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Is internationalization at inception only due to a time compression effect or significant differences exist and allow International new ventures to speed up their internationalization process?

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Introduction

Young companies are central in our society. Indeed, they generate a strong dynamism both locally and internationally and are synonym with growth. We observed for several years a faster and younger internationalization of some companies; this might be because of the crisis and the globalization. The internationalization of young companies is a phenomenon studied since the 70's. Before that, they were in fact observed as "miniature models" of large firms. Nevertheless, the variety and diversity of studies devoted to them since helped highlight several unique characteristics of international new ventures (INV).

The study of the INV's is motivated by two main factors. The first being that because they internationalize from inception, they form a different and unique business model from those previously studied. The second factor is the study of the internationalization process of these firms that do not seems to follow the classic patterns (Oviatt and McDougall 1994).

There are several definitions for the internationalization of companies. They all depend on the approaches chosen by the authors and, therefore, each describes this phenomenon as incomplete. One that integrates well the different perspectives is cited by Coviello and McAuley (1999) where internationalization is: "[...] *the process by which firms both increase their awareness of the direct and indirect influence of international transactions on their future, and establish and conduct transactions with other countries"* (Beamish, 1990, p.77). This definition allows a complete understanding of the concept of internationalization through 3 aspects. First, it defines internationalization as a process and subsequently recognizes its dynamic and evolving dimension. Secondly, it generalizes the definition by including different forms of foreign relations, both exports and imports. Finally, it implies that the process has an impact on business growth and performances (Coviello & McAuley, 1999).

Given this situation, the objective of this thesis is to assess theoretically and empirically whether internationalization at inception is only due to a time compression effect or if there are significant differences that allows International new ventures to speed up their internationalization process.

More specifically, this study will try to provide relevant information required for adapting the literature considering the limits of the Uppsala model that does not seem appropriate for all SMEs that go international.

This thesis has a dual purpose. First, it is to conduct a literature review retracing the major scientific contributions on the theme of the internationalization. On one hand we will analyse the evolution and implications of the Uppsala model, considered as a more traditional model. On the other hand we will report the studies about the International new ventures. We will insist on the most recent contributions, particularly those regarding the conceptualization of this process. The second objective of this thesis is to propose an integrative model of internationalization of INV's. With this model we want to analyse whether a company is more likely to become an International new venture depending on different variables and hypotheses. We also developed a predictive model able to evaluate the probability for a firm in our sample to be an International new venture regarding its characteristics. We will conclude with the managerial implications of our different assumptions and the limits of our study.

Clarification: Difference between global and international

After several meetings with the terms international and global business in the creation of this thesis, we decided to recall the difference between these two concepts so as not to confuse them.

In order to identify the level of internationalization of a firm, the most commonly indicator used is the percentage of sales generated abroad by the company. However, there are other indicators such as the performance (what goes abroad), structural (what comes from abroad) and the psychological attitude (In how many country this company is present, and what's the international experience of its team). These three factors are good indicators of the internationalization of the company (Sullivan, 1994).

In addition, Servantie (2007) reminds us that for Alain Rugman during the International Entrepreneurship Conference of 2006, there are only a dozen firms in the world that can be called global. Thus, according to this researcher, to merit the appellation of global enterprise you have to operate in North America (USA and Canada), Western Europe (European Union) and Asia (China, Japan and South Korea).

Thus, international and global companies are very different and it is essential to distinguish the two concepts when it comes to study companies with international activities. A global company is necessarily international and on the other side, an international company is rarely global.

The UPPSALA Model:

Created in the 1970s (by Johanson & Wiedersheim Paul, 1975) at the University of Uppsala, the model tried to provide a response to two central issues for any company that wants to internationalize. On one hand in which country or market a firm should enter and on the other hand which entry mode it should use to do it. The Uppsala model is characterized by the importance of the gradual process in the internationalisation of firms. The main objective of the progressive expansion is to reduce the uncertainty specific to foreign markets relying on the knowledge gained by the international operations.

One of the strongest hypotheses of the Uppsala model is the "establishment chain" (Johanson & Wiedersheim-Paul, 1975) that suppose that firms use entry modes requiring more involvement and risk. In order to fully apprehend them we made a description and a classification by order of commitment and risk of the different entry modes through which firms can go international.

1. Entry mode

1.1. Exporting

As the first of the list, this is the entry mode that requires the less commitment and is the least risky of internationalization strategies. Regarding this, this is a good test for companies which do not have an international experience and which wants to test the demand for their product in a foreign country.

Indirect exporting: The firm finds a distributor or an importer that is located in the foreign market it wants to enter in. This is the distributor which will offer the firm product in the new country, the risk and commitment are low since the company itself is not engage in international trade.

Direct exporting: In this case, compare to the indirect exporting, the firm will increase its commitment regarding the distribution (since the firm will have to make contracts in the foreign country, undertakes market researches, fix its own price and provide a support for its marketing and distribution forces) and facilitates control and collect of information regarding the foreign activities. "*Product and services are sold: via agents or distributors located in foreign market, company export salesman or through a sales subsidiary*" (John, 1997) (cited in Tykesson & Alserud, 2011, p.27). It has to be pointed out that this strategy is affected by the exchange rates and the eventual existence of tariffs.

Direct sales: "… is one form of direct exporting that takes the commitment to foreign markets even further, by establishing an own sale force with local and/or expatriate managers" (Cateroa, Gilly, & Graham, 2009) (cited in Tykesson & Alserud, 2011, p.27). This step takes place once the firm has increase its market knowledge and is able to run its foreign activities without the help of agent or distributor, which allows it to increase its profit margin. Even if the firm lose the knowledge of those agents and distributors, it can still be gained through the employment of local workers. This export strategy implies the higher level of commitment, resource engagement and risk level but it allows avoiding the problems linked to the handling of cooperation with the foreign agents or distributors, which is non-negligible because a bad cooperation could lead to a negative influence on the product/service quality.

1.2. Contractual Agreements

"Contractual agreements are long-term, non-equity associations between an international acting company and an entity in a foreign market. Contractual agreements usually involve the transfer of knowledge such as technology, processes, trademarks and human skills" (Cateroa, Gilly, & Graham, 2009)(cited in Tykesson & Alserud, 2011, p.28). Regarding some authors (Root, 1998; Young, Hamill, Wheeler, & Davies, 1989), contractual agreements can takes as much forms as: licensing, franchising, technical agreements, management and service contract, construction and turnkey contracts, contract manufacture and co-production agreements. In our case, we will limit our analysis to the licensing and the franchising.

The licensing: This is a contractual agreement between a foreign licensor (which transfers rights or resources like trademarks, copyright or know-how) and a local licensee that will pay royalties in proportion of the amount of product or services sold. On one hand, the licensor avoids development costs and risk implied by an own establishment chain in a foreign country and profit from the licensee's market knowledge. But on the other hand, it implies a loss of control regarding the firm technology and know-how. The firm has to be attentive to not lose its competitive advantage by creating a competitor in the foreign market. Another problem is that by shifting the production and responsibility of the foreign activities to the licensee, the firm slows down its experience curve. "*Finding, supervising and inspiring the licensees are the biggest challenges"* (Cateroa, Gilly, & Graham, 2009)(cited in Tykesson & Alserud, 2011, p.28)

Franchising: "A form of licensing agreement, in which the franchiser provides a standard package of products, systems and management services for a franchise fee, usually including lump-sum payment and a share of the franchisee's profit. The franchisee on the other side brings market knowledge, capital and manpower to the table. The franchisor often assists with design, equipment, organization and marketing of the business" (John, 1997)(cited in Tykesson & Alserud, 2011, p.29). Compare to the licensing, the franchising brings an increase in control and commitment of the franchisee. It is a win-win trade since there is a combination of on one hand, the unique product/service knowledge of the franchiser and on the other hand, the franchisee's local market knowledge and entrepreneurial experience. It has to be pointed out that the cooperation is also risky between the contractors since they share the same brand name, the action of one will have a direct influence on the other.

1.3. Strategic international alliance.

Strategic international alliance is a business relationship between two or more companies that share mutual interests. They have a common goal and all work together by combining their own value chains to try to accomplish it. All the advantages of this type of alliance are a repartition of the risk linked to the internationalization between all the members of the alliance, a reduction of the weakness linked to the fact of being alone in a foreign market and finally, an increasing of the competitive strength linked to the size of the group.

1.4. Ownership:

The most common type of ownership is the foreign direct investment (FDI). It describes the market entry of a firm into a foreign market through investment. Those investments can take multiple forms: acquisition (buying infrastructures already in place in the foreign country) or Greenfield investment (build its own infrastructure). “*FDI are often chosen in order to profit from low-cost labour, it also reduces transportation costs, and it bypasses import taxes and gains access to technologies or raw material”* (Cateroa, Gilly, & Graham, 2009)(cited in Tykesson & Alserud, 2011, p.30). Root (1998) describes three types of investors: the *extractive investors* which enter in a country to get access to resources, *sourcing investors* which enter in a country to benefit of cheap labour or energy (so they are manufacturing products in the foreign country and export it back to the home country) and the *market investors* which wants to penetrate a market through a production facility in the foreign country. The main advantage of ownership is that the firm has the total control of its strategy that allows it to use its competitive advantage without any compromises. This total control also allows having a better adaptation to local market in term of local preferences, purchasing power, etc. Regarding the disadvantages, it has to be pointed out that this type of investment implies high start-up costs, a long payback period and high exit barriers.

Now we are going to present the Uppsala model through three main contributions regarding the internationalization process of the firm: First, the study of Johanson and Wiedersheim (1975) based on a case-study analysing four Swedish firms and rest on the notions of gradual engagement of resources and the “*psychic distance*” (Johanson & Wiedersheim-Paul, 1975). Followed by the Johanson and Vahlne (1977) research based on empirical studies and presenting the interactions between commitment, market knowledge and decisions of the firm. Finally, the last contribution will be the revised model of

Johanson and Vahlne (2009), which add the network approach to the analysis of the internationalization process of the firm. We also added the innovation, a research based and knowledge based models since they are all based on the Uppsala researches.

2. The Original Model (1975)

The first study (Johanson & Wiedersheim-Paul, 1975) pointed out the incremental part of the internationalization process. Indeed, companies do not enter the market by their own since the start of their international activities. They first entered the market by working with intermediaries, *"often agents who represented the focal companies in the foreign market"* (Johanson & Vahlne, 2009, p. 1412). Then, a step-by-step process starts; by first replacing the foreign agents by their own employees to finally take in charge the manufacturing process in the foreign country to avoid trade barriers. They called this process the "*establishment chain"* (Johanson & Wiedersheim-Paul, 1975). The authors divided this process in four steps. First, the firm starts to export via an independent agent. Next the firm implements its own selling subsidiary. Then the firm starts to produce in the foreign country. Finally, the share of resources used for the foreign operations rises gradually regarding the information and experience gained by the firm. Later, adding local expansion modalities like the non-capitalistic partnership or the joint venture for example will complete this "establishment chain". This process is based on the gradual commitment growing at each step and by a better perception of the risk by the firm. They also introduced the concept of "*psychic distance*" (Johanson & Wiedersheim-Paul, 1975). This concept is defined as all the factors that can prevent or impede the circulation of information between the firm and its host market. Those factors can arise from linguistic, educational, cultural, industrial development or business practice differences for example. The authors noticed that another pattern was that firms started their internationalization process by first entering in countries *"that were close to the domestic market in term of psychic distance defined as factors that make it difficult to understand foreign environments* (Johanson & Vahlne, 2009, p. 1412). If the psychic distance is often correlated with the geographic distance, there is a difference between those two concepts. Indeed, the psychic distance, on the contrary of the geographic distance can change with the development of communication systems or with social changes in general. The psychic distance will influence the choice of the country where the firm will starts foreign operations and the share of resources it will use for those activities. All along the internationalization process, firms will gradually enter markets with a higher psychic distance. The "*psychic distance*" and "*establishment chain*" criteria's (Johanson & Wiedersheim-Paul, 1975) are important regarding the Uppsala model because it tends to reduce the uncertainty linked to foreign markets and enhance the incremental dynamic of the model.

3. An extension of the model: the Innovation related model

Another gradual model of internationalization process emerged from the research regarding the U-model and is closely linked to it. Indeed, those studies are still inspired by the Swedish school because they are based on two central concepts of the Uppsala model: the progressive commitment and the step by step approach of the firms regarding the exportation but also the existence of the "psychic distance" that has to be reduced by the experience gained on foreign markets. The innovation related internationalization model (I-model) is composed of many studies, which have in common to consider the process of internationalization as peripheral to the diffusion of innovation. Another difference with the Uppsala model is that in the I-model, the authors are using the sells/export ratio to measure the international commitment of the firms. The main studies that are frequently cited are: Bilkey and Tesar (1977), Cavusgil (1980), Czinkota and Tesar (1982) and Reid (1981). It is important to point out that these studies are mostly restricted to SME's. Those models focus "*on the learning sequence in connection with adapting and innovation*" (Andersen, 1993, p. 213). The different path proposed by these studies are summarize in the figure 1.

Figure 1: A Review of the Innovation-Related Internationalization Models

Bilkey and Tesar [1977]	Cavusgil [1980]	Czinkota [1982]	Reid [1981]
Stage 1 Management is not interested in exporting	Stage 1 Domestic marketing: The firm sells only to the home market	Stage 1 The completely uninterested firm	Stage 1 Export awareness: Problem of opportunity recognition, arousal of need
Stage 2 Management is willing to fill unsolicited orders, but makes no effort to explore the feasibility of active exporting	Stage 2 Pre-export stage: The firm searches for information and evaluates the feasibility of undertaking exporting	Stage 2 The partially interested firm	Stage 2 Export intention: Motivation, attitude, beliefs, and expectancy about export
Stage 3 Management actively explores the feasibility of active exporting	Stage 3 Experimental involvement: The firm starts exporting on a limited basis to some psychologically close country	Stage 3 The exploring firm	Stage 3 Export trial: Personal experience from limited exporting
Stage 4 The firm exports on an experimental basis to some psychologically close country	Stage 4 Active involvement: Exporting to more new countries—direct exporting—increase in sales volume	Stage 4 The experimental firm	Stage 4 Export evaluation: Results from engaging in exporting
Stage 5 The firm is an experienced exporter	Stage 5 Committed involvement: Management constantly makes choices in allocating limited resources between domestic and foreign markets	Stage 5 The experienced small exporter	Stage 5 Export acceptance: Adoption of exporting/rejection of exporting
Stage 6 Management explores the feasibility of exporting to other more psychologically distant countries		Stage 6 The experienced large exporter	

Source: Andersen (1993, p.213)

In general, those models are relatively similar. Regarding Leonidou and Katsikeas (1996), those steps can be resumed in three main phases: pre entry, initial and advanced phases.

In the "pre-entry" phase, the firm can be on one hand only interested in the national market (but could be involved in exportation activities in the past and not doing it anymore). It seems that the decision to export will be the result of forces, which push to this or by the help of an external agent (Andersen (1993) call this phenomenon the "*Push Mechanism*"). On the other hand, the firm can be only engaged on the national market but described as more interested and active regarding the international activities. This implies the existence of forces that pull the process of an internal agent involved (Andersen (1993) call this phenomenon the "*Pull Mechanism*"). In the "initial phase", the firm is engaged in regular exportation activities but having the potential to increase their activities abroad. In the "advanced" phase, the firms are going through regular exportation activities (and also have an high experience abroad) or is thinking about other mode of internationalisation that requires higher commitment and resources.

