. If a citizen does not have a college degree, wages are certainly lower (not to mention unusual constraints such as joining a family business or being an agent who starts his/her own business and start-up). Will this economic reality affect the behaviour of a company’s employees and the way they treat the company’s assets? It would appear so – if consumption is affected by economic crises, this will result in an increase in the consumption of low-cost products, for instance (Hitt, Ireland, & Hoskisson, 2012). In the event of employees having access to a company’s valuable assets, then additional precautions will have to be taken in certain environments, in order to protect them.

C. Case and research background

The case refers to a company with local offices in Mozambique, where one of the co-authors was a business manager. The company in Mozambique had 10 employees and was part of the Sinfic Group, S.A.. The field of business was the geo-localized management of assets using a computer platform. Sinfic S.A. is a Portuguese company with its headquarters in Lisbon (where all the software is developed) and offices in Mozambique, Angola, Brazil and South Africa. Sinfic, with about 100 employees (varying according to the seasonality of the projects), is a leading company in the computer field and the company was developing software for the Angolan elections.

The computer platform is called Quatenus – see available information (Quatenus, 2016a). As more and more companies opt for this online information channel (Gonçalves, Martins, Branco, Perez-Cota, & Oliveira, 2016; Martins, Gonçalves, Pereira, & Cota, 2012) the positioning in the Portuguese domain serves the purpose of cost control and theft protection, as well as protection against misuse through communication and automatic

processing (Quatenus, 2016b).

The growing use of these platforms only happened due to the evolution of mobile Internet in Mozambique, which is growing significantly. Before, the geolocation of assets was only possible using an Internet satellite, which was too expensive.

Simple tracking platforms such as 'Cartrack' have had greater market penetration because of their lower price, but also due to the struggle for resources to use and understand the benefits of advanced management platforms.

In Quatenus (2016a) it is shown how Quatenus products can be used by the management team, but also by operators (sales, service) "who need accurate and real-time geo-referenced information about the reality of business activity" (Quatenus, 2016a).

The Quatenus service is intended for mature, medium and large commercial management companies (over 50 vehicles), which monitor operations and productivity and make planning decisions (Quatenus, 2016a).

With evolution and maturity, companies tend to rely more and more on the ability to lower their costs and stay competitive. Savings are one of the key benefits of the product, leading to higher productivity and profitability of client companies. By lowering their costs, customers' companies can pass on these gains to their own customers in the form of lower prices, which means they can gain more market share than rival companies.

"The typification of vehicle uses, the establishment of performance standards, and the rigorous planning of fleet activity allow it to increase productivity and profitability by more than 30 %" (Quatenus, 2016a).

The main purpose of using the system in Mozambique, with a positioning slightly different from the Portuguese case, described above, was the management of the fleet that allows the identification of drivers, compliance with routes and various alerts such as speeding, hard braking, etc. The goal is to minimize costs for customers by enabling greater control over assets. In Mozambique the annual turnover is around 12 million Meticaís (about 160,382 Euros).

The software platform service costs eight thousand Meticaís annually (around 100 Euros, given the crisis environment and the devaluation of the local currency). The hardware costs, in its most basic form, 200 US Dollars. The hardware cost was always indexed to the US dollar.

Companies pay every year 12,000 Meticaís for the software (about 160 Euros). This allows for full management of the fleet. The price is per unit (per asset, per car).

The advantage of using this advanced platform is the possibility to extract real time information and to compile important management indicators in standardized reports (cost per km travelled, driver ranking, identification of periods of affluence, etc.) in Excel or PDF, according to the users' desire.

Mozambique's society is quite different from the Portuguese society, which involves a completely different cultural adequacy. It is necessary to ensure the control of the employees' use of a company's resources. In the Mozambican case, the focus was on cars. Company cars are often used as taxis to make money in post-work hours, something that has to be mitigated.

The biggest concern is fuel control, because there are still high rates of theft. The company tested and developed a fuel probe with live information and alerts (immediate).

The company in Mozambique is based in Maputo and has partnerships all over the country. The manager had to accompany the partners to carry out business in the provinces, a very important factor in that country, given its size and given the difficulty of travelling between the various provinces.

One of the co-authors taught a course unit on an accounting course. He noted that Mozambique's higher education is quite different from the Portuguese equivalent, as it is hard to get the students' active and relevant participation. Students are poorly prepared when they reach higher education and have difficulties in performing and delivering low-difficulty work. Some students have difficulty reading and interpreting texts. This is due to the teaching of Portuguese, which is not their mother tongue, despite it being used at school. They speak dialects at home and only have contact with Portuguese at the age of six, when they go to school. Teachers in many countryside universities are the students of the previous year. There is a lack of qualified human resources. This gives rise to a problem of accuracy and pertinence of the information given. On the other hand, another co-author of this study found that post-graduate higher education in Mozambique is expensive and not available to everyone, possibly costing as much as two local minimum wages, per month, to attend an attractive and international program; which means that not many people will have access and if they do it will probably be at considerable personal sacrifice.

With respect to safety, public security entities (police) continue to have very limited resources and insufficient salaries to live a normal lifestyle and therefore it was not possible to find a police officer who was not entangled in the informal compensation system, up and above the normal penalty (the concept of "soft drink" exists in Mozambique – which consists in obtaining capital from individuals in exchange for "letting go"). The reporting of any crime remains very expensive because justice works by monetary incentive. A company employee used a card to spend 1,500 Euros on private communications through a mobile device (this situation really happened) and when the complaint was filed, an amount was immediately requested to arrest the person. The crime was to watch videos all night, of all kinds, with company material, and that cost the company money.

