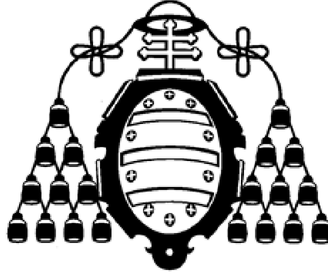

UNIVERSITY OF OVIEDO

Jovellanos Faculty of Commerce, Tourism and Social Sciences

END-OF-DEGREE THESIS

BACHELOR’S DEGREE IN COMMERCE AND MARKETING

INTERNATIONALISATION PROCESS OF SOFTWARE FIRMS

AUTHOR: Alberto Arias Zhukov

Gijón, 25 June 2023

ABSTRACT

The increased relevance of software companies and the development of information and communication technologies have challenged traditional theories of internationalisation. Software companies appear to have notable advantages when expanding abroad. This topic has been studied by academics yet its complexity and multidisciplinarity have made it impossible for one theory to properly explain it. This work reviews some of the existing literature on internationalisation with a focus on software companies before carrying out semi-structured interviews with managers of two Spanish software companies to provide insight into their internationalisation process. One of the companies was found to be a Born Global as its internationalisation was early, not guided by psychic distance and without the use of networks. Networks opened the door to internationalisation for the other company interviewed, following one of the described models; however, psychic distance was still important. While the advantages of software companies to internationalise have been documented and studied by academics, it is perhaps too simple to say that all of them have such advantages.

INDEX

INTRODUCTION 1

1. APPROACHES TO INTERNATIONALISATION 2

    1.1. THE UPPSALA MODEL 2

        1.1.1. Other considerations on Uppsala 3

    1.2. NETWORK THEORY 4

    1.3. BORN GLOBALS 5

        1.3.1. Decision-making in Born Globals: Effectuation and Causation 8

        1.3.2. Born-again globals 9

        1.3.3. Born Regionals 9

    1.4. DISTANCE AND MARKET SELECTION 10

2. SOFTWARE FIRMS AND THEIR INTERNATIONALISATION 11

    2.1. THE SOFTWARE INDUSTRY: A FIRST APPROACH 11

    2.2. THE INTERNATIONALISATION OF SOFTWARE FIRMS 12

        2.2.1. Market selection 17

        2.2.2. Market entry 18

3. THE CASE OF TWO SPANISH SOFTWARE FIRMS 19

    3.1. PANDORA FMS 19

    3.2. LIDERA SOLUCIONES 21

4. CONCLUSIONS 23

APPENDIX 25

REFERENCES 26

INTRODUCTION

This piece of work was created as a bachelor’s thesis for the undergraduate degree in Commerce and Marketing. In it, the topic of company internationalisation is explored, with a special emphasis on the software industry due to the peculiarities it presents, as it can be distributed through digital means, suggesting that such a process is easier for these companies. This is an important topic when considering the growth and importance of such companies in the current economic landscape.

The study of internationalisation is of great importance, as when successful it is another way for companies to grow, allowing firms to better serve their target market, diversify risks and become more efficient due to scale. In addition, it provides consumers with more choices and fosters economic growth due to the increase in trade.

The work is organised as follows: I present three of the most common academic theories explaining the internationalisation process: The Uppsala model, Network theory, and Born Globals, including two variants of this last one: Born-again globals and Born Regionals. After this, I explore the topic in relation to software companies, with a first approach to the industry itself before reviewing some of the literature regarding its internationalisation. Following this, I carry out empirical research through two case studies of Spanish software firms. I collect some information from secondary sources before conducting semi-structured interviews with managers of software companies who could shed some light on the matter. The results of such interviews are presented with an analysis taking into account the theoretical perspective. Both companies have a similar size and age, yet they are different in terms of the markets they serve and the software they produce; this, coupled with their different situations has led them to follow different internationalisation patterns. The theoretical approaches reviewed in this work provide a solid framework with which to analyse these companies and describe their internationalisation.

This piece of work ends by presenting the conclusions reached taking into account the case studies, and answering the question of whether software companies have advantages in their internationalisation.

1. APPROACHES TO INTERNATIONALISATION

No two companies are the same, leading to the adoption of different approaches and views towards the internationalisation process. Subsequently, academia has developed several frameworks to understand the internationalisation of firms. This chapter aims to review some of the different theories on internationalisation that have been developed to make sense of this complex process. The main objective of this first chapter is to gain a proper understanding of the different theories that explain the internationalisation process before matching them up against reality and finding the one, or ones, which are the best fit for firms in the software industry. Therefore, the approach to each theoretical framework is just descriptive.

1.1. THE UPPSALA MODEL

This model was developed in the 70s by researchers at the Uppsala University in Sweden (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977). It is a model based on a process of learning, as "to succeed continuously in other countries requires considerable networks and knowledge on how to do business in each host country" (Peng & Meyer, 2019, p. 316). Following this model, in a first stage companies would commit limited resources to a market, allowing them to gain certain knowledge about it, which would then be of use when making subsequent business decisions. This creates an iterative process of learning. This view of internationalisation was first brought forward by Johanson & Wiedersheim-Paul (1975), who distinguished between two types of market knowledge: General knowledge, and Market-specific knowledge. **General knowledge** is transferable from one geographical market to another and facilitates lateral growth (Johanson & Vahlne, 1977). On the other hand, **market-specific knowledge** is specific to that national market and includes culture, market dynamics, and "most importantly, characteristics of the individual customer firms and their personnel" (Ibid, p. 28). We can also understand knowledge by splitting it into institutional and business knowledge. Institutional market knowledge is related to psychic distance - language, laws and rules - and constitutes the **liability of foreignness**. In contrast, business knowledge is related to the environment in which the firm operates, a lack of market-specific business knowledge results in the **liability of outsidership** (Johanson & Vahlne, 2009).

The primary source of experience is **current business activities**. There is a certain lag between the activities and their consequences, for example, advertising and sales increases. Due to this lag, learning is a slow process and, as aforementioned, the knowledge

resulting from this is the basis of the model. This is why internationalisation is often slow (Johanson & Vahlne, 1977).

In their initial observations on the matter, Johanson & Wiedersheim-Paul (1975) distinguished four different stages to the whole process, called the *'establishment chain'*:

1. No regular export activity, sporadic exports.
2. Exports via agents (or independent representatives).
3. Sales subsidiaries.
4. Production and manufacturing subsidiaries.

This is why this model is also called the stage model (Peng & Meyer, 2019; Hollensen, 2019). As can be seen, there is a gradual increase in commitment in terms of resources (in the case that the firm sees fit the further penetration into the chosen market). This "commitment" is defined as being composed of two factors: the **amount of resources committed** and the **degree of commitment**. The latter is defined as the "difficulty of finding an alternative use for the resources and transferring them to it" (Johanson & Vahlne, 1977, p. 27). It is worth noting that this definition does not only consider the resources located in a particular market, such as financial resources but also the level of integration of those resources within the firm. Meanwhile, the amount of resources is the size of such investments (Johanson & Vahlne, 1977). The last piece to the Uppsala puzzle is **commitment decisions**; that is, the decisions to commit resources to foreign markets (Ibid). As noted, internationalisation will take place in the form of small steps, although there are three **exceptions**: Firstly, companies with large resource pools will suffer less from poor decisions and will therefore be able to take bigger steps. Secondly, if market conditions are homogeneous and stable, past experience is more applicable. Thirdly, when the firm has experience from markets with similar conditions (Arteaga Ortiz, 2017; Johanson & Vahlne, 1977).