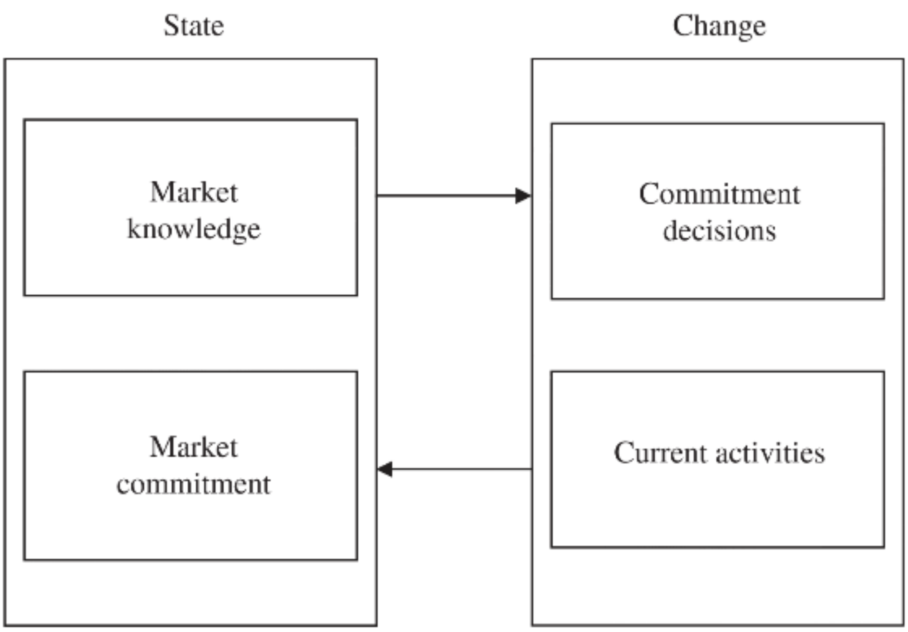
Even if they were for a long time the theoretical base for a lot of studies regarding internationalisation, the Uppsala and innovation-related models are largely criticized. Regarding Andersen (1993), the main critics are that the theoretical limits of these models are not clearly defined and that the explicative part of those models is limited (they explain the path followed by the firms that are going through an internationalisation process but do not explain "why" and "how" this internationalisation process starts). Some other authors like Turnbull (1987) or Covellio and McAuley (1999) pointed out that one single approach cannot explain the behaviour of the firms and that and that those models were only based on a few empirical studies which decrease their explicative value.

4. The first update (1977)

After this first draft in the beginning of the 70's, Johanson and Vahlne (1977) formalized the Uppsala model. Their aim was to answer to two main questions: "Which country/market the firm has to chose?" (Selection question) and "Which expansion modality the firm has to chose?" This integrative model, based on the minimization of uncertainty, is divided in four steps that follow gradually.

As we can see on the figure 2, the authors divided the internationalization process in two different states. First, at the left of the figure there is a static state. This aspect is composed on one hand of the "*market knowledge"* and operations (which can be general or specific, the general knowledge is transferable from one country to another while the specific knowledge can only be acquired by working on the given market and by gaining experience) and on the other hand of the resources engaged on the foreign markets (*market commitments*) which can be measured by the amount and degree of the resources engaged (once again, the resources can be general or specific). There is a link between those two components of the static part of the process. Indeed, the greater is the market knowledge, the greater will be the amount of resources engaged. Those static aspects have an influence on the components at the right of the figure, the dynamic part of the process. It's composed on one side of the "*commitment decisions"* which mainly concern the resources. Those are answers to the firm problems and to the opportunities that the foreign workers could face on the field. On the other side, the "*current activities"* are the main experience and knowledge sources. Again, those part of the dynamic process are linked because regarding its experience and knowledge, gained thanks to the "*current activities"*, the firm will chose to intensify or not its commitment. Subsequently, those dynamic aspects will have a retroactive effect on the new international knowledge/experience of the firm and finally on its market commitment. Due to this retroactivity, the international process is described as dynamic. The result of each step has an impact on the running of the next step. After this study, the authors pointed out that the steps of the "*establishment chain*" of their previous model were only indicative but that the incremental process was still valid.

Figure 2: The basic mechanism of internationalization: state and change aspects



Source: Johanson and Vahlne (1977, p.26)

5. The second update (1990)

Johanson and Vahlne updated their model in the 90's to insist on the importance of the position of the firm in a network to explain their internationalization process. Applied to the international activities, the network approach is based on an extension of the work realized by the UPPSALA school. They used the same concept as in their original model (involvement, knowledge, present activities, and decision making) and decided to analyse them on the market level more than only on the firm level (internationalization is seen as an intra- AND inter- organizational).

This way, they define the internationalization as a network developing through the commercial relationship with other countries via the three steps defined by Johanson and Mattson (1988) (extension, penetration and integration). The extension is the first step for companies to be part of a network. It often implies new investment for the firm. The penetration is linked to the development of the resources and the place that take the firm inside of the network. Finally, the integration consist in an advanced step in which the firm is linked to multiple networks that it has to handle and to coordinate.

By creating links (financial, technological or regarding the market knowledge for example) with other actors of the network, the firms create more and more connection, which allow them to extend their activities outside of the national frontiers to become international. Regarding Johanson and Mattson (1988), the degree of internationalization of the firm and the market has an influence on this process. In their model, the progressive learning and the market knowledge developed through the interactions with the network are important. By combining these two perspectives, they identified four situations of internationalization where the internationalization process of the firms is linked to the need of knowledge development and to the adjustment and capitalization of the relationship established in the network.

Figure 3: Firm and market internationalization degree

		Degree of internationalization of the market	
		Low	High
Degree of Internationalization of the firm	Low	The Early Starter	The Late Starter
	High	The Lonely International	The International among Others

Source: Johanson and Mattsson (1988, p.298)

The "early starter" has few and of limited importance relationships with foreign firms. The organization has a limited knowledge of foreign markets and usually works with local agents, distributors or more experimented firms. To begin, it exports operations internationally to gain experience. At this step, an important fact is the adaptation of resources. Indeed, the production capacity of the firm has to grow to face the demand of new markets. When the firm becomes more and more internationalized, it will pass to the second step.

The "Lonely international" is a firm that is highly internationalized while the market in which it evolves isn't. Thanks to its experience, the firm can enter in new networks and extend its activities. It has less pressure than the "early starter" even if its needs regarding adaptation of resources and coordination of its international activities are important.

The "late starter" already has an intern network that can be a strength for its international development. Its expansion is often affected by its international network (clients, suppliers…). In this case, the adjustment of resources and the coordination of international activities are important.

The "international among others" are active in a developed and competitive network, in which the national market is in decline due to the globalization. The firm and its network are highly internationalized. The internationalization through the network (by acquisition, cooperation, alliance or joint venture for example) can seem as the best option for SME's.

To summarize, the network approach go further than the traditional models and suppose that the network influences the international strategies developed by the companies. Thus, those relationships can lead, facilitate or stop the internationalization process of the firm. They can also influence the entry mode chose to enter in foreign markets. This perspective give a new interpretation of the internationalization process, more precisely when the firm studied is a small company that can't develop without being part of a network.

6. An extension of the model: Resource based approach

First, it was the Penrose (1959) studies that are at the origin of the concept of resources and competences. The resource-based approach relies on the approbation of assets hard to imitate for the concurrence that are source of benefits and competitive advantage for the firm. It is not only based on the on the resources properties but also on the ability of the firm to learn how to develop new resources and to coordinate their different resources (Penrose, 1995). The resource-based approach has been enlarged to the international or multinational firms. To explain the international development of the firms, Penrose (1959) stand that the indivisibility of productive resources leads to their underutilization. Because of this, the firm has to extent its market to raise its productivity and to consume those underused resources. Montgomery and Wernefelt (1991) pointed out that, for the diversification to be possible, the resources used for the internationalization has to be non-specific. Indeed, specific resources can only be applied to a limited number of industries.

Now we are going to make a deeper analysis of the model of Tallman and Fladmoe-Lindquist (1994), resumed in the figure 4 (Kayat, 2004), which combines the network and resource, based approach. They presented a model of approach regarding international resources in which the internationalization is characterized by two factors: the availability of resources and the interest linked to the organizational learning capacity development.

Figure 4: Resources, learning and multinationals

		Disponibilité des ressources	
		Faible	**Fort**
Intérêt lié au développement des capacités d'apprentissage organisationnel	**Fort**	*Quadrant 1 :* Firmes nationales : - intérêt marginal aux marchés internationaux. -exportation et licences -faibles résultats des stratégies multinationales	*Quadrant 3 :* Multinationales statiques : -la recherche de la domination du marché -internationalisation élevée -faibles risques/faibles recettes
	Faible	*Quadrant 2 :* les multinationales apprenantes : -recherche de croissance rapide -coopération -centralisation sur la croissance	*Quadrant 4 :* multinationales globales : -centrées sur le marché global -structure en réseau -recettes élevées selon les objectifs prévus

Source: Khayat (2004), p.7

The firms with limited resources and a weak organizational learning capacity (quadrant 1) are not supposed to start an international or multinational development. Those firms do not have deeper enough knowledge to allow them to face the difficulties linked to internationalization. Furthermore, they are not interested or not conscious of the opportunities that offer internationalization or do not fully understand the implications of the foreign firms on their own market.

The firms with a weak availability of resources, but a high interest for internationalization (quadrant 2) are conscious about the advantages that the extension on foreign market can bring. But they aren't able to change their structure or resources.

The firms with a high availability of resources but with no organizational learning capacity are in the third quadrant. Those firms often internationalize relying on new resources because they are not able to internationalize thanks to existent ones.

The firms with a high availability of resources and a high organizational learning capacity (quadrant 4) are in the best position to become international or multinational. The firms reaching this development stage can't be considered as little firms and a network structure is needed to keep flexibility to face strategic changes.

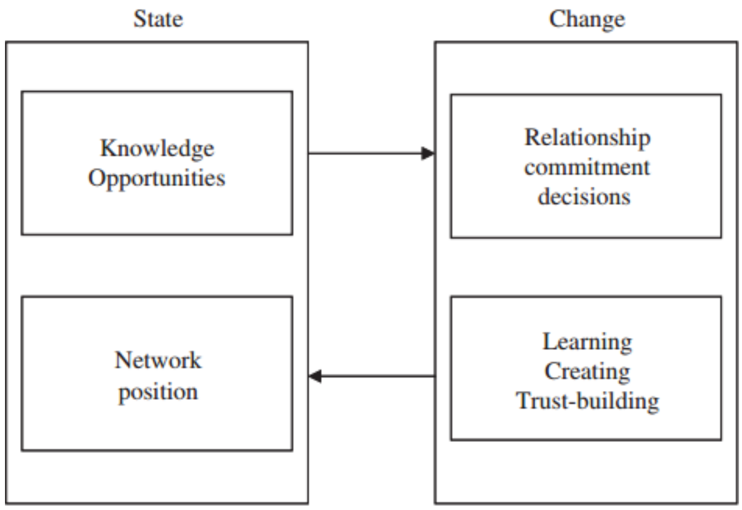
This research is interesting because it combines elements from both network and resource-based approaches. It point out that even if the firms specific resources are important for the choice of the product to internationalize, regarding the market and the organization, it's the network that will influence the international development.

It has to be pointed out that all those theoretical approaches trying to explain the internationalization process of SME's all rely on the notions of resources and competences. The internationalization process is more a combination of different resources and competences available for the firm.

7. The amended model (2009)

In 2009, Johanson and Vahlne amended the Uppsala model and developed a new version of this model. This follows reflection that started in the 90's regarding the importance of a business network to succeed an internationalization process. Johanson and Vahlne define the business network as all the relationships with supplier and important customers that "*allow a firm to acquire knowledge about its relationship partners, including their resources, needs, capabilities, strategies, and other relationships*" (Johanson & Vahlne, 2009, p. 1413). To be part of such a network will allow the firm to gain information, opportunities, trust relationships and partners on which it will rely on in its internationalization process. This new model is not focus on the foreign market anymore. For the firm that wants to internationalize, the question will not be to choose a country regarding its knowledge about this country but to be integrated in a business network in which one or more members will be able to help the firm with key resources to succeed an internationalization process. This is why the article is called "*The Uppsala internationalization process model revisited: From liability of foreignness to liability of* *outsider ship."* (Johanson & Vahlne, 2009, p. 1411) This new model forgot the concept of "psychic distance" and "establishment chain" which seems a lot less pertinent that in the first version of the model. This new version of the Uppsala model still lies in a form of four sequences following each other gradually as seen in the figure 5:

Figure 5: The business network internationalization process model (2009 version)



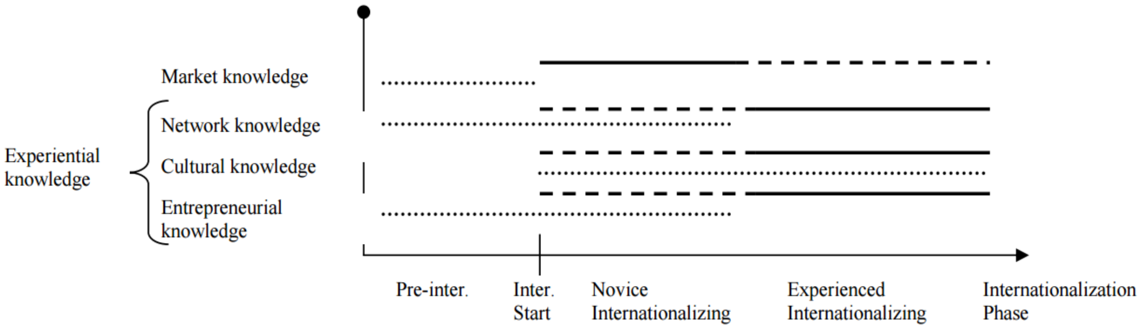
Source: Johanson and Vahlne (2009, p.1424)

The separation between static and dynamic states has been kept. On the left of the figure 5, we can see the static state. On one hand, we have the "Knowledge and opportunities". It corresponds to the knowledge base that comes from the network and on which will rely the firm for its internationalization process. This base is positively correlated to the number of opportunities of expansion for the firm because this knowledge will help the managers to see those opportunities. On the other hand, we have the "Network position". We analyse the firm in relationship with its business network: is it part of a network? Which position does it take in this network? (Central or not). It is important to know this because sometimes in a network, the knowledge, trust and commitment level are not equal between all the members and it can have a strong impact on the success of the internationalization process. Once again, there is a link between those two components. Indeed, the better is the position of the firm in the network, the better will be its knowledge base and its opportunity detection. On the right of the figure, we have the dynamic state. There is also an interaction between the static and the dynamic states: the static state will have an impact on the dynamic state. Regarding its knowledge and its position in the network (that are “fixed” at the start of the internationalization process), will have an impact on the “relationship commitment decision” of the dynamic state in the sense that it will condition the new relationship of the firm with the other members of the network. The same goes for the “Learning creating Trust building”. The revised Uppsala model is still a dynamic model. As we said, the static state has an impact on the dynamic state. But after there will be a retroaction and the dynamic state will have an impact on the static state and a new cycle of evolution starts.

8. An extension of the amended model: Knowledge based model

Mejri and Umemoto (2010) kept the incremental component of the UPPSALA model (the amended model) but focused on the knowledge as principal determinant of the success of the internationalization process. Indeed, “*The criterion based on which the phases were proposed is the level of experience: pre-internationalization (no experience), novice internationalization (short experience), and experienced internationalization (long experience)*” (Mejri & Umemoto, 2010, p. 161). As we can see on the figure 6, their model is composed of three phases (previously cited) each using four types of knowledge (Market, Network, Cultural and Entrepreneurial) with a different intensity regarding the stage of internationalization:

Figure 6: The knowledge-based model of SME internationalization



Source: Mejri, Umemoto (2010, p.162)

It has to be pointed out that the authors made a distinction between two types of knowledge. “One is the most objective or explicit and one is the more tacit and experiential… The objective knowledge comes from written documents, reports, and explicit materials. The experiential knowledge comes only from experience” (Mejri & Umemoto, 2010, p. 162). In their model, the market knowledge seems to be an objective knowledge (because today, you can find a lot of information about a market without necessarily having and exporting experience in this country) while the market, cultural and entrepreneurial knowledge seems to be experiential (you can only increase these kind of knowledge by practicing internationalization and gaining in experience).

8.1. Market knowledge:

This type of knowledge is, as it already has been pointed out, an objective knowledge. It corresponds to the objective and explicit information that a company can find about foreign markets. This type of knowledge is mainly used in the first steps of the internationalization process. Its intensity of utilization decreases through time. Indeed, before starting the internationalization, the firm has to find a lot of information about the market in which it wants to go in to reduce to a minimum the risk of uncertainty. For the next stages, the market knowledge will have a low-intensity utilization.

8.2. Network knowledge

Regarding the authors, the network knowledge is composed of social and business networks that will help the firm in its internationalization process. The network use starts in the pre-internationalization stage since the network can force or encourage the firm to internationalize. When the international activities of the firms have started, they will heavily rely on the experience of their network to try to enter in new foreign markets. The intensity of utilization of this knowledge will increase with the international involvement and experience of the firm.