The Portuguese manager and co-author was in Mozambique for a year and ten months, having finished functions in December 2016. It was a very rich and international experience at the top management level in a micro-enterprise that drew attention to the difference in national cultures and the functioning of institutions. The experience has led to a greater approximation of the computer platforms and greater sensitivity to the surrounding environment as a business dominant influencer (Industrial Organization model – see Hitt et al., 2012). Different cultures imply different technological and management tools to control and mitigate losses. Liability, as well as the responsible actions, vary according to reality. Only those who are close and live day-to-day, in the specific context, can understand the difficulties to achieve a meritocratic society that promotes, at the same time, equality of opportunities. The transaction costs mentioned, in 1991, by Nobel Prize winning economist Ronald Coase result in hidden costs, which means that the current system has nothing to do with the formal rules created to institute it. The Nobel Prize had to do with "his discovery and clarification of the significance of transaction costs and property rights for the institutional structure and functioning of the economy", a contribution that crosses the areas of economy, law and organization (Nobel Prize, 2014).

With contact networks and organizational subcultures, technology is a means of control to fight against those who escape the established rules.

Finally, it will take a lot of political maturity to correct certain inequality situations, which result in so many other violations of citizens' rights. Defining culture as "the accumulated shared learning of a given group, covering behavioral, emotional, and

cognitive elements of the group members' total psychological functioning." (Schein, 1992, p.10), and being the national cultures responsible for the establishment of the rules of conduct and institutions, it will take a lot of effort in countries, according to the Nobel Prize co-winner in Economics, in 1993, Douglass C. North, and as he later reported (North, 2005), it will take a lot of concerted effort to lead to the further development of nations.

On the other hand, it will require a lot of prior analytical work before attempting to sell and implement computer solutions in certain environments, as the case presented in this article shows. The problems experienced in Mozambique will not be evident in countries within the European Union, such as Portugal, France or Germany. It does not mean that they are better, but simply that they are different. That is why a management control mechanism must exist there as well as asset protection tools that respond to the diverse needs of each market. Assuming also that there are different market positions.

D. Interview – Company A

Company A is headquartered in IEUA (Incubadora de Empresas da Universidade de Aveiro – the University of Aveiro Enterprise Incubator) and develops a telecommunication electronic component. It has six full time workers and three more people that work in the scope of their academic research. The departments are not thoroughly defined, but each worker knows their function. The person interviewed controls the financial and operational areas. All workers have a Master's degree and three of them are obtaining a doctoral degree.

They did not need to be very proactive to find channels for internationalization. The company quickly obtained contacts by participating in some trade shows and conferences. From there, they focused on product development using these contacts.

At the moment, the product development is in accordance with the requirements given by a few American customers. Currently, the company exports directly to the USA.

The company produces a specific and advanced technology, and for that reason it was mandatory to start selling to other countries. Internationalization to additional countries is likely to take more time for technological reasons.

Questioned about the key resources, which allow the company to internationalize, the following answer was given: "The key is what we are developing. It is obvious that we have to be able to do it. We must have financial resources, people with the capacity to do this, but the focus, the main thing, what makes us get a foot on the other side of the world is what we developed effectively, the technology" (interviewee and chief financial officer at company A, in May 2017). This emphasizes the importance of the product.

In their case, they do not consider the importance of increasing their knowledge of the country they are selling to (e.g. its national culture) because they sell to a limited number of companies (due to the specificity of the product). "If I make a Formula 1 car I do not need to know if all the people will accept it." (interviewee and chief financial officer at company A, in May 2017). The specificity of the product in a small business-to-business market is more important than values, beliefs and policies at the national level.

E. Interview - Company B

Company B was founded in Lisbon, and there is also a sales office in London, but the production unit is based in Évora (Portugal). They do "digital delivery", in other words they develop digital solutions such as websites and mobile apps.

At the time of writing, the company had about 30 employees aged between 27 and 35 years old. All the workers had higher education diplomas.

The company was founded in 2010 and they quickly started exporting. Two years later a subsidiary in London was created. They have exported to more than 10 countries

The CEO said that it was necessary to streamline the whole project in Portugal before establishing the firm abroad. The first step was to hire externally within the UK, which took some time.

For this company to start an international business they ideally needed to have partners abroad or to hire locals. According to them it is complicated going alone abroad because they have to make new contacts. They also have to comply with local policies and culture that may differ from the originating country therefore local people with this knowledge need to be hired.

Questioned about their proactivity the CEO affirmed that there is no doubt that the company has been proactive and that this is completely necessary.

They evaluated the possibility of opening a sales office in France and Spain but England was chosen because it was aligned with the business strategy, as well as for social reasons (the language was easier for the entrepreneur and it is a more mature market digitally).

In their opinion, people are obviously the key resource for successful businesses. The potential of a company is related to the way companies select people (employees, partners, and customers).

The service that they provide to different countries also needed to be targeted because of cultural reasons. "We seldom design internationally, clients do it and we do the implementation. In Portugal, we do everything, from consulting, design, implementation and maintenance. Abroad, cultural differences exist..." (interviewee Chief Executive Officer at company B, in May 2017). Different countries have different approaches and requirements.