In terms of the geographical scope, companies start by internationalising in those markets which are closer in terms of psychic distance (Johanson & Wiedersheim-Paul, 1975; Arteaga Ortiz, 2017).

This model has evolved and changed, yet the basic structure still holds to this day (Vahlne & Johanson, 2017).

1.1.1. Other considerations on Uppsala

The original model was developed from four case studies of Swedish manufacturing firms (Johanson & Wiedersheim-Paul, 1975) (Johanson & Vahlne, 1977), and therefore not entirely applicable to service industries. Also, with the world becoming more homogenous, psychic distance decreases and access to knowledge on doing business abroad is much

quicker and easier to obtain (Hollensen, 2019). *Leapfrogging* is also a more common occurrence, as companies not only enter markets that are not as close in terms of psychic distance as other options; but also skip steps of the establishment chain (Hollensen, 2019). In any case, the main idea of the model, that is, internationalisation as a sequential model that relies on learning processes and accrued experience remains in force.

1.2. NETWORK THEORY

One important thing that was not explicitly mentioned in the first depiction of the Uppsala model was network relationships. The effects may vary depending on the type of firm we are dealing with, but regardless of that, networks still affect the whole process, as internationalisation is often interdependent with the internationalisation of the network (Peng & Meyer, 2019). “Networks provide access to assets, talent and technology, as well as knowledge of potential customers, suppliers and competitors” (Ibid, p. 317). It can also affect market selection and entry, as entrepreneurs or managers may make those decisions based on the opportunities created through network contacts rather than solely basing such decisions on strategic implications (Coviello & Munro, 1995), with young firms relying on social ties before developing economic links (Ibeh & Kasem, 2011). This is further supported by Ellis (2000, p. 462) when he states that “knowledge of entrepreneurial opportunities abroad is dependent on the particular information benefits of an individual’s social network” and “decision-makers tend to follow the line of least resistance abroad by capitalising on their existing connections with others”.

This emphasis on networks and subsequent research has led to the development of a distinct theory in the field. In this model, the firms participating are linked through exchange relationships (Hollensen, 2019) and certain bonds develop: technical, planning, knowledge, social, economic and legal, which can take the form of long-term contracts, logistical coordination or personal liking (Johanson & Mattsson, 2015). These networks are dynamic and changing by the interplay of those actors in them as companies aim their efforts to maintain, develop, change and disrupt relationships. “A basic assumption in the network model is that the individual firm is dependent on resources controlled by other firms” (Johanson & Mattsson, 2015, p. 118) and, in order to access them, companies develop relationships, for example, the way a car manufacturer may be dependent on the resources of another company to produce the engines they need. Internationalisation through the networks will happen by creating relationships in country networks that are new to the company -international extension-, development of relationships in those new networks -penetration-, and connection of networks in different countries -international integration- (Johanson & Mattsson, 2015). De Mello et al. (2019) list some major situations identified in

the literature as to where networks are present at the beginning of a firms internationalisation: when an important firm in the network internationalises, when internationalisation results from social or business ties, imitation or followership of other firms, when firms reach agreements to export together, or when a firm actively searches for foreign partners. There are also several ways in which firms can utilise networks, such as gaining market knowledge, legitimacy, new opportunities, overcoming obstacles or gaining access to foreign capital (Ibid).

There are two main types of networks (Vasilchenko & Morrish, 2011; Ibeh & Kasem, 2011): **Social** networks and **Business** networks. The former are developed from personal relationships and the latter from repeated economic exchange, establishing goal-oriented cooperation (Vasilchenko & Morrish, 2011). Social networks are defined as: "a collection of individuals who may or may not be known to each other and who, in some way contribute something to the entrepreneur, either passively, reactively or proactively whether specifically elicited or not" (Gilmore and Carson, 1999, p.31 as cited in Vasilchenko & Morrish, 2011). Business networks are "a set of two or more connected business relationships, in which each exchange relation is between business firms that are conceptualised as collective actors" (Anderson, Hakånsson, and Johanson, 1994, p. 2, as cited in Vasilchenko & Morrish, 2011).

"The way in which network relationships provide the basis for future growth is more important than the actual path to internationalisation" (Coviello, 2006, p. 727).

1.3. BORN GLOBALS

At the other end of the spectrum, we find the Born Globals (BG) or International New Ventures (INV) approach. An INV is defined as "a business organisation that from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries" (Oviatt & McDougall, 1994, p. 49). Meanwhile, Cavusgil & Knight, (2015) differentiated between Oviatt & McDougall's definition of INVs and born globals, defining the latter as "entrepreneurial start-ups that, from or near their founding, seek to derive a substantial proportion of their revenue from the sale of products in international markets" (Cavusgil & Knight, 2015, p. 4). Their aim was to emphasise certain differences, but for the sake of simplicity, I will not make such differentiation and use both terms interchangeably as the essence is the same: A business organisation that from a very young age seeks revenue from different geographical markets.

Actual definitions for what constitutes a BG that can serve as a benchmark in terms of numeric values are rather convoluted (Dib et al., 2010). Some of which are: 75% of export intensity (ratio of export sales as a percentage of total sales) for firms from small domestic markets within two years of inception (Chetty and Campbell-Hunt 2004, p. 65 as cited in Hennart, 2014), "25% of total sales in foreign countries in the first year of trading" (Evers

2010, p. 400 as cited in Hennart, 2014), or exporting at least a quarter of production in two years of being founded (Knight & Cavusgil, 2004) with the last one being quite used. In their work on software companies in Brazil, Dib et al. (2010) used the criteria of a firm that receives its first revenue from international operations in up to five years. Their reason for this is that the barriers to internationalisation are much greater in Brazil than in places like the US or Europe; while Nummela et al. (2014) considered BGs those that started selling internationally within three years of inception, with those sales accounting for a quarter of their turnover.

As pointed out by Oviatt & McDougall (1994), the exceptions to slow internationalisation in the Uppsala model -large resource pools, homogeneous market conditions, and experience in similar markets, as above mentioned- do not apply to INVs as they are young, compete in volatile markets and do not have a lot of experience in any market, so there is no way to fit them into the Uppsala model and they should be considered separately. However, Johanson & Vahlne (2009, p. 1420) argue that they do fit into the model: “We think they are [consistent with our model], to the extent that most born globals are really ’born regionals’, with international activities that do not really span the globe in any significant fashion”. I will however stick to the findings of Baum et al. (2015) who posit the existence of four distinct views.

We can distinguish between three main factors that have caused the rise of INVs. Firstly, the reduction in transportation and communication costs fostered by the Internet and information and communication technologies pushed the internationalisation of companies with fewer resources (Knight & Cavusgil, 2004; Oviatt & McDougall, 1994). Secondly, the use of non-equity entry modes in international markets, with special emphasis on network relationships (Hennart, 2014). Thirdly, the possession of technological, organisational, relational and human resources which are rare, valuable, non-imitable and non-substitutable (Hennart, 2014). This can be the case with certain resources and capabilities such as market knowledge or useful technologies (Knight & Liesch, 2016), so even though INVs are constrained by limited resources or lack of economies of scale, they “usually are endowed with distinctive intangible resources and capabilities” (Ibid, p. 94) and their founders have an international outlook and proactively seek internationalisation, sometimes having prior experience (Ibid). Other factors of the environment can drive internationalisation such as the liberalisation of markets, the size of the home market, competing firms’ internationalisation, and growth and global integration of the industry (Knight & Liesch, 2016).

