Venture Capitalists’ intervention and the internationalization of new ventures: financial and strategic support

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Biographic Note

Paulo Jorge Marques Ribeiro was born on the 30th of October in 1993 in Coimbra, Portugal. Having finished his Bachelor's degree in Economics in the University of Coimbra (2015), he has decided to move to Porto, in order to achieve the specialization in Economics and Business Administration, in the Faculty of Economics of Porto. Currently, he is still enrolled in the Master's degree.

He has been developing some activities while he has been studying. Still in Coimbra, he occupied the Chief Marketing Officer role at JEEFEUC, which is a junior company (a term used in Portugal to describe university-based small firms, mainly operated by students). Additionally, already in Porto, his research activity has started, with the presentation of his first research paper, entitled "Venture Capitalist's intervention and the internationalization of International New Ventures (INVs) – Portuguese Case Study". This paper was presented in two international conferences. These were the "8th International Research Meeting in Business and Management" (Nice, France) and the "10th Annual Euromed Academy of Business (EMAB) Conference" (Rome, Italy). Concerning the "10th Annual EMAB Conference", the paper was already published in the "Book of Proceedings".

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Abstract

The internationalization process is widely believed to be one of the most relevant dimensions in companies across countries. Nevertheless, operating abroad might not be easy for the International New Ventures (INVs) and the venture capitalists (VCs) can take an important role. Actually, the main purpose is to understand whether the international approach is easier with VC-backing and why. This analysis is even more relevant, considering the European context, promoting the international growth. In order to deepen this relation, Portuguese VCs and Portuguese new ventures were included in the study. Firstly, the VCs were inquired with the objective of collect valuable information about their intervention in the backed firms. Then, using those outcomes from the venture capital market, an empirical model was built to analyze a sample of 130 Portuguese firms, all of them with international activity.

Concerning the sample of VCs, the results suggest that industry knowledge, prior international experience or syndicated investments are some examples of the VC's intervention in the backed firms, supporting their first stage of international operations. Nevertheless, VCs are likely to be especially useful, in terms of the involvement in the new venture's board and their valuable connections, either within the domestic market or abroad.

Considering the INVs' perspective, the results are not similar. In reality, the VC's support is not considered important to overcome the international constraints, since there are no significant differences between backed and non-backed firms, overcoming those constraints. Nevertheless, after the VC's intervention, there may be some changes in the backed firm's management team and the inclusion of industry experts in the board is likely to be important, either financially or strategically.

Keywords: VCs; INVs; backed firms; non-backed firms; internationalization; intervention; financial support; strategic support.

Resumo

O processo de internacionalização é amplamente reconhecido como sendo uma das mais relevantes dimensões nas empresas de todo o mundo. Ainda assim, operar no estrangeiro pode não ser fácil para as *International New Ventures (INVs)* e as Sociedades de Capital de Risco (SCR) poderão desempenhar um papel importante. De facto, o principal propósito é entender se a abordagem internacional é mais facilitada com recurso a capitais de risco e porquê. Esta análise é ainda mais relevante, considerando o contexto europeu, promovendo o crescimento internacional. Com o objetivo de aprofundar esta relação, SCR portuguesas e *new ventures* portuguesas foram incluídas no estudo. Primeiramente, as SCR foram entrevistadas com o objetivo de recolher informação valiosa sobre a sua intervenção nas empresas participadas. De seguida, usando a informação do mercado de capital de risco, um modelo empírico foi construído para analisar uma amostra de 130 empresas portuguesas, todas elas com atividade internacional.

Relativamente à amostra das SCR, os resultados sugerem que conhecimento da indústria, experiência internacional prévia ou investimentos partilhados com outras SCR são alguns exemplos de intervenções por parte das SCR nas suas participadas, apoiando a sua fase inicial de operação internacional. Ainda assim, é provável que as SCR sejam especialmente úteis, em termos do seu envolvimento no conselho de administração da *INV* e das suas valiosas conexões, no mercado doméstico ou em mercados externos.

Considerando a perspetiva das *INVs*, os resultados não são semelhantes. Na realidade, o auxílio das SCR não é considerado importante para ultrapassar os constrangimentos internacionais, uma vez que não existem diferenças significativas entre empresas participadas e não participadas, ultrapassando esses constrangimentos. Ainda assim, depois da intervenção da SCR, pode existir algumas mudanças na equipa de gestão da empresa participada e a inclusão de especialistas da indústria no conselho de administração parece ser importante, tanto financeiramente como estrategicamente.

Palavras-chave: SCR; *INVs*; empresas participadas; empresas não participadas; internacionalização; intervenção; auxílio financeiro; auxílio estratégico.

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Introduction

Nowadays, economic development is a strong necessity, not only for Portugal but worldwide, too. It is extremely important to find the society's well-being and prosperity as well. Actually, there are some different ways to accomplish this objective. One of those ways is related to measures to promote the economic growth (Alesina & Rodrik, 1991). It has been noticed that most of the world governments are trying to execute measures, in order to improve people's conditions, such as employment creation or exports growth[1]. The program "2020 European strategy" is a very clear example of that. These kind of projects are trying to renew domestic economies, supporting their companies and providing them some benefits or special conditions.

The financing takes an important role in the economic growth. Actually, in order to be more efficient, economies need a solid financing system. This dissertation aims to present a different approach about one type of financial support: the venture capital. Venture capital market is important all over the world. For example, some American companies were founded by venture capital, such as Intel, Oracle or Sun Microsystems. In the other part of the world, the trend is the same. China and Taiwan are very clear examples of that. Quanta, the well-known maker of notebook computers and Asustek, the motherboards maker, were supported by venture capital funds, too (Kenney *et al.*, 2004). However, this support is not just about money. It is more than that. In some cases, the strategic part is one of the most important ones. Hence, the dissertation is focused on studying the interesting relation between venture capitalists (VCs) and International New Ventures (INVs). There are a lot of financing types, depending on the backed firms' characteristics. The main purpose is to study this relation within the "early stage". However, this stage of development contains a huge range of companies and this analysis is just focused on the final part of this phase when already exists a product, ready to be commercialized. This point is known as the first stage of financing and the INV starts growing and some expenses are coming up (Bachher & Guild, 1996). Although some of these costs represent a risk for the company, they can help it reaching a higher stage of

[1] Commission, E. (2010). Europe 2020: a strategy for smart, sustainable and inclusive growth.

development. Indeed, like all investments, the venture capital ones contain a risk percentage.

There are a lot of specific characteristics that are different from one investment project to the others. Generally, the process is executed to generate benefits for both of the parts (VC and backed company). These benefits are not just related to the financial ones. Usually, VCs decide to integrate the INV's share capital, providing it some work conditions, in order to make the business grow. In fact, there are some returns incorporated in the contract. For example, the profits distribution policy is defined in advance. In order to reach a successful partnership, it is common to share some capabilities between both parties. Both of them make efforts, sharing the INV's management (Gerasymenko *et al.*, 2015). According to this, the dissertation will focus on the influence of sharing capabilities in the INV's performance, especially in terms of the conditions to develop projects abroad. In other words, it aims to reach pertinent conclusions about the dimensions of the VC's support, in which they might be important improving the venture's international competitiveness. Truthfully, it is extremely important to understand whether the VCs' international support is financial, strategic or both.

As indicated above, the cooperation agreement can be executed in some different ways. For example, it can focus on core dimensions, such as strategic decisions, logistic or commercial support. In this study, the aforementioned relation will be studied through a specific point of view: the internationalization.

In terms of the venture capital, the investment project duration depends on the contract. Actually, it is absolutely important to consider its duration within this analysis. The study aims to provide a comparison between the beginning and the other partnership's moments, in terms of reaching new markets or developing new capabilities working abroad. Share the strategic decisions could take an important role in this process.

It is necessary to develop ways to promote the innovative entrepreneurship and that job has been done[2]. Firstly, small firms' managers are worried about the investment

[2] Commission, E. (2010). Europe 2020: a strategy for smart, sustainable and inclusive growth.

in a domestic basis and just after some time they start working abroad. However, that stepwise growth may be the cause to lose interesting opportunities and develop activities abroad (Rogers, 2004). This study is about keeping the INV growing, providing all it needs, either in terms of financial or non-financial support. Some European companies have been created, supported by European funds. Nevertheless, after the "seed stage", some of those businesses cannot be successful because there is no specialized support, concerning the internationalization path. In reality, the success of operating abroad is strongly associated to the managerial expertise and firm networks (Chandler & Hanks, 1994).

In some cases, those businesses could have a lot of potential and the venture capital company can be a possibility to materialize that. Generally, in the INV's "early stage", there is a high risk level and the investment is crucial (Howell, 2015). The INVs might be aware of the advantages and disadvantages of share the decision-making with VCs, if they have more information concerning this subject. In other words, it is crucial to provide them some information about the consequences of working with VCs and it might have an important influence on the INV's decision. This study's approach will focus on the venture capital investments, including INVs and VCs from Portugal. It comprises three main stages. Firstly, the INVs' (financial and strategic) international constraints will be studied. Secondly, the VCs' interventions will be analyzed, in order to reach a better understanding about their dimensions. Finally, the importance of the venture capital will be explored, through a comparison between backed and non-backed firms, concerning the magnitude of the international constraints for both groups. Concerning the methodology, the data triangulation and the methodological triangulation will be used in this dissertation. In other words, it means that multiple sources and methods will be connected, in order to study the VCs' intervention in the internationalization of new ventures.

Usually, in Portugal, this process is divided in two types of support: financial and strategic. The first one can be provided by financial institutions and the second one by incubators or similar institutions. In reality, VCs provide both types of support and they are aware of the INV's conditions. If the INV is aware of the recent investment's performance, more partnerships will be successfully executed. Sometimes, some new ventures are supported by venture capital companies but they do not have all of the information about the results from previous investments. Although the international constraints had been studied before, there is a lack analyzing the venture capital market and their connections with those constraints. Hence, being aware of this type of knowledge might be an important step, regarding the internationalization path of new ventures.

1. Review and synthesis of literature

Within this section, the literature will be approached, concerning both parts of the venture capital investment: VCs and INVs. The first part of this section is related to the internationalization constraints (internal and external) that INVs might face in the international path. In order to deepen the relation between VCs and INVs, the characteristics of the venture capital investment will be also studied. In the last part of this section, it is established a connection between the VC's intervention and the INV's international constraints.

1.1. International New Ventures (INVs) general constraints

International New Ventures (INVs) are companies in the beginning of its life-cycle and one of their most important purposes is to operate abroad or just export products or services for new markets, since their inception (Oviatt & McDougall, 1994). According to Zhou *et al.* (2010), INVs are likely to achieve success early in global markets. They are also well-known as "born global" firms because, for them, the internationalization is a short-term plan and is viewed as a priority (Rennie, 1993).

INVs have been facing some constraints and they might not have the necessary conditions to operate abroad, at the time of its creation, in terms of knowledge of foreign markets.

1.1.1. Internal internationalization constraints

There are some barriers in the internationalization process. Most of the times, those barriers can be overcome by investors, the VCs. For example, the managerial expertise within international projects is one of them. The financial and human resources constraints are even more serious in small companies aiming to develop its activity in another country (Leonidou, 2004). However, there are more types of barriers making this process harder for INVs, such as internal barriers (related to the organizational resources or capabilities and its export policy) and external barriers (procedural, governmental, environmental and task constraints). For example, informational, functional or marketing barriers are some examples of internal constraints.

Informational and functional constraints:

The informational barriers aim to identify the main problems about foreign markets. These problems are related to the difficulties gathering information about the factors that are likely to influence the activity. Few information to analyze the markets (in terms of the international databases) can hinder the anticipation of the work conditions in the new market. Even when those databases are available, they might be incompatible with the home country techniques (e.g., different base years, different measurement units or different data collect methods) (Czinkota & Ronkainen, 2001). Difficulties in finding business opportunities and contact overseas customers are informational constraints as well (Leonidou, 2004).

In some cases, the foreign order must not be the only stimulus to interact with local customers. Some other activities should be executed, such as the emergence of unsolicited orders. In other words, contacting with foreign buyers is crucial as well as developing a careful evaluation of their needs. Consequently, proactive behaviors with customers are likely to contribute to a long-term customer loyalty (Blocker *et al.*, 2011). This type of international commercial behavior is an important requirement, not only to operate abroad but also to be accepted in the market and gain the customer's confidence as well. Leonidou (1995) shows that these foreign markets' opportunities are not based on adequate research. INVs are not aware of foreign markets' necessities that can be provided by informed external institutions, such as governmental agencies or trade associations (Leonidou, 1995).

Functional barriers are related to some specific company's characteristics (key functional factors), such as the ones that can influence the internal dynamic. However, the main point is to analyze their influence on the internationalization process. Additionally, the functional barriers depend on the exports stage or the firm overall stage (Vozikis & Mescon, 1985). Exports stage depends on the level of the company's export experience and the overall stage is associated to the management sophistication and it comes with the stage of development of the aforementioned key functional factors, such as marketing, financial or operational issues. The literature considers some different options, in terms of the solutions for the functional problems. These constraints might have different magnitudes whether they appear within one of the stages or the others (Vozikis & Mescon, 1985).

This subject has also been studied through three main intrinsic company characteristics. The first one is related to the shortage of qualified employees to deal with export businesses. According to Zhou *et al.* (2010), international success may depend on the senior management behavior, promoting a learning environment, concerning the new market's entry. Within the growth stage, the INVs do not have the sufficient capacity to deal with export situations, in terms of the specialized export personnel. The most important required capabilities are related to the logistic arrangements (market's knowledge) and the communication with foreign customers (generate new businesses opportunities) (Gomez-Mejia, 1988). The second main functional constraint is the inexistence of production capacity to supply new markets (exports). Some companies are supplying foreign markets with its unutilized production capacity and they just operate abroad because of that excess of capacity. However, the possibility of operating abroad is limited by the available means and resources to materialize these international activities and it can be the explanation for the aforementioned insufficient production capacity. Resources take an important role in the company production and their influence on the international projects are stronger than the financial one, for example (Albaum *et al.*, 2008). Generally, INVs do not operate through this concept because their objective is to work abroad since the inception and many resources will be used overseas. Nevertheless, they must handle exports as one of the strategic options and the plan must be made in advance, with a considerable improvement on firm's performance (Kamath *et al.*, 1987). Normally, it is hard for INVs to supply new foreign markets in a large scale since the inception, due to their smallness constraints. Finally, financing may also be a functional barrier for INVs and sometimes they do not have financial possibilities to sustain these kind of projects since the beginning (shortage of working capital to invest). Actually, within the early stage, the investment is a crucial necessity (Howell, 2015). For example, visit new overseas customers or study those market's characteristics on site are some relevant expenditures in the first stage of internationalization (Leonidou, 2004).

Marketing constraints:

Marketing is an important subject within an internationalization process. Concerning this dimension, the most relevant constraints are the product, pricing, distribution, logistics and promotional activities in foreign markets. The main challenge is to adapt the marketing strategy to the new markets' circumstances. However, locating those new markets is also very important and specialized human resources are crucial. The firm's management team may be able to develop new products and seek innovative solutions, in order to fit the foreign market's requirements (Zhou *et al.*, 2010). Small firms can be even more affected by this constraint. Usually, they do not have specific research departments, in order to gather information about foreign markets or promote the company's products abroad. Moini (1997) considers two different marketing tasks deserving special attention and they were classified, in terms of the importance and the easiness to overcome, either for exporters or non-exporters. Those were the product adaptation and the advertising activities overseas. The first one is considered as very important and difficult to overcome, by non-exporters. Different product standards within foreign markets might make the product unable to be commercialized abroad (Moini, 1997). In order to satisfy those markets, according to their standards, financial strength can take an important role, since a large amount of initial investment may be required. This constraint tend to be important but not crucial, for companies already operating abroad. Additionally, advertising activities are not considered as very important and they seem to be a fairly difficult constraint to overcome, just for non-exporters (Moini, 1997). Actually, small companies, which are non-exporters, face some smallness constraints (Leonidou, 2004). For example, the financial ones are examples of that and it might explain their difficulties overcoming this type of costly activities. Additionally, consumer's characteristics (for example, shopping habits among lifestyles), cultures and business environment can be absolutely different across countries (Leonidou, 2004). In reality, customers across markets want more than what they ask for. They want a proactive behavior from providers, anticipating their needs (Blocker *et al.*, 2011). As mentioned above, company's marketing operation and promotional activities might require special attention. Content's cautions or different media channels are some examples of reasons to adapt the promotional plan, in line with the new market's characteristics and necessities (Leonidou, 2004).

In order to satisfy the new market's needs, it is extremely important to develop new products and some inherent supporting activities, in case of an export process. This adaptation process can be even harder when the customer's preferences are completely different from domestic markets (Leonidou, 2004). In order to minimize the effects produced by those differences, the capabilities approach is determinant: lack of managerial expertise, no previous research or shortage of working capital are some reasons that might be able to explain the INV's difficulties adjusting or creating its products for the new markets (McConnell, 1979). Sometimes, it is required to adapt the existing product's characteristics, instead of creating new ones. For example, different conditions of use or different cultural aspects can motivate this adaptation. However, this brings some potential costs for INVs, such as some problems dealing with export operations or an increase in the unit costs because there is no economies of scale yet (within the early stage), in those foreign markets (Kandemir *et al.*, 2000). Additionally, it is also very important to meet some requirements related to the international products specifications. For example, this dimension might be associated to the cautions concerning the population's health and safety and sometimes foreign products face extra costs, in terms of the quality certification (Leonidou, 2004).

Another barrier in the product provision is the after sales service (Leonidou, 2004). When occurs a problem with the product or another situation (for example, modification in conditions of use or defective products), it is crucial to provide a quick solution with high level of customer service. Thus, this quick assistance can take more time and increase costs, in case of international products, especially for industrial goods (Czinkota & Ronkainen, 2001). Furthermore, this constraint is even more serious for INVs since it is necessary to visit foreign countries occasionally and it requires relatively high amounts of financial and qualified human resources (Leonidou, 2004).

Definitely, it is very important to meet the international customer's requirements. However, international competitors are such a relevant stakeholder and they also deserve special attention from INVs. Home environment can influence the firm's strategy and, sometimes, that strategy is not reliable for foreign markets. In other words, competitive advantages may not be passable from home countries to local markets. Resources take an important role, too. In fact, the resources availability is crucial, not only because of competitive issues but also they can influence the company's strategy and marketing's decisions. For example, if the amount of resources is not enough, the company might be forced to adopt a niche's strategy, since the economies of scale are not a reality in that case, at least in the first stage (Doole & Lowe, 2008). According to these authors, niche's strategy may be a reliable option. However, sometimes, companies do not have the ability to find the right market niches. This lack of managerial expertise is considered one of the most important reasons to explain the inconvenient of being market driven (Doole & Lowe, 2008).

Price is also a huge concern to exporters and sometimes is hard for INVs to gain an important competitive position since the beginning. However, it depends on the company's strategy, too. The inexistence of economies of scale is one of the most important causes for the inability to provide competitive prices abroad, which may also depend on the market's characteristics (Manova & Zhang, 2012). Nevertheless, there are some other reasons explaining that, such as specific product conditions for foreign markets. Product packaging modifications, transport expenses, marketing/distribution costs or extra taxes are some examples of additional costs from developing activities abroad (Kandemir *et al.*, 2000). Sometimes is difficult to compete with local companies through the price, due to external factors. For example, monetary question is a relevant matter when the exchange rate is not affordable for INVs. Additionally, government policies can be an enemy since they make the territory more favorable for local investors, regarding the taxes or other fees (Doole & Lowe, 2008).

In order to achieve a clever marketing system, it is crucial for INVs to have a solid distribution method. However, they face some barriers in materialize that, since each country is different from the others, in terms of the distribution systems. For example, choose the way to execute it and choose between direct or indirect distribution must be considered important decisions. In fact, distribution characteristics are very different across countries (Kandemir *et al.*, 2000). The competition within these markets is an important matter in this analysis. It might be difficult to find efficient and cheap ways of distribution in the new markets, since some powerful local competitors monopolize the most important distribution channels. Thus, it can be hard (functionally and financially) for INVs to entry in this crowded networks (Czinkota & Ronkainen, 2001). Actually, these networks may be used as a crucial mean to gather information about exchange opportunities (Ellis, 2011). Nevertheless, the distribution problem can be minimized through some relations with foreign strategic institutions, such as foreign representatives (Leonidou, 2004). However, obtain a trustable and recognized representation can be difficult, due to the inability to find this kind of entities. Additionally, there are a lot of competition obtaining representation within foreign markets and, sometimes, those representatives are already supporting other competitors. Some of the most valued requirements are the financial strength, physical facilities or the range of important networks, such as the representative's reputation or their connections with other crucial institutions (governmental decision-makers) (Leonidou, 2004).

Logistic issues are frequently related to the internationalization barriers, too. Transport inefficiencies or delays are some situations that can bring negative consequences for a recent company, such as low credibility or sales decrease. In the first stage, INVs do not have the necessary international strength and notoriety. This situation can be a real concern for them (Leonidou, 2004). Logistics can also make the process more difficult due to the costly transportation from home country to destination. Actually, the distance can be a key factor, since the international transportation can contribute to increase costs and delays (Albaum *et al.*, 2008). One of the most critical aspects is the additional insurance requirements for foreign companies, which can increase the product's price. Additionally, the inexistence of physical facilities is a huge constraint, too. Especially in the first stage of an internationalization process. Some products require specific conditions of warehousing. Furthermore, find some available places to store those products may be a barrier within home country. In the new foreign markets, it becomes even worst. The dimension of those foreign countries is also important. Providing products for distinct parts of the country can cause a storage problem, because its transportation is more expensive and it is harder to maintain the quality standards in those aforementioned specific products (Cateora Philip & Gram John, 2001).

1.1.2. External internationalization constraints

External constraints also represent an important subject and they focus on problems stemming from the environmental differences between home countries and local markets. Furthermore, these external barriers can be divided in procedural, governmental, environmental and cultural barriers.

Procedural and governmental constraints:

The procedural constraints aim to analyze the problems of turning the internationalization into a natural process for INVs. In the first stage, INVs are not aware of all the exporting documentations and foreign systems to handle the monetary transactions, resulting from a purchase, for example (Kedia & Chhokar, 1986; Moini, 1997). In terms of exports, procedural barriers depend on the firm’s experience executing such type of activities. These constraints are more acute for non-exporters and marginal exporters, comparing with active exporters. In reality, it is obvious that a non-exporter firm has not the same capabilities to handle the export procedures as the experienced ones. Nevertheless, they represent an important issue for all export processes. As mentioned above, documentation requirements may be a reason to inhibit international operations and it can discourage firms, due to its unfamiliarity with those procedures. Moreover, paperwork is even one of the most important factors inhibiting the international activity (Moini, 1997). In fact, paperwork must be faced as a regular process and some international support is absolutely essential in this stage. Additionally, financial issues may be able to turn the international transactions into a slow process. From the moment of the foreign customer purchase until the international firm’s receivement can take a long period of time. Nowadays, within a global market, there are a lot of foreign buyers asking for credit facilities and it can make the financial system of international transactions slower. Geographic distance can also act as a barrier in case of currency constraints imposed by central banks from countries of destination (Leonidou, 2004).

Cultural and environmental constraints:

The external environment may comprise more constraints to operate abroad, which might be one of the main reasons for failures. Those barriers have a huge impact in the consequences of each decision. They are rarely predictable and sometimes its effects are even uncontrollable by decision makers. There are multiple environmental factors influencing the internationalization process and they, mostly, come from cultural assumptions and economic or regulatory issues. The second ones are related to the economic and monetary situation of countries of destination. Countries with fragile economic systems and societies with high unemployment rates or low purchasing power tend to reduce its consumption and look for the cheapest products (Leonidou, 2004).