F. Questionnaire

In our sample, the need to know the market better, to adequate the product and the overall strategy in order to maximize sales opportunities, is broadly verified.

Question in the survey: The company had / has success in its international business because it has sought to better understand (cultural, economic and social conditions) the countries in which it intends to grow internationally in order to adapt market positioning or adapt products, in order to maximize sales opportunities.

Thirty-nine answers to the question above were collected and divided as table 1 shows. We thus see a considerable amount of answers (a total of 27 out of 39, or close to 70%) at levels 4 and 5 (partially or strongly agree) – which means that adaptation (of positioning and products) is important in international markets, according to the questionnaire sample.

| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| 1 | 1 | 10 | 16 | 11 |

Table 1- Questionnaire answers to – "The company had / has success in its international business because it has sought to better understand (cultural, economic and social conditions) the countries in which it intends to grow internationally in order to adapt market positioning or adapt products, in order to maximize sales opportunities."

The answers to another (open) question “What would you do differently if you were to start the process again?” were very diversified. They reinforce the importance to choose good partners and relationships, they reinforce the importance of cultural differences and the need to study the market. Also, the importance of solidifying domestic relationships before going abroad is referred to.

Other answers by the sample of companies justify why Portuguese companies need to internationalize:

- “The domestic market is insufficient” – 19 out of 38 (50%) companies partially or strongly agree;
- “The profit margins obtained abroad are higher” – 30 out of 39 (77%) companies partially or strongly agree;
- “International business – key resources – management – ability to create knowledge and apply it across borders” – 31 out of 39 (close to 80%) companies partially or strongly agree;
- “International business – key resources are contacts and networking” – 33 out of 39 (85%) companies partially or strongly agree;
- “International business boosted by the knowledge and contacts of the partner established in the destination country” – 22 out of 38 (58%) companies partially or strongly agree.
- “International business boosted by the international experiences and mind-set of the manager” – 24 out of 39 companies (62%) partially or strongly agree.

The study reveals that the Portuguese companies in the sample have internationalized due to better profit margins registered abroad (77%); the domestic market being insufficient for half of the sample. Contacts and the desired network (85%), as well as experience (62%) and a management competence applicable across borders (close to 80%), are factors that allow for successful company internationalization.

V. DISCUSSION

Internationalization involves “a strategy through which the firm sells its goods or services outside its domestic market.” (Hitt et al., 2012, p.219; see also Oliveira, Gonçalves, Martins, Moreira, & Branco, 2016). A significant number of companies in smaller countries, particularly in certain industries, need to internationalize to survive. Civil construction in Portugal was an extreme case of this reality, the crisis extending until the year 2017, although with some improvements. Faced with the stagnation of the construction industry in Portugal, that even affected education (where students opted for other areas of education, to avoid unemployment), those who did not internationalize disappeared from the market (Soares, 2013). Internationalization can be achieved through the sale of standardized products in international markets (global strategy): “A global strategy is an international strategy through which the firm offers standardized products across country markets, with competitive strategy being dictated by the home office.” (Hitt et al., 2012, p.228).

The cement company CEMEX pursues a global strategy (Hitt et al., 2012). In terms of software and computer platforms, there are several philosophies that can be followed, not just the global strategy, and (Oliveira, Barandas, & Barros, 2007) write about Sage’s case. To sell their management software, Sage adopted a multi-domestic international expansion strategy. They recognized that national cultures are different, collected knowledge about them, and enabled decentralized decision-making in each country. The multi-domestic strategy allows to act on the perspective that each country is different, making it

necessary to adopt different strategies in each country. This is what we observed using the Quatenus platform, with different positioning in Mozambique and Portugal.

In Mozambique, Quatenus protects companies from the use of their assets by employees. In richer countries, the positioning is more focused on optimizing assets and lowering operating costs, as a result of greater competitiveness in the market. In African countries, there will be loyalty to the family, even if enlarged, not to the state or company. The concept of “xitique” (Coutinho, 2007) is an example of this and reflects the informal networks existing in Mozambique and their importance. “They provide rural populations with access to locally generated savings and function as a cushion in periods of economic fluctuation, promoting the formation of cooperatives and strengthening the sense of community.” (Coutinho, 2007, p.307). In Europe, we will see greater identification of employees with their companies, which in turn will lead to more “responsible” behaviours from an organizational point of view.

VI. CONCLUSIONS

A renowned author writes about the semi-globalized world (Ghemawat, 2007), as we witness great differences between countries and peoples in the 21st century. We are proponents of this approach, even within Europe, where there are large differences between, for example, the northern and southern countries (e.g. Nordic countries versus Greece and other Mediterranean countries). The differences between continents (e.g. Europe and Africa) aggravate the differences felt and the need to adapt products and market positions.

In our study, although the interviewee in company A emphasized the importance of the product and indicated that the specificity of the product in a small business-to-business market is more important than values, beliefs and policies at the national level; the interviewee in company B emphasized how different countries have different approaches and requirements. Furthermore, the survey revealed that close to 70% of the respondents see that adaptation (of positioning and products) is important in international markets.