However, Hennart (2014, p. 119) considers these explanations “not entirely satisfactory” and not all that consistent with the empirical evidence. He suggests that the existence of INVs is down to their business model, meaning what they sell, how they produce and deliver it, and to whom, as well as how they capture the value created and coordinate

their activities (Fjelstad & Snow, 2018 as cited in Hennart et al., 2021). Hennart's view takes into account the peculiarities of each firm, their products and how they conduct business; meaning that some business models imply slow internationalisation while others allow for faster market entry. He lists the necessary and sufficient conditions for INVs:

1. Sale of **niche products** and services sought by internationally dispersed customers.

Consumer preferences have evolved towards customization and specialisation, allowing more flexible firms to have a share of the market (Rennie 1993 as cited in Dib et al. 2010). Somewhat contrary to the idea that INVs produce knowledge-intensive products or high-tech ones is Hennart's proposition that what actually matters is the fact that those are niche products. This is an important consideration, as niche products can be produced through design, craftsmanship or other methods and include high-design, high-quality and high-know-how products, explaining why firms producing low-technology products can become INVs. Buyers of such products have very specific tastes, homogeneous within the niche no matter their location, overcoming psychic distance through "**domain-specific familiarity**" (Fan and Phan 2007 as cited in Hennart, 2014). They are also usually knowledgeable about the product and don't need to be educated on it, shortening the sales cycle and hogging fewer company resources. Selling in a narrow niche is a necessary condition, but not sufficient, as customers must be internationally dispersed.

2. Products or services need no marketing mix adaptations for the international market.

This is because of the homogeneous needs of customers or because they can adapt it themselves.

3. Use of low-cost means of communication and delivery.

The Internet easily comes to mind, as it reduces communication costs, making it easy to collect information and avoids transportation costs and tariffs. This is a necessary condition, but not a sufficient one, as they need to have a business model that fully takes advantage of them.

4. Based in a country with a small home market for the product or service.

The larger the home market the less likely the company will be considered a BG, as a higher percentage of sales will be domestic. It is not the same for a company to be based in a country with 10 million inhabitants than in one with 100 million.

These reasons also undermine the importance of networks as buyers seek niche products and "the existence of a network at the founding of the company is not as important as expected" (Rasmussen et al. 2001 as cited in Hennart, 2014).

Understanding these firms and how they operate is of utmost importance to regulatory bodies, as around 20% of new firms in the EU are Born Globals (Eurofound 2012 as cited in Knight & Liesch, 2016).

1.3.1. Decision-making in Born Globals: Effectuation and Causation

To explain the entrepreneurial process of these firms, scholars have relied on two theories: **effectuation** and **causation**, the former is an unplanned entrepreneurial approach based more on intuition than on rational calculation, while the latter relies on systematic information gathering, planning and more common entry strategies (Nummela et al., 2014; Harms & Schiele, 2012). The study of these two approaches is important as they focus on entrepreneurs' decision-making in the state of uncertainty found in the internationalisation process. In causation, opportunities may be ruled out if they do not allow for *ex-ante* planning, meaning before the internationalisation itself. These two views will lead to different goal-setting, with causation leading to goals defined before decision-making and, in effectuation, during the process itself. This goes further still. In effectuation, investments are made incrementally so that a poor investment decision does not put the company at substantial risk -affordable loss-, while in causation investments are made in large sums. Effectuators will seek to exploit opportunities as they arise, while their counterpart will exploit their current resources and capabilities (Ibid). In the international sphere a good example of effectuation would be following customers to other markets (Eriksson et al. 2000 as cited in Harms & Schiele, 2012), due to its emphasis on network building and affordable loss; on the other hand, firms using causation may forgo opportunities based on networks or wholly-owned subsidiaries as they rely more on export-based entry modes (Harms & Schiele, 2012). Lastly, as pointed out by Harms & Schiele (2012), effectuation and causation are not completely opposed, with companies being able to rely on both, while entrepreneurs with international experience are more likely to rely on effectuation, which is also preferred during the early stages of internationalisation and seems to give way to causation-based decision making with time (Nummela et al., 2014). When decision-makers have more business experience they adopt causation-based decision-making much faster than their inexperienced counterparts (Ibid). It is worth noting that when it comes to the speed of internationalisation, as is in the case of BGs, knowledge of foreign languages and past experience in an international firm matter more than the international experience or education of managers (Zucchella et al. 2007 as cited in Hennart, 2014). However, the logic followed appears to be dependent on whether the decision is concerned with product development or business, with the former favouring causation and the latter effectuation, common in fast-growing high-technology firms (Nummela et al., 2014).

1.3.2. Born-again globals

Once the idea of the Born Global or International New Venture is clear, the existence of Born-again globals and Born regionals is worth noting. As they have certain characteristics that make them worth having their own categories.

Bell et al. (2001) reported the existence of a type of firm that does not fit into the Uppsala model or the Born global one. These firms are usually well established in their domestic markets, they are not start-ups or young firms and have little to no interest in international markets. However, in the course of their existence a “critical incident” takes place that makes them change their outlook and start internationalising rapidly. Usually, those critical incidents involve some change in ownership and can include: Managerial buyout, takeover, bought from the administrator (a firm that was in receivership or ceased trading was bought and “resurrected”), acquisition of a firm with international connections, acquisition of new technology forcing internationalisation to make up for the cost, acquisition of distribution rights, internationalisation of a customer, and entry of an international client in the domestic market (allowing the company to gain knowledge or opportunities on operating in those international markets). As Bell et al. (2001, p. 180) note: “in a large number of cases, sudden internationalisation occurred due to a combination of ‘critical incidents’ and not just as a result of a single ‘episode.’” In an attempt to better draw the line between born globals and born-again globals, Kuivalainen et al. (2012) establish two criteria:

1. A business organisation that has not sought competitive advantage from selling in multiple countries at the time of inception, achieving less than 25% of foreign sales in three years.
2. After a strategic change, it reaches the 25% threshold within three years.

These two indicators combined can act as a useful benchmark to differentiate both types of companies.

1.3.3. Born Regionals

One early criticism of the Born Global approach was the fact that “if definitions of born-global firms simply look at the export share of sales, and at the number of export markets, they may ignore whether a company internationalises gradually, starting from culturally proximate neighbouring countries, or whether it chooses its export markets according to strategic considerations, disregarding psychic distance” (Lopez et al., 2009, p. 1236). In the study conducted by Lopez et al. (2009) a strong case for the idea of “born regionals” is made. In their analysis of software firms in Costa Rica, they reach the following conclusion: “In all, we were looking for born globals but found mostly born regionals and born locals instead” (Lopez et al., 2009, p. 1236). According to the literature, a small domestic market like Costa

Rica and an industry like the software one, which can easily take advantage of new and cheaper information and communication technologies, would seem like a fantastic breeding ground for Born Globals. What Lopez et al. (2009) found is that most of the firms in their sample were focused on the domestic market and did not export within the first three years of inception. Most importantly, however, is that the firms that could have been classified as Born Globals at first, were in fact Born Regionals, exporting to countries close in terms of psychic distance.

Baum et al. (2015) posit that born regionals constitute a fourth pattern of internationalisation different to traditional internationalisers, born globals and born-again globals, even if they share the common characteristic of internationalising shortly after inception as BGs do. This way they can better take advantage of firm-specific advantages and minimise the effect of **liability of foreignness**.