8.3. Cultural knowledge:

"*Cultural knowledge of a foreign market refers to the knowledge of values, manners, and ways of thinking people in that market*" (Mejri & Umemoto, 2010, p. 164). The acquisition of cultural knowledge starts when the firm begins its internationalization. The firm will gradually learn about how to trade, from a cultural perspective, with partners in the foreign country. The more cultural knowledge the firm has, the more the intensity of its utilization increases. This can be linked to the "*psychic distance*" concept developed by Johanson and Vahlne (1997). Indeed, by increasing its cultural knowledge regarding new foreign markets in which it came in, it become possible to enter in other culturally close markets. The intensity utilization of cultural knowledge will increase with the involvement of the firm regarding internationalization. If the intensity of utilization of the cultural knowledge of the firm is low in the novice-internationalization, it will become higher as the firm acquires more and more experience in foreign markets.

8.4. Entrepreneurial knowledge:

By entrepreneurial knowledge, the authors refer to the ability of managers to detect opportunities and to be able to exploit them. Opportunity recognition can be a mean cause for internationalization. Detecting an opportunity abroad can lead a firm through internationalization. This type of ability is used all along the internationalization process (and even before) since opportunity recognition can be seen as a skill and the knowledge gained in the national market can be transferred to foreign markets. The more experience the firm will have regarding international market, the more it will be able to use their skill to detect and exploit opportunities.

To summarize, the authors based their article on the incremental development of the firms described in the UPPSALA model with a focus on the knowledge factor and it acquisition and intensity of utilization all along the internationalization process.

To be able to internationalize firms have to use a mix of all those types of knowledge.

9. Some critics about the Uppsala model.

Since the foundation of the UPPSALA model was created in 1977, the environment has strongly changed. The arrivals of the e-commerce and of new technologies facilitating communication, the growing importance of the service sector compare to the production sector are good examples of changes that influenced the day-to-day business. Taking this changing business landscape into account, even if it has been updated, some critics still emerged regarding the U-model.

First, the firm environment has changed. Indeed, one of the critical factors to take into account in the internationalization decision is the risk linked to the process. Nowadays, because of increased globalization, there are more and more opportunities to internationalize and missing those opportunities by not expanding into foreign countries becomes a threat. Forsgren (2002) argues that the risk of not investing in foreign countries becomes more important than the risk linked to the investment, even if the firm has a low market knowledge regarding the new country. A reason for this need to internationalize could be a strong competition or a low growth rate in the home market.

Another source of critics regarding the U-model is the concept of “psychic distance” (Johanson & Wiedersheim-Paul, 1975). Indeed, with the globalization increasing and the facilitated communication, it has not decreased but becomes less an obstacle. This is due to the fact that people travel more, companies have increased their relationship with foreign countries and their cultures which makes managers more and more intercultural. Regarding those changes, the effect of physical and psychic distance (Johanson & Wiedersheim-Paul, 1975) has been overestimated. This is why in the revised model (Johanson & Vahlne, 2009), the authors replaced their focus on the psychic distance by the importance of being part of a network which can reduce the level of uncertainty linked to this concept.

An additional factor of change is the apparition of the e-commerce. Axinn & Matthyssens (2002) pointed out that thanks to the e-commerce, it was possible for firms to internationalize with a low-level of risk and commitment even if the uncertainty level remains high. This allows the firms to enter in foreign markets more rapidly, without following the step-by-step process described in the U-model.

Andersen pointed out that the theoretical limits of the model are not clearly defined. It is necessary to have a better explanation of the economic facts on which they are based. Another problem for him is that the gradual models describe the development of the process (the “how”) but not the causes, the beginning of the process (the “why”). (Andersen, 1997) He also described the model as too static. Johanson and Vahlne (2009) argue that their model is not static but dynamic (by retroaction: there is a relationship between all factors and they’re all influencing each other). They said that: “*…our model focuses on the processes driving continuous change of those [the firms] boundaries.”* (Johanson & Vahlne, 2009, p. 1426)

Other authors like Turnbul (1987) or Coviello and McAuley (1999) found that these models are too determinist. They are based on a few empirical studies and, regarding the great variety of firms and the complexity of their internationalization process; a single approach cannot fully explain the behaviour of companies, limiting the explicative value of the step-by-step models. Indeed, “*as most of the current empirical research seems to be highly context-specific, almost every author in this field has aimed at elaborating his/her own list of such key determinant success factors”* (Rialp, Rialp, & Knight, 2005, p. 137) regarding the internationalization of the firms. Regarding Andersen (1997) and Axinn and Matthyssen (2002), the fact of being too deterministic also implies that the U-model underestimates the managerial action. Indeed, managers have more and more impact regarding the internationalization decisions. To this critic, Johanson and Vahlne (2009) replied: “*we also* *think that the model can easily incorporate managerial discretion and strategic intentions."* (Johanson & Vahlne, 2009, p. 1417). The problem remains that if they say that it's possible to take into account the managerial account in their model, the authors of the U-model do not explain "how" to integrate this concept.

Another concept that is largely criticized is the "con*ceptual learning*" (Johanson & Wiedersheim-Paul, 1975). Indeed, in the U-model, learning is supposed to increase incrementally in the same time as the international experience of the firm increase. Regarding Forsgren (2002), there is other ways for firm to increase their knowledge. Indeed, firms can learn from the experience of other companies that already go through an internationalization process. If it is part of a network, through imitative learning, a firm can have access to the knowledge of other firms of the network without having to experience it itself. Another way to have access to knowledge without experiential learning can be to hire people with an international experience, acquiring local firms for example. To this critics, Johanson and Vahlne (2009) replied that to be able to hire the good managers or to acquire the good local firm the firm has to already gain experience on its own and they maintain that experiential and accumulative learning remains fundamental even if it can be completed with other kinds of additional learning processes.

Finally, there is the problem of the stages of internationalization. Regarding the growing importance of the concept of "*Born Globals*" (Knight & Cavusgil, 1996) (that we will develop further) this step-by-step process is questioned. In their revised model, Johanson and Vahlne (2009) argued that: "*the establishment chain is not part of the model, but rather a summary of the empirical observations on which we based our inductive theoretical arguments"* (Johanson & Vahlne, 2009, p. 1420). They also said that the changes in firms' behaviour are due to changes in the business environment more than to changes in the internationalization process.

International New Ventures theories:

1. Introduction

In the first part, we presented the Uppsala model that attempted to explain the internationalization of small and medium enterprises to foreign markets. This movement of thought assumes that companies must perform a number of steps in order to move to its internationalization. But in this approach, the company internationalization process is laborious and meticulous.

In this section, we will analyse a new form of company with a much faster and less “structured“ internationalization process; the International new ventures. The International new ventures attracted the attention of researchers in the late 80s because of their early and rapid internationalization; they called into question the traditional models. This has allowed the emergence of new field of research – the International Entrepreneurship. It started in 1994 with the publication of an article of Oviatt and McDougall titled “Toward a theory of international new ventures”. The researchers explain that it is possible to find companies, which since their creation, focus on internationalization. Companies that follow this pattern of accelerated internationalization rely heavily on their growth, focusing in particular on their sales to foreign markets. These firms, contrary to what the first models shows us, do not expect to gain experience in local or similar markets in order to spread them to other countries and/or continents. It is from their inception that these companies will begin to export to different parts of the world; which will enable them to internationalize. (Madsen & Servais, 2007; Coeurderoy, 1996)

1.1 The emergence of early and fast internationalization companies

The internationalization described by the traditional models is not the only one possible. Companies that become international from their inception do exist for a very long time (Oviatt and McDougall 1994; Mudambi and Zahra 2007). However, they were long ignored by researchers, more interested by the development of large and mature companies (Oviatt & McDougall, 1994; Knight & Cavusgil, 1996)

Given the globalization of businesses, the increasing competition and the evolution of information systems, there is a necessity to internationalize earlier and faster. These factors let the researchers find new theories in order to better understand and explain the internationalization of young companies. In the mid-1980s and the beginning of 90s, works on fast internationalization companies grew *(Welch and Luostarinen 1988 Ganitsky 1989; McKinsey and Co 1993; Holstein 1992 Jolly and al. 1992)*. The first researches on these companies have identified three factors that contributed to their development *(Oviatt and McDougall 1994).*

1.1.1. New market conditions

We face a further specialization of firms (development of niche markets), new international networks and new ways of financing for their internationalization (companies now have access to funding programs beyond their borders). Regarding the networks, they are considered as an intangible resource, essential for SMEs from its creation (Coviello & Munro, 1997; Loane & Bell, 2006). But networks also influence the strategic decisions of internationalization, particularly in regard of the choice of the country (Coviello & Munro, 1995; 1997) and the entry mode (Moen & Servais, 2002). Under this approach, the success of internationalization depends on the quality of the network.

1.1.2. The development of the transports and of the information and communication technology (ICT)

These two factors in particular facilitate the specialization of companies (access to information) and international funding for young firms. The psychic and geographical distances, as stated in the Uppsala model, are now reduced.

1.1.3. A more developed international experience

The role attached to the age of the firm at the entry in the international markets, has changed the perspective on the phenomenon of INV. The impact of the management team in this case is highlighted. In fact, the definition of International Entrepreneurship proposed by McDougall and Oviatt is "*a combination of innovative, proactive, and risk-seeking behaviour that crosses national borders and is intended to create value in organizations*" (Oviatt & McDougall, 2000, p. 903). This definition focuses on the behaviour that characterizes entrepreneurs and managers. These people have experience in the creation and development of new companies but also have industrial experience, technical, marketing and especially international experience. They are for a newly created firm a critical resource. (McDougall, Oviatt, & Shrader, 2003)

Entrepreneurs and their teams are now much better trained to the international; they have mostly study in order to manage the internationalization of their business. In addition, they are part of a much more open generation to the international than were their predecessors.

The experience of the entrepreneur is more and more mentioned as a reason for the early internationalization of new businesses. Indeed, with the experience gained before the creation, the entrepreneur develops unique skills that can enable to develop faster their activities in foreign markets.

According to the international entrepreneurship literature (Rialp, Rialp, & Knight, 2005), the international orientation of these companies can be attributed to cognitive processes and/or the knowledge related to the experience accumulated from previous activities. With this experience, the entrepreneur is then more inclined to perceive and exploit opportunities manifesting in foreign markets.

Previous experience of the leader in its industry and personal experience abroad allows him to realize his international vision through the creation and activation of its network. Furthermore, knowledge and previous experience reduce psychic distance and uncertainty; they play an important role in increasing the speed of learning (Chetty & Campbell-Hunt, 2004). McDougall et al. (1994) also emphasize the importance of the entrepreneur's experience in international affairs, in detecting international opportunities and the creation of companies that will immediately internationalize. Because of their unique skills (related to their networks, knowledge and courses), creators of INV's perceive and identify opportunities that others do not perceive (Weerawardena, Mort, Liesch, & Knight, 2007). Coeurderoy et al. (2009) highlight the importance of human capital acquired by entrepreneurs based on their international experience acquired in the past to explain the rapid penetration of foreign markets of German and British high-tech companies.

When Oviatt and McDougall began their researches in 1991, they made the observation that no serious or comprehensive observation had ever been performed on the fast international developing businesses. Indeed, at that time, researchers were mainly attracted to the internationalization of large mature firms. Back then, those represented major economic power. Academics who were interested in issues of international entrepreneurship didn't went further than the financing of young companies abroad *(Rossman, 1984)* or to the import/export (Coeurderoy, 1996)

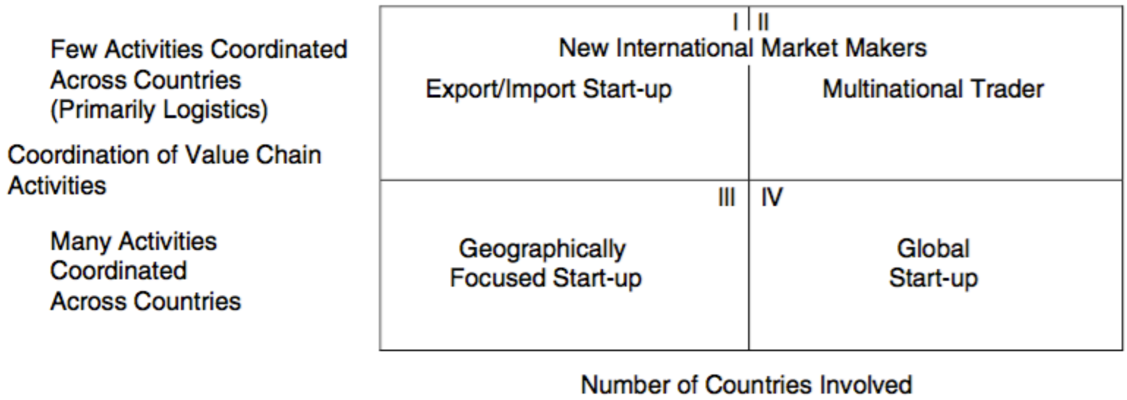
2. The definition of International new ventures

These companies are known in the literature as: High-Technology Start-ups (Jolly, Vijay, Alahuhta, & Jeannet, 1992), Instant Exporters (Mc Auley, 1999), Instant Internationals (Fillis, 2001). However, one of the most common denominations is Born Global (Servantie, 2007). It's Rennie who defined for the first time the term Born Global as: "*companies who began exporting, on average, only two years after their foundations and achieved 76 percent of their sales through exports."* (Rennie, 1993, p. 46).

For researchers a company is considered as an INV, if it meets the following definition: "An INV is defined as a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries" (Oviatt & McDougall, 1994, p. 49)

This definition of Oviatt and McDougall (1994) was taken by many researchers in international entrepreneurship (Bloodgood, Sapienza, & Almeida, 1996; Rialp, Rialp, & Knight, 2005). Oviatt and McDougall (1994) argue that this phenomenon of the INV's does not match the characteristics traditionally observed among multinationals. According to these authors, unlike the traditional organizations that develop gradually from their national environment, the INV's begins with a proactive international strategy. Oviatt and McDougall (1994), in our figure 7, distinguish four types of INV's according to two criteria: the number of countries involved, on the one hand, and the number of activities in the value chain that are coordinated, on the other.

Figure 7: Type of International new ventures



Source: Oviatt and McDougall (1994, p.59)

As we can see in this figure, the "Export/import start-up" focus on a small number of countries with which the contractor is familiar while the "multinational trader" serve a wider range of countries and are constantly looking for business opportunities in places where they have established or have easy access networks. A third type of INV includes the "Geographically Focused start-up"; these derive their competitive advantage in their ability to meet the specific needs of a region by mobilizing resources that come from abroad. In other words, the source of the competitive advantage of this type of company is the coordination of multiple activities of the value chain, such as technology development, human resources and production. And the last category, the “global start-ups” base their competitive advantage on the extensive organizational coordination of multiple activities spread over a large number of geographic territories.

It is essential to define the characteristics of an INV in order to study them better later. Oviatt and McDougall (1994) and subsequently by Zahra (2005) identify three factors to distinguish INV’s.

2.1. Age/Cycle of life

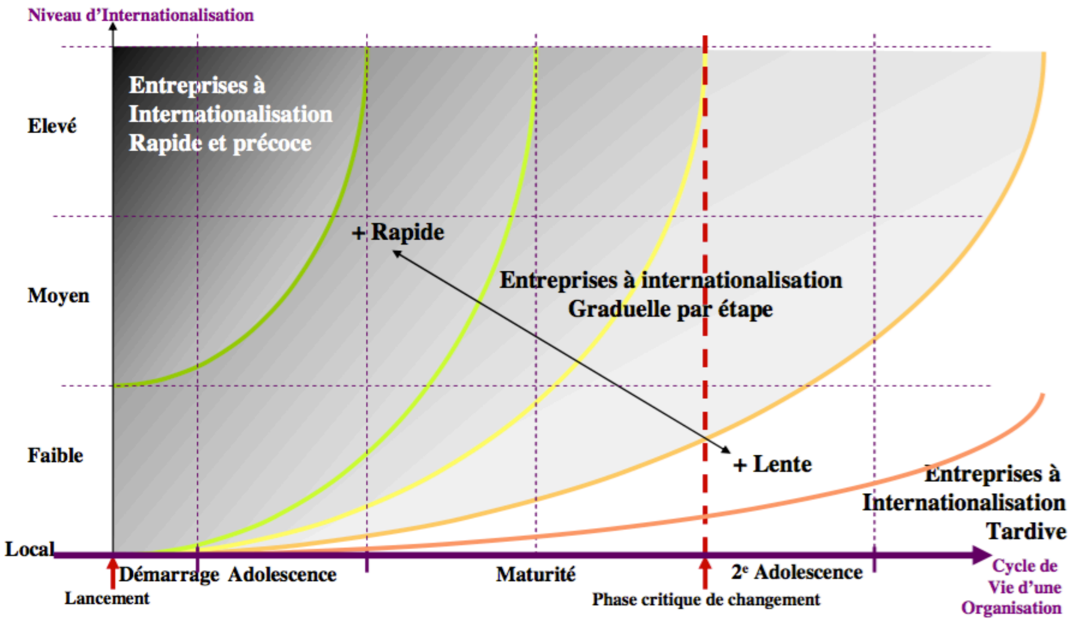
Time management is considered key in the definition of INV (Kuivalainen, Sundqvist, & Servais, 2007). Rennie (1993), in its definition of “born global” considered these SMEs competed with the major players in the global landscape, “virtually since their inception.”