Within external environment, monetary issues are also very relevant, since they can increase or decrease company's sales and its value. Czinkota and Ronkainen (2001) stated that currency's fluctuations are one of the most important reasons for that. Those fluctuations might influence the international transactions, in terms of turning the exporter's products into expensive ones. According to Manova and Zhang (2012), the exports prices can vary with the characteristics of foreign markets. If the foreign country's currency is extremely unstable, that market tends to be riskier for investors. For example, prices might become unattractive with a revaluation of the exporter's currency. This fact results in a loss of competitiveness of the exporter's product (Czinkota & Ronkainen, 2001). Furthermore, this fact tend to be even more acute for populations with a low per capita income, as mentioned above. Additionally, the regulatory constraints can influence the product's transactions within the internationalization path. These constraints are related to the conditions imposed to entry or operate within new countries by foreign governments. Entry barriers are relevant since they might influence the product's supply in the foreign market. The stocks can also vary because of that. Furthermore, price's restrictions are included in regulatory barriers, especially in economies with high inflation rates. In other words, governments can establish a price limit and make the exporter's product less competitive, compared with cost leader's price, by reducing its profit margins (Cateora Philip & Gram John, 2001). Import restrictions may also be an obstacle in the internationalization process. They may be imposed by taxes or import tariffs. However, nowadays, these constraints has been reduced by international efforts, in order to liberalize the worldwide trade.

Culture is also a significant aspect within the foreign environment and it deserves much attention. In fact, knowledge about cultural assumptions of countries of destination might be the difference between success and failure. According to Ellis (2011), some factors are used to measure the difficulties communicating with foreign markets. The cultural distance is one of them. However, there are a huge range of different cultural dimensions, such as the religion, values, attitudes, education, negotiation method or language. The negotiation process can be completely different between two different countries. For example, for some of the western cultures, the negotiation must be active, while the oriental ones privilege soft conversations (Leonidou, 2004). Additionally, companies must be aware of some behavioral aspects such as the necessity of formal or informal procedures within each negotiation stage (Czinkota & Ronkainen, 2001). This analysis can be even more complicated in countries with a mix of different cultures, especially, if the firm is looking forward to operating in such a different places inside those countries. Finally, language specificities deserve some attention, too. According to Leonidou (2004), language comprises a lot of different dimensions, such as the oral and written aspects or specific meaningful words. These dimensions must be deeply studied. In order to develop a clear communication process, nonverbal aspects are crucial as well. Body language or time perception may help export managers to have a better understanding of foreign stakeholder's behaviors (Leonidou, 2004). However, when this characteristics are unknown, international communication may be harder.

1.2. Firm size and firm age influences on the internationalization

Newness and smallness are important subjects to analyze, especially within an internationalization process. Through this analysis, size can be measured by sales or number of employees and INVs are considered new firms. Usually, they are considered as small, due to their low age. As aforementioned, INVs aim to develop international activity and some inexperience is commonly associated to these type of companies, due to its low age and small size. However, there is one factor that is likely to reduce these liabilities of newness, which is the INV's innovative process (Gassmann *et al.*, 2010).

The literature's evidence is not uniform in terms of the influence of liabilities of newness and smallness in the internationalization path, in this type of companies. Some authors consider this influence as a meaningful one. For example, there is evidence that newness is a disadvantage for INVs. Export constraints are considered as more dangerous for them, comparing with competitors that have been operating for a long period of time (Leonidou, 2000). Some procedural specific characteristics were analyzed in recent companies, with lacks of knowledge. Those characteristics were the exports experience, exports regularity and firm size. After that, it was observed its influence on some constraints, such as resources, environmental or legislation barriers, for example. The exports experience had the strongest effect, affecting five of the total six export factors. For example, in terms of the export experience, two of the most significant affected factors were the corporate resources (mainly human and financial) and exports bureaucracy (identification or representation the foreign markets) (Leonidou, 2000). Additionally, other studies related market inexperience and procedural complexity and the same trend was supported. Hence, it might be harder for non-experienced firms to handle the international trade procedures, comparing with the experienced ones (Katsikeas & Morgan, 1994). Thus, these barriers are particularly affected by the exports experience and its influence is stronger in recent firms, comparing with the experienced ones. According to this, the early stage is a critical period, since this type of problems are more likely to occur and they might have a different impact for non-experienced firms. Moreover, the firm's future is dependent on the firm's performance within the early stage, dealing with these constraints.

As mentioned above, exports regularity is also an important factor that might affect the firm's key capabilities along the internationalization path. According to Leonidou (2000), the exports regularity is defined as the products' export on an intermittent or systematic basis. Exports regularity takes a significant role in the internationalization factors, such as the exports bureaucracy or the corporate resources. The results support the previous analysis for exports experience. Hence, all barriers have a stronger effect on intermittent exporters, rather than firms exporting on a systematic basis (Leonidou, 2000). These conclusions evidence that the regular exporters are better able to address the considered barriers. Previous export experiences are likely to contribute to become more familiar with foreign markets or customers and understand their requirements as well. Finally, the third factor was the firm size and its influence on the internationalization path. According to Leonidou (2000), firm size depends on the number of employees. However, it was detected a special influence on the market entry. In fact, the study suggests that firms with a low number of employees are more vulnerable to be affected by such barriers. Furthermore, it is particularly associated to the shortage of specialized human resources to handle the export process, which is common in small firms (Leonidou, 2000).

Resource limitations or trade constraints are some examples of important barriers to reach new markets abroad by smaller companies. Katsikeas and Morgan (1994) show that the most meaningful key factors are related to the trade constraints, specifically product adaptation (packaging barriers or low quality/design standards) and exogenous logistical constraints (costs/easiness of transportation and payment delays from distributors). According to this evidence, large firms are better able to face both of the trade barriers (Katsikeas & Morgan, 1994). Additionally, size is important to achieve economies of scale. In fact, it is commonly accepted that large firms are more likely to achieve economies of scale and it may be associated to exports propensity, since the perceived risks from operating abroad are lower for this type of companies (Bonaccorsi, 1992).

The aforementioned relationship is strongly affected by the industry's key features within an internationalization process. For example, a study made for Italian manufacturing firms concluded that the industry experience is determinant, in order to export for new foreign markets (Gabrielsson *et al.*, 2008). Thus, it presents a positive relationship between firm age and export's success. Usually, the international experience is associated to consistent networks and it might take a fairly long period of time to achieve them, due to the relevant correlation between network's benefits and experience (Ellis, 2011). Gabrielsson *et al.* (2008) considers a strong relationship between firm age and accumulated knowledge. Therefore, the study is quite skeptical about the idea that these type of companies have all the necessary capabilities to work abroad, since the beginning. Additionally, within the early stage, its findings show that a small increase in the absolute experience causes a huge influence on the INV's readiness to operate abroad (Majocchi *et al.*, 2005).

According to Pla-Barber and Alegre (2007), firm size and exports intensity reveal a positive link between them. That positive relationship can be explained by two different approaches. One of them is related to the transaction costs (Verwaal & Donkers, 2002). These ones refer to the expenses of adapting the product, in order to meet the international market's requirements, as well as the costs of adapting the human resource's capabilities to operate abroad. For example, the firm's management must be prepared to the international approach, regarding the innovative solutions to adapt the firm's products (Zhou *et al.*, 2010). The transaction costs theory presents another approach, depending on the size-related characteristics of the firm, which can be associated to the economies of scale or suitable resources (Verwaal & Donkers, 2002). The theory is related to the costs from relation-specific investments in export relationships[3]. According to the theory, this type of investments (from firms with lacks in terms of the exports relationship indicator) are more likely to encounter an opportunistic behavior from foreign market's stakeholders, since it depends on the relationship. Actually, it may be difficult to assess foreign distributor's capabilities or even evaluate its efficiency. Geographical/cultural distance and information asymmetry are some reasons that might explain the higher importance of these factors within a relation specific investment (Verwaal & Donkers, 2002). As mentioned above, the transaction costs theory is an analysis developed through the two size-related characteristics (economies of scale and resources). Economies of scale, in terms of transaction costs, may enforce the export relationship and new firms are less likely to achieve them.

Small firms usually adopt differentiation strategies, since there are no available resources to execute cost leadership strategies within large markets. These differentiation strategies require high levels of export relationship (Verwaal & Donkers, 2002). According to Verwaal and Donkers (2002), firm size influences exports intensity through economies of scale and risk-taking behaviors. Both of them might be characteristics of mature companies, rather than INV's characteristics. Hence, this perspective considers that exports intensity is mostly a consequence of these two factors and they usually come up with the firm's experience, which is associated to size.

Firm size was considered an important characteristic within an internationalization process under some specific conditions, as mentioned above. Market

[3] The export relationship may be measured by the number of export activities with the same foreign buyer.

structure[4] and available networks may also be crucial to reach new opportunities abroad (Ellis, 2011) and provide innovative products or services for foreign customers. Actually, Rogers (2004) analyzed the relationship between these three variables (innovation, market structure and networks), among firms with different size. The aforementioned analysis is based on the idea that there are relevant connections between them. For example, it is expected a bilateral influence between market structure and innovation, since they are likely to affect each other (Rogers, 2004). In terms of size, large firms have some advantage in innovation. Financing is one of the key factors explaining that assumption. Further, large firms are more likely to fund innovation with its own cash flows (equity financing), since those cash flows are higher. Usually, small firms are more likely to ask for external financing (financing relying on debt), due to their lacks of financial resources. Moreover, if large firms need some financial support, they have a higher amount of assets to collateralize loans, comparing with small firms (Rogers, 2004). Additionally, innovative projects are commonly associated to a high risk level and financial institutions may be unable to finance this type of projects, which might be a constraint for small companies. Additionally, the availability of specialized human resources, in terms of quantity and knowledge, is also an important condition to develop innovative activities (Rogers, 2004).

According to Rogers (2004), network's importance takes also a relevant role, in order to develop innovative activities. It seems that networks are more important for small firms, than they are for the large ones. Actually, the innovation success is heavily dependent on these networks for small firms, comparing with large firms. Results from Rogers (2004) evidence a persistent innovation in large firms and R&D activities take an important role for that process.

1.3. Venture Capital Investment

Venture Capital investment is a type of financing that aims to generate benefits for both parts of the partnership (backed firms and venture capitalists). These benefits are likely to come up under two dimensions: strategic support and financial support.

[4] Market structure is usually proxied by concentration or market share ratios.

According to Dushnitsky and Lenox (2006), some firms are involved in venture capital investments because of strategic purposes. Actually, it is expected that backed firms, which are looking for a strategic support, are more able to create firm value than the ones, which are looking strictly for the financial support. Arthurs and Busenitz (2006) developed an approached based on venture capital advantages for new ventures and their study provides an analysis focused on the venture capital investment, “beyond the capital” (Arthurs & Busenitz, 2006, p. 18). Actually, they give much attention to the VC’s dynamic capabilities, emphasizing the strategic support. They concluded that those capabilities related to product and management development are also very important for INVs.

VCs must put in place a range of tangible and non-tangible structures, in order to support their backed firms. The tangible ones might represent resources or technologies, while non-tangible ones can be some valuable assets, such as the expert personnel with a deep knowledge about the backed firm’s core business, its market or technology. According to Ellis (2011), the firm’s experience may also come from the association with valuable mentors or well-connected managers and it may be provided by VCs. Additionally, VCs are better able to execute some kind of activities, since they have better conditions for that (for example, economies of scale, distribution networks or bargaining power with suppliers), which are useful for backed-firms. According to this evidence, the shared management can benefit both parties and it might have a significant role, creating greater value (Dushnitsky & Lenox, 2006).

Gorman and Sahlman (1989) developed an approach comprising the main strategic aspects, in which VCs may be crucial for backed-firms. Actually, some of the VCs are able to take an important role, in order to overcome the new venture’s constraints from section 1: i) strategic planning; ii) management recruitment; iii) operational planning and close connections with potential customers and suppliers.

Thus, the strategic support may be an important part of the venture capital investment. Within this type of investments, VCs are able to improve the INV’s conditions and add some business value. There are three main scenarios, in which the investment’s value might be higher: “(1) when venture capacities fall short of venture "needs," (2) when the venture faces great uncertainties regarding what the optimal strategies are or how best to implement the chosen strategies, and (3) when the VCs themselves appear to offer a significant source of valuable information for the venture" (Sapienza *et al.*, 1996, p. 447). These three situations are mainly associated to the VC's characteristics, INV's characteristics and market conditions as well. In other words, the strategic support might be dependent on it. According to Sapienza *et al.* (1996), VC's supporting efforts are strongly dependent on the origin of the venture capital, in order to deliver additional value for the INV's activity. For example, some VCs may be more or less able to make efforts in the venture capital investment, depending on their location.

The process usually follow some sequential steps, such as the venture fund raising, the investment in, its evaluation/monitoring, value generation and finally the exit strategy resulting, hopefully, in benefits for both parties. Bascha and Walz (2001) consider three different stages. Firstly, the entrepreneur make a proposal to the VC. The contract is presented as well as the VC's share of the firm value and the divestment conditions. The second stage is the answer. VCs analyze the proposal and take a decision about whether to accept it or not. Finally, the last stage is the choice about the exit option. According to Kaplan and Strömberg (2004), there are some important points to choose between businesses to invest. Those are the business plan quality, characteristics of the competitive strategy, divestment options or the capabilities of the management team. Venture Capital investment presents a different approach of financing and it aims to make the firms grow faster, create additional value and create employment as well (Keuschnigg, 2004).

According to Keuschnigg (2004), backed companies are better able to create innovative products or services and their patents are also more valuable. Typically, there are differences between entrepreneur's information and investor's information (informational asymmetries). Actually, backed company's founders try to invest in strategies to maximize their earnings and also generate low payoffs to shareholders. These entrepreneurs are likely to pursue risk-taking behaviors, since they gain in case of success but they do not suffer in case of failure (Gompers & Lerner, 2001). These backed companies have a very specific profile. Generally, they are small and young firms looking for financing to materialize their activities. In these type of business opportunities, there are a high level of uncertainty and, consequently, the risk of failure is also high. These small companies belong to volatile markets, which are likely to change within a short-term period (Gompers & Lerner, 2001). According to Sapienza *et al.* (1996), VCs are more able to add value when the INV is already developing its activity. Specifically, within the INV's early stage, when the level of uncertainty is high and the new venture is more likely to develop innovation strategies. According to these findings, this is a crucial moment within the venture capital investment, when VCs can have an important influence on the INV's performance (Sapienza *et al.*, 1996). Due to their smallness and newness liabilities, they present some lacks, in terms of the available assets and resources.

On the other hand, VCs make efforts in order to mitigate this type of behavior from backed companies and entrepreneurs, such as the aforementioned information asymmetry. Actually, they are sufficiently powerful for that, since INVs depend on their financing. In other words, it would be difficult for INVs to obtain those financial funds from other sources (Gompers & Lerner, 2001). One of the main reasons for successful investments is the partnership's characteristics, included in the contract. Actually, Venture Capitalists (VCs) may celebrate a contract allowing them to control the entrepreneur's activities (Cumming, 2008). Some of the most common ways to control the informational problem and the risk-taking behavior are the establishment of different stages of financing, syndicate investments or take a position on the firm's management (Gompers & Lerner, 2001).

The different stages may allow VCs to measure the investment's performance over time and decide whether to keep investing. Actually, the current performance influences the future amounts of financial investment. Hence, VCs may control the contract's option, including an exit option, which might prevent future losses. This behavior is just possible due to the collected information over time (Kaplan & Strömberg, 2003). Further, Smith (2005) also stated that the financing amount increases over time. According to this, the amount is higher, in the subsequent stages, than in the beginning of the partnership.

The firm's control is also consistent with the previous idea, since VCs have more influence in subsequent stages, comparing with the early stage. For example, within that stage, VCs do not have majority positions on the board and also they do not have the majority of the voting rights (Smith, 2005). Actually, they seem vulnerable or even powerless because they do not have yet a formal influence on the firm's control. However, they possess another range of tools to minimize that temporary problem. They can establish some negative covenants, which are rules prohibiting entrepreneurs to develop some activities without the VC's permission. For example, backed firms may not be allowed to execute some type of business combinations, such as mergers, and that is a negative covenant (Smith, 2005). Nevertheless, VCs gain relevance on the firm's control, in each stage of investment, and they gradually increase their influence until have a crucial, and even decisive, role on the firm's management. Usually, VCs increase their benefits in each round of investment, since they constantly bargain for more seats on the board or voting rights (Smith, 2005).

Syndicated investments with other VCs might also have some advantages, such as the risk diversification or the second opinion in the decision making processes. In order to have an active role in the top management is also important to ensure the partnership's control. Additionally, remuneration methods are an important tool to reduce the informational problem. For example, receive a part of their earnings in the form of equity might discourage entrepreneurs to take risky decisions or develop risky activities (Gompers & Lerner, 2001). These opportunistic behaviors might also be minimized through a strong firm's control by VCs with some measures, such as the majority of directors on the board. Concerning the firm's control, the most common case is the shared management between VCs and entrepreneurs. However, as aforementioned, there are some power asymmetries, depending on the investment stage. For example, according to Smith (2005), there are two ways to measure the shared control, such as the voting rights or the control of the board of directors. Even if the VCs have a majority of the voting rights, the firm's control might be considered as being shared, as long as they do not control the board, with a higher number of directors. Nevertheless, the board is not controlled by entrepreneurs either, because it contains representatives from both parts, as well as the independent members (Smith, 2005).

The exit method/divestment is an important characteristic of the venture capital investment process. Additionally, exit timing is also a relevant point and it depends on the chosen method (Giot & Schwienbacher, 2007). Some VCs tend to exit their investments in a premature stage. Actually, these VCs are likely to do it partially, not entirely (Cumming & MacIntosh, 2003). There are three main exit methods, such as the Initial Public Offering (IPO), trade sale (TS) or liquidation. Generally, the IPO is one of most common and profitable ways used by investors. Furthermore, it is considered the most successful and preferred one (Bascha & Walz, 2001). Within this process, VCs issue their shares, which are sold to public investors. However, these shares do not allow investors to have an active role, in terms of the firm's management. Nevertheless, entrepreneurs maintain their position in the top management (Schwienbacher, 2008). Trade sale is another exit option and the firm is sold to another strategic company, which actually has some interest on it. The backed company may be also acquired (partially or entirely) by another VC. However, these cases are not so frequent (Cumming & MacIntosh, 2003). Finally, the third exit option is the liquidation, when the new product or service is not successfully developed and the new firm is liquidated (Schwienbacher, 2008). Hence, these cases are associated to the unsuccessful ones and it might probably occur at the end of the firm's life cycle. For VCs, it is extremely important to make all efforts to avoid it. Actually, this paradigm is not desired, since "a forced sale may be a fire sale" (Cumming & MacIntosh, 2003, p. 14).

In short, venture capital investment contains a broad range of specific characteristics. In fact, VCs and backed firms must be aware of those specificities. VC's strategic support, capabilities sharing, backed firm's control, information asymmetry or syndicated investments are some examples of relevant aspects, which both sides must take into account in this process.

1.4. VC's intervention in the INV's internationalization

According to the internationalization characteristics of INVs, it is important to analyze the VC's influence on that process. The main objective of this section is to provide an approach about the importance of VCs overcoming barriers, within the INV's international path. However, although VCs are risk-takers, some of them view the early internationalization in new ventures as risky and because of that they make efforts in order to avoid foreign markets, showing preference for domestic investments (LiPuma, 2014). Actually, this fact may be related to the lower survival of new venture's internationalization but higher growth, comparing with new ventures, which just operate under a domestic basis (LiPuma, 2014).

There are different perspectives in terms of the VC's possibilities to overcome the INV's liabilities of newness, such as the influence of networks (within the home country and within the local market). Networking is considered very important and it is also classified as the "reliance on alternative governance structures to access resources" (Manolova *et al.*, 2010, p. 258). According to Ellis (2000), personal networks (previously known) have a crucial importance, in terms of efficiency (resource's saving) and performance. These type of networks are likely to turn the internationalization path into an easier process. Actually, personal networks are easily accessible and they might be able to save the INV's resources (for example, time and money), instead of take a different option, such as the market research (Ellis, 2000). Additionally, it can be also considered as an opportunity to control the opportunistic behavior, which might come from another unknown entities (Manolova *et al.*, 2010). However, this VC's support can act through a different point of view. For example, VCs not only provide INVs contact to resource providers, but they also protect those resource providers against INV's potential opportunistic behaviors or unreliability. In other words, INVs might be viewed as trustable partners by those resource providers, due to their affiliation with VCs (Stuart *et al.*, 1999).

The type of VC might also be a relevant point, within the internationalization path. According to Schildt *et al.* (2005), corporate venture capital (CVC) is likely to possess more international networks, for example, concerning the potential foreign customers. Some CVC's parent companies are multinational firms, and consequently, they are likely to pull their backed firms into some specific markets, in which these multinational companies develop some kind of activity (LiPuma, 2014). Additionally, CVC investors possess a higher level of reputation and legitimacy than independent venture capitalists (IVCs), within foreign environments, since they commonly have internationally known multinationals as parent companies (LiPuma, 2014).

1.4.1. Informational intervention

Venture capitalists are able to analyze foreign markets in order to minimize the INV's informational problems. Some of them are crucial and they deserve some attention, concerning the new market's entry. Guler and Guillén (2010b) gave special attention to the legal protection of the investor’s rights. They approached the relationship between these rights and another factors within foreign markets. For example, the legal systems of foreign markets. Further, VC’s intervention and support will depend on those conditions. According to this evidence, VCs may be able to anticipate any kind of change in important regulation, such as the property right’s protection. In fact, the VC’s mission is to clarify the influence of these policies in the foreign market’s political/regulatory stability, since it might be an important factor, concerning the investment in those countries (Guler & Guillén, 2010b). Additionally, VCs may be an important partner through another point of view: their experience. According to Sorenson and Stuart (2001), the VC’s prior international investment experience may be a crucial factor reaching new markets and enlarge their future international scope, supporting the INV’s activities overseas. Prior experience may help VCs overcoming more obstacles. Delineate contract’s characteristics or evaluate business opportunities abroad are some examples of that (Sorenson & Stuart, 2001). Actually, the VC’s international networks increase over time, with the internationalization of the venture capital industry. Additionally, the syndicated investments abroad also contribute to a raise of international knowledge, which is significant in order to identify new business opportunities abroad (LiPuma, 2014). The costs of monitoring may achieve a better efficiency as well, as a consequence of the VC’s prior experience. The negotiation’s constraints might be another point, in which prior experience can have a decisive influence (Sorenson & Stuart, 2001). According to this evidence, INVs might benefit from these experienced VCs, minimizing the informational lacks about foreign markets.

Networks within home country deserve some attention, too. Home country partners may possess some relevant information about the firm, which can be useful for foreign market’s stakeholders (Guler & Guillén, 2010a). These partners can contribute to assure the firm’s reliability within the foreign markets. Without that support, the firm could face some problems, in terms of signal its reliability (for example, showing foreign stakeholders that it is trustworthy). It can reduce the venture’s foreignness liabilities. However, these home country partners might possess a high level of “social status”.

In order to reduce the informational constraints, VCs may also stage their investments. According to LiPuma (2014) such problems are more likely to occur with a greater geographical distance. Thus, if there is a large distance between investors and new ventures, VCs are likely to use more stages of funding with shorter durations between them, in order to develop an efficient monitoring. However, on average, VCs prefer to be near the ventures in which they invest, in order to oversight their activities as well as maintain narrow connections with the venture's founders (Sorenson & Stuart, 2001).