1.4. DISTANCE AND MARKET SELECTION

It is important to have a basic understanding of market selection. This complex process can be carried out in several ways. The different theories explained in the previous pages deal with this differently, but there are several factors which are always present and have to be taken into account when undertaking the internationalisation process. These factors make *distance* a multidimensional variable, distancing itself from the conventional definition in the geographical or spatial sense. References have been made to the concept of psychic distance, which includes cultural and business differences (Ghemawat, 2018; Johanson & Vahlne, 1977). However, the concept of distance in international business is better understood with a framework such as the CAGE framework which includes (Ghemawat, 2018):

- ***C****ultural* distance: The difference between the traits of a society that stem from the interaction between people. This includes language, religion, values, norms, and level of traditionalism among others.
- ***A****dministrative* distance: Laws, policies, corruption, the strength of institutions, colonial ties, trade agreements and country relationships, and currency are some of the variables at play here.
- ***G****eographic* distance: Shared borders, distance from one country to another, differences in time zones and access to the ocean for example. Communication and transportation infrastructure can also be included here -or in economic distance-. It is important to consider how geography affects information flow, local knowledge and responsiveness, which can also condition entry mode.

- ***E**conomic* distance: Economic size, per capita income, labour costs, natural resources, financial and human resources.

The more similar the domestic country and the target country are in these areas, the lesser the distance, making trade between them easier. Colonial ties, common currency and a common land border have been found to have the highest impact at a macro level (Ghemawat, 2018). Companies should consider the different variables in their country selection to maximise their success in foreign markets. From this, it is safe to say that Spain sits in an interesting position as it is a member of the European Union and Eurozone, and because of its former colonial empire it has ties to many countries in Latin America.

2. SOFTWARE FIRMS AND THEIR INTERNATIONALISATION

2.1. THE SOFTWARE INDUSTRY: A FIRST APPROACH

While the idea of software can be quite clear, it is worth taking a look at several definitions to delimit the industry. There are several definitions for software, albeit they are quite similar:

> *"Instructions that tell a computer what to do. Software comprises the entire set of programs, procedures, and routines associated with the operation of a computer system".*
>
> (Britannica, T. Editors of Encyclopedia, 2023)

> *"Something used or associated with and usually contrasted with hardware: such as*
>
> *A. Programs for a computer*
>
> *B. (Dated) The entire set of programs, procedures, and related documentation associated with a mechanical or electronic system and especially a computer system"*.
>
> (Merriam-Webster, n.d.)

> *"1. Computer programs, procedures and possibly associated documentation and data pertaining to the operation of a computer system*
>
> *2. All or part of the programs, procedures, rules, and associated documentation of an information processing system*
>
> *3. Program or set of programs used to run a computer"*.
>
> (International Organization for Standardization, 2017)

There are several ways in which software can be classified, such as the way it integrates with hardware or its intended use (Buxmann et al., 2013). A relevant classification is the level

of standardisation (Ibid) because it leads to differences in how firms operate and, in the case that is pertinent to this piece of work, in how firms internationalise (see: Bell, 1995). While there is no objective way to measure this, it is possible to discern between the two extremes of the scale: custom-made software and standard software. The software industry first began with the development of bespoke solutions before it became apparent that standardised solutions had their market (Hoch, 2000; Buxmann et al., 2013).

In reference to the industry itself, Weder & Wang (2016) came up with a classification for it, distinguishing three main categories:

- **Business Function Software**: It can be used by any company regardless of its industry. Accounting or customer relationship management software would fit into this category.
- **Industrial Business Software**: It can only be used by one industry, as it is designed specifically for it, for example, banking or healthcare software.
- **Consumer Software**: Aimed at being used by people in their private lives, such as multimedia or web browsing software.

Both of the classifications mentioned are relevant to the topic at hand. Bespoke software requires a proper understanding of the client's requirements which might make language more important in market selection. Similarly, if a company develops industrial business software its market selection will be more biassed towards markets where its target industry is more developed, as seen in the work of Bell (1995) where a Norwegian company developing software for the oil industry ventured into Venezuela and subsequently to other oil-producing countries.

2.2. THE INTERNATIONALISATION OF SOFTWARE FIRMS

Nowadays, the use of low-cost means of communication and delivery fosters quicker internationalisation and this is something software companies have as an advantage in their internationalisation process as, nowadays, software solutions are delivered through the internet. Because of it, certain barriers in the internationalisation process can be overcome, as explored by Hamill & Gregory (1997):

- Psychological: Access to global information sources increases commitment, confidence and international awareness. It also allows companies to participate in global networks.
- Operational: Simplified export documentation transfers and payments.
- Organisational: Access to low-cost market research and information on international markets, and reduced dependence on traditional intermediaries.

- Product/market: Facilitates country/market selection, client feedback and adoption of a global niche strategy.

Certain characteristics distinct to software firms make their internationalisation process less likely to resemble that of the Uppsala model. Some of these are the low entry barriers in the industry, easy distribution of software, and the unimportance of the size of the company (Bell, 1995) as “once created, many knowledge-intensive products, such as software, can be replicated at low marginal cost” (Lopez et al., 2009, p. 1229).

Software firms are “characterised as high-technology, knowledge-based, and service-intensive” (Coviello & Munro, 1997, p. 362). In their work, Coviello & Munro (1997) identified, through four case studies of small software firms, three distinct stages in their internationalisation:

In the initial stage (0-1 year), the firm, limited in financial and human resources, focuses on the domestic market but intends to go international. During this time, a relationship with a larger firm is established, usually for product development. In the second stage (1-3), firms are involved in their first international market. They usually rely on networks and relationships with partners, affecting market selection and entry, and start serving two or more markets. The role of these partnerships is to make up for the lack of resources and knowledge, externalising market selection and mode of entry. The third stage (>3 years) starts when companies are really involved in several markets, with international sales as the main growth lever. It is noteworthy that two of the companies in their study set up sales offices abroad after five to seven years, not for software development but rather for support in sales and marketing. As the companies gained success in foreign markets, they wanted “greater control in network relationships (i.e. more autonomy in its decision-making with respect to product and relationship development, market selection, and mode of entry)” (Coviello & Munro, 1997, p. 377). The study has a strong focus on networks and ends up finding that they play a very important role in the patterns of internationalisation of small software firms. Bell (1995) posits that relationships between firms are very important in terms of market selection and mode of entry for software firms, as can be seen in companies following clients into markets where those clients had established commitments. The main peculiarities identified by Coviello & Munro (1997) are that the internationalisation of small knowledge-based software firms is very quick, taking less than three years; their internationalisation process only has three stages, as seen before; and they use different modes of entry, part of the international network of another firm.

They depict the pattern as follows:

1. The firm commences operations and has the intent to internationalise.
2. The firm develops a relationship with another, larger firm in the first year. A mode of entry to a psychically close market arises from this relationship.

3. Market knowledge and potential access are gained through the network, as contacts are developed.
4. Firm growth and knowledge acquisition from international experience.
5. A desire for more autonomy and control over its decisions leads to one of two situations:
    a. The firm begins to diversify product areas, pursue new markets, and/or establish foreign offices which are independent of network partners. It develops new networks which lead to it being acquired by a larger company, gaining new opportunities for growth.
    b. The firm lacks autonomy due to another company in the network exerting too much control and limiting growth opportunities to existent relationships.

Partners can take the form of hardware vendors (Coviello & Munro, 1997), consultant companies or another software company using the firm's product as a part of their own (Moen et al., 2004).