Examples of different positioning, from Europe to Africa, include Inditex Group stores. For example, Zara in Morocco has a more elitist position than in Europe, since in Europe Zara is considered a more accessible fashion brand. In Portugal and England, Lacron filters is seen as a top brand in the swimming pool industry, while in Spain, due to the more distant relationship with the English culture and its products, they do not benefit from unique positioning, despite the commercial efforts undertaken (Oliveira, Moreira, & Ferreira, 2012). Thus, in commercial efforts, the points of sale and the benefits of a product should be focused on for the meeting of organizational goals, considering how knowledgeable one is about local cultures and institutions.

The younger generation, called the millennials, are the ones who use technology the most (Gonçalves & Oliveira, 2010) and we see some cultural convergence there, across national boundaries. However, a global culture does not exist, although social networks and social media have brought many countries closer together. Even the access to these platforms is not as widespread as one might think (in China there is no access to Facebook or YouTube, for example). Internet access quality also varies according to geography, and there is still no access in some places (in Mozambique Internet access is still poor in many localities).

On the other hand, low incomes lead to despair, and that is why the individuals and institutions that are in power should continue to fight for equality and the elimination of extreme

poverty, which exists on a large scale in Africa. Even the most optimistic estimates foresee that practices that presuppose a greater approximation between cultures and countries may take more than a century to reap results (Hofstede, 2001) – with all the possible advantages and disadvantages for companies located in every corner of the planet.

The study concludes that the local circumstances (of economic development and related local culture) justify the adaptation of services and products, in order to maximize sales and optimize positioning in international markets.

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Appendix 3 – Interview script (Portuguese)

Guião de entrevista para a realização de dissertação de mestrado de Rafael Sousa (2016-2017)

Nome completo:

Habilitações Académicas:

Data de nascimento:

Posição na empresa:

Género:

Tempo na empresa:

Local de residência:

Data de fundação da empresa:

Nacionalidade:

A empresa já iniciou alguma forma de internacionalização? Sim

1) Como é constituída a empresa?

- Nº de colaboradores
- Idade aproximada
- Habilitações
- Experiência
- Assalariados/Voluntários
- Fundadores
- Departamentos formais na organização

2) Por quê internacionalizar?

- Opção do gestor
- Mercado doméstico insuficiente
- Existência de experiência na equipa que favorece
- Maior rendimento

3) O que faz a empresa para mercados externos?

- Produtos/serviços

4) Qual o modo de operação?

- - Exportação, agentes no estrangeiro ou subsidiária no estrangeiro:

5) Quando começou a internacionalizar-se?

6) Para onde se internacionalizou primeiro e porquê?

7) Como se internacionalizou? / Qual o modo de entrada?

- - A empresa foi proactiva em procurar internacionalizar-se, realizou ações para tal.
- - Através da network (clientes, parceiros, alianças) surgiram essas oportunidades
- - Usou a AIDA (Associação Industrial do Distrito de Aveiro) ou outra organização de apoio

8) Como surgiram os contactos para os negócios internacionais mais relevantes?

9) Quais os recursos-chave que permitem a internacionalização da empresa?

- - Recursos referem-se a ativos, contactos, particularidades do negócio ou capacidades dinâmicas que a empresa dispõe para conseguir internacionalizar-se.

10) Para onde se internacionalizou ao longo da vida da empresa?

11) O que não correu ou está a ocorrer como esperado?

12) Quais as barreiras sentidas que impedem um maior nível de internacionalização?

13) Como se caracteriza o gestor?

- - Experiência internacional
- - Visão para a empresa nos mercados internacionais

14) No que que concerne à internacionalização, o que teriam feito de diferente se começassem de novo?

15) Se existe inovação de que forma são geridos os resultados desta?

- - Usam sistema de gestão de conhecimento, Inovação aberta, Inovação fechada.
- - A empresa salvaguarda os seus direitos com registo de patentes antes da comercialização.

16) A empresa procura conhecer melhor (culturalmente, condições económicas e sociais) os países para os quais pretende crescer internacionalmente?

- - Adequação do posicionamento de mercado de forma a maximizar as oportunidades de venda

17) Os produtos da empresa são inovadores

| Discordo Totalmente | Discordo Parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo Totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

18) A inovação produzida foi motivo para os produtos penetrarem noutros mercados geográficos.

| Discordo Totalmente | Discordo Parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo Totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

19) O preço praticado foi motivo para os produtos terem sido vendidos noutros mercados geográficos.

| Discordo Totalmente | Discordo Parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo Totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

20) O network da empresa foi motivo para os produtos terem sido vendidos noutros mercados geográficos.

| Discordo Totalmente | Discordo Parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo Totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

21) Os produtos internacionalizados são direcionados a nichos de mercado

| Discordo Totalmente | Discordo Parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo Totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

22) A venda internacional de produtos ocorreu pois existiu um trabalho exaustivo de rastreio de mercado na busca de oportunidades de negócios em vários países.

| Discordo Totalmente | Discordo Parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo Totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

23) Os produtos internacionalizados tiveram de ser adaptados ao mercado a que se direccionaram.

| Discordo Totalmente | Discordo Parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo Totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

Appendix 4 – Interview script (English)

Interview script for the accomplishment of Rafael Sousa's Master's thesis

Full name:

Academic qualifications:

Date of birth:

Company position:

Gender:

Time in the company:

Residency:

Date of foundation of the company:

Nationality:

Has the company already started some form of internationalization? Yes

1) How is the company formed?