Scientists consider that we find us in a situation of an INV when there is “immediacy of creation and internationalization” (Bacq & Coeurderoy, 2010). For Oviatt and McDougall (1997) the six-year convention seems to be a good standard because this period seems to be crucial in the survival of a company. Nevertheless, it is accepted by many scientists that the maximum average time to create its overseas network is 2 to 3 years.

To overcome these difficulties, Servantie (2007) proposes to use the notion of lifecycle from the organizations to compare the maturity of an organization in regard of its level of internationalization. (Figure 8)

Indeed, if we believe the traditional theories of internationalization (Johanson & Vahlne, 1977), companies start by consolidating locally and develop their international commitment as they gain experience. Thus, we can assume that it is when the company acquires a certain maturity that it seeks to develop internationally. But in some very internationalized sectors or very specialized market, such as the high technology market, we can observe international sales from the start.

Figure 8: Level of internationalization and life cycle of an organization



Source: Servantie (2007, p.14)

Thus, according to the context in which a company evolves, the speed of internationalization may vary; some will do it faster than the others. Now, among the companies, which we can observe a rapid internationalization, some have a development that seems unusually fast for their age: Those are what we can call International New Ventures.

In our empirical study we will use the Oviatt and McDougall (1997) six-year convention.

2.2. Internationalization

The second factor is the internationalization of the INV's. It is defined as that the company must have significant commitments of resources in one or more foreign countries (Oviatt & McDougall, 1994). It begs the question of what exactly does the adjective "international" in terms of geographical terms means. Some authors seem to settle for an evocation of activities abroad, without going further into the explanation of the meaning of "international".

If the geographical spread is often expressed in terms of export ratios in the international business literatures (Autio, Sapienza, & Almeida, 2000; Bloodgood, Sapienza, & Almeida, 1996; Fernhaber, Gilbert, & McDougall, 2008), this definition suffers from some shortcomings. Indeed, experience shows that cross-border SME can have a very high export rate without being present in a large number of countries. For example, an Austrian SMEs exporting in Germany, or a Canadian company operating in the US market, may have a high export rate being only present in one country (Coeurderoy & Murray, 2008).

This is why in our empirical study we choose to consider an INV as a firm that is exporting in at least one different continent.

2.3. Competitive advantage

The third factor is the competitive advantage. This advantage results from being able to have a significant commitment of resources on an international scale (Oviatt & McDougall, 1994). Many authors restated in the empirical studies the argument of a competitive advantage based on innovation or on the quality of the product delivered by the INV. (Knight & Cavusgil, 2004; Lopez, Kundu, & Ciravegna, 2009; Aspelund & Moen, 2005) Other authors like Fernhaber, Gilbert and McDougall (2008) show the importance of the R&D activities of INV's.

Bacq and Coeurderoy (2008) have questioned whether the skills of INV's are necessarily specific to the high-tech sector or not. If we look further, their research showed that a significant part of the literature deals with companies active in high technology sectors (Knight & Cavusgil, 1996), considering that usually the most important effects of the internationalization are present in these areas. Two other explanations for the competitive advantage of INV's are the effects of the networks and the experience of the entrepreneur. (Coeurderoy and al., 2013 ; Baldegger and al., 2014 ; Cabrol and Nlemvo 2011)

3. The early internationalization analysed by author

The description of the models in the following sections will highlight the main factors behind the internationalization of international new ventures. We decided to only focus on the main models we used. At the end of this chapter, a summary table of all the factors identified in the models will be presented.

3.1. Oviatt and McDougall 1994

This exploratory study of Oviatt and al. (1994) aims at identifying factors that appears to lead to the creation and internationalization of "global start-up". From their observations, the authors identified several characteristics for a successful internationalization. The global vision of the market by the entrepreneur is considered as fundamental to the rapid internationalization of the company. Such market design, as seen as global, facilitates business opportunities with several countries or cultures (Oviatt and al., 1994). Cultural differences are circumvented by the international experience of the entrepreneur or the management team that is reinforced by the practice of one or more foreign languages needed to overcome the difficulties of the communication (Oviatt and al., 1994).

These authors also highlight the importance of international networks in order to build the bulk of its business relations in view of its limited resources.

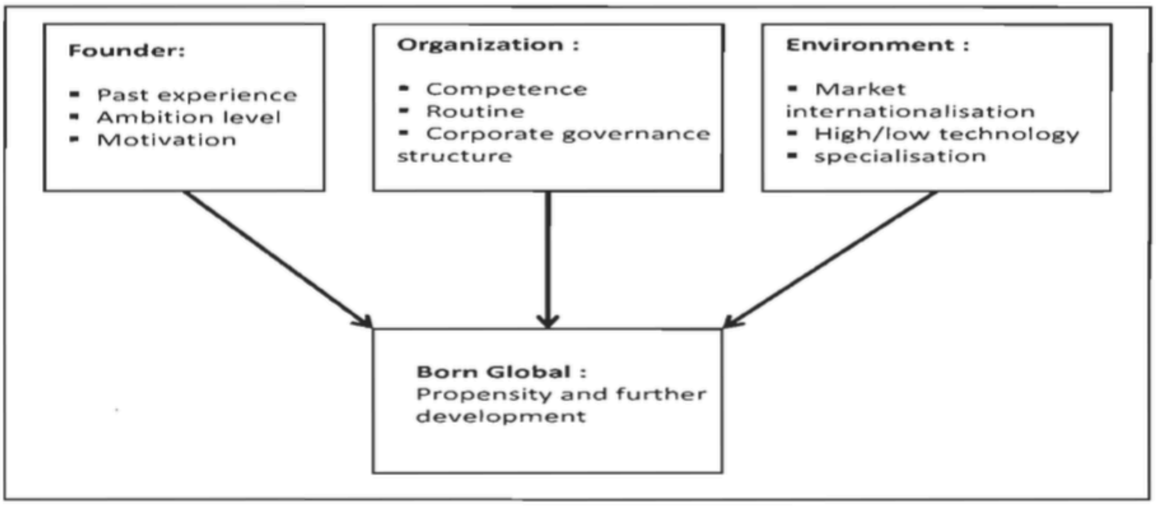
Beyond this vital aspect that are networks, the use of new technologies and marketing innovation seems necessary to offer a unique product or service to the market. (Oviatt and al., 1994) The study also shows that the valuation of unique intangible resources and innovation strategies can be a competitive advantage for the company that is able promote internationalization. (Oviatt and al., 1994)

3.2. Madsen and Servais 1997

In their article, Madsen and Servais (1997) propose a conceptualization of the rapid internationalization of companies, and a set of seven proposals for a better understanding of the emergence of INV's. According to Madsen and Servais (1997), the emergence of INV is due to the small size of the domestic market. The authors mention that the geographical location, the skills from other companies in the network, the importance of innovation and the R&D are factors that can explain the development of INV's.

From their proposals, Madsen and Servais suggest a research framework to explain the development of INV's (Figure 9) through three main factors: the founder of the company, the organization and the environment in which it operates.

Figure 9: A research model of "Born Globals"



Source: Madsen, Servais (1997, p.581)

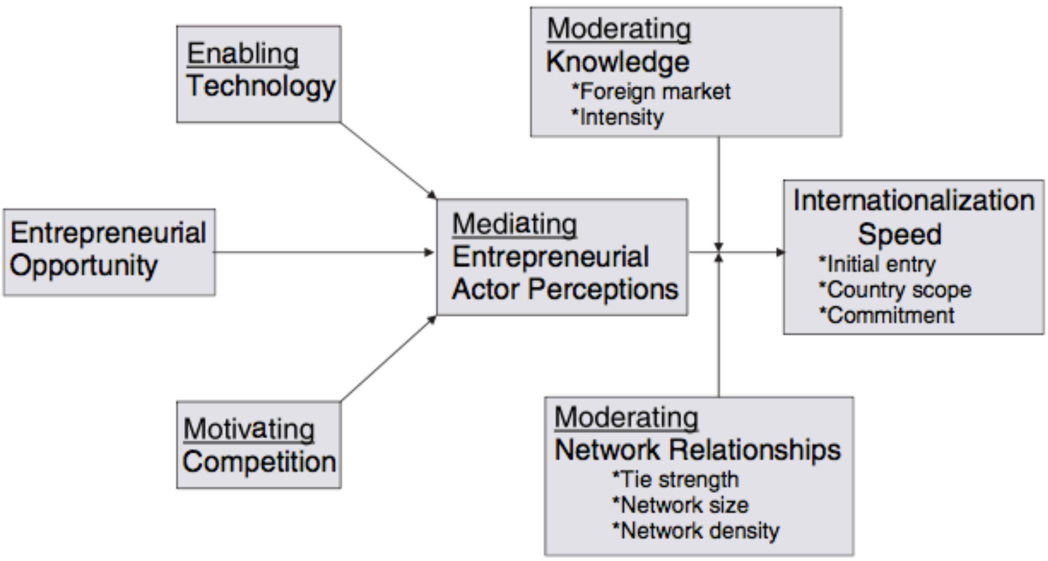
3.3. Oviatt and McDougall 2003

The McDougall and al. (2003) study discusses a comparison of international and domestic new ventures. The sample consists of 214 IPO (87 INV and 127 domestic new ventures). The authors argue that the distinctions between these two types of businesses come from: the experience of the management team (international and industrial experience); from the differentiation, innovation and quality of the products and services; and the industrial sector in which the company operates. The internationalization of INV's is also due to the impact of globalization on the industrial sector in which they operate. (McDougall and al., 2003)

3.4. Oviatt and McDougall 2005

The article of Oviatt and McDougall (2005) has as main objective to contribute to a new explanatory model of the rapid internationalization of companies based on a large literature from the entrepreneurship and international business. The authors developed a model representing various forces that influence the speed of internationalization (see Figure 10). This model shows that 4 types of forces determine this speed of internationalization

Figure 10: A Model of Forces Influencing Internationalization Speed



Source: Oviatt, McDougall (2005, p.541)

1. "Enabling force" which highlights the influence of new technologies in various sectors such as transport, communication or digital technology.
2. "Motivating force" which is seen as a factor that encourages the company to internationalize. This motivation for rapid access to the international market is due on one side to the new technologies and the other in the presence of competitors.

3. "Mediating strength" refers to the entrepreneur himself. The opportunity to internationalize will be perceived by the entrepreneur through his professional and international experience, or by his psychological traits.

4. "Moderating force." Two moderating forces that influence the internationalisation characterize this factor: the entrepreneur's knowledge and the networks.

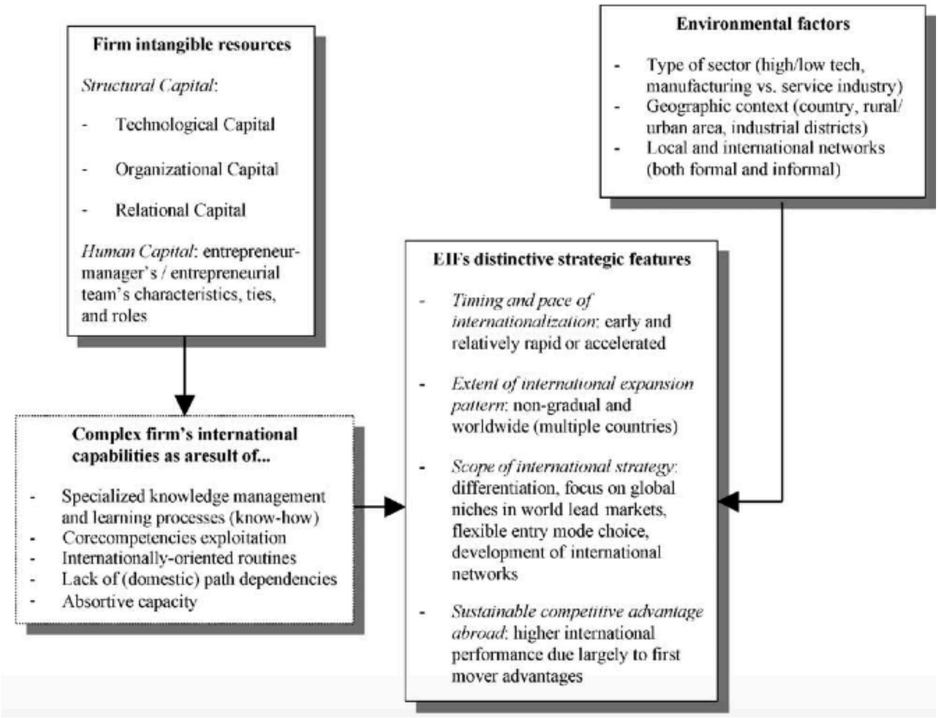
3.5. Rialp and al 2005

In a literature review through articles published between 1993 and 2003, Rialp et al. (2005) suggest that the most common factors for understanding the internationalization of an INV are: The new market conditions; the technological development in the areas of transmission or communication; the development and importance of networks and alliances; and the skills the entrepreneur or of the management team.

Beyond these factors, Rialp et al. (2005) identified several others present in the internal and external environment of the company, which seem to cause or contribute to the rapid internationalization. For example: a global vision and international experience of the entrepreneur, an international managerial commitment, the use of networks…

From these elements, the authors propose a research model for a better understanding of the early internationalization of enterprises. This theoretical representation (Figure 11), tackle three critical factors:

Figure 11: An exploratory resource-based model of early internationalizing firms.



Source: Rialp and al. (2005, p.161)

1. Firm intangible resources, consisting of technological, organizational and human capital. These resources are important aspects of the company's internationalization capacity (Rialp et al., 2005).

2. A capability called invisible or unobservable. *"Essentially, it is the result of mixing primarily intangible resources in such a way that generates complex interactions among them as well as internationally intensive routines through which all the firm's resources are coordinated"* (Fahy, 2000;Grant, 1991 cited in Rialp and al., 2005, p.161)

3. The external environment (type of industry, geographic location, the link with international networks) plays a crucial role in how the intangible resources will contribute not only to the international business development, but also to create a competitive advantage abroad (Rialp et al., 2005).