Gompers and Lerner (2001) highlight the strategic support provided by VCs, in addition to financing. Further, strategic advices, contacts and reputation are some examples of the VC's characteristics, which may be useful for INVs, in order to reach new markets. These points may take an important role in the internationalization path, specifically, minimizing the aforementioned informational problems. "Social status" is an important VC's characteristic and it can easily influence the stakeholder's perceptions about the new venture's qualities and outputs. This characteristic is considered as "a structural attribute of individuals or firms that are embedded in a certain social structure" (Guler & Guillén, 2010a, p. 393). In reality, "social status" may be especially useful when there is a shortage of information about those ventures. Guler and Guillén (2010a) also highlight the importance of being affiliated with partners (VCs, for example) with high social status. These partners might assure the output's quality for future stakeholders and achieve new investment opportunities abroad. This procedure can also increase the backed firm's social status, as a consequence. These partnerships may result in a favorable access to different types of resources, such as the better information, due to the right connections. Stuart *et al.* (1999) consider the firms with high social status as "prominent organizations". Actually, according to Stuart *et al.* (1999), this partner's characteristic might have an important influence attracting the attention of important stakeholders, such as customers, suppliers, business media or business analysts.

Sorenson and Stuart (2001) also approached the VC's networks that come from venture capital environments (from participants in this process). Actually, these networks might have a decisive role, accessing the international information, which might be important to reach new markets. The VC's reach is likely to enlarge over time, due to some networks effects. Actually, within this dimension, it may be considered the social and geographic reach, since the successive investments allow them to reach different contacts and it may enlarge their networks (Sorenson & Stuart, 2001). Connections can be established with other VCs, experts or new entrepreneurs. These are commonly established within the same industry. Actually, the VC may be investing in the same industry for a long period, which can bring some important connections within the same field, from different parts of the globe (Sorenson & Stuart, 2001). These networks within the same industry might allow the VCs to access privileged information across borders and it can be helpful for backed firms.

Syndicate investments may be another activity, which is likely to create some relevant connections between VCs. When two VCs are funding the same project together, the information is likely to flow throughout the venture capital community. Actually, VCs will enlarge their networks, every time they syndicate investments with another VC, since new associations will be developed. Further, VCs with many syndicated investments are likely to possess important networks and they access to a high amount of information, either in terms of industries or geographic regions (Sorenson & Stuart, 2001). Furthermore, the geographical distance between foreign and local VCs is not likely to result in a successful exit, when they are funding the same venture (syndicated investments). Nevertheless, the existence of a local syndicate partner might increase the likelihood of a successful exit (LiPuma, 2014).

1.4.2. Functional intervention

Functional constraints also represent an important part of the INV's constraints. The constraints approached in this section are related to the INV's lacks, in terms of the managerial expertise and resources availability to supply foreign markets. Actually, they might have different effects, depending on the firm's stage (Vozikis & Mescon, 1985) and it is important to analyze the VC's role, overcoming these INV's international constraints.

According to Fernhaber and McDougall-Covin (2009), there is some correlation between VC's international knowledge/resources and INV's international process. Reputation is also a relevant point and Fernhaber and McDougall-Covin (2009) considered that the VC's international knowledge is most noticeable, when the VC is also reputable, which might facilitate the new market's entry, overcoming functional barriers. In reality, VCs reveal an important role, acting as "catalyst to new venture internationalization" (Fernhaber & McDougall-Covin, 2009, p. 1). Arthurs and Busenitz (2006) also attribute an important role to the VC's experience and reputation. Further, they found a positive relationship between them and the first year of stock price returns, which is used to measure the INV's performance (Arthurs & Busenitz, 2006).

Further, a partnership with an external institution may be a reliable option, in order to exploit intangible resources, since it may achieve a greater dimension with this type of support. Additionally, this VC's international knowledge may have crucial importance reaching larger scale strategies, such as the internationalization process (Fernhaber & McDougall-Covin, 2009).

Arthurs and Busenitz (2006) developed an approach comprising the relationship between backed ventures and non-backed ventures, and the VC's influence on their activities. They found greater dynamic capabilities in the first ones, in terms of the product and management development. Additionally, Fried *et al.* (1998) focused their analysis in the post-IPO era, since this stage requires different skills, due the transition from entrepreneurial teams to the professional management. Further, backed ventures might have an important advantage, since their boards show a greater involvement in the strategy's development and monitoring, than non-backed ones. Further, Fried *et al.* (1998) found that the board involvement have a positive influence on the backed-firm's performance.

According to Arthurs and Busenitz (2006), there is a valuable support provided by VCs, at this stage of the INV's lifecycle. Within this phase, a competent management team is a crucial necessity. According to the aforementioned comparison between backed ventures and non-backed ventures, the first ones show a high performance, at the 1-year mark (Arthurs & Busenitz, 2006). The market perceives the VC's support in the management team as an important one and they believe that boards with VCs are likely to hire new managerial talent or motivate the existing ones, in order to achieve the INV's objectives. According to LiPuma (2014), internationalization requires a high level of oversight. Thus, the members of the venture's board must present geographical proximity, which is an important determinant. Larger and older VCs are the most appropriated ones to integrate the venture's board, since those ones grant a higher level of experience as well as they may positively signal the firm to potential investors (Lerner, 1995). Arthurs and Busenitz (2006) also stated that the market valorizes backed ventures (more than non-backed ones), specially, when those ventures face management's inexperience, within that stage with a high level of uncertainty. Thus, according to this evidence, the VC's strategic support is noticeable and recognized, and INVs may take advantage from that, within the early stage.

The management team of the VC backed-venture is an important functional subject and it deserve much attention. According to LiPuma (2014), VCs believe that international activities may present lucrative opportunities, in terms of attractive returns on investment. However, the management team may be appointed, in line with the investor's intentions. Hellmann and Puri (2002) developed an analysis focused on the characteristics of the venture's management, after the VC's intervention. This evidence brings the idea that VCs develop their activities, in order to "professionalize" the firm, which is likely to be a faster process in venture-backed firms (Hellmann & Puri, 2002). This professionalization might consist in hiring new management teams and some positions may be switched, including the replacement of the CEO. However, after the replacement, some of the former CEOs remain involved in some firms' operations after the arrival of a new CEO. According to Hellmann and Puri (2002), former CEOs may take a position in the board or develop other activities, such as chief technology officer, business developer or another position. Actually, this evidence considers that VCs provide a range of ancillary services, which may support the venture's professionalization and their establishment in the marketplace (Hellmann & Puri, 2002).

The changes within the management teams are likely to appear through four main dimensions, which are the recruitment practices, the human resources policies, the stock options planning and the recruitment of vice president of marketing and sales (Hellmann & Puri, 2002). Stock options, "which give the recipient the right to buy a share of stock at a pre-specified exercise price for a pre-specified term" (Hall & Murphy, 2002, p. 1), is an option to manage the human resources and compensate managers, specifically. This is an important mean, since valuable human capital might be attracted, and VCs provide incentives in order to retain them. In terms of these stock options, Hellmann and Puri (2002) found a strong relationship between obtaining venture capital and adopting a stock options plan. Actually, backed-firms possess more than twice of the likelihood of having a stock options plan, comparing with non-backed ones. In terms of the vice president of marketing and sales, it happens in the same way: a vice president of marketing and sales is more likely to be appointed with the intervention of VCs. Hellmann and Puri (2002) also found that VCs have a significant role in the human resources planning, defining policies according to their knowledge. Specifically, one dimension was deeper analyzed, which is the recruitment process. Backed-firms are more likely to use networks, in order to hire some type of human resources, such as the sales, marketing, administrative and managerial personnel. Specifically, the aforementioned networks are business and professional contacts. The use of networks within the recruitment process is one indicator about the firm's level of professionalization, in terms of their relationship with its business environment (Hellmann & Puri, 2002). Actually, through this analysis, it is easily understandable the VC's intervention in the human resources management.

In the section 1.1.1, some financial constraints were included in the functional ones, such as the shortage of working capital to invest. Truthfully, financing is an important part of the venture capital investment. According to Davila *et al.* (2003), the successive rounds of funding are crucial, as well as their timings. The funding's timeline may be conceived in such a way to keep the INV working successfully and take full advantage from the venture's potential (Davila *et al.*, 2003). In other words, it is very important do not harm the venture's growth, due to incorrect choices about the moments to execute the different rounds of financing. For example, some unexpected factors may come up, such as revenues' overestimations or costs' underestimations, and the venture's financial needs might not be synchronized with the different timings to provide capital. Further, VC's decision-making is a process based on much "paper" information (for example, ventures' business plans). Actually, this may increase the consequences of misalignments between "paper" and "real world" (Zacharakis & Meyer, 2000). These misalignments may also contribute to enlarge the consequences of the aforementioned problem of execute the rounds of financing within the incorrect period of time. However, according to Hellmann and Puri (2000), VCs possess business's knowledge and they are aware of the industry's conditions, that is why they may be able to choose right firms to invest in, those with high future potential. This evidence brings the idea that VCs are likely to be aware of the right time to execute the rounds of financing, since they possess expertise not only about the venture's features but also about the market.

1.4.3. Marketing intervention

Within the section 1.1.2 were analyzed some marketing constraints, which may inhibit INVs from reaching new markets and develop their activities abroad. Those are related to some factors, such as the product, price or distribution. Some evidence approach several ways to overcome those barriers, in which VCs might have a decisive role.

In terms of the product constraints, VCs possess assets that are likely to reduce the time to market. Time to market is considered as the “time from the birth of the company to the date of first product sale” (Hellmann & Puri, 2000, p. 15). According to Hellmann and Puri (2000), venture capital is considered as being decisive to accelerate the venture’s product launch, since those ones have a faster time to market with VC’s support. Nevertheless, it depends on the venture’s strategy. For example, innovators are more likely to take benefits from VC’s support since this association is especially strong for them. Contrarily, it seems that firms with non-innovative profiles are not so affected by VC’s support, in order to reduce their time to market. In other words, their time to market does not decrease significantly with venture capital backing (Hellmann & Puri, 2000). Innovators may possess first mover advantages and it is likely to require shorter times to market. Thus, this findings might be important to support the idea that these innovators are more likely to choose venture capital within their early stages (Hellmann & Puri, 2000).

In the first section about INV’s constraints was identified the difficult process of adapting the product, in order to reach new markets and meet their specific requirements. This task is associated to a high level of uncertainty and it must be considered the VC’s influence overcoming this type of marketing constraints. Arthurs and Busenitz (2006) developed an approach based on the relation between ventures with a product related risk factor and the VC’s influence on it. Venture capital backing appears as being important for INV’s product development. According to their findings, it seems that “the market perceives that venture capitalist-backed ventures are better able to address product-related weaknesses and threats” (Arthurs & Busenitz, 2006, p. 207). This product constraint may be minimized through the right choice about the management. Actually, VCs are likely to have close connections with important managerial expertise, assuring the quality of the venture’s project. For example, VCs might convince senior managers with high industry experience to integrate the venture’s project (Arthurs & Busenitz, 2006). However, this connections are not only related to the venture’s management. VCs may also be able to provide additional connections or alliance partners that can support INVs, in order to access important knowledge, which can be crucial to develop the INV’s products (Arthurs

& Busenitz, 2006). This type of "dynamic capabilities" might contribute to explain the reason why the market attributes more value to the VC-backed ventures, comparing with non-backed ones, when there are high product-related risks (Arthurs & Busenitz, 2006).

Additionally, according to the first section, the inexistence of economies of scale may be an important constraint within foreign markets. According to Fischer and Varga (2002), inter-firms cooperation/networks might have an important role achieving economies of scale, reaching new markets, or accessing new technologies. Those economies of scale may come up through an alliance with R&D and/or producing institutions. Zeng *et al.* (2010) approached the relationship between different types of networks and innovation, which requires scale, of small and medium enterprises (SMEs) in China. Their findings point out a high importance of different types of cooperation: inter-firm cooperation, cooperation with intermediary institutions and cooperation with research institutions. According to the evidence, these types of organizations are crucial to the small firm's innovative performance. Furthermore, Zeng *et al.* (2010) found a higher importance of vertical connections with customers, suppliers or other firms, comparing with the horizontal connections with research institutions. As approached within this section, VCs may be able to reach (socially and geographically) this type of vertical connections, since VC's networks enlarge over time (for example, through the contact with other VCs, experts or new entrepreneurs) (Sorenson & Stuart, 2001). Additionally, the literature review also shows the VC's importance, reaching potential foreign customers and suppliers (Gorman & Sahlman, 1989; Schildt *et al.*, 2005). Thus, taking into account the VC's networks reaching these stakeholders, it is noticeable that new ventures may benefit from the venture capital backing. In fact, these networks might be relevant to achieve economies of scale, which are important to be competitive within international environment.

1.5. Literature's conclusions

After the literature review from the previous section, it is important to synthesize ideas and provide an overview about the INV's internationalization constraints and the VC's potential intervention, overcoming those constraints. Hence, this section is divided in three main topics: INV's constraints, VC's intervention and the matching between both parties. In other words, the main objective is to find how those VC's capabilities might address the barriers faced by INVs, within foreign markets.

INV's constraints

International New Ventures (INVs) aim to operate abroad since their inception and this process can be crucial for them. In terms of the INV's constraints, literature highlight some of the most significant ones, within the internationalization path. The most important INV's constraints were the informational, functional, marketing, procedural and size-related ones.

Considering the informational activities, INVs may be unable to analyze correctly the foreign market's characteristics and they may face some difficulties finding business opportunities abroad and contact overseas customers (Czinkota & Ronkainen, 2001; Leonidou, 1995). This kind of connections with foreign markets might be very important to the internationalization process and it may be even more crucial for firms within the early stage. Nevertheless, in terms of the functional constraints, it was possible to conclude that these ones are strictly associated to the size-related ones. For example, the shortage of qualified employees to handle the internationalization issues and the shortage of working capital to invest abroad are not easy to overcome for firms with liabilities of smallness (Gomez-Mejia, 1988; Leonidou, 2004). Once the liabilities of smallness are commonly correlated to the liabilities of newness, INVs are likely to be affected by these functional constraints. Additionally, the inexistence of production capacity to supply foreign markets is also viewed as a crucial barrier for this type of firms (Albaum *et al.*, 2008).

Marketing is also considered a key factor in the internationalization process. Regarding the international product, meet the foreign market's specifications and the efficiency of the after sales service are the most relevant ones (Czinkota & Ronkainen, 2001; Leonidou, 2004). However, through the literature, it was concluded that INVs must be aware of some pricing constraints, which are the inexistence of economies of scale and the exchange rate's fluctuations within foreign markets. In reality, it can hinder the international path, since these fluctuations are likely to make the process unaffordable for INVs and the inexistence of economies of scale can turn the firm into a non-competitive one (Doole & Lowe, 2008; Kandemir *et al.*, 2000). Logistics may also present some important international constraints. The main ones are the costly transportation (due to the inexistence of important international networks) and the inexistence of physical facilities within foreign markets (for example, warehousing facilities) (Albaum *et al.*, 2008; Cateora Philip & Gram John, 2001). However, the logistical constraints may be able to affect the aforementioned firm's international competitiveness.

Developing activities within foreign markets may also bring the unfamiliarity with exporting documentation and foreign monetary systems to handle the financial transactions (Kedia & Chhokar, 1986; Moini, 1997). This constraint can be even more difficult for firms within the early stage. Actually, the size-related factors may take an important role, too. These INV's liabilities of newness are related to the financial or resource barriers. However, it was concluded that these barriers can be connected to the inexistence of some valuable networks. For example, obtaining funding may be harder for INVs, since there are no significant assets to collateralize loans (Rogers, 2004). Additionally, the inexistence of valuable networks may also result in opportunistic behaviors from foreign stakeholders (Verwaal & Donkers, 2002).

VCs intervention

After the previous analysis about the INV's internationalization constraints, the main VC's strengths were also considered, in order to understand whether they possess the necessary capabilities to overcome the venture's liabilities. According to Sapienza *et al.* (1996), VCs may have an important role, providing INVs some international support. VCs might also provide some kind of international support to reduce the INV's uncertainty or implement the chosen strategies.

Using their networks, VCs may be considered as a crucial intermediary between INVs and resource providers. For example, the venture capital may be the mean to protect those resource providers against the INV's hypothetical opportunistic behaviors. Nevertheless, it was concluded the validity of the opposite relationship. For example, INVs can also benefit from VC-backing. They may be considered trustable partners, due to the relations that they maintain with VCs (Stuart *et al.*, 1999). This type of intervention may be even more useful when INVs are unknown within foreign environments. Valuable stakeholders can also be influenced by the VC's "social status" (Stuart *et al.*, 1999). According to this evidence, it was possible to conclude that VC's may be important not only through their direct connections but also through their indirect connections, which come from the aforementioned "social status".

VCs might be also useful for INVs and the experience is one reason for that usefulness (Sorenson & Stuart, 2001). Previous investments and ongoing investments in the same industries are the main sources for the VC's experience. Thus, in terms of the VC's experience, it can be concluded that connections that are established with prior backed firms and stakeholders of the industries (in which those VCs develop some kind of activities) are very important to strengthen the international path.

There are two main types of venture capital (IVC and CVC) and they might have different possibilities or capabilities, supporting the international activity (LiPuma, 2014). Considering that CVCs are likely to belong to some multinational companies, backed firms might benefit from the relationship with CVCs, regarding the entry on markets in which those CVCs maintain any kind of activity. In other words, some valuable connections from CVC's markets can be useful for their backed firms.

The human resources issues are also an important dimension in the VC-backing. In reality, some positions may be switched and new management teams may be hired. For example, different recruitment policies may be executed, since some networks (business and professional contacts) can be used to hire some type of human resources, such as the sales, marketing, administrative or managerial personnel (Hellmann & Puri, 2002). With this type of intervention, the backed firm's management teams are likely to possess a higher knowledge, either in terms of the market knowledge or industry knowledge.

The international product development can also be improved or enhanced, under the VC's support. According to Hellmann and Puri (2000), backed-firms are likely to present a lower time to market, which is the "time from the birth of the company to the date of first product sale" (Hellmann & Puri, 2000, p. 15), comparing with non-backed ones. Additionally, Arthurs and Busenitz (2006) approached the relationship between VCs and product development and they found a positive effect of VC-backing in the venture's products development. Through the previous ideas, it is possible to conclude that VCs are likely to possess some valuable assets, which can improve the backed firm's product, shortening the production time. In the innovative firms, these might be a relevant advantage overseas, since the market entry can be faster and it may attract the customers' attention. These assets might be the VC's close connections with important managerial expertise, within the venture's industry.

In short, VC's intervention is important overcoming the INV's functional, informational and marketing constraints and the new ventures are likely to benefit from venture capital backing, in their internationalization process.

Connections between INV's constraints and VC's intervention

Some of the VC's interventions are able to minimize the INV's constraints, due to the characteristics of each one of them. These specific interventions are likely to present a high importance for the internationalization of new ventures. However, it is important to match both of them. Actually, both parties must be connected, with the objective of understanding which is the most appropriated VC's resource or capability to fit a specific INV's need (view Table 1).

Concerning the informational dimension, there is a relevant lack of knowledge about foreign market's conditions and business opportunities abroad as well (Czinkota & Ronkainen, 2001; Leonidou, 1995). Consequently, it is clearly concluded that the VC's assets may be strongly connected to these informational lacks. For example, according to the Table 1, VCs may be able to support INVs through their connections (horizontal connections, e.g., competitors (Chetty & Wilson, 2003), or the ones that are established with other VCs and experts within the same industry (Sorenson & Stuart, 2001)). Additionally, the acquired experience from prior investments (Sorenson & Stuart, 2001) or the syndication with other VCs (LiPuma, 2014) can also be important sources to improve the awareness of foreign market's conditions. With this VC's intervention, the INVs are able to reach new valuable foreign stakeholders. However, INVs might also access to some crucial information about their destination (e.g. regulatory conditions), and the aforementioned VC's networks can take a relevant role on it.

However, functional constraints also present an important influence on the INV's international activity. The shortage of qualified employees to handle the international activities is pointed out as an important functional constraint (Gomez-Mejia, 1988).

Actually, INVs possess some lacks of exports-related managerial expertise, in which VCs might be crucial. For example, Fried *et al.* (1998) shows that the board's involvement may be higher in venture-backed companies, which can benefit the venture's performance across borders. Furthermore, VCs are likely to hire new management teams (Hellmann & Puri, 2002) and it may also have a high importance handling the international activities. There might be an indirect relationship between the VC's connections and the improvement of the INV's exports-related managerial expertise. Thus, it can be concluded that the connections (e.g. with other VCs or industry experts) can be useful to overcome not only the informational lacks about foreign markets, but also they can be important to overcome the functional constraints. For example, it can come up through the recruitment based on the VC's connections.

In short, VCs might take a relevant role through their valuable networks. However, it can be materialized addressing the INV's informational or functional constraints going abroad, since the VC's connections are likely to bring different kinds of advantages, depending on their provenience (e.g., other VCs, other backed firms, industry experts, etc.).

Table 1 - INV's constraints and VC's intervention (resume)

INV's constraints (from section 1)	VC's intervention (from section 3)
Informational	
1. Few information to analyze the markets and difficulties finding business opportunities;	i) VC's horizontal connections (competitors); ii) VC's prior international investment experience; iii) Syndicated investments with other VCs; iv) Existence of a local syndicate partner; v) Connections with other VCs, experts or new entrepreneurs within the same industry; vi) Investments in the same industry for a long period of time;

Functional	
2. Shortage of qualified employees to deal with export businesses;	i) Board's involvement in the strategy's development and monitoring; ii) Geographical proximity of the board's members of INVs; iii) VC's hiring of new management teams;
Marketing	
3.a) International products specifications;	i) Time to market with VC's support; ii) VC's connections to enhance the product development (e.g., close connections with important with HR with managerial expertise and high industry experience);
3.b) Inexistence of economies of scale;	i) "Social status" (attracting the attention of important stakeholders such as customers, suppliers);

Source: own elaboration

2. Methodology

In order to improve the consistency of the results, the triangulation was used in this dissertation. Specifically, it focused on two main types: the data triangulation and the methodological triangulation. The data triangulation is likely to increase the robustness of the data and it comprises the use of multiple sources of information (Hussein, 2015). In reality, these sources refer to the two samples used in this dissertation: the VCs and the INVs. On the other hand, the methodological triangulation comprises multiple methods to investigate the same phenomenon (Hussein, 2015). This type of triangulation can turn the study into a more trustable one. The one used in this dissertation was the "between-method triangulation", which is likely to comprise both qualitative and quantitative methods (Hussein, 2015). Actually, it can be illustrated with the case study research (qualitative) and the structural equations model and the hypothesis testing (quantitative). The qualitative one is the case study research and it was based on "one-to-one" interviews with VCs. On the other hand, the quantitative one was based on a structural equations model (SEM), which was built with the results collected from a survey. In fact, there are two different perspectives: the VC's perspective and the INV's perspective. The qualitative analysis is related to the VC's perspective and it aimed to collect information from VCs, regarding their intervention in the backed firms. The quantitative analysis is associated to the INV's perspective. In this analysis, the sample comprised INVs and their insights about the internationalization constraints were explored. Actually, in the quantitative method, backed and non-backed firms were separated and the internationalization constraints were analyzed via hypothesis testing, for both groups. Additionally, the previously collected information from the qualitative analysis is used in the quantitative one, in order to attest the VC's importance to overcome the INV's constraints.

2.1. Qualitative methodology

The approached subject presents some complexity and it may be easier studied with information provided by the main actors of this process: the venture capitalists. The geographical distance was not a problem and it was possible to contact some Portuguese VCs. In fact, through this case study research, valuable and detailed data were collected and organized. However, the most important point about this method is that it provided information based on real experiences of venture-backing.

The case study research is an approach, which is likely to explore a single or multiple case, through an in-depth data, based on some specific sources of information and it is likely to achieve case-based themes (Creswell *et al.*, 2007). However, qualitative data might be unstructured, since it might be based on verbatim transcriptions of interviews, notes or written documents. In fact, some of this information came from unstructured sources, such as accounts of experiences or observation of interactions (Ritchie & Spencer, 2002). Hence, the qualitative researcher has the responsibility of give coherence and organize this unstructured information, developing some sequential tasks, such as defining, categorizing or explaining (Ritchie & Spencer, 2002) and those techniques were useful to study the VC's intervention in their backed firms.