- Number of workers
- Approximate age of workers
- Qualifications
- Experience
- Employees / Volunteers
- Founders
- Formal departments in the organization

2) Why has the company internationalized?

- Managerial option
- Insufficient domestic market
- Existence of experience in the team that favours it
- Higher income

3) What the company sell for external markets??

- Products/services

4) How does the company operate the business abroad??

- Export, agents abroad or subsidiary abroad

5) When did you start to internationalize?

6) Where did you first internationalize and why?

7) How did you internationalize? / What is the input mode?

- The company was proactive in seeking to internationalize, carried out actions to do so.
- Through the network (customers, partners, alliances) these opportunities
- - Used AIDA (Industrial Association of the District of Aveiro) or other support organization

8) How did the contacts for the most relevant international business arise?

9) What are the key resources that allow the internationalization of the company?

- Resources refer to assets, contacts, particularities of the business or dynamic capabilities that the company has in order to internationalize.

10) Where have you internationalized throughout the life of the company?

11) What did not happen or is happening as expected?

12) What are the barriers that prevent a higher level of internationalization?

13) How is the manager characterized?

- International experience
- Vision for the company in the international markets

14) As far as internationalization is concerned, what would you have done differently if the process started again?

15) If there is innovation how are the results of this innovation managed?

- Use knowledge management system, Open Innovation, Closed Innovation.
- The company safeguards its patenting rights prior to commercialization.

16) Does the company seek to know better (culturally, economically and socially) the countries for which it intends to grow internationally?

- Adequate market positioning in order to maximize sales opportunities

17) Are the company's products innovative?

| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| 1 | 2 | 3 | 4 | 5 |

18) The innovation produced was the reason for products to penetrate other geographical markets.

| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| 1 | 2 | 3 | 4 | 5 |

19) Low price was the reason why the products were sold in other geographic markets.

| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| 1 | 2 | 3 | 4 | 5 |

20) The company network was the reason for the products being sold in other geographic markets.

| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| 1 | 2 | 3 | 4 | 5 |

21) Internationalized products are targeted to market niches

| Strongly disagree | Partially disagree | I do not agree or disagree | I do not agree or disagree | Strongly agree |
|-------------------|--------------------|----------------------------|----------------------------|----------------|
| 1 | 2 | 3 | 4 | 5 |

22) The international sale of products occurred because there was an exhaustive job of market screening in search of business opportunities in several countries.

| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| 1 | 2 | 3 | 4 | 5 |

23) Internationalized products had to be adapted to the destination market

| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| 1 | 2 | 3 | 4 | 5 |

Appendix 5 – Questionnaire (Portuguese)

Inquérito para a realização de dissertação de mestrado de Rafael Sousa (2016-2017)

- O QUESTIONÁRIO DEMORARÁ APENAS 5 MINUTOS.
- Responda a este questionário, apenas se a sua empresa já iniciou alguma forma de internacionalização (inclui exportação)
- Caso não tenha informação suficiente para responder a qualquer questão passe para a seguinte
- Estudo realizado no âmbito do mestrado de gestão pela Universidade de Aveiro
- Todas as respostas são tratadas com carácter de confidencialidade.

Fatores influenciadores da internacionalização de empresas tecnológicas

A empresa onde se encontra é portuguesa? SIM

A empresa onde desempenha as suas funções é uma empresa de tecnologia (Empresas de tecnologia da informação, biotecnologia, de eletroeletrônicos) SIM

- Nº de colaboradores (aproximado: _____)
- Data criação da empresa (aproximada): _____
- Data de início de exportação (aproximada): _____
- Data de criação de estabelecimento no estrangeiro (se aplicável): _____

Classifique as seguintes questões de acordo com a seguinte escala:

| Discordo totalmente | Discordo parcialmente | Não concordo nem discordo | Concordo parcialmente | Concordo totalmente |
|---------------------|-----------------------|---------------------------|-----------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |

1) A empresa desenvolveu mais o mercado internacional porque:

- O mercado doméstico é insuficiente

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- As margens obtidas no exterior são superiores

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

2) Quais os Recursos-chave que permitiram a internacionalização da empresa?

- Recursos humanos qualificados e com experiência relevante

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Contactos e Networking

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- De gestão - Capacidade de criar conhecimento e de o aplicar além-fronteiras

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

3) A empresa teve/tem sucesso nos seus negócios internacionais porque:

- A empresa procurou/procura conhecer melhor (culturalmente, condições económicas e sociais) os países para os quais pretende crescer internacionalmente de forma a adequar o posicionamento de mercado ou adaptar produtos, de forma a maximizar as oportunidades de venda

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

4) O motivo pelo qual o produto/serviço da empresa teve aceitação noutros mercados geográficos foi:

- A inovação ou especificidade da tecnologia produzida.