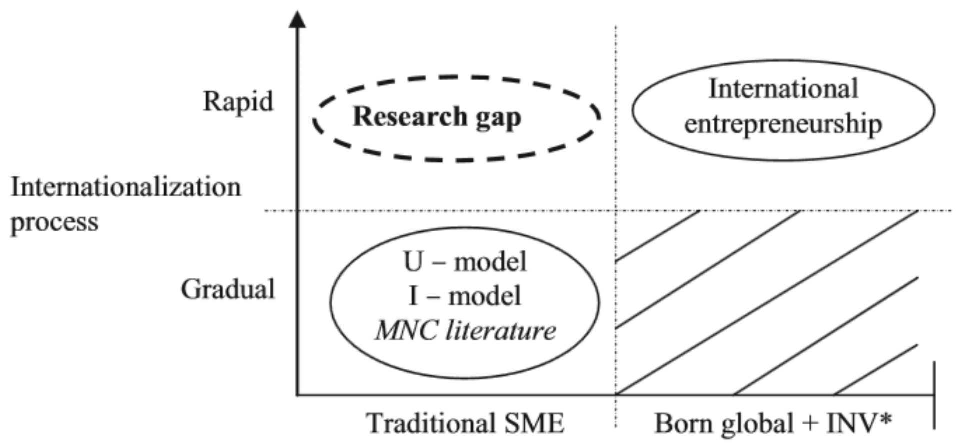
Figure 12: Summary of main contractors to the INV's theories

Factors / Authors	External environment	Entrepreneurs	Intangible capital	Strategy
Oviatt and McDougall 1994		- Global vision of the market - International Experience	- International networks - Valuation of intangible resources	- Use of new technologies - Marketing innovation
Madsen and Servais 1997	- Degree of internationalization of the market - Geographical location - Small domestic market	- Role of the entrepreneur (international and product experience)	- Network skills	- Level of specialization, innovation and R&D
Oviatt and McDougall 2003	- Industrial sector - Globalization	- International and industrial experience		- Aggressive strategies - Differentiation, innovation and quality of the products
Oviatt and McDougall 2005	- Technological development	- Characteristics of the entrepreneur - Professional and international experience - Psychological traits.		
Rialp and al 2005	- Technological development - Type of sector	- International experience - Market knowledge	- International management - Networks - Intangible resources - Flexibility	- Specialization - Product differentiation - Customer focus

Traditional companies with rapid internationalization

Now that we have go through the traditional (or gradualist) and the INV internationalization models, we could ask ourselves which one represents the best the internationalization process followed by the SME's nowadays. Studies realized by Rialp and al. (2005) and Kalinic and Forza (2012) try to answer to this question. The authors of these researches have comparatively analysed the internationalization process of firms characterized by traditional (*"firms following a more conventional pattern of internationalization"*) or more rapid (*"newly established and highly export-involved small firms from inception"*). Some questions emerged regarding the fact that *"several traditional SME's (manufacturing firms with neither particularly advanced processes nor products (Bel et al., 2003)) have rapidly internationalized operations in new and unknown markets"* (Kalinic & Forza, 2012). There exists a research gap (figure 13) because studies have been made to explain the traditional SME's with gradual internationalization process (U-model, I-model, MNC literature), other studies have described the rapid internationalization process of Born Global/INV (mainly the international entrepreneurship literature) but what about those traditional SME's which are able to perform a rapid internationalization process?

Figure 13: SMEs Internationalization literature: research gap



Source: Kalinic & Forza (2012, p.695)

To guide their researches, they developed two predicted patterns for each type of firms according to the following three dimensions or level of analysis: "*the founder's (and/or founding team's) characteristics, organizational capabilities and strategic focus (see first column of the table), subsequently divided into ten attributes (see second column of the table) which differentiate born global/INV entrepreneurial behaviour from traditional gradualist models (here they refer to export based models). The ten attributes are the result of different approaches adopted in the literature to study the internationalization process*" (Kalinic & Forza, 2012, p. 696). According to the authors, those dimensions and attributes seemed the more salient to be used to try to distinguish the two theories regarding the internationalization process of SME's. They used this table to choose and classify the firms that they were going to analyse to be sure to have traditional SME's and INV in the same proportion.

Rialp and al. argue that the greatest difference between those two types of firms rests in the behaviour of the entrepreneur and the managers and the capability to adapt to the changing environment. Indeed, "*the born global cases in this research provide particular examples of a faster and highly successful international expansion. They share, among other traits, several aspects such as being driven by proactive entrepreneurs-managers, who saw opportunities where other did not, to enter multiple markets quickly and to capitalize on the potential of innovative and highly differentiated products and/or processes. They have also focused on a narrow product-market scope and extensively used networks of both personal and business partners. In addition, they seem to have become more strategically flexible than other firms regarding the necessity to adapt more quickly to changing and dynamic international environments."* (Rialp, Rialp, Urbano, & Vaillant, 2005, p. 167)

Also regarding the born global/INV, some authors argued that this phenomenon has been mostly seen while observing new industries and high technology based sectors (Knight & Cavusgil, 1996). Others are pointing out that, even if in countries representing a large home market, INV are found in high technology based sectors, in smaller countries, they can also be found in more traditional and less technology requiring industries. (Madsen and Servais, 1997; McAuley, 1999; Andersson and Wictor, 2003) "*In this research, this type of* *firms and their characterizing strategies have been found in new, hi-tech industries, […], but also within some specific though increasingly important foreign market niches in much more mature industries, […]".* (Rialp, Rialp, Urbano, & Vaillant, 2005, p. 167)

Figure 14: Expected patterns associated with INV/born-global and traditional, behavioural models of export-based internationalization

Key dimensions	Attribute	Born-global/INV theory	Gradualist models' firms
Founder's (and/or founding team's) characteristics	Managerial vision	Global from inception	International markets to be developed gradually after a significant domestic market base
	Prior international experience	High degree of previous international experience on behalf of founding entrepreneurs and/or managers	Irrelevant or low degree of previous experience in international issues
	Managerial commitment	High and dedicated commitment with early internationalisation efforts and challenges	General commitment with objectives and tasks but not directly related to internationalisation
	Networking	Stronger use of both personal and business networks at the local and international level. Crucial to firm early, rapid, and successful global market reach	Loose network of personal and business partners. Only foreign distributors seem to be relevant to the firm's gradual path and pace of internationalisation
Organisational capabilities	Market knowledge and market commitment	High from the very beginning due to superior internationalisation knowledge at inception	Slowly growing with previously accumulated domestic and foreign market knowledge
	Intangible assets	Unique intangible assets (based usually on knowledge management processes) are critical for early internationalisation purposes	Availability and role of intangible assets are less important for successful gradual internationalisation
	Value creation sources	High value creation through product differentiation, leading-edge technology products, technological innovativeness, and quality leadership	Less innovative and leading edge nature of its products resulting in a more limited value creation capability
Strategic focus	Extent and scope of international strategy	A niche-focused, highly proactive international strategy developed in geographically spread lead markets around the world from inception	A more reactive and less niche-focused international strategy International markets will, at best, be developed serially and in order of psychic distance
	Selection, orientation, and relationships with foreign customers	Narrowly defined customer groups with strong customer orientation and close or direct customer/client relationships	In the hands of intermediaries at the earliest stages of internationalisation
	Strategic flexibility	Extreme flexibility to adapt to rapidly changing external conditions and circumstances	Limited flexibility to adapt to rapidly changing external conditions and circumstances

Source: Rialp and al. (2005, p.140)

After their researches, Rialp and al. concluded that these theories were consistent and that both can still be applied nowadays. Indeed, regarding their results, "*both the gradual development pattern abroad, as described by the traditional stage models, and the early and accelerated export internationalization process underlying the born-global model have been indeed found to constitute two consistent and distinctive patterns of firm international expansion."* (Rialp, Rialp, Urbano, & Vaillant, 2005, p. 166). This imply that some new venture will still follow a traditional and gradual path of internationalization at their beginning while others may decide to expend faster and to start the internationalization process faster in their life with a more global vision of their activities from inception. They argue that academics should not try to know which model is the more consistent but adopt a more holistic view of the process and trying to combine the stage model with more recent researches and theories to have a better understanding of the internationalization phenomenon regarding the SME's.

Kalinic and Forza started their reflection by noticing that during the last 20 years, some traditional SME's (which are supposed to follow a gradual model regarding the existing theories) have accelerated their internationalization despite the fact that they had a limited market knowledge or entrepreneurs experience and a small or no international network at all (factors that are supposed to be met to accelerate the internationalization). After those observations, they made the hypothesis that some traditional SME's were also able to speed up their internationalization process without necessarily following the path described by the INV theories. They analysed five firm cases through the key dimensions and attributes developed by the Rialp et al. They tried to understand which of them where linked to the Born-global/INV theory or to the gradualist model's firm when the studied firms were traditional firms with a rapid internationalization.

First they highlighted the main common traits among the case-firms regarding their international process. The entrepreneur was the main, if not the only actor in the decision process of the firms. The ownership did not change (at least until the internationalization process was complete). None of those firms were active in knowledge-based or knowledge intensive sectors. At the beginning of the study, all the firms were locally or nationally oriented, producing (manufacturing and/or assembling) their own products. Before their expansion, all the firms were exporting mainly in Western Europe. Those exports started a number of years after the establishment of the firm and the international experience of the entrepreneurs/managers was limited or non-existent. At the beginning of the 2000's, the companies started to establish production units abroad. The choice of the country was led by the entrepreneur's personal connections (if they had some) or by their intuition. If the reasons to start to produce in a foreign country were multiple, the labour and production costs played an important role in this decision. To be sure to not take too much risks, the firms transferred well-understood technologies to these new production contractors. Their independence grew and an increasing number of responsibilities were transferred to them regarding the production planning, control and purchase on the local market of which they had the responsibility. "*The involvement of those foreign subsidiaries was gradual and constant, but also rapid. […] The number of employees and the turnover increase both at home and broad"* (Kalinic & Forza, 2012, p. 701). There was no real planning to run this internationalization process.

After that they tried to analyse the characteristics and the behaviour of the firms and related them to the path developed by Rialp and al. to see which factors were linked to INV/born-global theory or gradualist model's firm.

The entrepreneurs and management characteristics

Regarding the entrepreneurs and management characteristics, for Kalinic and Forza they seem to follow the path described by the gradualist model. Indeed, international experience of those entrepreneurs/managers was limited. During the first years of the internationalization process, only a small part of the managerial team was committed to the process, the rest keeping focus on the local market. "*The management dedicated only the time and resources to the internationalization that would not obstruct the regular functioning of the company*" (Kalinic & Forza, 2012, p. 701). Because of its small or non-existent international network, the entrepreneurs, when they decided to look for opportunities in foreign countries, had to do it by themself and obtained the information by their own connections (local or cross-border network). At the beginning of the process, to keep the risk affordable, the resources engaged and the type of ties with the foreign subsidiaries were low. Those investments gradually grown with the expansion.

But for other authors like Coeurderoy and al. (2013), Baldegger and al. (2014) or Cabrol and Nlemvo (2011) those characteristics do not follow the gradualist path but rather the INV's one. The entrepreneur experience is increasingly cited as one of the reason for an early internationalization of new businesses. Indeed, by the experience before the creation, the entrepreneur acquires unique skills that can enable them to develop more quickly their activities in foreign markets. (Cabrol & Nlemvo, 2011)

The organization capabilities dimension

Regarding the organization capabilities dimension, it also tends to be more linked to the gradual model than to the INV theory. Indeed, the market knowledge of the country in which the firms invested was limited or totally inexistent. The firms did not operate in knowledge-intensive or knowledge-based sector and did not own specifically unique and intangible assets. The products they made did not require a high level of technology or knowledge. Their success was more based on their ability to adapt to the changing environment since the value of the product they were selling "*was mainly created through the personalization of the product, rapidity of the delivering, after-sales services, and through a niche-oriented strategy*" (Kalinic & Forza, 2012, p. 701).

Strategic focus dimension

For what concerns the strategic focus dimension, it tends to be linked to the born-global/INV theory. Indeed, "the firms were already present in international markets but mostly in a passive way by selling directly to the foreign customers […]" (Kalinic & Forza, 2012, p. 701). The decision to export was mainly due to a rationalization of the production process by establishing a plant in a foreign country (mainly in Eastern Europe). The initial production plan abroad rapidly took more and more importance inside of the firms and was rapidly transformed into an active subsidiary linked to the local environment. There was no planning regarding the internationalization process and its extent and scope change smoothly. Local partners and experts (which were preferred to intermediaries due to the close and direct relationship that were developed) were hired and the number of operations and activities rapidly grew. Finally, "they established tight connection with a number of local sub-contractors and suppliers and kept only the core operations internal. This allowed them to have an extremely flexible supply chain" (Kalinic & Forza, 2012, p. 701).

Regarding the INV and gradual theories, “Neither the mechanism identified for the gradualist models’ firms nor those for INV’s fully capture the traditional SME’s that rapidly internationalize operations in new and unknown market despite limited market knowledge, limited use of international networks, and limited entrepreneur’s international experience” (Kalinic & Forza, 2012, p. 704) and in the same time “provided evidence about five traditional firms that adapted “well understood technologies to new foreign markets and at the same time, managed to perform a rapid internationalization”. (Kalinic & Forza, 2012, p. 704)

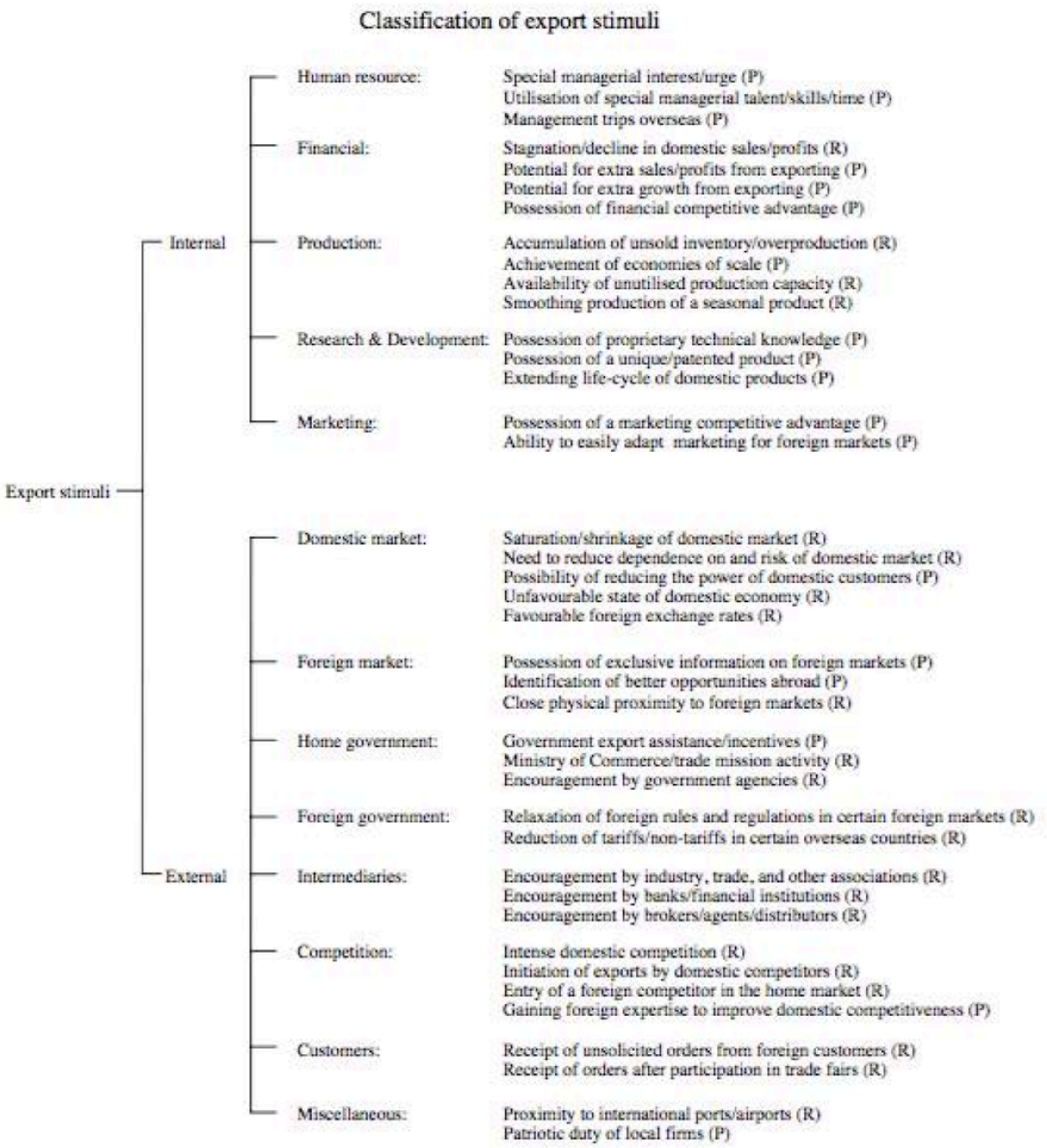
As we can see after those two studies, authors are really divided concerning the difference between the traditional firms and the international new ventures. On one hand, some authors like Rialp and al. (2005) argue that, even if both theories are consistent and can still be applied nowadays, there are significant differences between international new ventures and traditional firms. On the other hands, others like Kalinic and Forza (2012) argue that we have to take precaution before making the distinction between those two types of firms because some firms that can be defined as traditional are able to internationalize rapidly.