Moen et al (2004) in their study of five Norwegian firms also find support for the importance of networks in the case of software firms as "none of the firms investigated have made serious commitments in markets where they did not have any relationships in advance" (Moen et al., 2004, p. 1244); further proving the point that networks are determinant in market selection. This leads companies to consider markets which they did not think of at first and also to postpone entry into markets of greater interest because of a lack of partnerships. So while psychic distance is not that strong of a factor Moen et al. (2004) and Coviello & Munro (1997) find that first international efforts are in psychically close markets, but such influence is diminished with subsequent entries. This could be due to the increased easiness of establishing network relationships with partners in psychically close markets because of factors such as language.

Most of the findings by Coviello & Munro (1997) support theories more linked to born globals and the importance of networks rather than the Uppsala model. However, a vital concept of the Uppsala model is present: learning of managers that leads to increased commitment and further learning.

Bell (1997) finds that software companies do not tend to use export-promoting organisations (EPOs) for information on markets, either due to a preference for experiential knowledge or better intelligence capabilities and suggests that EPOs could increase their relevancy by providing companies with training in financial issues, where they find the most problems.

A study conducted by Nummela et al. (2014) found that the decision-making process of software INVs was effectuation-based at first. As time passed, it became more causation-based, as decision-makers gained experience. Still, both types coexisted. The

logic used depended on whether the decision was related to the product or the business. Product-related decisions favoured causation because technology is more predictable in this area. Business-related decisions favoured effectuation because windows of opportunity are much shorter. Certain critical incidents lead to changes in the decision-making paradigm, such as the change of people in charge. This is of great importance as decision-making logic is dependent on the individuals themselves and their past experiences as those will shape how they interpret the changes in the environment. And while flexibility in decision-making is possible, it is unclear whether it is intentional or just a consequence of, e.g., time pressure.

Various academic works were reviewed to get a better understanding of the different findings regarding the internationalisation of software firms and are presented in Table 2.1. Including a mix of qualitative and quantitative pieces of research from several parts of the world. In the following section, I analyse their contents in terms of market selection and market entry mode.

Table 2.1: Summary of Research on the Internationalisation of Software Firms

Authors (year)	Methodology	Nº of companies / Country	Findings
Bell (1995)	Questionnaire / Personal interviews with 24 managing directors of the companies	31 / Finland 34 / Ireland 23 / Norway	Psychic distance does not explain market selection, as it was rather opportunistic. Exports are the preferred entry mode. Companies targeting very specialised niches obtained all of their sales from abroad. Age, size or export experience did not influence the decision to internationalise.
Bell (1997)	Questionnaire / Personal interviews with 24 managing directors of the companies	31 / Finland 34 / Ireland 23 / Norway	Most problems faced by exporting software firms are related to financial issues: Delays in payment, setting competitive prices, and currency fluctuations. Obtaining financial resources from banks posed a challenge due to high risk and low asset bases. Communication costs were also an issue as face-to-face demonstrations are of great importance.
Coviello & Munro (1997)	Multi-site case study	4 / New Zealand	Small knowledge-based software firms become committed internationalists in as little as three years, go through only three stages, use multiple modes of entry and internationalise through the use of networks.
Moen et al. (2004)	Interviews and site visits	5 / Norway	Companies choose entry form based on the options available stemming from their network relationships. Investments are only carried out in those markets where the firms have established relationships in advance.
Ojala & Tyrväinen (2006)	Case study	8 / Finland	Product strategy, and service and implementation model are important determinants of entry mode; while distribution is not.
Ojala & Tyrväinen (2007)	Linear multivariable models	51 / Finland	Software market size and geographic distance explained 70% of country preference. Countries with a small software market were only selected if they were geographically close to the domestic market.
Lopez et al (2009)	Semi-structured interviews and questionnaires	40 / Costa Rica	Most foreign activities of Costa Rican software firms were in nearby markets in the form of export activities. Few Born Globals were found, with most of the companies being Born Regionals.
Dib et al. (2010)	Survey	79 / Brazil 44 Traditional internationalisers 35 BGs	BGs are more innovative and customer-oriented. They are led by entrepreneurs with more technical knowledge and more sensitivity to risk. All firms used networks intensively, perhaps due to Brazilian culture being relational.
Ibeh & Kasem (2011)	Qualitative Interviewing	6 / Syria	Networks are important in initial internationalisation, market selection and internationalisation speed. Social networks are more relevant at first, and business networks become more important later on. Decision-makers' international experience and adverse home market conditions also play a role.
de Mello et al. (2019)	Longitudinal case study	7 / Brazil	No single theory can explain the internationalisation of INVs.

Source: own elaboration

2.2.1. Market selection

Several factors explain market selection. Coviello & Munro (1997) find that companies started by entering psychically close markets, either directly or, more commonly, through a partnership established in the domestic stage with an overseas company. This later evolved into a distribution agreement, which led companies to venture into more distant markets. In a study on seven firms by de Mello et al. (2019), the sequence of market selection responded to different logics: one of the firms followed psychic distance, two followed relationships and another two followed market niche, but they made use of networks during the process. Two companies had no clear pattern.

In their quantitative analysis, Ojala & Tyrväinen (2007) find that, especially at first, geographic distance plays an important role in market selection due to lower economic and managerial costs; in the industry in question, this can be due to the need for constant communication with clients for specification of requirements, installation and support (Ojala & Tyrväinen, 2006). However, the purely quantitative perspective does not seem to be enough to explain this complex process; as the influences of geographic and psychic distance only go so far and cannot explain some internationalisation decisions. In the quantitative part of his work in 1995, Bell finds that “50-70 per cent of firms entered [psychologically] ‘close’ markets in the initial stages" (Bell, 1995, p. 64), but proximity, either psychological or geographical did not explain the initial exports of 30-50 per cent of the firms. Following clients abroad, targeting niche markets, and industry-specific considerations have more influence than the aforementioned factors and how, even though those companies preferred psychically close markets, that was actually due to industry growth trends; as targeting distant markets that offered good growth opportunities was something the managing directors were not reluctant to.

Networks play a role in this process. Client followership is one way. Less structured ways were identified by Ibeh & Kasem (2011) where both business and social networks lead to the start of international activities and, therefore, the initial market selection; sometimes accelerating the process.

In short, while no one theory can explain the market selection process, a collection of factors has been identified to have a significant impact on the process: networks, both business and social; industry growth and target industry trends; and psychic and geographical proximity.

2.2.2. Market entry

Choices of market entry are varied and depend on several factors. According to Moen et al. (2004), the mode of entry is rather opportunistic relying on the options available through network relationships. There is great variety in the modes used, in distant markets Coviello & Munro (1997) find that joint ventures and sales offices have great protagonism, yet their classification for software companies is not as clear (Moen et al., 2004). Bell (1995) finds that entry mode is, to a certain extent, dependent on product strategy with exports being the most common entry mode: companies selling bespoke products rely more on their own sales staff, while those selling "off-the-shelf" software were likely to use indirect forms of exports such as agents or distributors. This link between product strategy and entry mode is also supported by Ojala & Tyrväinen (2006) who found it to be of great importance in their work on Finnish software firms entering the Japanese market. Service and implementation models also play an important role in market entry mode, as the more complex it is, the more companies rely on their own means (Ojala & Tyrväinen, 2006; Bell, 1995). Interestingly Ojala & Tyrväinen (2006) find that the distribution model does not seem to have a significant effect on entry mode, as many times the product itself can be delivered through the internet making physical presence in the market more important in terms of after-sales service, product specification, and implementation amongst other things, rather than distribution. De Mello et al. (2019) state that all of the firms they studied used direct exports at some point and while the patterns followed were different, low-cost and low-commitment modes were very present; although, for firms following Uppsala model logic, this changed to higher-commitment entry modes. In two cases, this was facilitated by foreign incubators financed by a government agency. Bell (1995) notes a special case with Finnish firms, where a considerable amount of them internationalised by supplying software to third parties in the home market who would then export integrated systems. This is attributed to the engineering and machinery sectors in Finland.