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- O preço praticado

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- A influência que o parceiro exerce nos mercados de destino

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Os produtos internacionalizados são direcionados a nichos de mercado

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

5) A internacionalização foi potenciada por:

- Experiências internacionais e *mindset* internacional do gestor de topo

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Existência de competências específicas na equipa que permitem a internacionalização

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Pelo conhecimento/contactos do parceiro estabelecido no país de destino

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Relações com os clientes que despoletaram oportunidades no exterior

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Estabelecimento de alianças/parcerias em território nacional

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Pela participação em feiras e eventos

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Deslocações ao estrangeiro de forma a estabelecer contactos com potenciais parceiros e clientes

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Procura direta de potenciais clientes/parceiros no estrangeiro (Redes sociais, pesquisas online, base de dados)

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

- Existiram apoios do governo ou instituições para a internacionalização

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

6) No que que concerne à internacionalização, o que teriam feito de diferente se comesçassem de novo?

7) Quais as barreiras/situações que impedem um maior nível de internacionalização?

*** Informação para efeitos de verificação da integridade dos dados. Os dados são confidenciais e não serão publicados**

*Nome:

*Empresa:

Habilitações Académicas

Appendix 6 – Questionnaire (English)

Survey for the accomplishment of Rafael Sousa’s Master's thesis (2016-2017)

- THE QUESTIONNAIRE TAKES ONLY 5 MINUTES .
- Respond to this questionnaire only if your company has already started some form of internationalization (includes export)
- If you do not have enough information to answer any question go to the following
- Study conducted in the scope of the master's degree in management by the University of Aveiro
- All responses are treated as confidential.

Factors influencing the technological companies’ internationalization

Is the company where you work Portuguese? YES

The company where you work is technological (information technology companies, biotechnology, electronics) YES

- Number of employees (approximate): _____
- Establishment date of the company (approximate): _____
- Export start date (approximate): _____
- Creation date of establishment abroad (if applicable): _____

Please rate the following questions according to the following scale:

| | | | | |
|-------------------|--------------------|----------------------------|-----------------|----------------|
| Strongly disagree | Partially disagree | I do not agree or disagree | Partially agree | Strongly agree |
| 1 | 2 | 3 | 4 | 5 |

8) The company further developed the international market because:

- The domestic market is insufficient

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
- The profit margins obtained abroad are higher

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

9) What are the key resources that allowed the internationalization of the company?

- Qualified human resources with relevant experience

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
- Contacts and Networking

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
- Management - Ability to create knowledge and apply it across borders

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

10) The company has / had success in its international business because:

- The company has sought / sought to better understand (culturally, the economic and social conditions) the countries for which it intends to grow internationally in order to adapt market positioning or adapt products, in order to maximize sales opportunities

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

The reason why the company's product / service was accepted in other geographic markets was:

- The innovation or specificity of the technology produced.

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- The price tag

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- The influence that the partner has in the destination markets

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- Internationalized products are sold towards niche markets

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

11) Internationalization was boosted by:

- International experiences and mindset of the manager

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- Existence of specific competences in the team that allow internationalization

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- By the knowledge / contacts of the partner established in the destination country

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- Relations with clients that triggered opportunities abroad

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- Establishment of alliances / partnerships in national territory

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- By participating in trade shows and events

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- Traveling abroad to establish contacts with potential partners and clients

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- Direct search of potential clients / partners abroad (Social networks, online surveys, database)

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

- There have been government support or institutions for internationalization

| | | | | |
|----------|----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 |
|----------|----------|----------|----------|----------|

12) As far as internationalization is concerned, what would they have done differently if they started again?

13) What barriers / situations prevent a greater level of internationalization?

*** Information for the purpose of verifying the integrity of the data. The data is confidential and will not be published.**

*Name:

*Company:

Academic Qualifications

Appendix 7 – Transcript Born Global interview (Portuguese)

Due to privacy reasons some of the content was summarized

- 1) Sim, exporta
- 2) A nível de colaboradores sem conseguir precisar exatamente, são 30 colaboradores.

A maioria concentra-se entre os 27 e 35. Em termos de habilitações todas as pessoas têm formação superior e são maioritariamente na área das tecnologias, engenharia informática e design embora tenhamos algumas pessoas de gestão e de marketing.

Damos estágios de final de curso, estágio académico, temos essa abertura para receber pessoas. Obviamente que recebemos pessoas com o objetivo das pessoas se efetivarem na empresa. Tantos alunos de licenciatura como de mestrado.

Em termos de organização estamos muito bem organizados, temos departamentos como o de produção, design, administrativa e financeira e comercial.

3) Basicamente tem a ver com tudo. As crises têm esta particularidade boa porque faz com que os países abram os olhos e as próprias pessoas para procurarem soluções. Na verdade quando há uma crise e a Argentina foi um caso desses e outros mais países com crises profundas. A nossa não foi assim tão profunda quanto isso mas abriu-nos os olhos para que as pessoas comessem a pensar para além de Lisboa porque antes da crise, até mesmo ir ao Norte, ter um cliente no norte era um sacrifício, muitos têm os clientes aqui em Lisboa e porque haveriam de ir ao Norte e perder tempo. A crise fez com que nós não saíssemos apenas e só de Lisboa mas também na verdade saíssemos de Portugal e fôssemos à procura de novas coisas e isso fez com que a gente abrissemos os olhos e horizontes e nos atirássemos para fora. Tanto é que hoje em dia todos os dias nós vemos notícias excelentes sobre Portugal. Ontem por exemplo a Mercedes anunciou que vai abrir um centro de *digital delivery* em Portugal e todos os dias vemos situações que têm a ver com a nossa nova forma de estar de procurarmos outros mercados e de facto tem a ver com isso, agora quando olhamos para fora vemos que o mercado é muito mais interessante, que os valores são muito mais interessantes e daí a nossa estratégia de sair.