2.1.1. Sample and data collection method

Concerning this approach, data collection methods are surveys or interviews and the evidence is qualitative (words). One of the objectives of case study research is to provide a description about the subject (Eisenhardt, 1989). Nevertheless, this type of information is just the "raw data of the research" (Pope *et al.*, 2000, p. 114). It does not provide any explanations and that is why it must be properly analyzed.

In line with Yin (2015), institutional responses may be studied through this type of qualitative data. Actually, the collected data were provided by a group (8) of Portuguese VCs (view Table 2). However, twenty-four VCs were contacted, in order to have the opportunity to collect different and complementary perceptions about VC-backing and its importance for the new venture's internationalization. The answer rate was 58.3%. However, just eight of them had a positive feedback, in terms of the availability for meetings and all of these ones were interviewed. In these meetings, VC's members (mainly managing partners and business analysts) were interviewed. The main purpose of the interviews was to compare the Portuguese VC's intervention with the literature's evidence, in terms of the VC's international approach, supporting their backed firms abroad.

2.1.2. Interview's structure

Each interview is identified with a number (view Table 2). All of them were supported by a script (view Table 16 - Appendix), in order to approach the most important aspects in the literature's review. Similarly to the literature, the approached aspects, throughout the interviews, were related to the three main dimensions of the venture capital investment: informational, functional, and marketing intervention. Specifically, the interview's questions were divided in 4 main parts: i) study's presentation; i) VC's presentation; iii) VC's standard intervention; iv) VC's international intervention in their INVs. However, these interviews had an exploratory direction and the interviewed managers had the total freedom of add some relevant aspects, in order to illustrate its reality supporting their backed firms, operating abroad.

Qualitative research is likely to divide the main themes in categories, which may be obtained inductively (gradually from the data) (Pope *et al.*, 2000). In fact, outcomes from previous interviews (view Table 3) were being questioned in the subsequent interviews, in order to find out their relevance for this study. However, qualitative data is an inclusive process and the categories are likely to reflect as many specificities as possible (Pope *et al.*, 2000). Thus, this is an objective of the research through a gradual addition of subcategories provided by the interviews.

2.1.3. Outcome's analysis method

Seven of the interviews were recorded and transcribed. Then, all of them were organized, through the software NVIVO®. Similarly to Creswell *et al.* (2007), the transcripts from the 7 interviews were analyzed and the most significant statements, sentences or quotes were highlighted. However, each of them fitted specific meaning units. One of the interviews was analyzed through a note-taking method, but it was also included in the software NVIVO®. According to Pope *et al.* (2000), analytical categories are defined to describe a phenomenon. In fact, the information was analyzed and classified, according to the aforementioned method. Usually, the interpretation of the collected information is influenced by the study's objectives and new concepts emerged from the data by themselves (Pope *et al.*, 2000). In this case, these are the literature's evidence and the additional information from interviews, in terms of the informational, functional and marketing intervention.

With the chosen methodology, the researcher is likely to collect data from a variety of sources and aggregate them to illuminate the case (Baxter & Jack, 2008). Thus, it was possible to identify how many VCs ("sources") mentioned each item and the content of the emerging information about each one of those items ("references") (view Table 3). In fact, through this analysis, it was developed an overview about the most relevant aspects and the existence or inexistence of any relationship with the literature's aspects.

2.2. Quantitative methodology

In order to reach a complementary knowledge about the subject, quantitative data was also included in the empirical part. The outcomes from the qualitative data (interviews with VCs) were used in the empirical model, with the objective of analyze the relationship between the VC's intervention and the internationalization of their backed firms.

2.2.1. Survey characteristics

The survey is a very important part of the empirical study and it must be carefully analyzed. Its target comprised Portuguese companies with 7 or less years of existence, which are developing international activities (sales or services abroad). These two criteria aimed to collect information about their main constraints operating abroad.

The survey is divided in four main parts, which are the firm's identification questions, the VC's intervention, the internationalization constraints and the degree of internationalization.

<u>Part 1 (view Table 18 – appendix):</u>

The first part of the survey comprised some identification questions with the objective of collect some information about the sample's profile, concerning the sector, industry, dimension, years of existence or international activity. This part was also relevant to filter the companies, in order to accomplish the two main criteria (less than seven years of existence and international activity).

Part 2 (view Table 19 – appendix):

The second part of the survey aimed to incorporate the findings from the qualitative data (interviews), in order to find out whether the VC's intervention was important for backed firms. The approached questions were sourced either from the literature or from the emerging aspects, in the interviews with the VCs.

Part 3 (view Table 20 – appendix):

Concerning the third part of the survey, the questions were conceived with the objective of develop an approach about the main constraints of new ventures, in their first stage of internationalization. With all these questions, it was possible not only to establish a relationship between the constraints and the degree of internationalization, but also a comparison between backed and non-backed firms, regarding their difficulties within foreign environments.

Part 4 (view Table 21 – appendix):

Finally, the last part of the survey comprised some questions to evaluate the degree of internationalization of the firm, mainly, based on quantitative indicators or internal practices, which are likely to differentiate the companies, according to the dimension of their international activities.

In terms of the answers, it was used five different types ("free entry text", "free numerical entry", "multiple choice", "likert scale with 7 items" and "yes or no"). However, the meaning behind each question (according to the corresponding variable) and the measures are deeply approached in the section 3.2.1, with the variables' specification.

2.2.2. Measures

The last two parts of the survey were developed, based on the measures for the endogenous variables (view Fig. 3). The scales were collected from previous works that measured those variables under the same methods.

Analyze foreign markets and contact stakeholders overseas (questions 10.a) and 10.b) in the survey):

The market orientation (either in terms of the intelligence generation or intelligence dissemination) was used to have a better understanding about the market analysis. Although these concepts are different, both of them are pivotal aspects of the organizational information processing (Jaworski & Kohli, 1993). The intelligence generation is associated to the process of information collection and it might be the most important part. On the other hand, the intelligence dissemination is the method of sharing and diffusing the information throughout the organization, vertically and horizontally (Jaworski & Kohli, 1993). In the survey was used a 7-point scale, in which very important (huge constraint) is scored 7 and very unimportant (not a constraint) scored one. However, there are some differences between the scale used by Jaworski and Kohli (1993) and the one used in this dissertation. For example, the questions about departmental connections are not used, since new ventures are analyzed and these ones might not have yet an organized internal structure, in terms of their departments. Additionally, these questions were adapted from Jaworski and Kohli (1993), since they were used to measure the venture's constraints, in terms of the intelligence generation and intelligence dissemination. In other words, instead of asking about the existence of the intelligence generation or intelligence dissemination, the problem was exposed through a different way, which was the inexistence of this kind of capabilities, analyzing foreign markets and stakeholders. Thus, the questions were adapted, in order to fit the survey's objective in a better way.

Lacks of managerial expertise (questions 10.c), 10.d) and 10.e) in the survey):

Three variables were collected from Sadler–Smith *et al.* (2003), which were the "managing process", "managing vision" and "managing stakeholders and environments". This measures clearly fit this model, since it analyzes the management's behavior in small firms and this dissertation also approaches this kind of companies. Although Sadler–Smith *et al.* (2003) considers more management dimensions (e.g. performance, culture and development), these ones were not approached. Actually, "process", "vision" and "stakeholders" are considered the most suitable to fit this model. The first one (process) is related to the programs/plans and negotiation/agreements. In terms of the second one (vision), Sadler–Smith *et al.* (2003) approached it through two main dimensions in the survey, which are the product development and the necessities of customers and competitors. In fact, according to McConnell (1979), managerial expertise might be important to overcome the product adaptation constraints, highlighted by Leonidou (2004). That is one of the reasons why this variable was chosen for this model. One the other hand, customers and competitors are relevant points of this dissertation, mainly in the usefulness of the VC's networks reaching customers and suppliers (Gorman & Sahlman, 1989; Schildt *et al.*, 2005). Finally, the management of stakeholders and environments (Sadler–Smith *et al.*, 2003) were the other variable used to measure the managerial expertise. This dimension comprises the identification of the stakeholder's needs and the political or regulatory aspects that might influence new ventures. A 7-point scale was used to collect the answers for these 3 variables, in which very important (huge constraint) is scored 7 and very unimportant (not a constraint) scored one. Concerning this variable, the model intends to measure the venture's constraints handling the managerial dimensions. This is the reason why the survey approached it, with the objective of measure the venture's difficulties managing the aspects that were previously highlighted and included in the survey of Sadler–Smith *et al.* (2003) to measure the managerial capabilities related to the three dimensions (process, vision and stakeholders/environment).

<u>Lacks of exports-related managerial expertise (questions 10.f), 10.g) and 10.h) in the survey):</u>

The lacks of exports-related managerial expertise may be measured through a triple dimension, which came from Filatotchev *et al.* (2009). These dimensions are related to the R&D intensity, global networks and the international knowledge transfer. The R&D dimension is related to the past experiences, since it may benefit the small firms' capabilities, in order to be more competitive selling their innovative and self-developed products (Filatotchev *et al.*, 2009). This dimension is approached through an analysis about the entrepreneur's previous experience. Specifically, it comes up as a dummy variable, which assumes the value 1 if the entrepreneur previously worked for a multinational corporation (MNC) and zero otherwise.

The international knowledge transfer intends to analyze the transfer of many types of knowledge (e.g. products, technology and financing) across countries. In order to have a better understanding about this subject, some knowledge dimensions were approached in the survey: the new technological and business ideas, marketing knowledge and financial knowledge brought from foreign markets. The measure was the same, comparing with Filatotchev *et al.* (2009), which is a 7-point scale, in which very important (huge constraint) is scored 7 and very unimportant (not a constraint) scored one.

Finally, the global networks were also analyzed as a variable to measure the exports-related managerial expertise. These networks are related to the personal and professional strategic linkages, which are likely to access firm-specific characteristics. This variable was measured through a scale used in Filatotchev *et al.* (2009) and it comprises the level of importance of three types of connections: networks from foreign markets, contacts with people within those markets and the membership of different kind of associations overseas. This scale is the same, comparing with the one used to measure the international knowledge transfer (7-point scale very important scored seven and very unimportant scored one).

Although the scale from Filatotchev *et al.* (2009) approached the managerial expertise related to the export process, this scale was adapted in the survey to fit the model's objectives. This adaptation consists in formulate the same questions in a different way. Specifically, this way intended to approach the level, in which these aspects (global networks, international knowledge transfer and R&D intensity) were constraints for the internationalization of new ventures.

<u>Shortage of working capital to invest in the exports process (question 10.i) in the survey):</u>

The scale used to measure the working capital was adapted from Padachi (2006), which suggests two variables to express the working capital: the cash conversion cycle (CCC) and the return on assets (ROA). The cash conversion cycle was included in the survey as "the time lag between expenditure for the purchases of raw materials and the collection of sales of finished goods" (Padachi, 2006, p. 49). This question used a 7-point scale (where very unimportant (short period of time) is scored 1 and very important is scored 7 (long period of time)). This measure is related to the level of importance of the aforementioned time lag, as a constraint for the internationalization path.

In terms of the return on assets (ROA), the survey approached it as the relationship between the profitability of the business and the assets (Padachi, 2006). The question was the profit's weight in the assets and the scale came up from the definition of three percentage ranges (from 0% to 5%; from 5% to 10%; more than 10%) to collect the possibilities of responses. However, these two measures for the working capital refer to the first stage of the international business and that is mentioned in the questions.

<u>International product development (including ancillary services to supply foreign markets) (question 10.j) in the survey):</u>

Three measures were chosen in order to have a better understanding about the variable. Those are the product adaptation, the provision of repair services overseas and the provision of technical advice overseas. This scale derived from Moini (1997) and its measure comprises the level of importance of each one of these constraints in the export process. The scale used by Moini (1997) focused on different dimensions in terms of the exports constraints, such as the marketing or financial barriers. However, in this model, just the technical and the adaptation ones were used to measure the international product development, their adaptation and the ancillary services provided abroad. Actually, those ones are more suitable for the dissertation's objectives, according to the new ventures' constraints, highlighted in the literature. It was considered a 7-point scale (where very unimportant is scored 1 and very important is scored 7). In this scale, the non-relevant constraints must be scored 1 and the very significant ones must be scored 7. Moini (1997) developed an approach based on the importance of the aforementioned constraints (e.g. technical, adaptation, financial, etc.), highlighting the most relevant ones for the export activities of small and medium-sized firms. Although these aspects have been used in the survey, the questions were adapted, in order to have a better understanding about the level of importance of each one of those constraints for the internationalization of the inquired firms.

Degree of internationalization (questions 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24 in the survey):

This variable is the endogenous one and it intends to reflect the level of internationalization of new ventures. The measure for this variable derived from Cavusgil (1984). Through this point of view to classify the degree of internationalization, some quantitative questions are used in the survey (e.g. profits derived from exporting or international sales' weight in the total sales). The measures for this type of variables appear in 3 main intervals, which are "from 10% to 19%", "from 20% to 39%" and "more than 40%". Additionally, some intrinsic characteristics of the firm are also included in this concept of internationalization degree, such as the marketing policies or the research practices for foreign markets. For example, in the marketing policies, some aspects are questioned, such as the contact with foreign distributors or the adaptation of these policies for foreign markets. There is just two options for the response to this type of questions ("yes or no" or multiple choice). However, two questions of Cavusgil (1984) are not used, since they are not related to the objective of this research. Those are the uniqueness of the principal export product and the principal markets to export. According to Cavusgil (1984), the marketing policies must be adapted for foreign markets and that is an indicator about the degree of the internationalization of the firm. In turn, research practices tend to be more efficient in firms with a high degree of internationalization.

2.2.3. Variables' specification

Table 5 - Variables (resume)

Latent Variables (LVs)	**Author (scale)**	**Manifest Variables (MVs) - Questions of the survey (numbers)**
Inclusion of some members (generally, 1 or 2 members) in the venture's board as NEDs	-	9.a)
Inclusion of industry experts in the venture's board as NEDs	-	9.b)

Recruitment based on the VC's connections	-	9.c)
Personal connections of VC's members	-	9.d)
Establishment of a partnership with local partner	-	9.e)
Search for new capital investors - intros	-	9.f)
Syndicated investments with another VC	-	9.g)
Syndicate investments with local VCs	-	9.h)
Other backed firms in the same markets	-	9.i)
Acquire firms within countries of destination	-	9.j)
Analyze foreign markets and contact stakeholders overseas (Intelligence Generation) – "AMIntGen"	(Jaworski & Kohli, 1993)	Market Orientation (Intelligence Generation): 10.a)
Analyze foreign markets and contact stakeholders overseas (Intelligence Dissemination) – "AMIntDiss"		Market Orientation (Intelligence Dissemination): 10.b)
Lacks of managerial expertise ("ManExp")	(Sadler–Smith *et al.*, 2003)	Managing Process ("MEManProc"): 10.c)
		Managing Vision ("MEManVis"): 10.d)
		Managing Stakeholders and Environments ("MEStaandEnv"): 10.e)

Lacks of exports-related managerial expertise (“EE”)	(Filatotchev *et al.*, 2009)	International knowledge transfer (“EETransf”): 10.f)
		R&D intensity (“EERandD”): 10.g)
		Global networks (“EEGloNet”): 10.h)
Shortage of working capital to invest in the exports process (“WC”)	(Padachi, 2006)	Cash Conversion Cycle (“WCCCC”): 10.i.1)
	(Padachi, 2006)	Return on assets (“WCROA”): 10.i.2)
International product development (“IPM”)	(Moini, 1997)	Adapting products for foreign markets (“IPMAdapt”): 10.j.1)
		Providing repair service overseas (“IPMrep”): 10.j.2)
		Providing technical advice overseas (“IPMTecAdv”): 10.j.3)
Degree of internationalization (measured by the exports sales) – “DoI(ExpSal)”	(Cavusgil, 1984)	Export sales’ weight in the total sales: 11)
Degree of internationalization (measured by the marketing policy) – “DoI(MarkPol)”	(Cavusgil, 1984)	Marketing Policy Aspects of International Involvement: 12), 13), 14), 15), 16).
Degree of internationalization (measured by the export profits) – “DoI(ExpProf)”	(Cavusgil, 1984)	Profits Derived from Exporting as a Percentage of Total Company Profits: 17)
Degree of internationalization (measured by the research practices) – “DoI(ResPract)”	(Cavusgil, 1984)	Foreign Market Research Practices of Companies: 18), 19), 20), 21), 22), 23), 24).

Source: Own elaboration

Exogenous variables:

In order to develop a clear analysis about the Portuguese venture capital market, it is crucial to use the previously collected information about the VC's intervention. Actually, this dissertation intends to demonstrate the causal relation between the internationalization of new ventures and the venture capital support.

Inclusion of some members (generally, 1 or 2 members) in the venture's board as NEDs:

This variable depends on the investment's characteristics, but it might also depend on the VC's methods. According to the interviews, some rules must be followed, in terms of board's involvement. For example, the CEO's appointment or the introduction of Non-Executive Directors (NEDs) in the venture's board. VC-backed firms show a higher board's involvement (Fried *et al.*, 1998) and the this model intends to analyze the consequences of this involvement operating abroad.

Inclusion of industry experts in the venture's board as NEDs:

There is another relevant point, in terms of board's involvement, which is related to the characteristics of the appointed members by VCs. For example, if they are VC's members or industry experts, appointed based on the VC's personal connections. In other words, it may be important to analyze their background and why they were chosen for the board's position (1st and 8th interview).

Recruitment based on the VC's connections:

VCs may have an important role in the backed firms through their connections. These connections may be especially useful, in order to hire new human resources for the new venture. According to the 1st interview, the recruitment process may be one service provided by VCs to their backed firms. Therefore, it is important to analyze the influence of this activity in the internationalization of new ventures.

Personal connections of the VC's members:

These empirical data pointed out the importance of the VC's personal networks overcoming the international obstacles (specially, reaching foreign stakeholders), according to the 1st, 4th and 7th interview.

Establishment of a partnership with local partner:

Local syndicate partners can be crucial and they might enlarge the venture's information about foreign markets (LiPuma, 2014). The 2nd interview also highlighted the relevance of local syndicate partners, in order to facilitate the market penetration. Syndicate investments with local partners is a VC's decision, which can be important, with the objective of minimize the informational lacks and it is crucial to analyze that relationship.

Search for new capital investors – intros:

If the new venture needs financial funds (new round of financing), VCs may have a relevant role, introducing them to new investors. These new investors are recommended by VCs and they may help to overcome financial constraints, which are faced by new ventures. Further, the objective is to analyze to what extent this intervention is significant for the venture's internationalization.

Syndicated investments with another VC:

This variable is related to the VC's alliances, supporting the same backed firm in their internationalization path. Consequently, it might bring more information for the new venture. According to the 6th interview, this type of investments are likely to provide more international networks. There might be an enlargement of the potential countries of destination for the internationalization process. The model also raises the influence of this type of investments in the venture's management capabilities, in terms of the exporting process.

Syndicate investments with local VCs:

According to the 4th interview, there are some advantages in syndicate investments with specialized VCs from countries of destination and it is important to find out its consequences for the internationalization process. Actually, this type of VCs possess not only industry knowledge, but also some valuable networks within those markets, which can be very useful for new ventures.

Other backed firms in the same markets:

Previous experiences may benefit future investments and they might contribute to analyze foreign markets. Those previous experiences may come up from other backed firms within those markets. For example, they might have a relevant role, overcoming regulatory constraints (3rd interview) and share experiences between backed firms can improve the international knowledge.

Acquire firms within countries of destination:

In order to be aware of the market's specificities and gain industry knowledge, acquire national or international firms might be reliable options. VCs may have the task of analyze these firms, through a strategic point of view (2nd interview). These acquisitions may turn the internationalization process into an easier one, since foreign markets would be more accessible for new ventures.

Endogenous variables (internationalization constraints):

The first group of variables is related to the ventures' constraints, which were analyzed within the literature's review. All of these constraints were grouped in five main dimensions: analyze foreign markets, managerial expertise, exports-related expertise, financial constraints and product development.

Analyze foreign markets and contact stakeholders overseas:

This variable intends to reflect the ventures' lacks going abroad, in terms of the awareness about foreign markets' conditions, since the INVs might not possess a high amount of information about countries of destination (Czinkota & Ronkainen, 2001). Leonidou (1995) considered that the research might not be executed through the right way and that is why this type of ventures' constraints must be included in the model. The most important informational dimensions highlighted in the literature are the foreign markets' exporting documentations and procedures (Kedia & Chhokar, 1986; Moini, 1997), the regulatory constraints (paperwork) and cultural assumptions (Leonidou, 2004). However, reach local customers (Gomez-Mejia, 1988) and distributors (Czinkota &

Ronkainen, 2001) is another element of the market's analysis and they are also included in this variable.

Lacks of managerial expertise:

According to Leonidou (2004), adapting products may be a critical aspect in the internationalization path and this process may be even harder if the customers' preferences are completely different between markets. Actually, the managerial expertise is appointed by McConnell (1979) as one of the dimensions, which might facilitate the products' adjustments for new markets.

Lacks of exports-related managerial expertise:

The exports-related procedures are very relevant for this dissertation. In fact, within the literature's review, this theme was approached, in terms of the shortage of qualified human capital to handle the export process in new ventures (Gomez-Mejia, 1988).

Shortage of working capital to invest in the exports process:

The financial issues were also presented as an important constraint for the internationalization of new ventures. According to Leonidou (2004), it may be difficult for these kind of firms developing export activities, due to their shortage of working capital to invest. For example, studying foreign markets and visiting those places on site are some relevant expenditures that can hinder the international expansion (Leonidou, 2004).

International product development (including ancillary services to supply foreign markets):

The international product development is another dimension of the literature's review, in terms of the main constraints to operate abroad. This variable comprises some specific types of product constraints, such as their adaptation for foreign markets (McConnell, 1979; Moini, 1997) or the inexistence of production capacity to supply new markets (Albaum *et al.*, 2008). However, some ancillary services are also included in the scope of this variable, such as the after sales services or the logistical inefficiencies (e.g. transport delays) (Leonidou, 2004), which were identified as internationalization constraints in the literature.

Endogenous variable (degree of internationalization):

This model's objective is the analysis of the aforementioned variables in the international activities of new ventures. Specifically, the level of internationalization will be measured by the degree of internationalization.

Degree of internationalization:

This variable is the endogenous one and it intends to reflect the level of internationalization of new ventures. Its main objective was to turn the internationalization process into a measurable one. The degree of internationalization was considered under four main perspectives, which are the marketing policies within foreign markets, exports profits, exports sales and research practices overseas.

2.2.4. Hypothesis testing

In order to have a better understanding about the significance of the variables, some hypothesis were studied and significance tests (two-tailed and one-tailed tests) were used in this dissertation. For each one of them, two different hypothesis were presented, the null hypothesis and the alternative hypothesis (Nickerson, 2000). Symbolically, the null hypothesis can be abbreviated with H_0 and the alternative one with $H_{1.}$ These hypothesis point out in different directions. If the null hypothesis is considered as false, then, the alternative one might be considered as true (Nickerson, 2000). The objective of this kind of tests was to provide a comparison between backed and non-backed firms, regarding the internationalization constrains and the degree of internationalization of both types of firms. Taking both types of tests into account, H_0 is always the same, for each one of the variables. It considers that VC-backed and non-backed firms present no differences facing the internationalization constraints. However, the degree of internationalization of each one of the parts was also considered. On the other hand, concerning the H_1, there was two types of alternative hypothesis, depending on the scope of the test. For example, in the two-tailed tests, the H_1 states that backed and non-backed firms are different facing their internationalization constraints.