In their work, Moen et al. (2004) mention how one of the companies created several, country-specific, websites with local phone numbers to create a sense of local presence and proximity. The authors say this use of "virtual offices" to penetrate markets could be considered a new type of entry form. De Mello et al. (2019) identified how two of the seven firms they explored used an evolving form of entry where they would first use temporary or joint offices to become familiar with the market, establish relationships and initiate local sales; after that, they would choose a local partner to carry out such functions and put an end to their physical presence.

All in all, exports are very common, but product strategy plays an important role, as more complex service and implementation models require the use of the company's own resources, especially in the case of bespoke products.

3. THE CASE OF TWO SPANISH SOFTWARE FIRMS

Once the theoretical framework has been laid out, it is worth exploring the internationalisation process of Spanish software firms. This empirical study has been developed through two case studies. In order to build such case studies, I proceeded as follows: first, I collected the information about each of these companies available from secondary sources. Then, I conducted semi-structured interviews with managers that were involved in the internationalisation process of these companies. Table 3.1. offers a summary of the main characteristics of such companies. The guide used to carry out these semi-structured interviews is shown in Appendix I.

Table 3.1: Basic information on interviewed companies.

Company Name	Pandora FMS	Lidera Soluciones
Date of incorporation	2005	2006
Employees	42	80
Turnover (2022)	€2.2M	€3M
Export turnover	47%	± 60%
Person interviewed	CEO & Founder	International Manager

Source: own elaboration

3.1. PANDORA FMS

Founded in 2005, Pandora FMS provides standardised monitoring software for all IT-related aspects. It unifies the different monitoring systems the company may already have in place to provide a complete and unified picture. According to the classification presented above, Pandora provides **business function software**, as it has served different industries such as education, healthcare, and transport to name a few. This software is provided as a licence to be hosted on the client's servers or as a service in a typical software-as-a-service fashion. Services associated with the software and related support are an important source of revenue for the company. This type of service is mostly carried out in the national market as it is where the company has enough resources while abroad the sale of licences becomes more important. The industry is characterised by high barriers to customer acquisition and high retention, as the set-up process is long, sensitive information is handled and failure to

provide the service properly can lead to high costs. This means that trust and transparency are important factors in the industry and to increase these variables the code created by Pandora is open-source, meaning it can be accessed by anyone. "*That has given us visibility from day one*", says Sancho Lerena -CEO and Founder-, "*allowing us to be part of the product ecosystem without large investments in marketing*".

The company was founded to serve a global market (common to BGs), stemming from the initiative of the founder and not driven by environmental factors. While the company today has clients in 57 countries, it has given up on actively pursuing market share in some countries due to past experiences. Meaning, through a learning process it has understood which markets are worth pursuing given the available resources. The product was marketed towards workers in IT, a sector where English is the predominant language, leading to both the product and the website being English. An example of a lower cultural barrier -language- due to industry-specific peculiarities (but it has translated its website to various languages with time). Domain-specific familiarity (see page 7) is also at play here, as the needs of companies with important IT infrastructures are not dependent on their country of origin, therefore psychic distance was not regarded as a big problem, apart from language which was important for conducting business and product adaptation, such as the case of France where both factors were of great importance.

Its first sale abroad came from the United States in 2007 as a passive export, meaning without the company actively looking to sell there. After this, several attempts had been made to enter the US market through direct sales, but to no avail. The US market is highly competitive, needing large investments in marketing to gain a foothold. Pandora today relies on three main channels: Its own sales force for European and Latin American countries which are closer in terms of psychic distance. In countries where cultural barriers are too high, mainly language, distribution is carried out through partners, such is the case in Japan, the Arab and Slavic countries. The entry mode through a distributor in Japan has seen remarkable success. Its most effective channel is the digital one, with its website working as a "global shop window". That is why the company has managed to be in so many countries, all quite different and distant, with no apparent underlying logic.

The main difficulty faced was related to the lack of financial resources. In some cases, such as in Latin America, receiving payment constituted an issue, as prospects located there had less difficulty paying a company in the US than in Spain. To solve this, a subsidiary was opened in the US with the sole purpose of facilitating billing.

National identity is an important factor. The United States is the main market for IT, with the largest demand and providers. This leads to a lot of providers trying to look like Americans, to increase the confidence of prospects. In the case of Germany, the company found that there is a strong reluctance to buy foreign products and usually certain reluctance

exists in Europe towards Spanish software. That was not the case in Latin America or the US where they were quite indifferent, and in Japan, it was an advantage.

The company worked with ICEX, the main export-promoting organisation in Spain, for assistance in opening its subsidiary in the US. ICEX also provided financial resources and organisational help for Pandora to attend an event in Germany. Also, they received training in internationalisation. Overall the experience was quite positive.

Decision-making in the realm of internationalisation was mostly effectuation-based. As the firm obtained more resources, its capacity for planning increased as well, leading to conscious efforts in penetrating international markets.

This company fits under the Born Global umbrella. It started with the intent to internationalise from the beginning and by using a channel with global reach, managed to acquire clients in several countries, regardless of any sort of distance thanks to domain-specific familiarity, a product that needs virtually no adaptation and the use of low-cost communication and delivery methods. Clients found Pandora through digital channels, and given the effort the company has put into them, it would be unfair to call these passive exports. Perhaps it is more appropriate to understand digital channels as an entry mode, not to one particular country, but rather to a global market.

3.2. LIDERA SOLUCIONES

Founded in 2006 Lidera Soluciones develops standardised resource planning software for dealerships and repair shops, making it **industrial business software** as it was specifically tailored towards this segment. Its software is offered as a service and on-premise through licensing. The company started selling abroad in early 2011, five years after its inception, in Portugal and quickly after, Cabo Verde and Venezuela. To understand why, it is necessary to understand the origins of the company. Lidera Soluciones was founded by Ramón Lago Álvarez and several companies, the most important being Salvador Caetano, a Portuguese group in the automotive industry with an important presence in Africa. This relationship with the group fostered the expansion to Portugal and Cabo Verde. Venezuela's case was also due to a good relationship with another shareholder. However, this was short-lived because of Venezuela's political and economic situation. Spiga+, Lidera's main product, was released in the aftermath of the 2007-2008 financial crisis. Such an event could be considered a "critical incident" in the theory of Born-again globals (see page 9); however, contrary to born-again globals, the company designed its software with the idea of internationalising it. This and the help of the shareholders through their networks led the company to pursue opportunities abroad as the domestic market stagnated.