No nosso caso concreto eu acho que não foi a crise se bem que esta fez com que o tema fizesse mais em cima, o movimento natural dos gestores é de ir para fora fez com que obviamente isso me levasse a pensar, contudo a história que nós fora de Portugal eramos mais competitivos e muito mais interessantes. Eu sempre achei que Portugal, ou seja aquela visão que hoje em dia existe eu sempre tive essa convicção, que Portugal tinha um elemento competitivo e que Portugal se poderia posicionar como um forte *player* nestas áreas a nível internacional e não o estava a fazer.

A busca de maior rendimento, sim porque na verdade hoje em dia os que existem em Portugal são totalmente diferentes dos praticados lá fora.

4) Fazemos basicamente o chamado “digital delivery”, ou seja nós desenvolvemos soluções digitais para outros mercados, nomeadamente desenvolver um website, aplicações mobile, toda essa componente digital. Lá para fora praticamente não fazemos o design, os clientes fazem-no e nos fazemos a implementação coisa que em Portugal nós fazemos tudo, fazemos desde a consultoria, design, implementação e manutenção. Lá fora por questões culturais e essencialmente os clientes pedem-nos para nós fazermos a implementação digital,

ou seja desenvolver toda a parte tecnológica, sendo que eles fazem a parte de design. Esta implementação é feita desde de Évora.

5) Na parte internacional estamos em Londres e através daí desenvolvemos para outras áreas para outros países mas Londres é o nosso escritório Hub internacional. No entanto já vendemos para diversos países.

6) A empresa existe desde 2010. Começamos a exportar dois anos depois. Primeiro estivemos a olear tudo o que era o projeto cá e depois tivemos então a desenvolver para fora. Estivemos a agilizar e a olear todo o projeto cá para depois contratar a pessoa lá fora o que demorou algum tempo. A criação da subsidiária foi dois anos depois, começamos a exportar antes, mas significativo foi Londres. Ultimamente e estranhamente temos estado a desenvolver algumas coisas para Angola, estranhamente porque nós não procuramos nem na verdade é uma coisa que gostamos muito por serem maus pagadores e tudo isso. Mas quem nos veio pedir são de facto empresas bem posicionadas e que têm toda uma outra forma de estar que se adequa a nós e portanto têm vindo alguns negócios de Angola e depois Estados Unidos onde temos alguns bons projetos, essencialmente países fortes são estes. Embora façamos coisas pontuais para outros países.

7) O primeiro cliente internacional foi brasileiro, mas dentro da nossa estratégia esteve sempre a Inglaterra no nosso *mindset*. Inglaterra é simples, é um mercado mais maduro em termos digitais é um mercado que já desde há muitos anos, o digital para eles é uma coisa completamente normal e está totalmente no *mindset* deles e que tem investimentos muito avultados, por outro lado têm o mesmo fuso-horário que é uma grande mais valia, para além de ter também o facto de estar muito próximo ou seja como eu costumo dizer, nós com 150€ vamos e vimos e é uma hora e meia de viagem e tudo isso são questões muito significativas. É um mercado maduro que está muito bem oleado e isso faz com que o mercado inglês tenha sido o eleito porque o espanhol embora mais perto estava a passar muitas dificuldades, França tem a questão da língua e algumas questões culturais e, portanto, achamos o inglês o mais interessante

Brasil, foi um cliente que nos encomendou porque de facto não está mesmo no nosso *mindset* irmos para o Brasil ou termos negócios lá. É uma coisa muito complicada e não tem a ver connosco.

8) Foi um cliente nacional que nos convidou para irmos para este projeto em parceria. Sem dúvida que a empresa tenha sido pró-ativa e isso é completamente necessário.

Não tivemos apoio de nenhuma instituição, nem foi nosso objetivo tão pouco. Fomos para Évora porque era aquilo que nos parecia melhor e que reunia as melhores condições para nós irmos.

9) Através de parcerias, ou seja parceiros que já estavam dentro dos clientes que nos convidaram para ir para determinados projetos. Já participamos em feiras, mas na verdade não nos dá o tal *boost* que é necessário. Quando se vai para um negócio internacional o ideal é ter-se parceiros e até contratar lá pessoas localmente, porque na verdade a pessoa ir para lá para feiras e andar “assim” é de facto um trabalho muito improdutivo. É complicado porque temos de fazer contactos, temos de fazer uma série de coisas que cá não existe e portanto a gente temos de conhecer as pessoas, nós temos que ter *network*, toda uma série de formas de estar que conhecer e isso só se consegue com pessoas ou que vivem há muito tempo lá ou que são de lá.

São diversos parceiros que vamos angariando e até porque temos trabalhado com base naquilo que fazemos em Portugal e apresentamos e portanto é esse tipo de parceiros que nós temos que procurar para dar as mais-valias que é trabalhar com Portugal.

10) A capacidade de mostrar as suas mais-valias a trabalhar cá e dar portefólio. Tem de se criar de facto um portefólio para depois ter. Pois ir assim sem portefólio e sem essa parte da credibilidade é muito complicado. Não há negócios dominantes do mundo em Portugal e mesmo que houvesse. São as pessoas obviamente até para teres isso são as pessoas para chegares a esse nível.