2.2.5. Structural Equations Model

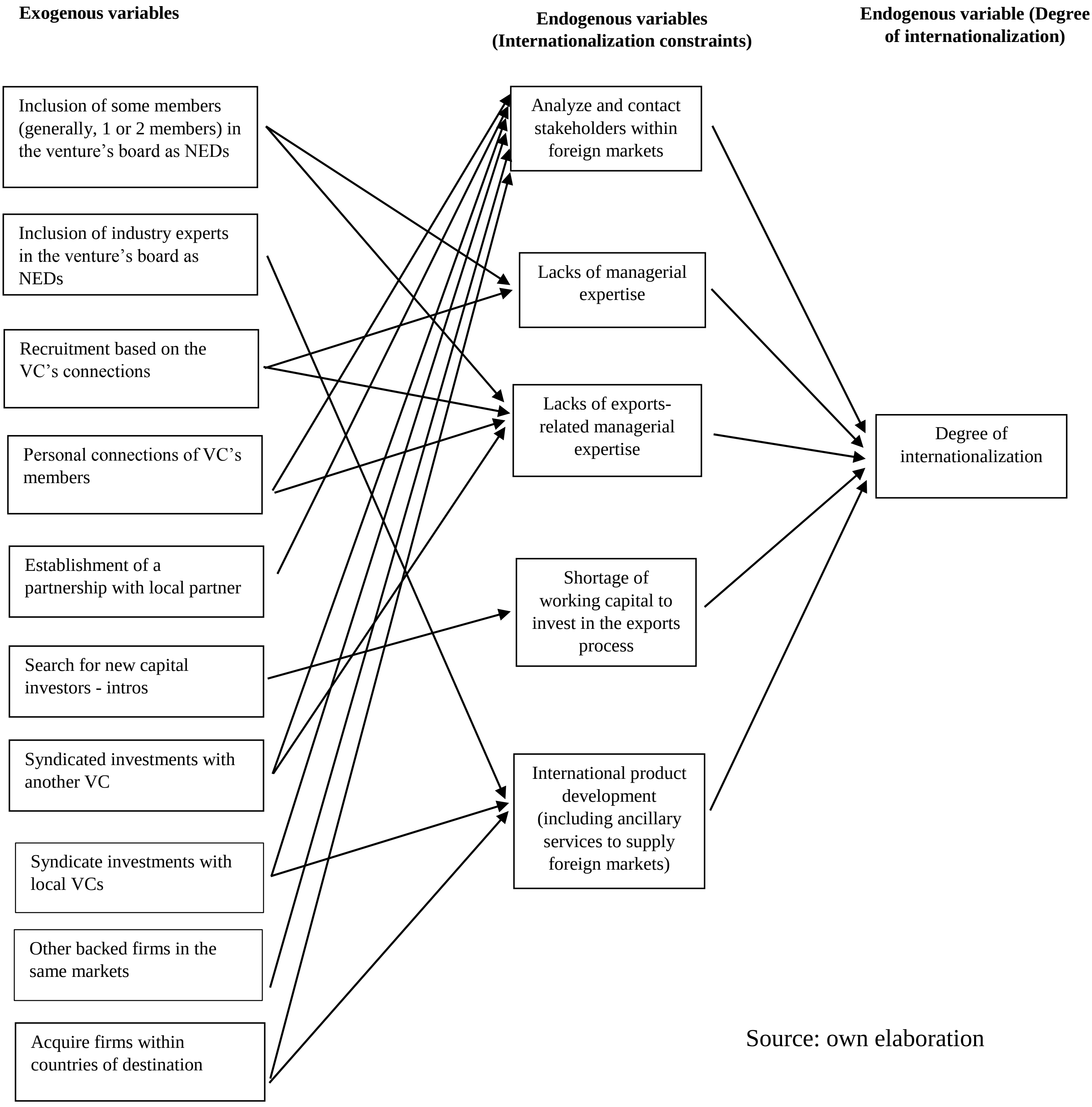
In this type of analysis, the main purpose was the establishment of a relationship between the VC's intervention and the minimization of the INV's constraints in the internationalization path. Consequently, it was also important to establish a connection with the final result of this process, which is the degree of internationalization (view Fig.1).

The VCs' interventions were sourced from the emerging aspects and the most referred ones in the interviews. Those are approached on the left side of the Fig.1. Actually, this was the reason why the qualitative analysis was so important. With this kind of analysis, it was possible to collect some of the most relevant dimensions, in terms of the VCs' interventions in the backed firms and connect them to the INVs' constraints. However, some of these aspects had been analyzed in the literature. These VCs' interventions were grouped in ten exogenous variables, since they are not affected by any other variable in the model.

The second type of variables was presented as a representation of the INV's constraints related to the same subject. These variables are in the middle of the model (view Fig.1). For example, the variable "Analyze and contact stakeholders within foreign markets" comprised many aspects, which were collected from the literature (e.g., regulatory constraints (Leonidou, 2004) or the difficult access to local distributors (Czinkota & Ronkainen, 2001)). The objective of these variables was to find out if there were differences between both types of firms, concerning the way they face each one of the constraints. These INV's lacks were sourced from the literature, considering the three main dimensions: informational, functional and marketing. Considering that these variables are influenced or explained by some other variables in the model (Marôco, 2010), they are endogenous. In order to measure each one of them, some scales were sourced from the literature (view Table 5).

However, it was necessary to include a measure of the international performance, which was the degree of internationalization. This variable is on the right side of the model (view Fig.1) and it was also important for the comparison between backed and non-backed firms, regarding their degree of internationalization, under four main perspectives (marketing policies within foreign markets, exports profits, exports sales and research practices within foreign markets). All of these measures for the degree of internationalization were sourced from the literature (view Table 5).

Fig. 1 – Initial model

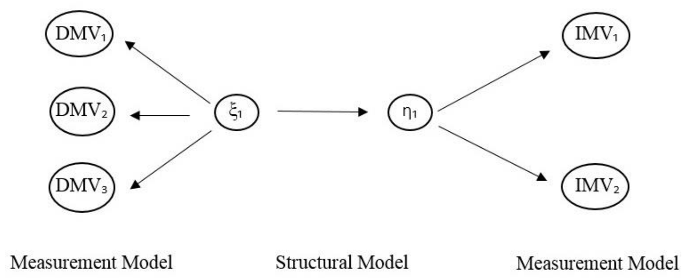


Source: own elaboration

In the social sciences, it may be difficult to find directly observable variables and the most reliable option is to analyze their effects, which can be approached through other variables or indicators (Marôco, 2010). The SEM method allows the researcher to analyze or estimate causal effects simultaneously. For example, it is possible to estimate the effect of x-y and y-z. Through this way, the indirect effect of x on z is clearly approached (Lowry & Gaskin, 2014). Actually, one of the SEM's advantages is the possibility of "include latent (unobserved) variables in causal models. Thus, the researcher may model abstract constructs comprised of many indicators (observed variables), each of which is a reflection or a dimension of the latent construct" (Lowry & Gaskin, 2014, p. 125). These indicators, which are used to measure the latent variables (LVs), are known as manifest variables (MVs). However, two types of MVs must be considered: reflective indicators or formative indicators. According to Chin (1998), reflective indicators are suitable to the factor analysis models. These indicators are approached under the perspective that all of them are likely to measure the same underlying phenomenon, which is the LV. Thus, if the actual level of the LV change, the reflective indicators should change in the same direction (Chin, 1998). Nevertheless, formative indicators are also used as MVs. In contrast to the reflective ones, they are not likely to measure the same phenomenon. In reality, formative indicators are considered as the "cause variables that provide the condition under which the LV they are connected to is formed" (Chin, 1998, p. 306). Considering the characteristics of the variables of the model, both types of MVs were used.

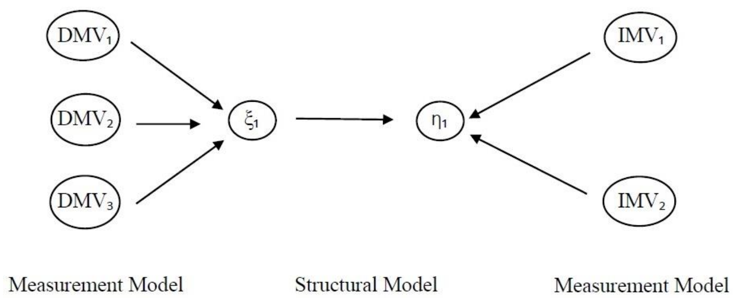
The estimation model of SEM's parameters is also a concern and the one used in this study is the Partial Least Square (PLS). The PLS algorithm analyzes one variable at a time, through the minimization of the residual variance of dependent variables in multiple linear regressions, using the LVs (Marôco, 2010). Another relevant point in the chosen method is the type of relations between the variables. These might be formative or reflective. In the first ones, the LVs are connected to the manifest variables which may be negatively or positively correlated (Marôco, 2010). Contrarily, in the reflective relations, the manifest variables (which are connected to the LV) are positively correlated. In reality, PLS allows both types of relations (Marôco, 2010) and that may be the reason why this method is likely to be suitable to analyze the variables in this dissertation. Both types of relations were used in the empirical model. Except the variables of the degree of internationalization (DoI(MarkPol); DoI(ExpSal) and DoI(ExpProf)) and the working capital to invest in the export process (WC), all of them used reflective relations. The formative relations were included, mainly, in the quantitative variables. Actually, these quantitative LVs are formed by MVs. For example, concerning the working capital to invest in the export process (WC), the "Cash Conversion Cycle" (CCC) is the cause. It is not the consequence. That is the reason why these quantitative variables used formative relations.

Fig. 2 - Structural equation model (SEM) representation (reflective relations):



Source: Author (adapted from Urbach and Ahlemann (2010))

Fig.3 - Structural equation model (SEM) representation (formative relations):



Source: Author (adapted from Urbach and Ahlemann (2010))

Legend (Fig.2 and Fig.3):

DMV: dependent manifest variable

IMV: independent manifest variable

ξ: dependent latent variable

η: independent latent variable

In order to have a better understanding about the degree in which the observable variables develop a trustable representation of the constructs, it is necessary to validate the scale. The construct reliability (CR) is one method that is commonly used to evaluate these conditions (Marôco, 2010). This method is likely to provide an evaluation of the internal consistency of the latent construct. In this dissertation, the analysis was based on the convergent and discriminant validity, which is able to study the intensity of the correlation between the items in the construct (Marôco, 2010). Actually, there is a convergent validity when the items of the construct are positively and highly correlated between them (Marôco, 2010). The construct reliability intends to develop this type of analysis and it was approached in this dissertation. The three main indicators used in the empirical analysis were the composite reliability (CR), the average variance extracted (AVE) and the Cronbach's Alpha. The AVE is a measure used for the consistency and it shows the average percentage of the variance between the parts of the construct. In order to assure the criteria for the convergent validity, it is necessary a CR higher than AVE, and the AVE must be higher than 0.5 (Marôco, 2010). In terms of the Cronbach's Alpha, the minimum acceptable is 0.7. Otherwise, the content of the variables would be too heterogeneous (Kline, 2015).

2.3. Conclusion

The methodology used in this dissertation was selected, taking three main factors into account, which are the research questions, the purpose of the study and the data set. The quantitative methodology was chosen to fit the relationship between the VC's intervention and the degree of internationalization, considering the internationalization constraints that are faced by new ventures in the international path. In the model, these three main subjects are moderated and mediated by several variables, which are not directly observable. Considering these relationships, the SEM (structural equations model) was chosen as a model of analysis. In contrast, the qualitative methodology was chosen based on the characteristics of the subject. In order to study the venture capital market in Portugal, the case study research was considered the most suitable method. Actually, the main features of the venture capital were studied and the “one-to-one” interviews were considered a very important source, since it provided practical information about the VCs’ investments, based on their previous experiences.

In short, the qualitative methodology is able to complete the quantitative one. In other words, with the interviews, it was possible to analyze the VCs’ perceptions about the strategic and financial importance of the venture capital intervention. On the other hand, the INVs’ perceptions were sourced from the quantitative analysis, with the survey. Additionally, the interviews’ outcomes were included in the survey and it was possible to establish a comparison between both perspectives.

3. Empirical data

In this section, the results will be presented. Firstly, the outcomes from the interviews are approached. Those are separated, according to their specific category (view Table 3). After the presentation of the qualitative information, there is an overview about the VC's intervention. The outcomes are organized, according to their level of importance. Additionally, it is also presented a comparison between these outcomes and the literature's aspects. Regarding the quantitative dimension, there are two main elements, which are the empirical model and the hypothesis testing. The empirical model used the outcomes from the qualitative data and it intends to analyze the effects of the VC's intervention on the INV's international constraints and the effects of the INV's constraints on the degree of internationalization. The hypothesis testing aimed to provide a comparison between backed and non-backed firms, in terms of the intensity of the constraints and the degree of internationalization.

3.1. Interviews with VCs (qualitative data)

In order to obtain a broader knowledge about the VC's intervention in backed firms, it was collected empirical data. These data were provided by a group (8) of Portuguese VCs. With these 8 interviews, it was developed an overview about the venture capital market in Portugal and the VC's specific characteristics, supporting their backed firms:

Table 2 - VC's presentation

Number	VC's name	Interviewed	Date	City	Description
1	Vallis Capital Partners, SGPS, S.A.	Francisco Seixas (Analyst)	16/03/2017	Porto	Vallis Capital Partners is located in Porto. Its founders still maintain 100% of the share capital. One of its premises is to develop an active role supporting the backed firms, since the team of Non-Executive Directors (NEDs) show a large business experience. Vallis invests in some different industries, such as genetics, IT or construction.
2	Inter-Risco - Sociedade De Capital De Risco, S.A.	João Amaro (Managing Partner)	03/03/2017	Porto	Inter-Risco was created by the Portuguese bank "BPI", as a bank subsidiary, in order to support entrepreneurs to expand their businesses (growth capital). At that

					stage, BPI had 100% of the Inter-Risco's capital. However, in 2010, happened the Inter-Risco's MBO (management buy-out). Currently, shareholders hold 51% of the capital and BPI the remaining (49%). Inter-Risco invests in some different industries, such as oil and gas, accounting or engineering and industrial maintenance.
3	x)*	x)*	17/03/2017	Porto	This VC support startups (most of them innovative firms) in the early stage. It has a great experience financing this type of firms, since the backed firm's sectors are similar between each other. The management team of the backed firm is important and some joint efforts are made, in order to turn these ideas into successful businesses.
4	2Bpartner - Sociedade de Capital de Risco S.A	Ana Rangel (Business Manager)	23/03/2017	Braga	Located in Braga, 2BPARTNER was founded in 2007. Currently, it belongs to DST group, supporting startups within the early stage and most of them operating abroad since their inception. Most of 2BPARTNER's investments are associated to the technology development.
5	BCP Capital - Sociedade de Capital de Risco S.A	Pedro Pintassilgo (Director)	01/03/2017	Lisbon	BCP Capital belongs to the Portuguese bank "Millenium BCP". After the financial crisis of 2008, Portuguese banks joined, in order to support Small and Medium Enterprises (SMEs), which were affected by the crisis, through their difficulties obtaining financing.
6	Change Partners Capital - Sociedade de Capital de Risco S.A	Mário Pinto (Chairman)	27/02/2017	Porto	Change Partners was founded in 1989. This VC shows a large experience in the venture capital market. It keeps syndicated investments in some different fields, such as the software development or life sciences.
7	Explorer Investments, Sociedade de Capital de Risco, S.A.	Pedro Valente (Analyst)	07/03/2017	Lisbon	Explorer Investments is a VC, which operates through 3 main dimensions: private equity, growth capital and tourism/real estate. It was founded 13 years ago and, currently, it keeps 3 private equity funds under management ("Explorer I", "Explorer II" and "Explorer III"). In terms of tourism/real estate, there is the "Discovery" fund and in the growth capital, the "Fund

					Revitalizar Norte" (FRN) stands out. There is a strong position in the Portuguese and Spanish markets.
8	Novabase Capital - Sociedade de Capital de Risco, S.A.	Henrique Gomes (Investment Analyst)	01/03/2017	Lisbon	Novabase Capital is the Novabase's Corporate VC arm. It was founded in 1993. It was the investment arm of the first Portuguese incubator. Its investments are aligned with the NOVABASE's core business, which is associated to the development of new technologies.

x)* This VC asked for confidentiality of the provided information. Source: Own elaboration

All meetings were analyzed using the software NVIVO®.

3.1.1. Interview's outcomes

Table 3 - Interview's outcomes from NVIVO®

Name	Description	Sources	References
Build-up strategies	Sometimes, VCs acquire different companies, in order to generate a bigger one, which is capable of compete abroad (achievement of economies of scale).	1	1
Functional	It is related to the INV's human resources, after the VCs intervention. For example, the VC's involvement in the strategy with new human resources.	23	46
Board's involvement in the strategy's development and monitoring	The shared decision-making between VCs and backed firm.	8	24
Board observers	Sometimes, VCs choose a NED (non-executive director), which is in the backed firm's board. However, there are more VC's members, developing a monitoring role in the backed firm (board observers).	1	1
Debt	Sometimes, the VC's financial support is not just about equity. Some of the VCs may help their ventures, in terms of debt, controlling the risk of the investment.	2	2
Geographical proximity of the board's members of INVs	With the VC's intervention, the INV's board may be different and new members can be added. Thus, this item is about their geographical proximity between those members.	0	0
Services provision	Some ancillary services may be provided, in terms of the INV's professionalization.	6	10
Group Synergies	Sometimes, the VC belongs to some economic group. Thus, those economic groups may possess other firms (e.g. marketing and communication), which can provide some ancillary services for backed firms.	1	2

Name	Description	Sources	References
Outsource services based on VC's connections	Some ancillary services may be provided by VC's well known firms.	1	1
VC’s hiring of new management teams	With the VC's intervention, the backed firm’s board may be fired or maintained.	3	5
Recruitment based on VC's personal connections	Sometimes, the recruitment process in the backed firms may be supported by VC's partners or shareholders connections.	1	1
Informational	INVs must be aware of the foreign market’s conditions and their specificities. This item concerns all the available means to study the informational aspects, which may influence the INV’s activity overseas.	37	60
Connections with another VCs, experts or new entrepreneurs within the same industry	Relationships/connections with other players in the backed company’s industry. It may be important improving the VC's knowledge about that industry in the foreign markets.	5	11
Existence of a local syndicate partner.	Share an investment with another VC, using a local partner to turn the internationalization process into an easier one.	1	2
International connections	VCs may hold important and valuable connections with some institutions/human capital, which can take a decisive role, reaching new markets, due to their valuable information about foreign markets (e.g. AICEP)	5	7
Investments in the same industry for a long period of time	It is related to the prior experience in the same industry, supporting businesses in the same industry, more than once.	2	3
VC's members background	Sometimes, VCs are likely to invest in some kind of industries, in which their members/shareholders have some knowledge or experience, since there is a better understanding about the business characteristics.	1	2
Looking for new investors	The backed firm may be searching for more financial funds and VCs can help them reaching new investors.	3	4
Personal international connections	Sometimes, VCs use their personal connections, in order to reach foreign markets. This situation may be even more important for the internationalization path.	4	5
Syndicated investments with another VC	Share investments with other VCs.	6	9
Syndicated investments with international VCs	Share an investment with international VCs may have an important role, either in terms of financing or in terms of the range of networks abroad.	1	4
Syndicated investments with other institutions	Shared investments with other players, such as banks, business angels...	4	6

Name	Description	Sources	References
VC’s horizontal connections (competitors)	VCs may have any kind of important connections with potential competitors, which may be useful for backed firms, in order to have a better perception about the main characteristics of that market.	0	0
VC’s prior (international) investment experience	VCs may have prior investments with other backed firms, which may benefit the backed firms. These prior investments may give the VCs the chance of learning from past experiences.	5	7
Marketing	The most noticeable VC's capabilities in the international markets, in terms of marketing intervention (for example, product, distribution or communication).	16	27
International activities	Some VCs support their backed firms, giving them the chance to participate in some international events, such as international fairs (e.g. NOVABASE CAPITAL). Additionally, there are more activities in which VCs can go along with backed firms, such as international meetings (VC's negotiation skills)	4	9
Market analysis - selecting markets	Some VCs used to support their backed firms, studying foreign markets, in which those backed firms will be operating (e.g. potential groups of customers, potential partnerships, etc.)	4	6
Regulatory problems and adaptation	VCs may be useful for INVs, helping them with regulatory constraints (e.g. health sciences sectors)	1	2
Social Status	Reputation and "social status" may be important, in the international path. For example, the backed company's credibility may be strengthen, due to the VC's social status, attracting the attention of important stakeholders such as customers, suppliers.	3	4
Time to market with VC’s support	This items intends to analyze whether the time to market is faster with VC-backing.	2	2
VC’s connections to enhance the product development	In the foreign markets, it may be hard to develop the firm's product. Thus, the VC's relations may be important, within home countries or foreign markets. For example, close connections with important HR with managerial expertise and high industry experience.	2	4
Mergers, acquisitions or International partnerships	VCs may help their backed firms, dealing with these kind of processes.	2	3
Acquisitions	Sometimes, it is common to buy other companies, in order to enlarge the production capacity to obtain economies of scale, for example. Thus, VCs may support backed firms, studying the market and analyse which are the most interesting firms to acquire.	1	2
International partnerships	VCs may have an important role, establishing the international partnership's terms and conditions.	1	1

Source: NVIVO®

The exploratory interviews aimed to add value to the literature's background, by providing a broader practical perspective of the venture capital market in Portugal. There was two main types of valuable information: new evidence (comparing with the literature's review) and evidence supporting the literature's findings. Although the information is valuable, not all of them fit the objectives of this dissertation. Hence, just this kind of information will be presented and discussed. Similarly to the literature's review, the information was divided in three main categories: functional, informational and marketing.

3.1.2. Discussion

<u>VC's involvement in the backed firm board:</u>

In terms of the functional dimensions, VCs may take an important role. For example, the first point was the VC involvement in the backed firm's board, developing the strategy and monitoring it. According to Fried *et al.* (1998), backed ventures might have an important advantage, since their boards show a greater involvement in the strategy's development and monitoring, than non-backed ones. For that reason, it is extremely important to analyze the VC's role on it. VCs are likely to appoint new management teams for some of the VCs' positions (Hellmann & Puri, 2002). Thus, the exploratory interviews were able to find out how these changes in the venture's board may be executed. Most of the interviewed VCs referred the inclusion of some members (generally, 1 or 2 members) in the venture's board as NEDs (4th, 5th, 6th and 8th interview): "Usually, we ask for a board seat…always non-executive" (8th interview). Additionally, VCs maintain a minor position, in terms of the share capital (3rd, 4th 5th and 6th interview). According to the 1st interview, "some industry experts may be also included in the venture's board as NEDs" (1st interview), since their experience and knowledge may be useful. After the VC's intervention, some venture's positions may be switched. For example, the replacement of the CEO (Hellmann & Puri, 2002). This theory was supported by the interviews. They revealed that VCs may have the responsibility of choose the C-level positions, such as the CEO or CFO (2nd and 6th interview): "Appoint the CEO is one of our rules" (6th interview). Additionally, the 6th interview highlighted one method to keep the backed firm under control, which is the appointment of the CEO, just for periods of 1 year. However, other VCs might just participate in the choice (5th interview).