Considering those contradictory studies, we chose to take as hypothesis that significant differences exist between traditional firms and International new ventures. We want to isolate the variables that would allow those firms to speed up their internationalization process. If we succeed in this, we will be able to answer to our research question: “Whether internationalization at inception is only due to a time compression effect or if there are significant differences that allows International new ventures to speed up their internationalization process?”. Indeed, if we isolate variables that enable International new ventures to accelerate their internationalization and that firm defined as traditional do not have this variable in common, we will be able to conclude that there are significant differences between those two types of firms (regarding their structure, environment and composition of their workforces e.g.). In this case, the fast internationalization process of international new ventures will not be only due to a compression of time regarding the steps needed to succeed internationalization.

Context and hypotheses

Oviatt and McDougall (1994) advance that the INV's development mode confronts the Uppsala model. According to the U-model, the company's internationalization process consists of a series of incremental steps that take place gradually and in a certain order. This incremental model focuses on the acquisition, integration and gradual use of knowledge about markets and foreign operations. The main assumption of the model is that the lack of such knowledge is a major obstacle to the development of international operations and the necessary knowledge can be acquired mainly by overseas operations. Based on the behavioural theory of the firm, Vahlne and Johanson (1977) assume that firms tend to operate on the basis of existing knowledge and remain in their home market as they are not pushed or pulled by an event. For McDougall and Oviatt (1994), the step-by-step internationalization model cannot explain the INV's process because it assume that firms become international long after their creation and therefore restrict its application to mature and large firms. (McDougall, Shane and Oviatt, 1994 cited in Bacq and Coeurderoy 2010). Due to those last implications, we decided to go further and isolate the variables that really make a difference between a so-called traditional firms compared to an International new venture and that allow INV to speed up their internationalization process. To do so, we inspired from the model of Leonidou and al. (2007). It states that firms desire to internationalize and to export can come from various factors as we can see in figure 5. He divides those stimuli in 2 different categories. First, 5 internal factors: human resources, financial, production, research & development and marketing. On the other hand we have 8 external factors: Domestic market, foreign market, home government, foreign government, intermediaries, competition, customers and miscellaneous. "Internal stimuli are associated with influences endogenous to the firm, while external stimuli are derived from the environment within which the firm operates or intends to operate" (Leonidou, Katsikeas, Palihawadana, & Spyropoulou, 2007, p. 737). We want to do the same but with a focus on the factors that enable the International new ventures to speed up their internationalization process instead of the export stimulus. In this section you will find our hypothesis (also classified as internal or external factors) and the theory on which those are based.

Figure 15: Classification of export stimuli



Note: (P) = proactive and (R) = reactive

Source: Leonidou and al. (2007, p.739)

1. Internal factors

1.1. Technological innovation

In their Oslo manual (guidelines for collecting and interpreting innovation data), the OECD gives the following definition: "*An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practice, workplace organisation or external relations*." (OECD/Eurostat, 2005, p. 46). Still regarding the OECD, Innovation can be declined in multiple forms: product innovation (linked to a product or its commercialization and have as goal an improvement in the product quality, a raise in its market share or a market penetration), process innovation (have as goal a cost reduction or a raise in the production capacity) or a marketing innovation (have as goal the implementation of a new marketing strategy to better fit the customer needs or a repositioning of the product on the market to increase its sales). Regarding Dunning (1988), innovative firms will be more likely to be able to gain a competitive advantage by leveraging their core technology. Many authors like Madsen and Servais (1997), Knight and Cavusgil (2004) or Oviatt and McDougall (2005) gave an important place to innovation regarding the internationalization process of the firms. Indeed, in all those researches, the firms studied are always described as innovative. Firms will have to be careful that the innovation will have to be constant to keep its competitive advantage and to pursue its international activities. Cavusgil and Knight (2009) pointed out that an innovative product, with unique characteristics and high quality, allow the firms to be competitive. A study by Bleaney & Wakelin (2002) also showed that innovative companies were more likely to export. These authors have therefore established a link between innovation within the company and its ability to venture abroad.

H1: Selling an innovative product has a positive impact on the fact to go through an early and rapid internationalization process.

1.2. Quality certification

As we can see, In addition to the product innovation, the product quality matters too. Indeed, thanks to globalization, the diversity of the offer exposes the firms to multiple competitive products. Since the customer is more likely to be attentive to the quality of the product if there is a large offer, the product quality take more and more importance. The firms have to go further than the client's needs regarding functionality and performance to distinguish themselves from their competitors. Regarding Knight and al (2004), the quality of the product or service gives a competitive advantage to the firm compare to its competitors and helps it to go faster through its internationalization process. Leonidou and al. (2007) pointed out that: "*the strength of this stimulus is also higher when the product is internationally patented, thus ensuring a constant flow of revenues to the company for a sufficient period of time, although the appearance of other competing technologies may reduce the power of this product advantage*" (Leonidou, Katsikeas, Palihawadana, & Spyropoulou, 2007, p. 743)

H2: Selling products under a quality certification has a positive impact on the fact to go through an early and rapid internationalization process.

1.3. Research and development

Regarding the impact of research and development activities on the internationalization process of the firms, Leonidou and al. (2007) argue that it's positive. They justify this by the fact that the research and development activities that are made for the home country are very likely to be transferred at the international level for three major reasons:

1) If the specific technology developed in the home country has been proved successful, this will be a guarantee for a similar success in foreign countries.
2) Since the cost linked to those activities is more imputable to the research and development than to the adaptation, the opportunity cost of exploiting the new technology abroad is negligible.

3) Since the technology has been developed in intern, the other firm do not dispose of it, which means that the owner will have a competitive advantage abroad.

Other authors like Johnston and Czintkota (1982) or Tear and Tarlesto (1982) proved that the research and development activities had a strong positive impact on the decision of firms to go through international activities.

H3: Being engaged in research and development activities has a positive impact on the fact to go through an early and rapid internationalization process.

1.4. Managers international experience

The role of the entrepreneur in the internationalization of the INV's has been shown in many studies like said earlier. His place as an entrepreneur, manager or executive made him a key variable in the strategic choices of the company. His status in the company permits him to contribute especially to the selection of information that can lead to business opportunities, but also to the positioning of the company in the foreign markets. His place within the company is even more important when the size of it is small.

The perception and interpretation of opportunities or threats, as well as sorting the different information collected by the leader are influenced by many factors such as its own personal characteristics (gender, education and experience), his psychological traits (or taste risk averse, attitude and need) (Oviatt & McDougall, 2005) and its strategic orientation (Clercq, Sapienza, & Crijns, 2005).

Among the types of experiments reported in the above literature we find those related to the international, industrial or commercial experience.

1) International experience allows the identification and exploitation of new opportunities beyond the borders, the detention of a better market knowledge and the building of a network. The experience and the international orientation of the leaders reflect a proactive attitude and a willingness to innovate (Knight & Cavusgil, 2004).

2) An industrial experience, as well as international experience, enables the identification and exploitation of new opportunities (Oviatt & McDougall, 1994). Indeed,

the new business opportunities are due to the industrial knowledge of the entrepreneur that enable an effective information treatment (McDougall, Oviatt, & Shrader, 2003)

3) Commercial experience of the management team allows the INV's to possess the knowledge of the marketing of their product. These can be adapted to the targeted market which will affect the company's rapid internationalization (McDougall, Oviatt, & Shrader, 2003)

The various experiences mentioned suggest that the INV's are composed with at least one executive with many years of professional activities. While these features, specific to each executive, may confirm or refute its decisions and thus the internationalization strategy (Oviatt & McDougall, 2005), research agree on the fact that its "global" or international vision appear to be one of the main reasons for the arrival of INV's internationally (Oviatt & McDougall, 1994; Rialp, Rialp, Urbano, & Vaillant, 2005)

Beyond the vision of the entrepreneur, all of his skills and knowledge resulting from his experiences are key elements to understand the internationalization of INV's. The success of internationalization implies an accumulation of experience. However, INV's, given their young age, have a lack of experience (Oviatt & McDougall, 1994). The inexperience and absence of practice on the international markets are considered as real hurdles for companies that do not export (Veilleux & Ferro, 2010).

This lack of experience is largely compensated by the international experience of the executive.

H4: Employing at least one executive being involved in international activities in the past has a positive impact on the fact to go through an early and rapid internationalization process.

2. External factors

2.1. Networks

Johanson and Vahlne in their amended model define the business network as all the relationships with supplier and important customers that "allow a firm to acquire knowledge about its relationship partners, including their resources, needs, capabilities, strategies, and other relationships". (Johanson & Vahlne, 2009, p. 1414) To be part of such a network will allow the firm to gain information, opportunities, trust relationships and partners on which it will rely on in its internationalization process.

A significant number of studies demonstrated the role of networks in the internationalization of companies (Meier & Meschi, 2010). In the updated version of the Uppsala model, Johanson and Vahlne (2009) argue that it is the entry in networks that will enable a company to internationalize successfully, thanks to the trust, learning and development opportunities in an environment that facilitates the conquest of foreign markets. The role of networks is particularly important for the internationalization of SMEs due to their lack of resources and expertise to expand internationally (Chetty & Blankenburg Holm, 2000).

As stated before, regarding the INV's studies, networks are considered essential for new international firms in their strategic decisions choice of country and the entry mode.

Even if this variable is present in both models we are convinced that it has a strong impact on the early internationalization of new ventures. Indeed, we believe that the difference state in the fact that with INV's, the involvement in a network start earlier and not gradually. Unfortunately, we will not be able to test this hypothesis in our empirical research because this information was not listed in the EFIGE-database.

H5: Employing at least one executive being involved in international activities in the past has a positive impact on the fact to go through an early and rapid internationalization process.

2.2 Competition

Regarding the impact of competition on the speed of internationalization of firms, Leonidou and al. (2007) distinguished four cases:

1) "*An intense domestic competition*" (Leonidou and al., 2007) (which can take multiple forms as price, advertising or product differentiation) can bring small firms into difficulties (as a diminution of the sales or a decline in market shares or growth e.g.). The

start of exporting activities can be a solution to those difficulties. Firms will have to look at countries that suit their characteristics and capabilities. The authors point out that the importance of the competition of the domestic market becomes less and less importance regarding the globalization of economies making the competition a factor to take into account at the international level.

2) "*Initiation of exports by domestic competitors*" (Leonidou and al., 2007). In this case, the local firm will suffer from a competitive disadvantage compare to its competitors that go through international activities. Indeed, the competitor can benefit from its international activities at the economic (increasing sales, better growth and risk diversification) and experiential (managerial capability, technological advancement…) levels, but also gain the first mover advantage that could prevent other firms to start international activities in this country. Regarding those competitive disadvantages, a firm that sees its competitors going international is likely to decide to do the same. Czinkota and Ronkainen (2006) pointed out that the impact of this stimulus could be low because some firms realize that they were not ready to starts international activities and were quickly going back.

3) "*Entry of foreign competitors in the home market*" (Leonidou and al., 2007). If because of the intensification of the competition at a global level, it is easier for domestic firms to start international activities abroad, it's also easier for foreign competitors to enter in a firm domestic market. This could be an incentive for the domestic firm to start exportation activities to retaliate on its competitors to protect its market share in its home country. It also allows the firm to compensate the loss of market share in its home country by gaining some in foreign markets. The authors pointed out that the explicative power of its explanation was limited because for small and medium firms, most of them do not have the necessary resources and capabilities to retaliate versus multinationals for example.

4) "*Gaining foreign expertise to improve domestic competitiveness*" (Leonidou and al., 2007). When the firm try to escape its domestic market to avoid a strong competition by starting export activities in another country, it could also have an impact

on its home market. Indeed, by gaining experience in a new country, the firm also becomes stronger in its domestic market. "*By competing in different and complex environmental settings, the firm can learn about new business practices, acquire new technologies, develop new product ideas, and have access to new resources and capabilities.*" (Leonidou, Katsikeas, Palihawadana, & Spyropoulou, 2007, p. 750) This increase in the firm expertise can result in a strong competitive advantage in its domestic market.

Regarding this, competition can have an impact on the decision of starting international activities for a firm.

H6: Evolving in markets with a high level of competition has a positive impact on the fact to go through an early and rapid internationalization process.

2.3. Sector

The sector characteristics are important in the international development of the company (Wictor and Andersson, 2003). In the context of a globalized world we need to take into account different variables that can be external or internal to the sector in which the company operates (Lemaire, 2003). A significant part of the literature deals directly about companies active in high technology sectors (Knight and Cavusgil, 1996), considering that usually the most important effects of globalization are present in these areas. Bacq and Coeurderoy (2010) analysed 34 articles and more than a third of them are devoted to INV operating in technology sectors.

H7: Operating in high-tech industries has a positive impact on the fact to go through an early and rapid internationalization process.

Methodology

This chapter will present the methodological aspects of our research and in the same time will justify the method and techniques that we used. First it will describe our research position, then our research canvas to finish with the choice of our main variables.

1. Descriptive research:

The descriptive research consists in a simple description of the variables in order to be able to understand their impact on the research question. Based on our literature review, we isolated the main variables we think could have a positive impact on the fact to go through an early and rapid internationalization process. The database we used for our descriptive (but also for the quantitative) research is the EFIGE dataset. The EFIGE project (European Firms in a Global Economy: international policies for external competitiveness) was financed by the EU. This database studied multiple aspects of European firms. They wanted to know if there was a link between the international operations of the European firms and factors like the structure of the firms, their workforces, their investments (in R&D and innovation e.g), their internationalization process, their environment and their financial structure. Next, the purpose was to have enough information to be able to take good decision regarding the EU politic to help European firms to be more competitive at the international level.

1.1. Database description

"*The EU-EFIGE/Bruegel-UniCredit dataset is a unique firm-level database of representative samples of manufacturing firms (with a lower threshold of 10 employees) across European countries. The questionnaire covers six different broad fields, for a total of some 150 variables organized in more than 450 different sub items, for each one of the 14,759 firms. The total dimension of the questionnaire is around 30GB, for more then 7,200,000 data points*." (Altomonte & Aquilante, 2012)

A professional contractor carried out the surveys (GFK, a main actor in the market research sector) and the purpose was to collect qualitative and quantitative data.

The data collected are diffused in the form of an excel worksheet where they are divided in 6 fields:

A - Structure of the firms;

B - Workforce;

C - Investment, technological innovation, R&D;

D - Export and internationalization processes;

E - Market structure and competition;

F - Financial structure and bank-firm relationship.

Each column in each field correspond to one question of the questionnaire (Annexe 1) where the name of the variable (eg a3) is composed of the letter corresponding to field at which the question is related and the number of the question.

1.2. Sample

The EFIGE dataset interviewed 14759 SME's, which they divide by country, age, sector, etc. Our main interest was the age of the companies. In fact, during our literature review and analysis of INV's, most authors agree that an INV is a company less than 6 years old. The other age groups of the dataset did not allow us to know the company's creation year. We therefore logically only took the companies with an age of less than 6 years. Of this sort, 1044 SME's had been created within the last 6 years.

We still had to successfully make the distinction between an INV and a traditional company. Several options were open to us. First, we could set a minimum rate of export according to their turnover, but this would brought us to the problem of knowing where and in how many countries they were exporting. Secondly, the database gave us access to a dummy variable that said: *"firm is direct exporter in 2008 or has been actively exporting in years before 2008*". But again we faced a lack of information problem.

We arrived at our third possibility that was the dummy variable: Global Exporter. As defined in the database this variable is: “*Dummy for firm exporting to China or India or Other Asian countries or USA or Canada or Central or South America.”*

This variable gave us the certainty that the business was actively exporting in another continent and thus allowed us to avoid the problem of neighbouring countries.

From the 1044 companies under an age of 6, 248 are global exporters that we therefore consider as International New Ventures and the 746 others are so considered as traditional businesses.

2. Quantitative research

Once we will have our entire hypothesis thanks to the descriptive research, we will test the impact of all the variables that we selected to see if they are really a source of difference between the internationalization process of traditional firms and International new ventures.

2.1. Dependant variable

Here is the description (name in the database, type of variable, the question that were asked to create this variable and the answers that were proposed to the firms) of the variable that we selected for our descriptive research (that will be tested in a quantitative research and in an empirical model after) and the reason why we chose to study it. For our quantitative research (which follow the descriptive research), the 2 first variables are the one we used to create our dependent variable (to be an INV) and the following are the independent variable for which we want to test the impact on the fact to be an INV or not.