Its market expansion and penetration in African countries are somewhat lacklustre and not very deep, constituting a small part of its operations. Its limited presence in Angola, Senegal, Kenia, and Cabo Verde was thanks to business networks stemming from Salvador Caetano. The case in Latin America is much more interesting. Setting Venezuela aside, its first market in the region was Colombia. The reason for this choice lay, once again, in the networks of one of the shareholders. “We did not enter hand in hand with them. They simply opened the door for us and what we did was look for companies that would support us locally”. The market selection was conditioned by networks, yet Lidera was mostly left to its own devices for market entry, which was carried out through a distributor. Subsequent entry and selection to other markets in the region were carried out through, yet again, business networks; however, in this case, they stemmed from the clients they had acquired. The region is characterised by a lot of interaction between companies, which are usually large business groups: “You end up making almost natural leaps [to other countries]”. Entry mode, as already mentioned, was through distributors, but this evolved with time due to their poor performance and the company ended up opening a subsidiary in Colombia to handle commercial operations and to offer better support, following Uppsala logic. This need to open a subsidiary due to implementation and support is consistent with the findings of Ojala & Tyrväinen (2006) and Bell (1995). At this time, Lidera was present in other countries in the region, but Colombia was chosen because of its good connections to both Central and South America, as they usually need to send workers to other countries. “Colombia was not the best option financially speaking, because it is an expensive country taxwise. Much more expensive than other neighbouring countries. We could have gone to Panama and we would have been better off economically, but from Colombia we provide a better service.”

While entry opportunities arose from relationships, psychic distance was not disregarded completely. Lidera had the opportunity to enter both Brazil and Argentina, but due to complications, no entry was made.

As in the case of Pandora FMS, digital channels are an option for this company. While they have not been its focus, the industry appears to be difficult to penetrate this way due to a lack of modernisation.

Sometimes, having Salvador Caetano as an investor made other large dealership groups in Latin America reluctant to buy Lidera’s software. Other difficulties Lidera faced were mainly related to building trust at first, as it had no presence in the country which meant it could not offer the product with all the necessary adaptations. Financially the Euro was an issue, making the price of the software more expensive than other options and payment to Spain was costly and difficult for their clients. Culturally there were no problems. The use of two official currencies in some countries required adapting the software as well as

administrative and tax-related issues which were the main reasons for the adaptations. This is consistent with Bell (1997).

Having the company originated in Spain was an advantage as it could provide insight to its clients from having experience in a more developed and competitive market. It also helped with national identity, especially when building trust as local companies are perceived as less trustworthy. The company did not rely on EPOs as it did not see them as capable of helping them reach its target effectively due to being in a very specific industry.

Today the company is working on reaching agreements with companies offering complementary products in target markets, such in the case of Mexico or Chile. This shows evolution as a result of the acquired experience in general knowledge (see page 2).

The internationalisation of Lidera Soluciones resembles the pattern depicted by Coviello & Munro (1997) and explained on pages 13 and 14 of this work. First of all, the company was founded with the idea to internationalise in the future, but instead of developing a relationship with a larger firm, it already had one with Salvador Caetano. Thanks to it, Lidera internationalises to a psychically close market (Portugal). It gains access to new markets by expanding its network and grows as a result. With time the company establishes a foreign office while expanding outside of the network, but instead of it being acquired by a new, larger company, Salvador Caetano acquires it (situation 5a). In addition, Lidera had, and still has, autonomy over its growth decisions. Even though the time frames do not match exactly the one described, it is safe to say that Lidera Soluciones falls under the network model. However, while difficult to estimate its extent, the success of its internationalisation has been conditioned by its expansion into psychically close markets. If, instead of Colombia, Lidera had ended up in the US things would have been much more difficult. Distance should not be disregarded.

4. CONCLUSIONS

The different theories put forward by academics in International Business to explain the internationalisation of firms provide an adequate framework to analyse this process, including that of software firms. Despite the lack of a single theory, each one of the theories presented is invaluable. The Uppsala model understands limited resources and the importance of experience and learning, which have been present in both of the cases analysed. It also puts a strong emphasis on psychic distance, the effects of which cannot be disregarded in most cases. The Network theory factors in that business is a result of human interaction and how that creates ties that can lead companies abroad. A proper understanding of networks is necessary to analyse any business. And finally, the Born Global approach is the child of modern times, describing how certain companies can make the world their oyster. As for the

many questions in life that have many right answers, perhaps there is no need for a single theory because such a feat would be so complicated that the result would probably be too cumbersome to be useful.

The usefulness of these theories is evident in how they were capable of explaining and adapting to both of the case studies presented in this work, as one company could be classified as a Born global and the other one as following Network theory. The reasons for this are many, and while the companies are similar in size, turnover and age, their environment and business model are somewhat different. These differences are a representation of the flexibility of software to serve many market segments.

Do software companies have substantial advantages in their internationalisation? I am afraid that the answer has a “but”: Yes, they have several advantages which are common to them, but such a complex process does not have such an easy answer. It is not the industry the important bit, but the business model. A direct comparison of both of the companies analysed would not be fair because of the numerous environmental factors that make them different: One had numerous network relationships as a result of its origin, while the other made smart investments in digital channels. We must think about it this way: Lidera provides a software solution whose value in international markets is conditioned on the company's ability to adapt to specific factors outside its control. As a resource planning software, it has to take into account rules and regulations in tax-related, legislative, and financial matters among others. Pandora only has to mainly worry about the language its software is in. The answer, or at least an attempt at a correct one, should go beyond merely looking at the industry.

APPENDIX

This appendix presents the guide used to carry out the semi-structured interviews. Some of the questions (e.g., size, year of foundation) were placed as confirmatory ones, as the information was previously gathered through secondary sources.

The questions were open-ended, providing the interviewee with the opportunity to explain their points and further develop their answers.

1. Year of company establishment.
2. Size of company:
    a. Employees.
    b. Turnover.
3. Percentage of sales abroad over total sales.
4. Year of first international sale.
    a. Further details of this first sale abroad.
5. Why did the company internationalise?
6. How did the company internationalise?
    a. Entry methods and distribution channels.
    b. Was there any change with time?
7. Did the company internationalise to one or several markets at first?
    a. Which ones and why? In which order?
    b. Most important factors in market selection (CAGE framework).
8. Greater difficulties faced during the internationalisation process?
9. Role of national identity.
10. Has the company used the services of Export-Promoting Organisations?

REFERENCES

Arteaga Ortiz, J. (2017, November). *Manual de Internacionalización. Técnicas, herramientas y estrategias necesarias para afrontar con éxito el proceso de internacionalización.* (2nd ed.). ICEX Ceco. Retrieved March 05, 2023, from https://www.icex-ceco.es/imagen/libros/2017-0630_Manual_Internacionalizaci%C3%B3n_proteg.pdf

Baum, M., Schwens, C., & Kabst, R. (2015). A latent class analysis of small firms' internationalization patterns. *Journal of World Business*, *50*(4), 754-768. https://doi.org/10.1016/j.jwb.2015.03.001

Bell, J. (1995). The internationalization of small computer software firms: A further challenge to "stage" theories. *European Journal of Marketing*, *29*(8), 60-75. https://doi.org/10.1108/03090569510097556

Bell, J. (1997). A Comparative Study of the Export Problems of Small Computer Software Exporters in Finland, Ireland and Norway. *International Business Review*, *6*(6), 585-604. https://doi.org/10.1016/S0969-5931(97)00033-4

Bell, J., McNaughton, R., & Young, S. (2001). 'Born-again global' firms: An extension to the 'born global' phenomenon. *Journal of International Management*, *7*, 173-189. https://doi.org/10.1016/S1075-4253(01)00043-6

Britannica, T. Editors of Encyclopedia. (n.d.). Software. In *Encyclopedia Britannica*. Retrieved June 4, 2023, from https://www.britannica.com/technology/software