<u>Services provision:</u>

Another relevant point was the services provided by VCs. Human resource's policies were pointed out either by the literature or interviews. According to Hellmann and Puri (2002), VCs might take an important role defining policies, according to their knowledge and networks. In the 4th interview, it was highlighted the importance of outsourcing (based on VC's networks): "Sometimes, if we think that we do not have the necessary capabilities, we outsource those services and our connections are useful" (4th interview). For example, in terms of the recruitment process, backed firms are more likely to use professional networks to hire some type of human resources, such as the sales, marketing or managerial personnel (Hellmann & Puri, 2002). Thus, according to the 1st interview, recruitment is one of the provided services, for example, in terms of the sales team. The human resources policies were highlighted by the 8th interview, with the necessity of a stock options plan. This outcome is likely to support the literature's evidence, where backed firms are more likely to adopt a stock options plan (Hellmann & Puri, 2002). Additionally, internal information and communication are also relevant points, from interviews. Some of them (1st and 5th) revealed that backed firms might have weak information/reporting systems. Thus, VCs take a relevant role professionalizing their backed firms though this way. Foreign markets information is one of the most relevant constraints in the internationalization path and international opportunities are not based on adequate research (Leonidou, 1995). Further, backed firms may not be aware of the foreign market's conditions and, according to the 8th interview, some services may be provided, with the objective of minimize these lacks of international information. For example, the definition of pricing models to reach some kind of foreign markets, in order to fit their personal characteristics. Contact overseas customers (Leonidou, 2004) was one of the informational constraints highlighted in the first section and the interviews showed an important role of VCs, overcoming these barriers. The 4th interview highlighted the relation with stakeholders. For example, some important actions, such as contact and negotiate with foreign stakeholders: "It is necessary to know how to talk with suppliers, how to talk with customers, and look for a contract and identify its weakest points…" (4th interview). This relation with stakeholders includes the VC's capabilities evaluating and delineating contracts, in terms of their weaknesses and strengths. Actually, this evidence was also previously highlighted by Sorenson and Stuart (2001).

<u>Connections with other VCs, experts or entrepreneurs within the same industry:</u>

According to the interviews, VC's networks had some relevance for many of the venture's activities. For example, the 1st interview presented the inclusion of some industry experts in the backed firm's boards, as NEDs. This situation was previously highlighted by Arthurs and Busenitz (2006), considering the possibility of VCs bring senior experienced managers to the venture's project. This members may be recruited, based on the VC's industry ties, especially the partner's networks. However, the 8th interview referred that VCs may just introduce some of these experts to the backed firms and they can take a position in the board. "We can introduce some "C-level guys" and they may be part of the team" (8th interview). Actually, this type of activities can make the venture's board valuable, in terms of the industry knowledge.

Another relevant point, in which VCs may use their networks, is the syndicated investments with local VCs. This fact was pointed out by the 4th interview. VCs will be able to bring not only international money, but also the international knowledge and local networks from these VCs (e.g. connections with customers, suppliers, distributors…): "By bringing these international investors, we also bring the international market and their connections within their countries" (4th interview). Actually, this type of partners may provide inside information about the foreign market's conditions and it might be determinant to operate abroad, especially, within markets with a high level of associated risk.

VC's knowledge may come up through a different point of view, such as their prior experience with other backed firms within the same industry: "There is one important thing, which is the experience from the first companies" (2nd interview). Actually, this type of knowledge may be important to face any kind of constraints, which may be overcame through a comparison with similar situations from some firms that were previously supported by VCs.

Industry knowledge:

In terms of the industry knowledge, two main factors were considered by the interviews: the investment in the same industries and the background of the VC's members.

Sorenson and Stuart (2001) highlight the influence of investments in the same industry for a long period in the establishment of important connections within the same field. Actually, according to the 1st interview, there are some advantages from ongoing investments in the same industry, such as the establishment of some networks with important stakeholders (e.g. suppliers or customers). However, the 8th interview brought another way to develop the venture's industry knowledge. This knowledge is likely to appear in the Corporate Venture Capitalists, since this kind of VCs is able firms within the same industry. Additionally, the 3rd interview showed that VC's members are likely to possess valuable knowledge about the backed firm's industry. For example, their academic background or professional experience is determinant to support new ventures and provide them the necessary industry knowledge. However, VC's members may be useful for more reasons. For example, according to the 1st, 4th and 7th interview, their members are likely to possess some personal networks, which can be important in order to overcome some international obstacles (reaching foreign stakeholders): "Most of the times, our connections may unlock the initial approach" (7th interview) .

Existence of a local syndicate partner and international connections:

The existence of a local syndicate partner may be important for new ventures and sometimes VCs are likely to establish this type of partnerships and search for syndicate partners within foreign markets. Actually, the existence of a local syndicate partner may have a decisive role in the investment's success (LiPuma, 2014). The 2nd interview supported this idea, recognizing the advantages of having a local syndicate partner within foreign markets, in order to turn the internationalization path into an easier one: "That is why I think that anyone investing in Portugal (even a foreigner) should have a local partner to help" (2nd interview). Additionally, the 4th interview also referred the importance of maintaining international connections, especially when the plan is to internationalize to risky markets. However, according to this interview's outcome, this international connections may be especially important to validate the stakeholder's credibility or reliability. In other words, local connections can be strategic partners to support the VC's decision making process, giving them trustable information about unknown entities. This information may be helpful at the time of taking important international steps, such as the contracts with local suppliers or distributors.

Search for new investors:

VCs may have an important role searching for new capital investors (8^{th} interview): "For example, if the firm is thinking about a new round (of funding), we can help, introducing them to some investors" (8^{th} interview). However, the information flows throughout the venture capital community (Sorenson & Stuart, 2001) and it turn the search for new investors into an easier process. This fact was also referred in the 4^{th} interview.

Syndicate investments with another VC:

According to the literature, syndicate investments with other VCs may bring positive consequences for both sides of the venture capital investments: VCs and backed firms. Some important advantages were highlighted either by the literature's review and exploratory interviews. For example, the 6^{th} interview and Gompers and Lerner (2001) approached the VC's risk diversification. Additionally, this syndicated investments may allow VCs to support a higher number of new ventures, since their financial intervention is lower in each investment (6^{th} interview). The 1^{st} interview gave some importance to the existence of complementary strategies from each one of the syndicate partners. Additionally, this type of investments might be likely to bring more "know-how" to the backed firms (1^{st} interview). Actually, there is more information sharing (6^{th} interview), since there is always a second opinion in the decision making process (Gompers & Lerner, 2001).

Syndicated investments may also contribute to a raise of international knowledge and the capacity to analyze foreign markets. Additionally, find business opportunities abroad can be easier (LiPuma, 2014). This factor was also referred in the 6^{th} interview, through the international connections of each one of the syndicate partners. In other words, those markets, where they keep valuable networks, might be more in syndicated investments, comparing with the situation of individual investments (with no syndicate partners). According to this type of investment, backed firms might develop their international activities in more countries.

Syndicate investments with local VCs:

Syndicate investments with VCs from foreign markets, where backed firms will be operating, may bring some valuable advantages for them, especially, in terms of the market knowledge. This factor was referred in the 4th interview, as a possibility for VCs.

This action might be especially important in foreign markets with very specific characteristics, for example, in terms of the negotiation methods. According to Czinkota and Ronkainen (2001), backed firms must be aware of the cultural assumptions within foreign markets, such as the necessity of formal or informal procedures within each stage of negotiation: "German (companies) like to speak their own language with German people. Then, we perceived that we had 2 possibilities: we could reach a German investor or we could reach a German distributor" (4th interview). In other words, there are some markets where is important to have a local VC, in order to overcome this type of cultural assumptions. According to this interview, if there is a local VC involved in the project, the contact with local stakeholders is easily accessible. However, this necessity might be different from one market to the others, since the cultural differences depend on the countries. Another advantage of syndicate investments with local VCs is the improvement of market knowledge (4th interview). However, this syndicated investments might be shared with specialized VCs with a high level of industry knowledge. Hence, according to the 4th interview: "If I bring an international VC, specialized in the industry of my investment, I am bringing not only the market, but also their networks within those countries. This is smart money." (4th interview).

Syndicated investments with other institutions:

Several times, VCs are likely to syndicate investments with different types of investors, such as banks or private investors (6th interview). This situation might benefit backed firms, since there is a high level of heterogeneity in their boards. For example, according to the 8th interview, the board's characteristics is an important requirement to choose whether to syndicate investments or not. Actually, before starting the investment, VCs usually ask themselves the following question: "How would be a board with these members?" (8th interview). Hence, the investor's skillset is important and different types of investors may bring different types of capabilities. Another relevant point was highlighted in the 5th interview, which is the compliance mechanisms: "Not only because they (backed firms) can have compliance mechanisms, management's control with higher efficiency, they are obliged to follow rules and the information sharing is better." (5th interview). According to this interview, backed firms can take benefits from having more than one institutional partner from different proveniences.

<u>VC's prior international investment experience:</u>

According to the literature, VCs with prior international experience are likely to be well prepared to face the internationalization process. International experienced VCs are likely to enlarge their future international scope, supporting firms across borders (Sorenson & Stuart, 2001). Actually, some obstacles may be easier to overcome in foreign markets, such as the negotiation's constraints (Sorenson & Stuart, 2001). Informational problems about foreign markets might be minimized with prior international investment.

This situation was referred in the exploratory interviews and prior investments within foreign markets are likely to benefit future investments in the same markets (2nd, 3rd, 7th and 8th interview). Investments within those countries may be important to identify the main obstacles and benefits. These learnings from other backed firms' experiences are likely to help future backed firms in the same markets. It may help the decision making process (strategic options) in future investments (3rd and 8th interview): "Actually, experiences from previous investments are examples, and they are important to be aware of the wrong ways, which might not be followed" (8th interview). One of the main advantages of prior international investments are the establishment of valuable networks (important local stakeholders). This type of contacts may be useful for another firm in the same market (7th interview). Thus, according to this, first backed firms in the market might facilitate the next ones' entry.

Market analysis and international activities:

In the exploratory interviews, it was possible to approach the VC's intervention, in terms of the foreign market analysis. Generally, VCs may have an important role, searching for the most valuable foreign customers in the market (1^{st} interview). Additionally, VCs are likely to study foreign markets, for example, in terms of the necessity of a local partner, the identification of the most important actors in the market or the market's regulatory specificities for foreign investors: "Do we need a local partner? Are the sectors less or more regulated? How do they face the foreign investment? All these ones are interesting questions" (2^{nd} interview). The 8^{th} interview highlight the analysis of potential partnerships as an important point, in which VCs may have a relevant role. According to this interview, potential customers might be one of the factors to choose the country of destination. This market analysis may be easier if the VC operates in the country of destination, since there is a valuable knowledge about those markets (5^{th} interview). Additionally, VCs are likely to analyze foreign markets in terms of the regulatory conditions. However, its importance depends on the industry. Some industries have stronger regulations and VCs are likely to have an important role analyzing each case. According to the 3^{rd} interview, other backed firms in the same markets might be crucial to be aware of those markets' regulatory conditions: "Did they (other backed firms) face the same problem? Can we share? And this is just one call away" (3^{rd} interview).

In the market analysis, VCs may have an active role, since they can develop some activities within foreign markets, such as international visits to know "not only the companies, but also the players" (2^{nd} interview). However, VCs might go abroad for different reasons. For example, they can also go along with the backed firm's management in international meetings with potential stakeholders (3^{rd} and 7^{th} interview). Actually, in the literature was referred the VC's importance reaching foreign potential customers and suppliers (Gorman & Sahlman, 1989; Schildt *et al.*, 2005).

VC’s “social status” and reputation:

“Social status” is one of the VC’s characteristics which may be important within foreign markets, especially, in terms of the relationships with potential stakeholders. In fact, it may help backed firms attracting the attention of customers or suppliers, according to Stuart *et al.* (1999). VC’s reputation might be transferred for backed firms, and it may have some importance abroad. According to the 5th interview, VC-backing may be important, in terms of obtaining financing abroad. For example, if the new venture needs financial support overseas, it can be easier to obtain it, in case of being supported by an institutional investor (5th interview). Actually, according to Rogers (2004), small firms might face some obstacles obtaining financing, since there is not a high amount of assets to collateralize loans. Thus, VC-backing may give this type of guarantees to potential foreign financial investors. However, VC’s “social status” might not be important just for loans. For example, backed firms are more likely to reach new investors (e.g. another VC), than non-backed firms (3rd interview).

Additionally, VC-backing may be also important in the negotiation process, in order to obtain the collaboration of a global foreign firm. According to the 3rd interview, the presence of a VC is positive in this context, since with VC-backing the project’s risk is lower.

Mergers, acquisitions and international partnerships:

In some cases, backed firms are likely to expand their activities and mergers or acquisitions are reliable options. According to the 2nd interview, one possibility to obtain industry knowledge is to acquire national or local firms. For example, acquire firms within local markets might be an opportunity to have a better understanding about those market’s specificities and VCs are able to analyze those opportunities (2nd interview). However, national firms might be another option to improve the industry knowledge (2nd interview).

International partnerships are also relevant activities. For example, VCs are likely to support backed firms, by providing them some guidance establishing the partnership’s terms between backed firms and foreign market’s stakeholders (e.g. foreign distributors).

According to the 3rd interview, some backed firms are likely to "establish a partnership or distribution agreement with a company but they are not aware of the partnership's terms and they would like to have the VC's support". Hence, VCs may be important analyzing those contracts and defining some important conditions.

3.1.3. Emerging aspects from interviews

The interviews provided some additional information, comparing with the approached aspects in the literature's review. These aspects were related to the functional, informational and marketing VC's intervention in the backed firm's internationalization. The VC's involvement in the backed firm's board is one of them. Generally, VCs are likely to appoint 1 or 2 members for the backed firm's board, developing activities as NEDs (4th, 5th, 6th and 8th interview). This aspect was referred in 4 interviews. However, one of the interviews revealed a different approach about the backed firm's control, which is the CEO's appointment for just one year (6th interview). Additionally, most of the VCs usually take minor positions, in terms of the share capital (pointed out in 4 interviews - 3rd, 4th 5th and 6th interview).

Another emerging aspect from interviews was the services provided by VCs, in order to approach the international path. VCs are likely to improve the internal information/reporting systems, in order to make the backed firm's communication easier and more efficient between their members (1st and 5th interview). However, according to the interviews there is another emerging point in terms of the services provided. This activity is related to the definition of pricing models to reach any specific type of foreign customers (8th interview).

VC's networks are also an important aspect in terms of the venture capital investment. In the interviews, some VCs are likely to recruit venture's members, based on their networks. One of the referred activities was the introduction of industry experts to the backed firms and this members may take a position in the board (8th interview). According to the interviews' information, VCs are likely to invest in industries related to the academic background or professional experience of VC's members. In fact, according to this aspect, the industry knowledge might be strengthen by VC-backing (3rd interview).

VCs might also have an important role searching for investors to support the backed firm's project (4th and 8th interview).

New investors can improve the foreign market's approach. VCs from home countries may syndicate investments with foreign VCs from foreign markets, which can bring some advantages to the international path. With this kind of activities, VCs are able to bring not only international funds, but also international knowledge and local important networks (e.g. connections with customers, suppliers, distributors…) (4th interview). Additionally, VCs might find other institutions to syndicate investments, such as banks or private investors (5th and 6th interview), which can bring several advantages such as the board's heterogeneity or compliance mechanisms, in order to oversight the activities related to the backed firm.

Foreign market's analysis is another activity, in which VCs can be very important. For example, VCs are likely to develop some international activities, such as the international visits to know the main local stakeholders (2nd interview) or they might search for the most valuable groups of foreign customers in the market (1st interview). However, VC's international experience might turn the international path into an easier one. Actually, prior investments within foreign markets might benefit future investments in the same countries (2nd, 3rd, 7th and 8th interview).

Finally, VCs are likely to examine some opportunities to acquire firms, in the national market or abroad. This activity might be a relevant one, since international firms can provide some industry or market knowledge to the backed firm (2nd interview).

3.1.4. Literature's aspects supported through the interviews

Some of the literature's aspects were supported in the interviews. In fact, those were previously referred in the literature and, somehow, approached again in the interviews with VCs.

According to the interview's outcomes, VC's geographic reach is likely to enlarge with syndicated investments (6th interview). Sorenson and Stuart (2001) considered the same aspect through a different perspective, which is that VCs are able to enlarge their social and geographic reach, due to the effects of successive investments. For example, they might establish connections with some actors in the venture capital market (entrepreneurs, other VCs, experts…), from different countries.

The knowledge from ongoing investments in the same industry was also pointed out by the literature's review (Sorenson & Stuart, 2001) and supported by VCs (1st interview). Actually, both sources considered this kind of investments as an important mean to establish some valuable ties within the industry (e.g. suppliers or customers).

In terms of the local connections is important to highlight the existence of a local syndicate partner. Although its advantages were recognized by the interviewed VCs (2nd interview) and LiPuma (2014), the empirical data deepened this aspect, exploring the usefulness of these local partners.

In terms of the foreign market's analysis, the regulatory aspects might be relevant and they were approached either in the literature or in the empirical data. Actually, according to Guler and Guillén (2010b), VC's may be able to anticipate some regulatory changes within foreign markets, such as the property right's protection. Thus, this kind of foreign market's study might be useful, in terms of its analysis. In the empirical data, the same trend was supported. According to the 3rd interview, some industries and markets have stronger regulatory conditions and VCs might be able to analyze it, for example, through a comparison with other backed firms operating within the same markets.

In terms of board's involvement in the backed firm's strategy and monitoring, there is also a correspondence between empirical data and literature. In fact, Fried *et al.* (1998) considered that boards from backed firms are likely to present greater involvement in the strategy's development and monitoring. The interviews (4th, 5th, 6th and 8th interview) are likely to corroborate this theory, since most of the VCs might appoint one or two members for the backed firm's board (as NEDs), in order to support the development of the backed firm's strategy as well as their monitoring.

The backed firm's teams are likely to change with the venture capital intervention. This evidence came from the literature (Hellmann & Puri, 2002), with the appointment of new management teams. Actually, this evidence was supported by empirical data (2nd, 5th and 6th interview), since there is the possibility of switching the management teams, especially, in "C-level positions" (CEO or CFO, mainly).

Human resources policies were also referred previously in the literature (Hellmann & Puri, 2002) through two main examples: the adoption of a stock options plan or the recruitment process, based on VC's networks. In the empirical data, this evidence was corroborated, since VCs might be important either in the recruitment process (1st interview) or in the implementation of some human resources policies, illustrated with an adoption of a stock options plan (8th interview).

In terms of the recruitment process and changes of management teams, there is also another aspect. In the literature, Arthurs and Busenitz (2006) approached the possibility of VCs bring senior experienced managers (experts) to the venture's board. Actually, this fact was referred in the interviews (8th) and it might give some expertise to the venture's board, in terms of the industry knowledge.

Syndicated investments with another VC might also represent a relevant aspect, in terms of the advantages in the decision making process. In fact, firstly, Gompers and Lerner (2001) referred the importance of having a second opinion in the decision making. Actually, the empirical data (6th interview) took a position in the same direction and revealed that the information sharing between investors might be important for the backed firm's success.

3.1.5. Interviews' most referred aspects

Some aspects assumed a higher importance, since they were mentioned more times than the others. Although these points has not been mentioned in the same way, they are likely to present complementary ideas, concerning the same subject.

In terms of the backed firm's control and board's involvement, it was possible to conclude that most of the VCs are likely to take a minor position in the share capital (3rd, 4th 5th and 6th interview) and appoint 1 or 2 members for the backed firm's board, as NEDs (4th, 5th, 6th and 8th interview).

Prior international investments were considered as an important characteristic in the empirical data. However, the interviews went further and they considered that prior investments within foreign markets are likely to benefit future investments in the same markets (2nd, 3rd, 7th and 8th interview).

VC's networks (personal and professional) were deeply analyzed in the interviews, through some different perspectives. Mainly, these connections were approached through 3 main dimensions, which are their usefulness: i) to appoint some industry experts for the backed firm's board, as NEDs (1st interview); ii) to support other firms in the same industry (7th interview); iii) to reach foreign VCs, in order to syndicate investments with them (4th interview). However, VC's personal connections were also one of the most referred points (1st, 4th and 7th interview). Actually, these personal connections are likely to benefit backed firms abroad, essentially, reaching foreign stakeholders.

VCs might be likely to develop activities within foreign markets and they might assume a high importance, with many purposes. For example, VCs are likely to visit foreign markets, in order to explore their opportunities and have a better perspective about the main local stakeholders (2nd interview). Additionally, VCs might go along with the management of the backed firms, in order to support them in international meetings (3rd and 7th interview).

3.1.6. Literature's non-referred aspects (in the interviews)

In this section, empirical data is analyzed, in order to find out the relevant literature's aspects (in terms of the VC's intervention in backed firms), which were not approached in the interviews.

One of these aspects were the influence of Corporate Venture Capitalists (CVCs) in the internationalization of their backed firms. According to Schildt *et al.* (2005), CVCs are likely to possess more international networks (for example, in terms of potential foreign customers) than IVCs. LiPuma (2014) also considered that this type of VCs may be more likely to possess a higher level of reputation and it may benefit backed firms abroad, in terms of the market knowledge. Nevertheless, CVCs were just approached once in the empirical data (8th interview) and this interview just mentioned the CVC's industry-related knowledge, since CVCs are likely to support backed firms within the same industry.

According to the literature, home country partners might have a high importance in the backed firm's international path, since they may possess relevant information about the backed firm and it can be useful for stakeholders within foreign markets (Guler & Guillén, 2010a). Actually, according to this evidence, home country partners may facilitate the backed firm's international approach trough the minimization of informational lacks, but this trend was not referred in the empirical data.

Geographic proximity between VCs and backed firms was also approached in the literature. Sorenson and Stuart (2001) considered that VCs prefer to be near the backed firms to oversight their decisions and maintain close connections with their founders. However, this point was not supported by the empirical data, since local VCs might be involved in the investments (4th interview). In fact, the geographic distance were not considered decisive in the empirical data.

Product development was not deeply approached through the interviews. According to Hellmann and Puri (2000), VCs are likely to reduce the backed firm's time to market, since they might possess assets which can make the product launch faster. In fact, most of the VCs highlighted their influence on strategy-related aspects, instead of product-related aspects.

In the literature's review, the achievement of economies of scale was one of the identified small firm's constraints operating abroad. Actually, Zeng *et al.* (2010) referred that inter-firms might give easier access to the economies of scale, which might come from an alliance with R&D and/or producing institutions. Thus, this type of actions could be taken by VCs. However, in the interviews, this point was not approached.

3.1.7. Qualitative data (conclusion)

According to the qualitative analysis, some valuable information was sourced from the interviews with VCs. In these "one-to-one" interviews, it was possible to conclude that VCs are likely to be important for their backed firms in multiple dimensions. For example, VCs are likely to provide some industry knowledge or market knowledge, which may come from prior international investments or ongoing investments within the same industry. The syndicated funding projects may also contribute for that. However, the VC's intervention can be also related to the professionalization of the firm with the involvement in the backed firm's board. Thus, it was possible to conclude that VCs are likely to take an active role in the backed firm's operations, for example, with changes in the backed firms' management teams. Nevertheless, another relevant conclusion from the interviews was the VC's importance, through the strategic dimension. For example, according to their perceptions, they can be very helpful establishing some crucial partnerships with foreign stakeholders. In fact, their networks are likely to facilitate the establishment of these kind of connections with such players. The aforementioned experience (collected from ongoing investments or prior international activities) may be strictly related to the establishment of these networks within foreign markets.

Through the interviews, it was also possible to conclude that VCs do not approach the financial support as the most important one, since they consider that venture capital is more than just money and they are able to make some important decisions in the backed firm's management. According to their perceptions, the main VC's task is handling the international strategic decisions. They are not enrolled in daily tasks, since they are likely to take a management role. For example, product-related activities are not a VC's duty.

In short, VCs highlighted the strategic part of the venture capital as the most important one, in the internationalization path. In their perceptions, the "smart money" is the way. The syndicated investments with local VCs can illustrate this kind of intervention, since Portuguese VCs bring not only the international money, but also some crucial contacts from foreign markets.