2.1.1 Age of the firm:

VARIABLE LABEL	VARIABLE TYPE	QUESTION / DESCRIPTION	VALUES	NOTES
A1	QUANTITY	Year of establishment	< 6 years; 6-20 years; >20 years	Young Innovative Companies: < 6 years

This variable is taken into account in the definition of our dependent variable (the fact to be an INV). Indeed, in accordance with the articles we read for our literature review, and more particularly the one of Oviatt and McDougall in 1994, we defined an INV as a firm that created an overseas network in less than 6 years. So in our database we only took matter of the company classified as "less than 6 years".

In order to avoid confusion with business aged over 6 years in our results, we have decided take them out of our database, implying that our tests where only made on firms under 6 years. This is why the variable "less than 6 years" will not be taken into account in our summary nor in our SPSS test.

2.1.2 Global exporter:

Global exporter		Dummy for firm exporting to China or India or Other Asian countries or USA or Canada or Central or South America.

This variable is also taken into account in the definition of our dependent variable (the fact to be an INV). The global exporter variable is a dummy that was created by the researchers with the value "1" if the firm was exporting to another continent than Europe and "0" if it was not the case. Before that we took this criterion of global exporters, we decided to focus on the firms that had at least 25% of their turnover represented by their exports as recommended by various literatures (Knight, Cavusgil, 1996; Moen, 2002; Madsen, Rasmussen, Servais, 2000).

But here we faced a problem; imagine two Belgian firms (A and B) that meet the criterion of firm age and the criterion of the 25% of export involvement. Firm A exports to 4 foreign markets (Luxembourg, France, Germany and the Netherlands), and firm B exports in "only" 2 foreign countries (China and the U.S.A.). If we just look at the international involvement, firm A show a higher international participation than firm B. But if we listen to Johanson and Vahlne (1977) and their theory of the psychic distance (direct neighbouring countries versus separate continents) firm B reveals to be more international and 'venture oriented'.

Therefore, the number of export markets should be considered as an explanatory variable (Rialp, Rialp, Knight, 2002) rather than a strict quantitative criterion. (Glowik & Sadowski, 2014)

So our definition of International new venture for our study is: a firm that is an active exporter in another continent less than 6 years after her creation.

2.2. Independent variables

2.2.1 Product innovation

product_innov		Dummy for firms that carried out any product innovation in years 2007-2009

The product innovation dummy informs us on the fact that the firms carried out any product innovation, with this we want to know if firms that are running product innovations are more likely to go fast to the international than firms that are not.

2.2.2 Quality certification

qual_cert		Dummy for Quality certification: the firm has gone through any quality certification during last year

Our last variable, give us some information about the fact that the firms that has gone through any quality certification can be more likely to be an INV than firms which are not.

2.2.3 Research and Development

r_d		Dummy for R&D: firm employs more than 0 employees to R&D activities

As seen before, R&D can be an important variable to make the distinction between an INV and a traditional company. This dummy informs us on the fact that the firms are involving one or more employees in research and development activities and thus can be really interesting for our analysis.

2.2.4 Managers' international experience

VARIABLE LABEL	VARIABLE TYPE	QUESTION / DESCRIPTION	VALUES	NOTES
B12	SINGLE	Has any of your executives worked abroad for at least 1 year?	1 "Yes" 2 "No" 3 "DK/DA"	

We chose to use this variable because we wanted to test the hypothesis that firms employing managers who already had an international experience were more likely to become an INV than firm with no managers with international experience in their team.

2.2.5 Competition

comp		Dummy for Competition from abroad: the firm has competitors abroad

With this dummy variable which informs us on the fact that the firm has competitors from abroad or not, we want to test the hypothesis that firm that have to face competition from abroad are more likely to become an INV that firm which are not.

2.2.6 Firm sector

VARIABLE LABEL	VARIABLE TYPE	QUESTION / DESCRIPTION	VALUES
PAVITT	SINGLE	Pavitt classification on the basis of original NACE code of firm (3-digits)	"Traditional" - "High Tech" - "Specialized" - "Economies of Scale"

With the answers to this question, we created a dummy which consisted to assign the value "1" to then enterprises evolving in "High-tech" and "Specialized" sector and 0 to the others. The purpose of this dummy is to test if firms evolving in more specialized sector are more likely to become INV that firms operating in "more traditional" sectors.

Table 1: Summary of variables

Dependant variable	Name of the variable	Value
Global Exporter	"Global_exporter"	0/1
Independent variable	**Name of the variable**	**Value**
Product innovation	"Product_innov"	0/1
Quality certification	"Qual_cert"	0/1
Research and development	"R_D"	0/1
Managers experience	"International_executive"	0/1
Competition	"Competition"	0/1
Firm sector	"Sector_HT"	0/1
Employees	*"Log_emp"*	>1

3. Empirical model

In order to test the probability of a firm to be an international new venture or a traditional firm, we used a logistic regression model. To test whether more traditional firms and INV were different regarding internal factors (selling innovative product, going through quality certification process, being involved in research and development activities, employing at least one executive with a previous international activity and the number of employees (expressed in log)) and external factors (the technology intensity and the competition level of the sector in which the firm evolves), we chose to use the logistic regression (logit).The main reason for this choice is that our dependent variable (the fact to be a global exporter or not) is a dichotomous variable, if our dependent variable had been a count we should have use a Poisson regression.

Logistic regression is defined as a technique to fit a regression surface to a group of data when the dependent variable is dichotomous. This technique is used for studies designed to check whether the independent variables can predict a dichotomous dependent variable. On the contrary of the multiple regression and discriminant analysis, this technique does not require a normal distribution of predictors or homogeneity of variances.

The method we used is the direct method (the basic method in SPSS). It is used when no specific assumptions are made regarding the order or importance of predictive variables. In fact, this only takes into account the contribution of previous predictors, because every variable is valued as if it recently entered into the equation.

We will test our model through the following indicators: first, the Nagelkerke R^2, it represents the variance explained by the model. The field of study and the underlying theories should be used to judge this variance. Indeed, a low Nagelkerke R^2 does not necessarily means that the model has not to be taken into account. After that, the total percentage can also check the strength of the model. Consequently, in the classification table, we can check the correct percentage and the overall percentage. This way, we will know the percentage of companies that our model has correctly classified.

Thereafter, we will observe which variables were included in the equation and then consider which are significant thanks to the p-value (Sig in SPSS). We will also proceed to the interpretation of odds ratios that are in the box Exp (B).

Finally, we will elaborate a predictive model. This model leads to the development of a prediction instruments. Based on the set of variables we defined, with this instrument, it will become possible to measure the probability for a firm to be an International new venture regarding those variables. This way, if we collect information regarding new firms and their response to the different variables, we will be able to predict its chance to be an International new venture.

Descriptive statistics

As a reminder we made 7 hypotheses in regard with our literature review.

- *H1: Selling an innovative product has a positive impact on the fact to go through an early and rapid internationalization process.*
- *H2: Selling products under a quality certification has a positive impact on the fact to go through an early and rapid internationalization process.*
- *H3: Being engaged in research and development activities has a positive impact on the fact to go through an early and rapid internationalization process.*
- *H4: Employing at least one executive being involved in international activities in the past has a positive impact on the fact to go through an early and rapid internationalization process.*
- *H5: Employing at least one executive being involved in international activities in the past has a positive impact on the fact to go through an early and rapid internationalization process* (As reminder, this hypothesis could not be analysed)
- *H6: Evolving in markets with a high level of competition has a positive impact on the fact to go through an early and rapid internationalization process.*
- *H7: Operating in high-tech industries has a positive impact on the fact to go through an early and rapid internationalization process.*

Those hypotheses were made in order to help us in answering to our research question. The objective of this thesis is to assess theoretically and empirically whether internationalization at inception is only due to a time compression effect or if there are significant differences that allow International new ventures to speed up there internationalization process.

As stated before, one hypothesis is linked with one variable available in the database. It was thus important to analyse each of them independently. In table 2, we created graphics for every independent variable related to our dependant variable. Those graphics were made with a percentage scale in order to avoid the problem of a big visual difference between the number of traditional companies (734) and INV's (248) in our sample. In addition to this we launched a simple linear regression (one for each variable isolated) to have an insight of the impact of this variable on the fact to be an International new venture and to ensure that it was significant.

In table 4 we pointed out our descriptive statistics with for each variable the minimum, maximum, mean and standard deviation. All our variables are dummies except for the logarithm of the number of employees. We decided to use a logarithmic scale so that we could make mingle the small and large values, and have a more linear evolution.

Table 4: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
product_innov	1043	0	1	,48	,500
qual_cert	1043	0	1	,54	,498
R_D	1043	0	1	,48	,500
International_Executive	1043	0	1	,23	,424
competition	1043	0	1	,49	,500
Sector_HT	1043	0	1	,22	,417
Log_emp	1043	1,00	2,70	1,4794	,39630
Global_exporter	1043	0	1	,24	,426

Table 2: Descriptive graphics of the different variables in our sample

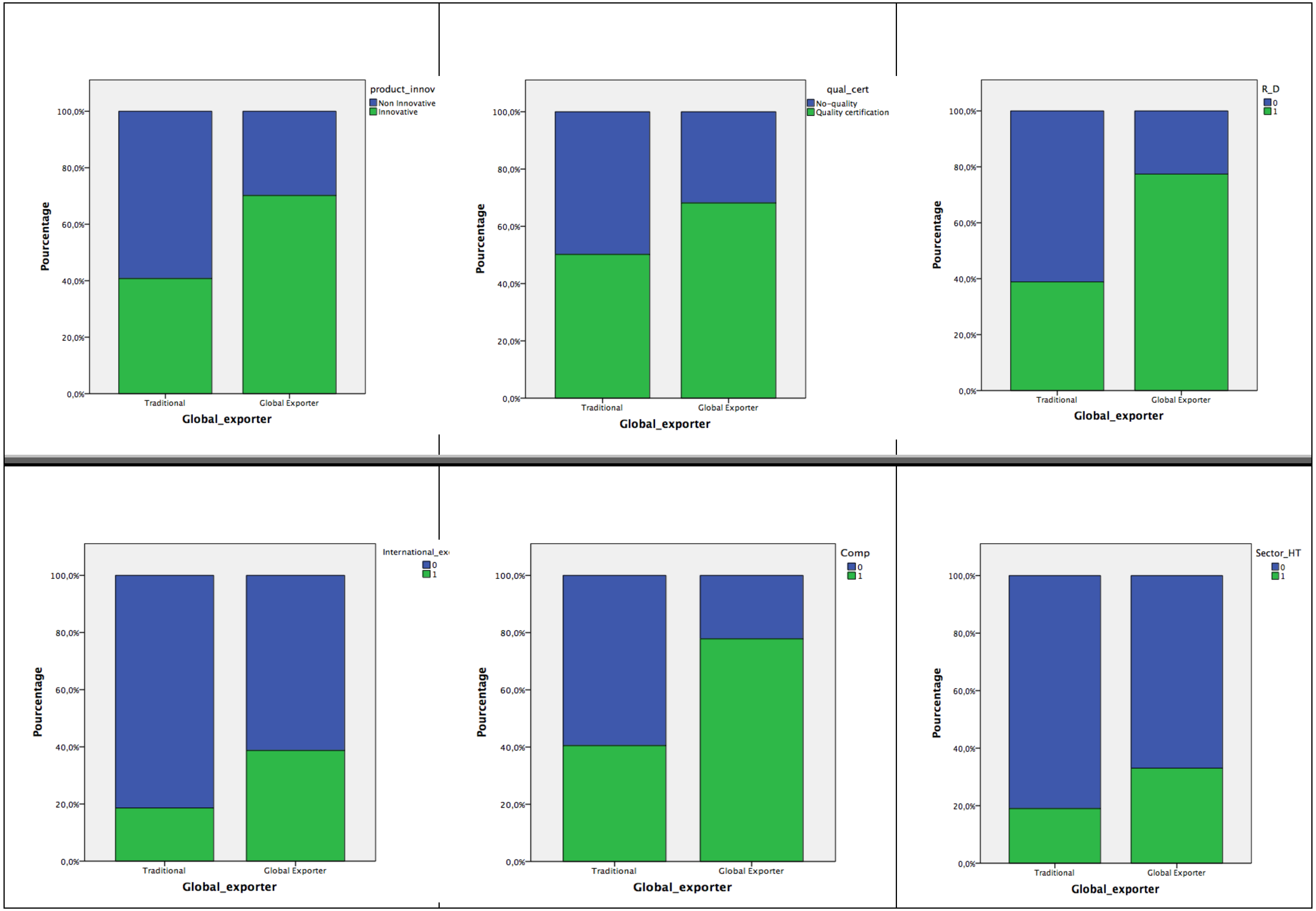


Table3: Table of different coefficients

Model	Non-standardized coefficients B	Non-standardized coefficients Standard error	Standardized coefficients Beta	T	Sig
(Constant)	,136	,018		7,684	,000
"Product_innov"	,214	,026	,251	8,353	,000
(Constant)	,166	,019		8,608	,000
"Qual_cert"	,131	,026	,154	5,012	,000
(Constant)	,103	,017		5,976	,000
"R_D"	,280	,025	,328	11,222	,000
(Constant)	,190	,015		12,885	,000
"International_executive"	,215	,031	,202	6,657	,000
(Constant)	,104	,018		5,924	,000
"Competition"	,271	,025	,318	10,813	,000
(Constant)	,205	,015		13,831	,000
"Sector_HT"	,147	,031	,144	4,689	,000

For our first hypothesis we can see that the share of INV's (70,16%) that carry out a product innovation is greater than the share of traditional companies (40,75%) and as indicated in our regression that its impact is positive (ß=0,251) and significant ($p < 0,001$). This reinforces our idea that a product innovation has a positive impact on the early and rapid internationalization of companies.

For our second hypothesis we can see that the share of INV's (68,15%) that go through quality certifications is greater than the share of traditional companies (50,19%) and as indicated in our regression that its impact is positive (ß=0,154) and significant ($p < 0,001$). This reinforces our idea that selling product under a quality certification has a positive impact on the early and rapid internationalization of companies.

For our third hypothesis we can see that the share of INV's (77,42%) that employs people involved in research and development activities is greater than the share of traditional companies (38,87%) and as indicated in our regression that its impact is positive (ß=0,328) and significant ($p < 0,001$). This reinforces our idea that being engaged in research and development activities has a positive impact on the early and rapid internationalization of enterprises.

For our fourth hypothesis we can see that the share of INV's (38,71%) that has executives who worked abroad for at least one year is greater than the share of traditional companies (18,62%) and as indicated in our regression that its impact is positive (ß=0,202) and significant ($p < 0,001$). This reinforces our idea that employing at least one executive being involved in international activities in the past has a positive impact on the early and rapid internationalization of companies.

For our sixth hypothesis we can see that the share of INV's (77,82%) that face competition from abroad is greater than the share of traditional companies (40,50%) and as indicated in our regression that its impact is positive (ß=0,318) and significant ($p < 0,001$). This reinforces our idea that evolving in a market with a high level of competition a positive impact on the early and rapid internationalization of companies.

For our seventh hypothesis we can see that the share of INV's (33,06%) that our active in the high-tech sector is greater than the share of traditional companies (18,99%) and as indicated in our regression that its impact is positive (ß=0,144) and significant ($p < 0,001$). This reinforces our idea that operating in high-tech industries has a positive impact on the early and rapid internationalization of companies.

The analysis of the correlation matrix (Tables 5), as a summary of our Beta's, does not show a high level of correlation between variables, but they are all significant with our dependant variable. The most important and significant correlation is logically between a product innovation and the research and development of the company, but also between this last one and the competition in the market. In conclusion, all are variables isolated seemed to validate our hypotheses and so abled us to launch our logistic regression entering those conjointly to test our empirical model.