Buxmann, P., Diefenbach, H., & Hess, T. (2013). *The Software Industry: Economic Principles, Strategies, Perspectives*. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-31510-7

Cavusgil, S. T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, *46*, 3-16. https://doi.org/10.1057/jibs.2014.62

Coviello, N., & Munro, H. (1997). Network relationships and the internationalisation process of small software firms. *International Business Review*, *6*(4), 361-386. https://doi.org/10.1016/S0969-5931(97)00010-3

Coviello, N. E. (2006). The network dynamics of international new ventures. *Journal of International Business Studies*, *37*(5), 713-731. https://doi.org/10.1057/palgrave.jibs.8400219

Coviello, N. E., & Munro, H. J. (1995). Growing the Entrepreneurial Firm: Networking for International Market Development. *European Journal of Marketing*, *29*(7), 49-61. https://doi.org/10.1108/03090569510095008

de Mello, R. C., da Rocha, A., & da Silva, J. F. (2019). The long-term trajectory of international new ventures: A longitudinal study of software developers. *Journal of International Entrepreneurship*, *17*, 144-171. https://doi.org/10.1007/s10843-018-0236-5

Dib, L. A., da Rocha, A., & da Silva, J. F. (2010). The internationalization process of Brazilian software firms and the born global phenomenon: Examining firm, network, and entrepreneur variables. *Journal of International Entrepreneurship*, *8*, 233-253. https://doi.org/10.1007/s10843-010-0044-z

Ellis, P. (2000, September). Social Ties and Foreign Market Entry. *Journal of International Business Studies*, *31*, 443–469. https://doi.org/10.1057/palgrave.jibs.8490916

Ghemawat, P. (2018). *Redefining Global Strategy: Crossing Borders in a World Where Differences Still Matter*. Harvard Business Review Press.

Hamill, J., & Gregory, K. (1997). Internet marketing in the internationalisation of UK SMEs. *Journal of Marketing Management*, *13*(1-3), 9-28. https://doi.org/10.1080/0267257X.1997.9964456

Harms, R., & Schiele, H. (2012). Antecedents and consequences of effectuation and causation in the international new venture creation process. *Journal of International Entrepreneurship*, *10*, 95-116. https://doi.org/10.1007/s10843-012-0089-2

Hennart, J.-F. (2014). The Accidental Internationalists: A Theory of Born Globals. *Entrepreneurship Theory and Practice*, *38*(1), 117-135. https://doi.org/10.1111/etap.12076

Hennart, J.-F., Majocchi, A., & Hagen, B. (2021). What's so special about born globals, their entrepreneurs or their business model? *Journal of International Business Studies*, *52*, 1665-1694. https://doi.org/10.1057/s41267-021-00427-0

Hoch, D. J. (2000). *Secrets of Software Success: Management Insights From 100 Software Firms Around the World*. Harvard Business School Press.

Hollensen, S. (2019). *Global Marketing* (Eighth ed.). Pearson Education.

Ibeh, K., & Kasem, L. (2011). The network perspective and the internationalization of small and medium sized software firms from Syria. *Industrial Marketing Management*, *40*, 358–367. https://doi.org/10.1016/j.indmarman.2010.08.004

International Organization for Standardization. (2017). *Systems and software engineering — Vocabulary* [ISO/IEC/IEEE Standard No. 24765:2017]. https://www.iso.org/standard/71952.html

Johanson, J., & Mattsson, L.-G. (2015). Internationalisation in Industrial Systems — A Network Approach. In M. Forsgren, U. Holm, & J. Johanson (Eds.), *Knowledge, Networks and Power.* (pp. 111-132). Palgrave Macmillan, London. https://doi.org/10.1057/9781137508829_5

Johanson, J., & Vahlne, J.-E. (1977). The Internationalization Process of the Firm—A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, *8*, 23-32. https://doi.org/10.1057/palgrave.jibs.8490676

Johanson, J., & Vahlne, J.-E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, *40*, 1411-1431. https://doi.org/10.1057/jibs.2009.24

Johanson, J., & Wiedersheim-Paul, F. (1975). The Internationalization of the Firm - Four Swedish Cases. *Journal of Management Studies*, *12*(3), 305-323. https://doi.org/10.1111/j.1467-6486.1975.tb00514.x

Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, *35*, 124-141. https://doi.org/10.1057/palgrave.jibs.8400071

Knight, G. A., & Liesch, P. W. (2016). Internationalization: From incremental to born global. *Journal of World Business*, *51*, 93-102. https://doi.org/10.1016/j.jwb.2015.08.011

Kuivalainen, O., Saarenketo, S., & Puumalainen, K. (2012). Start-up patterns of internationalization: A framework and its application in the context of knowledge-intensive SMEs. *European Management Journal*, *30*(4), 372-385. https://doi.org/10.1016/j.emj.2012.01.001

Lopez, L. E., Kundu, S. K., & Ciravegna, L. (2009). Born global or born regional? Evidence from an exploratory study in the Costa Rican software industry. *Journal of International Business Studies*, *40*, 1228-1238. https://doi.org/10.1057/jibs.2008.69

Merriam-Webster. (n.d.). Software. In *Merriam-Webster.com dictionary*. Retrieved June 4, 2023, from https://www.merriam-webster.com/dictionary/software

Moen, Ø., Gavlen, M., & Endresen, I. (2004). Internationalization of small, computer software firms: Entry forms and market selection. *European Journal of Marketing*, *38*(9/10), 1236-1251. https://doi.org/10.1108/03090560410548951

Nummela, N., Saarenketo, S., Jokela, P., & Loane, S. (2014). Strategic Decision-Making of a Born Global: A Comparative Study From Three Small Open Economies. *Management International Review*, *54*(4), 527-550. https://doi.org/10.1007/s11575-014-0211-x

Ojala, A., & Tyrväinen, P. (2006). Business models and market entry mode choice of small software firms. *Journal of International Entrepreneurship*, *4*, 69-81. https://doi.org/10.1007/s10843-006-0001-z

Ojala, A., & Tyrväinen, P. (2007). Market Entry and Priority of Small and Medium-Sized Enterprises in the Software Industry: An Empirical Analysis of Cultural Distance, Geographic Distance, and Market Size. *Journal of International Marketing*, *15*(3), 123-149. https://doi.org/10.1509/jimk.15.3.123

Oviatt, B. M., & McDougall, P. P. (1994). Toward a Theory of International New Ventures. *Journal of International Business Studies*, *25*(1), 45-64. https://doi.org/10.1057/palgrave.jibs.8490193

Peng, M., & Meyer, K. (2019). *International Business* (3rd ed.). Cengage Learning EMEA.

Vahlne, J.-E., & Johanson, J. (2017). From internationalization to evolution: The Uppsala model at 40 years. *Journal of International Business Studies*, *48*, 1087-1102. https://doi.org/10.1057/s41267-017-0107-7

Vasilchenko, E., & Morrish, S. C. (2011). The Role of Entrepreneurial Networks in the Exploration and Exploitation of Internationalization Opportunities by Information and Communication Technology Firms. *Journal of International Marketing*, *19*(4), 88-105. https://doi.org/10.1509/jim.10.0134

Weder, K., & Wang, H.-Y. (2016, September). Towards a Software Product Industry Classification. *15th International Conference on Intelligent Software Methodologies, Tools and Techniques*, [Conference Paper]. https://www.researchgate.net/publication/306323231_Towards_a_Software_Product_Industry_Classification