3.2. Quantitative analysis

In the quantitative analysis, the data were sourced from a survey. This survey focused on the VC's intervention in their backed firms. After a research about Portuguese companies with these characteristics (using the database SABI), the survey was emailed to all of them.

Table 4 – Survey characteristics (resume)

Contacted companies	7.715
Valid Answers (sample)*	130
Region	View Appendix – Fig. 5
Sector	View Appendix – Fig. 4

Source: Own elaboration

*some companies were not enrolled in international activities and their answers were removed (total answers=159).

Sample's descriptive statistics

In the quantitative analysis, the sample is represented by 130 firms from different fields. This number refers to the valid answers. Actually, some of the answers were removed, since those companies were not enrolled in the international activities and, consequently, they did not fit the research objectives. The total sample comprised 159 entities. Almost 60% of the inquired companies were service-providers (e.g. health, education, banking, tourism, etc.). However, there are more types of firms in the sample, such as the ones belonging to the industrial activities or agriculture, and these ones were product-providers (view Fig. 4-Appendix). These inquired companies (INVs) were young and small. In fact, all of them were developing activities within foreign markets and they had seven or less years of existence. More than 50% of the sample had more than three years and less than six years of existence. Their size is noticeable through their number of employees. More than 70% of the firms had less than 10 employees. Concerning the geographic regions, the north of Portugal (e.g. Porto, Aveiro, Braga, etc.) is the most represented area in the sample (view Fig. 5-Appendix).

3.2.2. Exploratory Factor Analysis

In order to test the significance of the variables (essentially, comparing backed firms with non-backed ones), it is important to reduce the dimension of the variables. Actually, according to Chin (1998), the MVs must change in the same direction with a change in the actual level of the latent variable (LV).

Using the software IBM® SPSS® Statistics 24, it was possible to reduce the dimension of the variables. All of the MVs were grouped and transformed into a single variable of 1 factor. However, considering the model, just three indicators (MVs) were removed from the analysis. These three variables were measuring two LVs, which were the lacks of exports-related managerial expertise ("EE"- view Table 5) and the degree of internationalization, under the perspective of the marketing policies ("DoI(MktPol)" – view Table 5). In terms of the first one, the removed indicator was the question of the survey, which was representing the R&D intensity ("RandD"- view Table 5). Concerning the variable "DoI(MktPol)", the removed indicators were the results of two questions (13 and 14) of the survey that was representing this variable. These questions were the following ones: “Organizational arrangement used for exports is a special export division?” and “Major export channel includes a foreign distributor?” As aforementioned, the reduction of the dimension is executed with the objective of standardize the effect of all of the indicators and the ones that was not pointing in the same direction were removed. For example, in the lacks of exports-related managerial expertise (EE), all indicators were showing a positive effect on the LV, except the “R&D”, with the factor loading of -0.079. In terms of the “DoI(MktPol)”, both of the removed indicators were also presenting a negative factor loading. The first one (“Organizational arrangement used for exports is a special export division?”) were showing a factor loading of -0.349 and the second one (“Major export channel includes a foreign distributor?”) a factor loading of -0.776, while all the others had a positive factor loading. However, these factor analysis is better understandable with Fig. 6, 7, 8, 9, 10, 11 and 12, in the Appendix.

3.2.3 Construct Reliability and Validity

After a proper analysis of the construct reliability (view Table 6), through the software SmartPLS 3®, it was possible to develop an overview about the characteristics of the constructs. However, only the latent variables (measured by reflective indicators) were considered through this analysis. Hence, it was conceived a new model with the significant variables from the first version (view Fig.1). All of the variables are included in the Table 7, with the analysis of the significance of each variable.

Table 6 - Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
IPM	0,852	1,000	0,906	0,764
ManExp	0,928	0,935	0,937	0,516

Source: SmartPLS 3®

The first step in the empirical analysis was the evaluation of the criteria for the convergent validity and internal consistency of the model. In the Table 6, it is possible to evaluate those criteria and the ones approached in this dissertation are the cronbach’s alpha, the composite reliability (CR) and the average variance extracted (AVE). However, in the Table 6, just the latent variables (measured by reflective indicators) are considered, in terms of the aforementioned criteria. According to the previous section, the CR should be greater than AVE, and the AVE should be greater than 0.5 (Marôco, 2010). In terms of the cronbach's alpha, the coefficient should be higher than 0.7 (Kline, 2015). Thus, through the analysis of the Table 6, it is easily understandable that both variables fit these ranges of values. However, this convergent validity is related to the changes in the model, with the exclusion of some variables.

3.2.4. Structural Model Regression

The Table 7 presents the best version of the model, with the exclusion of some variables, which were not significant. This analysis is conducted via *bootstrapping* and its results will be presented below.

Table 7 - Bootstrapping

Number	Relations	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
1	IPM → MktPol	0,329	0,170	0,325	1,014	0,311
2	ManExp → ExpProf	-0,277	-0,279	0,087	3,175	0,002
3	ManExp → ExpSal	-0,195	-0,195	0,101	1,937	0,053
4	ManExp → MktPol	-0,304	-0,280	0,254	1,193	0,234
5	a → CCC	0,167	0,166	0,096	1,743	0,082
6	a → ROA	-0,209	-0,205	0,108	1,942	0,053
7	b → ManExp	-0,285	-0,281	0,100	2,852	0,005
8	b → CCC	-0,202	-0,196	0,120	1,678	0,094
9	b → ROA	-0,132	-0,131	0,072	1,826	0,068
10	CCC → ExpProf	0,189	0,181	0,088	2,149	0,032
11	CCC → ExpSal	0,132	0,122	0,095	1,384	0,167
12	e → IPM	-0,102	-0,111	0,118	0,859	0,391
13	f → IPM	0,344	0,375	0,157	2,193	0,029
14	g → ManExp	0,149	0,137	0,104	1,435	0,152
15	i → IPM	-0,238	-0,259	0,154	1,550	0,122
16	ROA → ExpProf	0,250	0,251	0,076	3,283	0,001
17	ROA → ExpSal	0,155	0,156	0,081	1,923	0,055

Source: SmartPLS 3®

As aforementioned, these are the variables included in the final version of the model. Actually, the initial model was changed, in order to achieve the best significance of the relations. In this analysis, the p-value was the criteria to assure the significance of each relation. Considering the significance level of 10%, each relation is significant if its p-value is lower than 0.1. From the examination of the Table 7, it is easily understandable that not all relations are significant. In this analysis, the direct and indirect relations must be considered, since some variables might be indirectly correlated with some other variables in the model.

All of the significant relations must be highlighted, comparing them with the expected results. Concerning the endogenous variables, it is easily understandable that there is an effect of the lacks in the managerial expertise ("ManExp") on the degree of internationalization ("DoI"), either measured by the export profits ("DoI(ExpProf)") or export sales ("DoI(ExpSal)"), with a level of significance of 10%. Actually, these results point out in the direction of the expected ones, since an increase in the lacks of managerial expertise is likely to reduce the degree of internationalization, either measured through the export sales and export profits (relations 2 and 3 – view Table 7). Additionally, the Cash Conversion Cycle ("CCC") is also likely affect the degree of internationalization, measured by the export profits ("DoI(ExpProf)"). However, the result is different from the expected, since an increase in the time lag between purchases and sales, which is the "CCC", is likely to increase the degree of internationalization (according to the results from the relation 10 in the Table 7). Finally, considering the return on assets (ROA), the relation between this variable and the degree of internationalization (measured by export profits and export sales) present the expectable results since an increase in the "ROA", which is the profit's weight in the assets, is likely to affect positively the degree of internationalization (relations 16 and 17).

In terms of the exogenous variables, it is important to highlight the inclusion of industry experts in the venture's board as NEDs ("b"). According to the results from the Table 7, this variable is likely to have a positive effect on the backed firms' lacks of managerial expertise and those results support the expectable ones. In other words, through this analysis, it is possible to establish a connection between the inclusion of some industry experts and the decrease in the backed firm's managerial lacks (relation 7 – view Table 7). Additionally, regarding the exogenous variables, there is one more important relation ("b"→"CCC"), which is significant and related to the expectations. According to the results, the inclusion of industry experts ("b") is likely to reduce the Cash Conversion Cycle and the venture capital takes a role on it. All of the other significant variables are not in agreement with the expectations. These are the relations 5, 6, 9 and 13. For example, according to the results from the Table 7, through the relation 5, it is noticeable that the inclusion of some members in the backed firm's board is likely to increase the time lag between purchases and sales (“CCC”). In the case of the relation 6, the results are not in agreement with the expectations, too. In fact, the inclusion of some members in the backed firm’s board might have a negative effect on the return on assets (“ROA”). Regarding the relation 9 (“b”→“ROA”), the conclusion is the same. The results do not point out in the direction of the expectable results, since the inclusion of industry experts is likely to decrease the return on assets. Finally, according to the results from the relation 13 (“f”→“IPM”), the search for new capital investors is likely to increase the backed firm’s constraints, developing the international product.

Nevertheless, in this analysis, the indirect relations must also be considered, since some variables might be indirectly correlated with some other variables in the model. Thus, concerning this indirect effects, it is possible to highlight the relation between the inclusion of industry experts in the backed firm’s board (“b)”) and the degree of internationalization, either measured by the export profits (“DoI(ExpProf)”) and export sales (“DoI(ExpSal)”). In reality, this relation is mediated through the managerial expertise, since the industry experts are likely be associated to the decrease in the lacks of managerial expertise (relation 7 – view Table 7) and it might be related to the increase in the degree of internationalization (relations 2 and 3 – view Table 7).

3.2.5. Hypothesis and results

After the factor analysis, the LVs were transformed into factors. Hence, taking this outcome into account, it was possible to execute some tests, in order to compare backed firms with non-backed firms, in all the approached dimensions. In fact, this comparison was the main purpose of the dissertation. With the objective of testing the hypothesis, one-tailed t-tests (comparing means) were executed. It aimed to provide a comparison between backed firms and non-backed firms, not only with the analysis of the internationalization constraints but also approaching their degree of internationalization (under the different approached perspectives). In reality, the objective was to compare whether these two groups of companies are affected in different ways by the aforementioned constraints. In terms of the degree of internationalization, the aiming was the same.

1. Analyze foreign markets and contact stakeholders overseas – intelligence generation (Backed vs. Non-backed). Significance level = 5%.

H_0: Difficulties analyzing foreign markets and contacting stakeholders overseas (intelligence generation) are the same for backed firms and non-backed firms.

H_A: Difficulties analyzing foreign markets and contacting stakeholders overseas (intelligence generation) are different for backed firms and non-backed firms.

Table 8 - Independent Samples Test (AMIntGen)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	10,698	,001	,241	128	,810	,04773518
	Equal variances not assumed			,273	80,119	,785	,04773518

Source: IBM® SPSS® Statistics 24

From the examination of the two-tailed test (view Table 8), it is possible to conclude (with a significance level of 5%) that backed firms and non-backed firms might face similar lacks of market analysis, under the perspective of the intelligence generation (p-value (0.785)>0.05). Thus, the H_0 is not rejected. The scale that was used to analyze this variable came from Jaworski and Kohli (1993) and, according to these authors, the intelligence generation is related to the process of information collection. In other words, the ability to handle these specific types of informational constraints may be similar, comparing both types of firms.

2. Managerial expertise (Backed vs. Non-backed). Significance level = 5%.

H_0: Lacks of managerial expertise are the same for backed firms and non-backed firms.

H_A: Lacks of managerial expertise are different for backed firms and non-backed firms.

Table 9 - Independent Samples Test (ManExp)							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	9,845	,002	-,828	128	,409	-,16394603
	Equal variances not assumed			-,947	81,219	,347	-,16394603

Source: IBM® SPSS® Statistics 24

In the Table 9, the approached variable is the managerial expertise, comparing backed firms with non-backed firms. This variable comprised three main dimensions (included in the survey), concerning the management activities. Those are the "managing process", "managing vision" and "managing stakeholders and environments" (Sadler–Smith *et al.*, 2003). Through the results, the lacks of managerial expertise are likely to be similar for both types of firms (p-value (0.347)>0.05). Thus, the H_0 is not rejected again. However, these results are not in line with the ones presented by the regression of the model (view relation 7 - Table 7). According to those results, there is one VC's intervention which is likely to increase the backed firms' managerial expertise. This intervention is the inclusion of industry experts in the backed firm's board. Hence, the lacks of managerial expertise would be expected to be higher for non-backed firms, comparing with the backed ones.

3. Exports-related managerial expertise (Backed vs. Non-backed). Significance level = 5%.

H_0: Lacks of exports-related managerial expertise are the same for backed firms and non-backed firms.

H_A: Lacks of exports-related managerial expertise are different for backed firms and non-backed firms.

Table 10 - Independent Samples Test (EE)							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	9,993	0,002	-,814	128	,417	-,16114940
	Equal variances not assumed			-,954	86,327	,343	-,16114940

Source: IBM® SPSS® Statistics 24

The exports-related managerial expertise is measured through the international knowledge transfer and the global networks, according to the scale suggested by Filatotchev *et al.* (2009). Initially, this scale comprised three measures (international knowledge transfer, R&D intensity and global networks). However, the second one was removed with the factor analysis. In this case, the H_0 is not rejected one more time and it is possible to conclude (with a significance level of 5%) that the constraints associated to the exports-related managerial expertise may present similar intensities for both parties (p-value (0.343)>0.05).

4. Cash Conversion Cycle (Significance level = 5%).

H_0: The Cash Conversion Cycle (CCC) is the same for backed firms and non-backed firms.

H_A: The Cash Conversion Cycle (CCC) is different for backed firms and non-backed firms.

Table 11 - Independent Samples Test (CCC)							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	1,512	,221	,320	128	,750	,122
	Equal variances not assumed			,296	53,109	,768	,122

Source: IBM® SPSS® Statistics 24

Financial constraints are also important for the internationalization path. This variable is the Cash Conversion Cycle (CCC), which was adapted from Padachi (2006). This variable is related to the time lag between purchases and sales, concerning the raw materials. In this case, the H_0 is not rejected and both parties are likely to face similar constraints, regarding the Cash Conversion Cycle (p-value (0.750)>0.05).

5. Return on assets (ROA) (Significance level = 5%).

H_0: The return on assets (ROA) is similar between backed firms and non-backed firms.

H_A: The return on assets (ROA) is different between backed firms and non-backed firms.

Table 12 - Independent Samples Test (ROA)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	,500	,481	-3,347	128	,001	-,516
	Equal variances not assumed			-3,469	65,144	,001	-,516

Source: IBM® SPSS® Statistics 24

The return on assets (ROA) is measured through the profit's weight in the assets. From the examination of the Table 12, this variable is likely to be different for backed firms and non-backed firms and H_0 *is* rejected (p-value (0.001)<0.05). Consequently, considering that the H_0 is rejected, the differences between backed firms and non-backed firms must be considered. Regarding the tests of equality of means, if the H_A is known to be true and the H_0 is known to be false, then the difference of means (between both populations) is one of the directions to follow (Jones & Tukey, 2000). Thus, a new one-tailed test will be executed to find out if the "ROA" for non-backed firms is higher than for backed-firms:

H_0: The return on assets (ROA) is similar between backed firms and non-backed firms.

H_A: The return on assets (ROA) is higher for non-backed firms than it is for the backed ones.

However, in the two-tailed tests, the p-value must be divided in two equal parts, in order to obtain the suitable one for this kind of tests:

$\text{p-value}_{(\text{one-tailed})}=\text{p-value}_{(\text{two-tailed})}/2=(0{,}001)/2=0.0005<0.05$

According to the results of the one-tailed test, the return on assets (ROA) is likely to be higher for non-backed firms than it is for backed firms. Actually, this conclusion came from the $\text{p-value}_{(\text{one-tailed})}$, which is lower than 0.05 and the H_0 of the one-tailed test is rejected.

6. International product development (Significance level = 5%).

H_0: International product constraints are the same for backed firms and non-backed firms.

H_A: International product constraints different for backed firms and non-backed firms.

Table 13 - Independent Samples Test (IPM)

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	1,247	,266	1,385	128	,168	,27296356
	Equal variances not assumed			1,422	63,853	,160	,27296356

Source: IBM® SPSS® Statistics 24

The international product development was analyzed based on the product adaptations for foreign markets, technical advice and repair services abroad and the scale was adapted from Moini (1997). According to the test, VC-backed firms and non-backed firms do not present significant differences in the development of their products for foreign markets, since the H_0 is not rejected (p-value (0.168)>0.05).

7. Degree of internationalization (measured by the marketing policies) (Significance level = 5%).

H_0: Degree of internationalization (under the perspective of the marketing policies) is the same for backed firms and non-backed firms.

H_A: Degree of internationalization (under the perspective of the marketing policies) is different for backed firms and non-backed firms.

Table 14 - Independent Samples Test (DoI(MarkPol))

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	,289	,592	-,197	128	,844	-,03908579
	Equal variances not assumed			-,195	59,725	,846	-,03908579

Source: IBM® SPSS® Statistics 24

According to the scale suggested by Cavusgil (1984), the degree of internationalization was measured by the marketing policies executed within foreign markets. The independent samples test shows that there is no significant differences between backed and non-backed firms, in terms of this variable (p-value (0.844)>0.05). Thus, the degree of internationalization is likely to be similar for backed and non-backed firms, measured under the perspective of the marketing policies executed overseas.

8. Degree of internationalization (measured by exports profits) (Significance level = 5%).

H_0: Degree of internationalization (under the perspective of the exports profits) is the same for backed firms and non-backed firms.

H_A: Degree of internationalization (under the perspective of the exports profits) is different for backed firms and non-backed firms.

Table 15 - Independent Samples Test (DoI(ExpProf))

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	,264	,609	,643	128	,521	,161
	Equal variances not assumed			,630	58,291	,531	,161

Source: IBM® SPSS® Statistics 24

Another option to measure the degree of internationalization is the exports profits in percentage of the total profits of the company (Cavusgil, 1984). Thus, considering this measure for the degree of internationalization, it is noticeable that backed firms and non-backed firms are likely to present similar degrees of internationalization, since the H_0 is not rejected (p-value (0.521)>0.05).

9. Degree of internationalization (under the perspective of the exports sales) (Significance level = 5%).

H_0: Degree of internationalization (under the perspective of the exports sales) is the same for backed firms and non-backed firms.

H_A: Degree of internationalization (under the perspective of the exports sales) is different for backed firms and non-backed firms.

Table 16 - Independent Samples Test (DoI(ExpSal))							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference
A-R factor score 1 for analysis 1	Equal variances assumed	,087	,769	,856	128	,394	,221
	Equal variances not assumed			,847	59,462	,401	,221

Source: IBM® SPSS® Statistics 24

In terms of the degree of internationalization (measured by the exports sales), the results are the same. VC-backed firms and non-backed firms are likely to possess the same degree of internationalization, under this perspective (p-value (0.394)>0.05), with a significance level of 5%. This scale was also sourced from Cavusgil (1984) and it compares the exports sales in percentage of the total sales of the company. Hence, there are no significant differences between both parties, considering the internationalization, measured by the exports sales.

3.2.6. Quantitative data (conclusion)

In order to have a better understanding about the relation between the variables and their effects, the hypothesis testing aimed to understand whether non-backed firms face greater international difficulties, comparing with the backed ones.

Firstly, the two-tailed tests were executed with the objective of analyze the differences between both types of firms. The approached variables were the market analysis (through the intelligence generation), the managerial expertise, the exports-related managerial expertise, the Cash Conversion Cycle, the return on assets, the international product development and the degree of internationalization (measured by export profits, export sales or marketing policies within foreign markets). With these tests, it was possible to understand the differences between backed and non-backed firms. According to the results from the two-tailed tests, the return on assets is the only variable that is different for both types of firms. It was possible to conclude that the return on assets (ROA) is different for both parties, in the internationalization process. In order to attest the effect of venture capital on this dimension, a one-tailed test was executed. Thus, the one-tailed test aimed to certify that the return on assets is higher for non-backed firms comparing with VC-backed firms. In this test, the H_0 was rejected and it was possible to conclude that non-backed firms might have a higher level of profit's weight in the assets. With this result, it seems that the venture capital do not present a high importance, through the financial dimension. Actually, the results from the hypothesis testing are not likely to support the VC's perspective, which is sourced from the qualitative data. Through the "one-to-one" interviews, it was possible to conclude that the VC's strategic intervention could comprise many dimensions. However, according to the results from the hypothesis testing, that point of view was not supported. Considering that it was used a sample of INVs, it is also possible to conclude that there are two different views: the VC's view and the INV's view. The VCs consider that they are likely to be crucial through the strategic and the financial dimension. On the other hand, taking the hypothesis testing into account, the INVs consider that the venture capital may not important, neither in terms of the strategic dimension or the financial one.

Concerning the quantitative analysis, the VC's importance is highlighted through the inclusion of some industry experts in the backed firm's board. These outcomes came from the regression of the model (view Table 7). In reality, this might be the only point in which the VC's perceptions are in line with the INV's point of view, since the VC's strategic and financial support assume some importance. According to the results, the inclusion of industry experts is related to a higher degree of internationalization, either measured through the export profits or export sales. Additionally, regarding the financial dimension, VCs may also present some relevance, reducing the time lag between the purchases of raw materials and the sales of finished goods, which is the Cash Conversion Cycle (CCC). The VC's importance through the financial dimension is also connected to the inclusion of industry experts in the backed firm's board. Hence, it is noticeable that the industry-related expertise is likely to develop the international approach and this fact may be related to the valuable industry knowledge and networks from the qualitative data. In addition, the decrease in the Cash Conversion Cycle, with the inclusion of the industry-related human resources, is likely to be related to an intense familiarity with the products and the inputs, which is associated to the industry knowledge. In fact, in this case, a higher production efficiency may be achieve, due to the inclusion of some industry experts in the backed firm's board.

In short, according to the INV’s perceptions, it seems that the international constraints are not different for backed and non-backed firms. Nevertheless, regarding the backed ones, the inclusion of industry experts in the board might take an important role on two main dimensions: the international strategy (with an increase in the international sales and profits) and the financial efficiency (with the decrease in the Cash Conversion Cycle).

4. Conclusion

In order to overcome the new venture's main constraints operating internationally, VCs may be an important partner. Actually, according to the qualitative data, the VC's support is more than just money. This support may be able to provide several important assets, regarding the international activities. This dissertation aimed to analyze those assets, mainly in terms of the relevant networks and the managerial expertise, since the success of operating abroad may be highly dependent on these two resources (Chandler & Hanks, 1994). The evidence of this dissertation was sourced through three main dimensions, which are the literature (concerning the new venture's constraints and the VC's intervention), the qualitative data (VC's intervention – from interviews) and the quantitative data (new venture's constraints – from the survey). In reality, taking the data into account, it is possible to highlight two different perspectives: the VCs' point of view (sourced from the interviews) and the INVs' point of view (sourced from the survey).

Firstly, the literature highlighted the most relevant new venture's difficulties operating abroad and the VC's intervention, overcoming it. These aspects were approached under three main perspectives (informational, functional and marketing). In terms of the informational one, the main new venture's constraint was their lacks of knowledge about the foreign market's conditions and business opportunities (Czinkota & Ronkainen, 2001; Leonidou, 1995). On the other side of the partnership, VCs may be able to provide some important resources, in terms of the awareness of the foreign market's characteristics. Those are the VC's horizontal connections (mainly, with competitors) (Chetty & Wilson, 2003), the ongoing investments in the same industry (Sorenson & Stuart, 2001), the acquired experience from prior investments (Sorenson & Stuart, 2001) and the syndicated investments with other VCs (LiPuma, 2014). Concerning the functional aspects, the exports-related managerial expertise (Gomez-Mejia, 1988) was the most relevant dimension, in which new ventures may present some difficulties. However, this type of constraints might be overcome by VCs, since they are likely to bring new management teams to the backed firm's board (Hellmann & Puri, 2002). Finally, in terms of the marketing dimension, Leonidou (2004) highlighted the products' requirements as one of the key marketing constraints, which is faced by new ventures within foreign markets. Truthfully, meet the products' specifications is an important requirement operating abroad and the VC's industry connections are likely to support the international product development (Arthurs & Busenitz, 2006). This may be one of the reasons why backed firms are likely to have a faster "time to market" (Hellmann & Puri, 2000).