11) Às vezes as pessoas não são as mais corretas e aí é uma aprendizagem contínua na parte de as escolher para no fundo partilharmos aquilo que é a aprendizagem das pessoas melhores para cada função. Mas isso é uma coisa que nós nunca vamos ter a ciência total, quando fizermos isso temos um potencial louco que é termos as melhores pessoas, escolhermos as melhores pessoas.

Em relação às patentes estamos devidamente bem munidos de pessoas para essas áreas, pois isso não pode acontecer.

12) Já respondido.

13) Tem a ver com várias situações, o facto de termos logo à partida a Inglaterra, é um país de grande potencial e portanto é muito complicado nós esgotarmos o potencial que temos em Inglaterra, seria necessário faturar muitos milhões para esgotarmos esse potencial. Uma coisa é ir para um país em África ou no Brasil que o potencial é muito mais baixo, teríamos de ter ido para vários países ao mesmo tempo. Em Inglaterra o mercado é tão grande e vale tanto que é complicado esgotarmos o potencial.

14) Para mim inovação é descobrir e fazer coisas novas e nós não fazemos coisas novas, nós fazemos o que o mercado pede e faz. Quem faz inovação para mim na verdade são empresas que fazem investigação e descobrem coisas novas.

Diria que não temos inovação. Trabalhamos é com ela.

15) Já respondido.

16) Só o facto de nós estamos em Évora uma das situações é de facto essa, faz com que a nossa rotatividade seja muito menos e foi feito mesmo a pensar nisso. Mitigar o risco através de pessoas.

17) Nós queremos ter o maior conhecimento necessário e por isso contratamos pessoas locais para nos ajudarem nesse caminho. Tentamos ter o maior conhecimento possível sobre cada uma dos países onde estamos para adequarmos o posicionamento.

18)4

19)4

20)5

21)5

22)3

23)5

24)5

Appendix 8 – Transcript Innate Exporter interview (Portuguese)

Due to privacy reasons some of the content was summarized.

1) Sim. Exporta.

2) Seis Funcionários assalariados.

Dois deles com experiência na área que vieram de outra empresa

Mais três pessoas que contribuem esporadicamente, mas mais na ótica de desenvolvimento dos seus trabalhos académicos.

Departamentos definidos: mais ou menos.

O Filipe coordena a área operacional e financeira.

O Francisco é o CEO, participa um pouco em tudo. Acompanha sempre os contactos com a empresa.

O Zé Lino é o “VPI ENGINEERING” e está responsável pela parte da engenharia dos produtos.

Todos os outros são recursos técnicos de desenvolvimento de produto em si.

O Francisco, a Ana (Co-founder) e o Ricardo (Técnico) estão a realizar o doutoramento. Todos aqui temos mestrado.

A ideia surge de um professor em conjunto com a aluna Ana. O professor continua a acompanhar a operação numa espécie de *coaching*.

3) Maios rendimento claro mas fundamentalmente pelo mercado doméstico ser insuficiente.

4) Vendem em Portugal, mas basicamente têm um cliente.

O mercado é pequeno e esta tecnologia tinha obrigatoriamente de começar no mercado internacional.

Desenvolve um componente eletrónico para telecomunicações de acordo com as necessidades do mercado EUA.

5) Exportação direta. Recorrem inicialmente a serviços de consultoria, mas coisas ligeiras. Não é algo complicado para a empresa (o Filipe financeiro e com experiência no setor bancário durante 15 anos dá suporte)

6) Após um ano e meio da criação da empresa.

7) EUA. Os principais clientes estão lá. São clientes específicos e estão maioritariamente lá. Mais tarde outros mercados poderão vir, mas poderá levar algum tempo, nomeadamente porque a nível de produtos tecnológicos eles estão mais avançados.

8) A empresa foi mais ou menos pró-ativa. Como o produto tem inovação e tem um *target* muito pequeno e definido bastaram alguns contactos em feiras e conferências de tecnologia para despoletar contactos relevantes.

9) Resposta anterior.

10) É a particularidade do negócio, a particularidade do equipamento que desenvolvemos. Nós temos acordos de sigilo sobre a tecnologia usada.

Temos de ter capacidade para o fazer, nomeadamente a nível de recursos financeiros e de pessoal, mas fundamentalmente o que nos permite internacionalizar é a tecnologia que desenvolvemos.

- 11) EUA
- 12) Já respondido.
- 13) Apenas pela particularidade de se estamos a falar de tecnologia avançada exige a validação e teste por parte dos clientes. Estamos a afinar agulhas.
- 14) São os países que ainda não estão prontos para receber a tecnologias.
- 15) Em termos de comércio não tem experiência. Mas está sempre envolvido no desenvolvimento dos contactos internacionais, porque tem grande conhecimento nesta área. A perspetiva dele é tudo lá fora. Só estamos aqui porque por acaso somos Portugueses. O nosso mercado é lá fora. O nosso produto é internacional.
- 16) Não. Afinar agulhas.
- 17) Forma fechada. Conhecimento registado em *work flows* mais ou menos estabelecidos. Chefe de operação não tem conhecimento para analisar essas informações. Vão-se registando as evoluções da parte técnica. Tudo o que eles fazem é fundamental que façam os registos.
- 18) Não. Não tem qualquer interesse pois os nossos clientes são três ou quatro empresas.