In order to deepen the VC's intervention in the internationalization of the new ventures, the VC's perspective was included in this dissertation, with the "one-to-one" interviews. The first approached item is the characteristics of the board in VC-backed firms. According to Fried *et al.* (1998), backed firm's boards are likely to present a greater involvement in the strategy's development and monitoring than non-backed firms. Considering the approached VCs, although most of them take a minor position in the share capital, they are likely to appoint 1 or 2 members for the backed firm's board, as non-executive directors (NEDs). In line with Hellmann and Puri (2002), with the VC's intervention, the venture's management teams may be switched. In fact, according to their perceptions, VCs are likely to take an active role on the backed firm and they can the management teams, not only through the appointment of NEDs, but also through the appointment of some of the "C-level positions" to the backed firm's board (CEO or CFO, mainly).

The VC's professional and personal networks were also approached through the qualitative data, in three main dimensions, which were their usefulness: i) supporting firms in the same industry; ii) appointing some industry experts for the backed firm's board, as NEDs; iii) reaching foreign VCs, in order to syndicate investments with them. Arthurs and Busenitz (2006) considered that VCs might be able to bring senior experienced managers to collaborate in the venture's project and these members may be recruited, based on the VCs' partners networks (personal connections).

With the purpose of reaching a better understanding about the foreign market's characteristics, VCs can also develop some activities, within those markets, where their backed firms will be operating. In the literature, VCs present a high importance reaching foreign potential customers and suppliers (Gorman & Sahlman, 1989; Schildt *et al.*, 2005). In reality, the qualitative data brought some relevant information. VCs are likely to visit foreign markets, with the purpose of exploring their business opportunities and know the main local stakeholders. Additionally, they might go along with the backed firm's management team in international meetings.

While the qualitative data approached the VC's perspective about their intervention, the quantitative data had two main purposes: collect information concerning the INV's perspective about the VC's international intervention and compare VC-backed and non-backed firms, according to their capacity to overcome the international constraints. In fact, this comparison provides information about the importance of the venture capital to the new ventures. As aforementioned, the VC's perspective about their international intervention was included in the empirical model. The most significant dimension was the inclusion of industry experts in the backed firm's board. The inclusion of this kind of industry-related expertise in the venture's board, as NEDs, is likely to take a relevant role, strategically and financially. Thus, in the INV's perspective, the VC's strategic importance was supported, since these changes in the human resources may be related to the lacks of managerial expertise, according to the empirical model (view Table 7). Additionally, this VC's intervention may also be important reducing the Cash Conversion Cycle (CCC) (view Table 7). However, considering the differences between backed and non-backed firms, the results do not point out in the same direction. Hence, according to the international constraints, the venture capital is not considered important to overcome those barriers, either financially or strategically. Contrarily to the outcomes from the interviews with VCs, the quantitative results suggest that the VC's support may not be so important. Nevertheless, the inclusion of the industry-related expertise in the backed firm's board is the only intervention that is likely to be relevant to the backed firms with an indirect effect on the degree of internationalization, concerning the amount of sales and their profits. Through this results, it is possible to conclude that the VCs may not possess important assets to facilitate the backed firm's international path. However, their industry connections (mainly approached in the qualitative data) can take a very important role, in terms of the appointment of the NEDs. Considering the effect between the inclusion of the industry experts and the decrease in the Cash Conversion Cycle, it is also possible to conclude that these members are likely to bring some relevant knowledge, in terms of the production efficiency, due to their accumulated industry experience.

The implications of this dissertation may also be highlighted. This information can be used to study other interesting research items. Regarding the theoretical implications, this dissertation provides some outcomes for future research. Actually, taking the results into account, the connection between the inclusion of some industry experts and the degree of internationalization can be analyzed in future research. In reality through this dissertation, it is possible to establish a relation between these two variables. However, there are no further explanations for this connection. Additionally, the relation between the industry experts and the production efficiency can also be analyzed in future research. However, this dissertation brings some practical implications, too. In reality, both parts of the partnership can adjust their behavior, taking the results from this dissertation into account. Regarding the INV's behavior, it is easily understandable that the product-sellers may benefit from the venture capital backing, comparing with service-sellers, for example. This fact is explained through the connection between the venture capital backing and the shorter Cash Conversion Cycle. Thus, this finding can be very important for INVs with long production cycles. On the other hand, the VCs can also adapt their activity. Taking the results from the comparison between backed and non-backed firms into account, some important improvements are necessary, concerning the VC's strategic support. In fact, VCs may need to improve their international capabilities. For example, regarding the knowledge about foreign markets, some efforts can be executed to incorporate an international dimension in the VCs' management teams. Additionally, considering the results from the regression of the model, it is noticeable that VCs may take valuable benefits from the inclusion of some industry experts in the new venture's board. In reality, some efforts can be executed in order to establish connections with this type of industry-related expertise. Hence, with these efforts, the venture capital is likely to provide a very relevant support to the INVs, comparing with the other financing types.

This dissertation also presents some limitations. In terms of the qualitative analysis, the sample (interviewed VCs) was not perfectly homogeneous. Some of these Portuguese VCs have a different scope, regarding their backed firm's profile. Actually, some of the backed firms were not within their first stage of development. However, all of the VC's information is valuable, since the VC's intervention may be useful in different occasions with different backed firms. Additionally, the VCs had different purposes, since their portfolios presented different characteristics. In other words, the VCs were likely to invest in different sectors and a different type of support may be provided. In reality, this aspect may be relevant since the sample might be considered as a non-homogeneous one through this way and the VC's intervention and knowledge might be biased by the backed firm's sector. Another limitation is the origin of the VC's funds. Some of them might have different proveniences and the VC can be "obliged" to develop some specific type of activities, according to the will of those resource providers. In these situations, the VCs' intervention (for example, in terms of the international activities) and their decisions may be shared with different players or investors.

Concerning the quantitative data, the main limitation is associated to the differences between the inquired firms' industry. The approached constraints (in the survey) were sourced from different authors, who had been studied the same subjects before. However, some of the questions did not fit the main constraints of the firm, concerning its industry's characteristics. For example, this limitation is noticeable through the comparison between product-sellers and service-sellers.

In short, this dissertation focused on the analysis of the VCs' intervention in the INVs' internationalization and its findings comprised two different perspectives. The VC's perspective considered that their intervention is noticeable through the strategic scope, with several dimensions. However, the INV's perspective did not support the same idea, since there are no significant differences between backed and non-backed firms overcoming the international constraints. Nevertheless, the industry-related expertise may be relevant through the financial and the strategic point of view and this kind of knowledge derives from the VC's intervention.

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APPENDIX

Table 17 - Interviews' script (English)

1. Investigation subject: This investigation aims to analyze the venture capital market in Portugal. Specifically, the intervention of Venture Capitalists (VCs) in the new ventures' development, in the early stage.
II. Questions
2. VC-related questions: • Age; • Volume of supported investments; • Portefolio; • Backed firms' sectors;
3. Which ones are the projects' selection criteria? Do these ones influence the future intervention?
4. Which ones are the (financial and strategic) services, provide by _____________ (VC's name) for the backed firms with this kind of characteristics?
5. How can these services be useful for the backed firms within their early stage?
6. In terms of the internationalization process, which part can make the decision of operate abroad?
7. Which ones are the most important _____________'s (VC's name) advantages, supporting this kind of firms?
III. Additional question
8. Are the syndicated investments with another VC common? If so, in your opinion, which are the most important advantages for backed firms, in terms of their internationalization path?

Table 18 - Interviews' script (Portuguese)

1. Âmbito da investigação: Esta investigação pretende analisar o mercado de capital de risco em Portugal. Especificamente, a intervenção das Sociedades de Capital de Risco (SCR) no desenvolvimento das new ventures, na sua fase inicial.
II. Questões
2. Questões identificativas da SCR: • Idade; • Volume de investimentos apoiados; • Portefolio; • Sectores de atividade das empresas participadas;
3. Quais os critérios de seleção dos projetos? Será que estes influenciam a intervenção futura?
4. Quais são os serviços (financeiros e estratégicos), prestados pela _____________ (nome da SCR) às empresas participadas com este tipo de características?
5. Como podem esses serviços ser úteis para empresas participadas na sua fase inicial de desenvolvimento?
6. Em termos do processo de internacionalização, qual das partes pode tomar a decisão de operar nos mercados externos?
7. Quais são as vantagens mais importantes da __________ (nome da SCR) no apoio que presta a este tipo de empresas?
III. Questão adicional
8. Os investimentos partilhados com outra SCR são comuns? Se sim, na sua opinião, quais são as vantagens mais importantes para as empresas participadas, em termos do seu processo de internacionalização?

Table 19 – Survey (Part 1)

Part 1. Identification questions			
Number	Question	Type	Source
1	Sector	Multiple choice (3 items)	-
2	Dimension (number of employees)	Multiple choice (4 items)	-
3	CAE (classification of the economic activities)	Free numerical entry	-
4	Region	Free text entry	-
5	Years of existence	Multiple choice (3 items)	-
6	Does the company develop any kind of international activities (e.g., sales, services or subsidiaries)?	Yes/No	-
7	When was the first international activity?	Multiple choice (3 items)	-
8	Is the company supported by venture capital funds?	Yes/No	-

Source: Own elaboration

Table 20 – Survey (Part 2)

Part 2. VC's intervention			
Number	Question	Type	Source
9.a)	Inclusion of some members (generally, 1 or 2 members) in the venture's board as NEDs.	Yes/No	Qualitative data
9.b)	Inclusion of industry experts in the venture's board as NEDs	Yes/No	Qualitative data
9.c)	Recruitment based on the VC's connections.	Likert Scale (7 items)	Qualitative data
9.d)	Personal connections of VC's members.	Likert Scale (7 items)	Qualitative data
9.e)	Establishment of a partnership with local partner.	Yes/No	Qualitative data
9.f)	Search for new capital investors – intros.	Likert Scale (7 items)	Qualitative data
9.g)	Syndicated investments with another VC.	Yes/No	Qualitative data
9.h)	Syndicate investments with local VCs.	Yes/No	Qualitative data
9.i)	Other backed firms in the same markets.	Likert Scale (7 items)	Qualitative data
9.j)	Acquire firms within countries of destination.	Yes/No	Qualitative data
9.l)	Others:	Free text entry	-

Source: own elaboration

Table 21 – Survey (Part 3)

Part 3. Internationalization constraints			
Number	Question	Type	Source
10.a.1)	Difficulties to meet with customers, at least once a year, to understand which are the products/services that they might need in the future.	Likert Scale (7 items)	(Jaworski & Kohli, 1993)
10.a.2)	Development of "in-house" market research.	Likert Scale (7 items)	
10.a.3)	Period of time to detect changes in the preferences of our customers, in terms of the product/service.	Likert Scale (7 items)	
10.a.4)	Difficulties inquiring end users at least once a year to assess the quality of our products and services.	Likert Scale (7 items)	
10.a.5)	Difficulties in survey those who can influence our end users' purchases (e.g., retailers, distributors).	Likert Scale (7 items)	
10.a.6)	Difficulties collecting industry information through informal means (e.g., lunch with industry friends, talks with trade partners).	Likert Scale (7 items)	
10.a.7)	Time period to detect fundamental shifts in our industry (e.g., competition, technology, regulation).	Likert Scale (7 items)	
10.a.8)	Difficulties in reviewing (periodically) the likely effect of changes in the business environment (e.g., regulation) on customers.	Likert Scale (7 items)	
10.b.1)	When something important happens to a major customer or market, the whole business unit knows about it in a short period.	Likert Scale (7 items)	
10.b.2)	Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.	Likert Scale (7 items)	
10.c.1)	Negotiate contracts and agreements with internal and external providers of goods and services.	Likert Scale (7 items)	

10.c.2)	Generate support and obtain resources for programs, projects and plans.	Likert Scale (7 items)	(Sadler–Smith *et al.*, 2003)
10.c.3)	Negotiate and obtain agreement for programs, projects and plans.	Likert Scale (7 items)	
10.c.4)	Delegate responsibility and authority for areas of action within the organization.	Likert Scale (7 items)	
10.c.5)	Provide professional and technical advice on preparing and implementing programs, projects and plans.	Likert Scale (7 items)	
10.d.1)	Identify problems and opportunities in products and services.	Likert Scale (7 items)	
10.d.2)	Develop systems to review the organization's external operating environment, identify customer needs and spot opportunities for product and service development.	Likert Scale (7 items)	
10.d.3)	Identify and evaluate existing and potential competitors and collaborators.	Likert Scale (7 items)	
10.d.4)	Create shared vision and develop a mission to give purpose to organization.	Likert Scale (7 items)	
10.d.5)	Formulate appropriate objectives and strategies to guide organization.	Likert Scale (7 items)	
10.e.1)	Identify current and likely future interests of stakeholders.	Likert Scale (7 items)	
10.e.2)	Evaluate and influence stakeholder's capabilities to help or hinder achievement of organization's objectives.	Likert Scale (7 items)	
10.e.3)	Evaluate and respond appropriately to changes in political, legal, regulatory and trading environments.	Likert Scale (7 items)	
10.e.4)	Develop systems to review the generation and allocation of financial resources.	Likert Scale (7 items)	

10.f.1)	To what extent the difficulties obtaining knowledge abroad is a constraint, in terms of new technological ideas?	Likert Scale (7 items)	(Filatotchev *et al.*, 2009)
10.f.2)	To what extent the difficulties obtaining knowledge abroad is a constraint, in terms of new business ideas and opportunities?	Likert Scale (7 items)	
10.f.3)	To what extent the difficulties obtaining knowledge abroad is a constraint, in terms of new marketing knowledge?	Likert Scale (7 items)	
10.f.4)	To what extent the difficulties obtaining knowledge abroad is a constraint, in terms of new financial knowledge?	Likert Scale (7 items)	
10.g)	Did the entrepreneur work for a MNC (multinational corporation)?	Yes/No	
10.h.1)	To what extent the difficulties establishing networks abroad were considered a constraint?	Likert Scale (7 items)	
10.h.2)	To what extent the difficulties maintaining contacts with local people were considered a constraint?	Likert Scale (7 items)	
10.h.3)	To what extent the difficulties participating in business associations abroad were considered a constraint?	Likert Scale (7 items)	
10.i.1)	To what extent the time lag between expenditure for the purchases of raw materials and the collection of sales of finished goods was a constraint?	Likert Scale (7 items)	(Padachi, 2006)
10.i.2)	In the first stage of investment, how was the profit's weight in the assets?	Multiple choice (3 items)	
10.j.1)	To what extent adapting products for foreign markets was a constraint?	Likert Scale (7 items)	(Moini, 1997)

10.j.2)	To what extent the provision of repair services overseas was a constraint?	Likert Scale (7 items)	
10.j.3)	To what extent the provision of technical advice overseas was a constraint?	Likert Scale (7 items)	

Source: own elaboration

Table 22 – Survey (Part 4)

Part 4. Degree of internationalization			
Number	Question	Type	Source
11	Export Sales as a percentage number of the total company Sales:	Multiple choice (3 items)	(Cavusgil, 1984)
12	Principal export product is the same product sold domestically?	Yes/No	
13	Organizational arrangement used for exports is a special export division?	Yes/No	
14	Major export channel includes a foreign distributor?	Yes/No	
15	Face-to-face contacts with foreign distributors take place:	Multiple choice (4 items)	
16	Support provided for distributors includes:	Multiple choice (3 items)	
17	Profits Derived from Exporting as a Percentage of Total Company Profits.	Multiple choice (4 items)	
18	Foreign market research is perceived to be equally as important as domestic market research.	Multiple choice (3 items)	
19	Analyzing foreign market opportunities is a frequent task (conducted several times a year).	Yes/No	

20	Foreign market opportunity analysis is a fairly formalized process with written reports.	Yes/No	
21	Computerized data bases are regularly used in foreign market opportunity analysis.	Yes/No	
22	The task is perceived to be complex and requires a high level of data analysis.	Yes/No	
23. The most important source of data used in foreign market research is:			
23.a)	Government	Likert Scale (7 items)	
23.b)	Industry/business	Likert Scale (7 items)	
23.c)	Publications and reports	Likert Scale (7 items)	
23.d)	Other firms	Likert Scale (7 items)	
23.e)	Internal company	Likert Scale (7 items)	
23.f)	VCs (if applicable)	Likert Scale (7 items)	
23.g)	Other	Free text entry	
24. The most important problem associated to the foreign market data is:			
24.a)	Too broad to be useful	Likert Scale (7 items)	
24.b)	Not reliable	Likert Scale (7 items)	
24.c)	Biased	Likert Scale (7 items)	
24.d)	Out of date	Likert Scale (7 items)	

Source: own elaboration

Fig. 4 – Inquired companies (by sector)

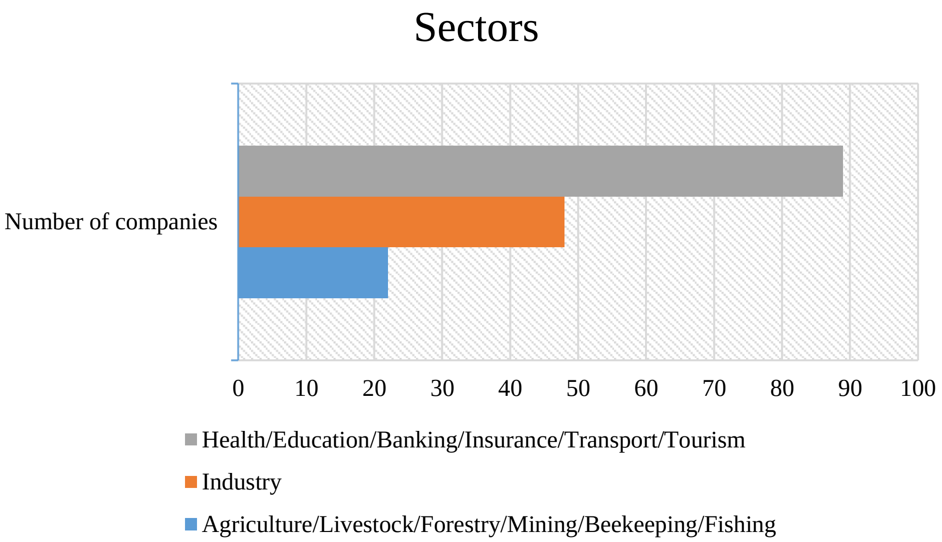
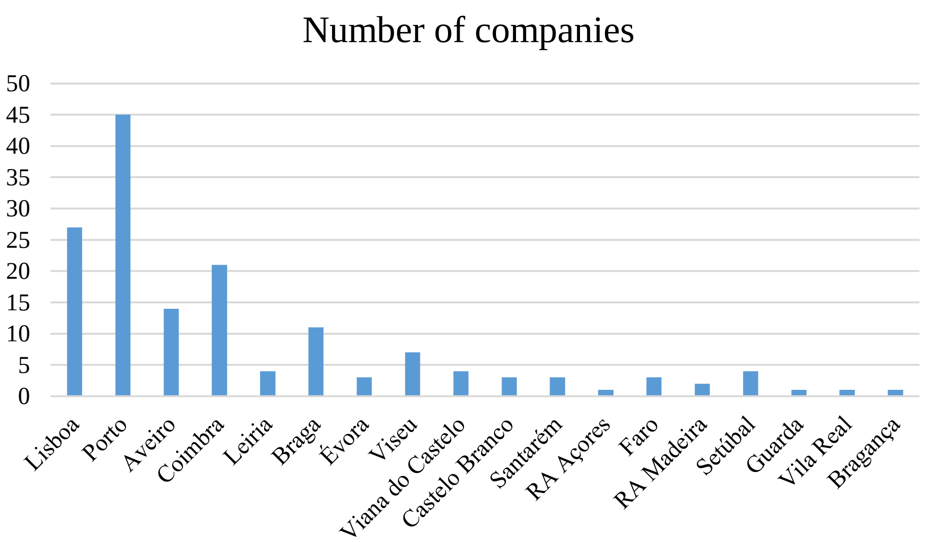


Fig. 5 – Inquired companies (by region)



Factor analysis:

Fig.6 - Factor analysis (IntGen)

Matriz de componente[a]

	Componente 1
RI1 (AM-IntGen)	,765
RI2 (AM-IntGen)	,788
RI3 (AM-IntGen)	,635
RI4 (AM-IntGen)	,773
RI5 (AM-IntGen)	,776
RI6 (AM-IntGen)	,762
RI7 (AM-IntGen)	,655
RI8 (AM-IntGen)	,714

Método de Extração: Análise de Componente Principal.

a. 1 componentes extraídos.

Source: IBM® SPSS® Statistics 24

Fig.7 – Factor analysis (IntDiss)

Matriz de componente[a]

	Componente 1
RI1 (AM-IntDiss)	,900
RI2 (AM-IntDiss)	,900

Método de Extração: Análise de Componente Principal.

a. 1 componentes extraídos.

Source: IBM® SPSS® Statistics 24

Fig.8 - Factor analysis (EE)

Matriz de componente[a]

	Componente 1
RI1 (EE-Transf)	,793
RI2 (EE-Transf)	,792
RI3 (EE-Transf)	,825
RI4 (EE-Transf)	,770
RI1 (EE-RandD)	-,079
RI1 (EE-GloNet)	,702
RI2 (EE-GloNet)	,794
RI3 (EE-GloNet)	,751

Método de Extração: Análise de Componente Principal.

a. 1 componentes extraídos.

Source: IBM® SPSS® Statistics 24

Fig.9 - Factor analysis (ME)

Matriz de componente[a]

	Componente 1
RI1 (ME-ManProc)	,684
RI2 (ME-ManProc)	,712
RI3 (ME-ManProc)	,779
RI4 (ME-ManProc)	,610
RI5 (ME-ManProc)	,694
RI1 (ME-ManVisi)	,735
RI2 (ME-ManVisi)	,688
RI3 (ME-ManVisi)	,700
RI4 (ME-ManVisi)	,743
RI5 (ME-ManVisi)	,702
RI1 (ME-StaandEnv)	,834
RI2 (ME-StaandEnv)	,796
RI3 (ME-StaandEnv)	,690
RI4 (ME-StaandEnv)	,698

Método de Extração: Análise de Componente Principal.

a. 1 componentes extraídos.

Source: IBM® SPSS® Statistics 24

Fig.10 - Factor analysis (WC)

Matriz de componente[a]

	Componente 1
RI1 (WC-CCC)	,728
RI1 (WC-roa)	,728

Método de Extração: Análise de Componente Principal.

a. 1 componentes extraídos.

Source: IBM® SPSS® Statistics 24

Fig.11 - Factor analysis (IPM)

Matriz de componente[a]

	Componente 1
RI1(IPM-adap)	,849
RI1(IPM-rep)	,912
RI1(IPM-TecAdv)	,873

Método de Extração: Análise de Componente Principal.

a. 1 componentes extraídos.

Source: IBM® SPSS® Statistics 24

Fig.12 - Factor analysis (DoI-MarkPol)

Matriz de componente[a]

	Componente 1
RI1(DoI-MarkPol)	,136
RI2(DoI-MarkPol)	-,349
RI3(DoI-MarkPol)	-,776
RI4(DoI-MarkPol)	,723
RI5(DoI-MarkPol)	,745

Método de Extração: Análise de Componente Principal.

a. 1 componentes extraídos.

Source: IBM® SPSS® Statistics 24