Table 5: Matrix of correlations between variables

	Global_exporter	product_innov	qual_cert	R_D	International_Executive	competition	Sector_HT	Log_emp
Global_exporter	1							
product_innov	,251**	1						
qual_cert	,154**	,076*	1					
R_D	,328**	,464**	,151**	1				
International_Executive	,202**	,161**	,132**	,189**	1			
competition	,318**	,127**	,129**	,286**	,102**	1		
Sector_HT	,144**	,100**	,047	,125**	,155**	,119**	1	
Log_emp	,204**	,137**	,314**	,195**	,226**	,159**	,027	1

**. Correlation is significant at the 0.01 level (2-tailed).

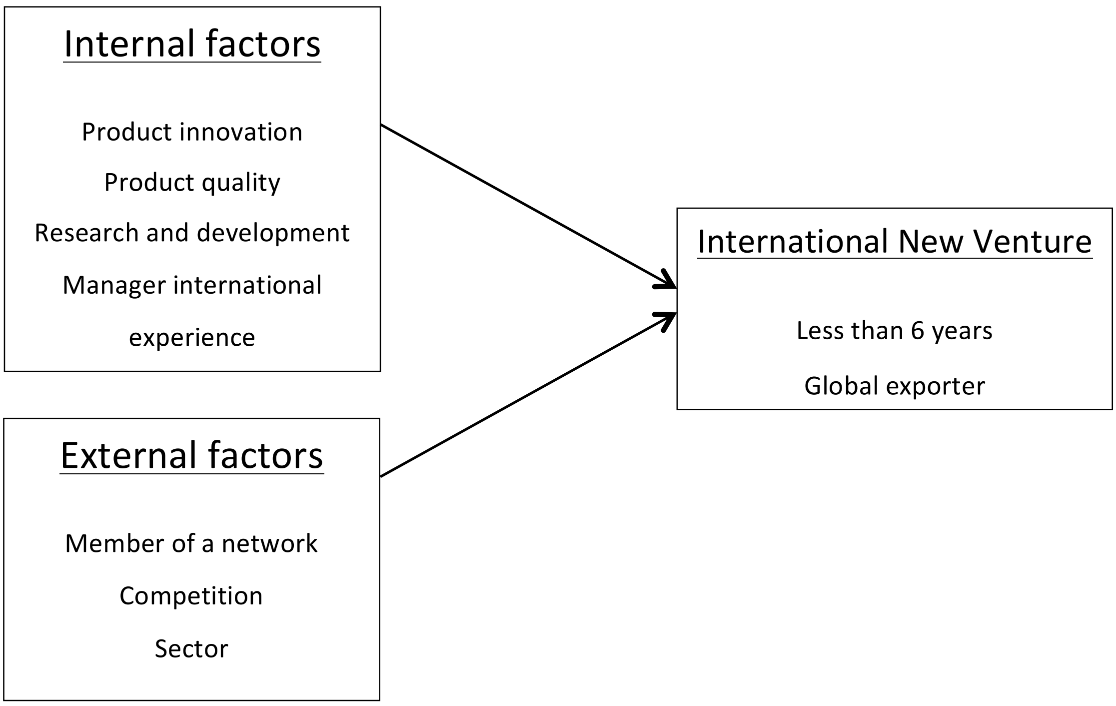
*. Correlation is significant at the 0.05 level (2-tailed).

Empirical model – Logistic regression

1. Model

After our descriptive analysis and the creation of our hypotheses we have created a theoretical model. This integrative model test each variable / hypothesis and reveals their impact on being an INV. As you will see in Figure 16, we have well distinguished the internal and external factors to the company. Subsequently, we unfortunately do not have the ability to analyse a variable, the networks the companies are part of. Indeed, as described in our methodology, this variable that seems to have a high explanatory power is not included in the database.

Figure 16: Integrative model on variables affecting International New Ventures



2. Logistic regression estimation

A logistic regression was performed to ascertain the effects of the internal and external factors on the probability for a firm to be an international new venture. For our model we identified a sample of 1043 companies with less than 6 years that we could analyse. We used the direct method because there are no specific assumptions made regarding the order or importance of our predictive variables. In fact, this only takes into account the contribution of previous predictors, because every variable is valued as if it recently entered into the equation. In table 6 you will find a summary of the variables that may explain the fact or not to be an INV.

Table 6: Summary of variables

Independent variable	Name of the variable	Value
Product innovation	“Product_innov”	0/1
Quality certification	“Qual_cert”	0/1
Research and development	“R_D”	0/1
Managers experience	“International_executive”	0/1
Competition	“Competition”	0/1
Firm sector	“Sector_HT”	0/1
Employees	*“Log_emp”*	>1

An extract of the data we used is presented in table 7. The company's identification number comes from the entire database and not our restricted sample.

Table 7: Extract of the data

Company n°	Global_exporter	Product_innov	Qual_Cert	R_D	International_executive	Competition	Sector_HT	Log_emp
82	0	0	1	0	0	1	0	2,65
110	0	1	1	1	1	1	1	1,36
154	1	0	0	1	1	1	1	1,54
…	…	…	…	…	…	…	…	…
14901	1	1	0	1	1	0	0	1,08
14909	0	0	1	0	0	1	0	1,40
14910	0	0	1	1	0	0	0	1,34

2.1. Statistical interpretation

We will test our model through the following indicators: first, the Nagelkerke R^2, it represents the variance explained by the model. In table 6, we can see, that the model we created explained 30% of the variance of the fact to be an International new venture. The Nagelkerke R^2 was preferred to the Cox & Snell R Square because this last one cannot achieve the value of 1.

Table 6: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	911,601[a]	,200	,300

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

In table 7, we have represented the results of the logistic regression used to test the differences between traditional companies and International new ventures. The results show us that there are significant differences between the companies' types in both internal and external factors. The classification table indicate that the logistic procedure correctly classified 734 of the 795 traditional companies and 83 of the 248 INV's. Consequently, 78,3% of the companies are correctly classified.

Table 7: Classification Table

Observed			Predicted		
			Global_exporter		Percentage Correct
			Traditional	Global Exporter	
Step 1	Global_exporter	Traditional	734	61	92,3
		Global Exporter	165	83	33,5
	Overall Percentage				78,3

a. The cut value is ,500

Another indicator we have to look at is the significance of our variables when they are jointly tested in the model. In table 8, we observe that all our variables are significant but some at different levels. The variables that are significant at the level $p < 0.01$ include product innovation, research and development, international manager experience, competition and the log of the number of employees. The two other variables, the high-tech sector ($p < 0.05$) and quality certification ($p \simeq 0.05$) are also significant in our model but at a lower level. The fact that those two variables are "less" significant should not have a high impact on our results and we will not take this difference into account.

Table 8: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	product_innov	,646	,184	12,347	1	,000	1,908
	qual_cert	,343	,180	3,638	1	,056	1,409
	R_D	,973	,193	25,302	1	,000	2,647
	International_Executive	,518	,184	7,944	1	,005	1,679
	competition	1,301	,181	51,665	1	,000	3,674
	Sector_HT	,404	,186	4,718	1	,030	1,497
	Log_emp	,549	,209	6,903	1	,009	1,732
	Constant	-4,183	,360	134,665	1	,000	,015

a. Variable(s) entered on step 1: product_innov, qual_cert, R_D, International_Executive, competition, Sector_HT, Log_emp.

In terms of having a positive impact we will analyse now the Beta for each of our hypotheses. We are aware that for the reader it may seem a bit repetitive, but for the clarity of our analysis this step is necessary.

Our first hypothesis assumes that a product innovation has a positive effect on the early and rapid internationalization of enterprises. Looking at the statistically significant variable, we find a positive result. H1 is confirmed, with a positive impact on the probability of a firm to be an INV. (ß=0,646, $p < 0,01$)

Our second hypothesis assumes that selling product under a quality certification has a positive effect on the early and rapid internationalization of enterprises. Looking at the statistically significant variable, we find a positive result. H2 is confirmed, with a positive impact on the probability of a firm to be an INV. (ß=0,343, $p < 0,1$)

Our third hypothesis assumes that being engaged in research and development activities has a positive effect on the early and rapid internationalization of enterprises. Looking at the statistically significant variable, we find a positive result. H3 is confirmed, with a positive impact on the probability of a firm to be an INV. (ß=0,973, $p < 0,01$)

Our fourth hypothesis assumes that employing at least one executive being involved in international activities in the past has a positive effect on the early and rapid internationalization of enterprises. Looking at the statistically significant variable, we find a positive result. H4 is confirmed, with a positive impact on the probability of a firm to be an INV. (ß=0,518, $p < 0,01$)

Our sixth hypothesis assumes that evolving in a market with a high level of competition a positive effect on the early and rapid internationalization of enterprises. Looking at the statistically significant variable, we find a positive result. H6 is confirmed, with a positive impact on the probability of a firm to be an INV. (ß=1,301, $p < 0,01$)

Our seventh hypothesis assumes that operating in high-tech industries has a positive effect on the early and rapid internationalization of enterprises. Looking at the statistically significant variable, we find a positive result. H7 is confirmed, with a positive impact on the probability of a firm to be an INV. (ß=0,404, $p < 0,05$)

We have to point out that it is not an omission that we did not analyse the effect of our fifth hypothesis on the early and rapid internationalization of enterprises. Indeed, as stipulated before we did not have the necessary information to test it.

To finish this statistical interpretation we will have a look to the real impact of some of our variables. This can be done by analysing the Exp(B) output. The ExpB is the change in the odds ratio associated with a 1 unit change in the predictor variable. Since in our model all the variables, expect the log_emp, are dummies we can interpret it easily. As an example, a company that is engaged in research and development activities has 2,647 more chances to be classified as an International new venture regarding our model. Also a firm that faces competition from abroad has 3,6474 more chances to be classified as an INV.

2.2. Economical interpretation

Now we will show you the mathematical reasoning that allows our model to assess the probability for a firm to be an INV according to our assumptions.

Taken the output of our logistic regression (table 8) we can write the model as follows:

$$Ln\frac{P_i}{1-P_i} = 0{,}646 * \mathrm{product_{innov}} + 0{,}343 * \mathrm{qual_{cert}} + 0{,}973 * \mathrm{R_D} + 0{,}518 * \mathrm{International_{Executive}} + 1{,}301 * \mathrm{competition} + 0{,}404 * \mathrm{Sector_{HT}} + 0{,}549 * \mathrm{Log_{emp}} - 4{,}183 + \mathrm{e_i}$$

e_i = residuals

This model allows us to calculate the chance of a firm to be an INV depending of the different variables affecting it.

Here is an example taken from our database that we will incorporate in our model.

Company n°	Global_exporter	Product_innov	Qual_Cert	R_D	International_executive	Competition	Sector_HT	Log_emp
13682	1	1	0	1	1	1	0	2,05

Once integrated in the equation we find, that the probability for this company to be an International new venture is 59%.

$$Ln\frac{P_i}{1-P_i} = 0{,}646 * 1 + 0{,}343 * 0 + 0{,}973 * 1 + 0{,}518 * 1 + 1{,}301 * 1 + 0{,}404 * 0 + 0{,}549 * 2{,}05 - 4{,}183$$

$$Ln\frac{P_i}{1-P_i} = 0{,}38045$$

$$\frac{P_i}{1-P_i} = e^{0{,}38045} = 1{,}46294$$

$$P_i = \frac{1{,}46294}{1+1{,}46294} = 0{,}59398$$

This is just an example and can be done for every firm in our sample. In annexe 2 you will find a table with all the variables for each firm and in addition their probability calculated by our model to be an International new venture.

2.3. Summary of the model

To sum up, the model we created explains 33% of the variance of the fact to be an International new venture and classifies well 78,3% of the companies. We saw that all our independent variables were significant and had a positive impact on our dependant variable. Regarding our model a company that face intense competition and is involved in research and development activities is more likely to be an International new venture, the values of the odds ratios are respectively 3,674 and 2,647. In conclusion, this presentation of our logistic regression recalls that it is an excellent technique when it comes to determine the predictors of a phenomenon, like here the fact to be an International new venture.

2.4. Interpretation of the results

First, we made the hypothesis that firms selling innovative products/services were more likely to speed up their internationalization process compared to the traditional firms. This hypothesis has been validated with the logistic regression. The main reason for this could be that with the competition level being higher on the international market, INV's need more innovative products to distinguish themselves on those markets and to be able to pursue their export activities.

The hypothesis that International new ventures were more likely to go through a quality certification process for their products/services was also validated by the logistic regression. This could be also due to the fact the competition level being higher on the international market, INV's need differentiate themselves on those markets and because those quality certificates are important for the clients what could be a source of a competitive advantage to be able to maintain the international activities.

Regarding the hypothesis under which the International new ventures were more likely to be involved in research and development activities, it was also confirmed by the logistic regression. This could be linked to the two previous hypotheses because to be able to sell innovative products/services and to make those pass a quality certification, going through research and development activities could be necessary or at least a huge competitive advantage compared to the other firms on the market.

For the hypothesis proposing that firms employing managers that already had an international experience were more likely to speed up their internationalization process, it was also confirmed by the logistic regression. It could be due to the fact that if they already went through an internationalization process before, managers are more able to detect opportunities to go international, have a lower risk perception linked to internationalization but most of all, probably because they already have a strong base of experience and knowledge which is necessary to succeed an internationalization process.

The hypothesis proposing that firms evolving in more specialized and technological sectors were more able to be International new ventures, was also validate in our logistic regression. This could be due to the fact that firms evolving in sectors with high technology requirements are able to fast adapt their product/services in case of change. Since in the current global environment, the rapid technological change is typical making the adaptation a key success factor, it's not surprising that INV are more likely to exist in this type of sectors.

Our last hypothesis regarding the fact that international new ventures were more likely to evolve in markets where the intensity of competition was high was also validated by our logistic regression. This could be due to the fact that in sectors in which the competition is fierce, the only way to maintain their growth on a long term will be to internationalize. Competition could also imply a competition for resources that can lead to a price war and lower turnover for the firms. This way, the fact to enter in new market could be a solution, since the increase in sales volume would keep them viable.

Conclusion

Today we are in an era where we face an emergence of new companies with an early and rapid internationalization, called International new ventures. Our research question is therefore whether these firms still follow a traditional internationalization model but in a time compression or if those companies where different and followed their proper way. After a theoretical analysis of the literature, we were able to understand that this new type of business was significantly different from the more “traditional” type. So, based on different authors, we made 7 hypotheses, which would be factors differentiating International new ventures from traditional business. These factors are divided into two divisions, on one hand the internal ones, which are more conducive to the company itself and its experience. These variables play a role on the behaviour and responsiveness of the company on the international market. It also allows the firm to remove barriers to enter in a country. This is, among others, the result of the new technologies that facilitates the communications, more open markets in the world and a greater international experience of the managers. On the other hand the external factors refer more to the environment in which the company evolve and if it is a more favourable atmosphere for an early and rapid internationalization.

After verification of our model thanks to a logistic regression, we can conclude that there are significant differences regarding internal and external factors between International new ventures and the firms considered as more traditional. In summary, regarding the internal factors, the International new venture are more likely to sell innovative products, to go through a quality certification process for their products/services, to be involved in research and developments activities and to employ managers that already had an international experience in the past. For what concerns the external factors, the International new ventures are more likely to operate in high technology sectors and in market in which the competition level is higher. Those results are consistent with previous researches regarding the international new ventures.

Regarding the main characteristics necessary to facilitate the internationalization of a firm, our model stressed out 3 facts that managers should take into account.

First, regarding the product/service proposed by the firm. Since our model showed us that firms that are involved in R&D activities and this way are selling innovative product/service that have been through a quality certification process were more likely to follow a rapid internationalization process. It means that managers of firms wanting to expend their market overseas should be attentive to the product/service they will propose on those new markets. They will have to sell a product that’s different and innovative with a real competitive advantage or they won’t be able to face the competition that will be fiercer. Innovation and the quality of the product/service sell by the firm allows to maintain the competitively by gaining a competitive advantage and this way, being viable on national and international market. This will be an important variable to take into account because the strong international competition requires from the firms to be proactive and to rapidly answer to the needs of their clients more and more exigent with a product/service more and more innovative, with low costs and a strong proximity. It also implies that managers of firms which are not operating overseas who think that the product/service they sell could be able to differentiate on the international markets should see international expansion as a real opportunity. Going international is risky but could be a way to sustain their growth on the long term or to soften the competition if it becomes too high on their home market.

Next, about the composition of the managerial team, our study stressed out the fact that firms employing at least one manager with a previous internationalization experience were more likely to go through a rapid internationalization process. Regarding a managerial point of view, our results show the importance to evaluate the experience and the competences necessary to start and speed up their operations overseas. The influence of the experience of the entrepreneurial team has to be taken into account, especially to evaluate the international growth potential of the firm. All firm that wish to internationalize rapidly will have to analyze the different types of experience gained by their managers, it will allow them to have a clear view of the human capital on which they can rely on.

Finally, managers of firms evolving in sector with high technology/specialization requirements or with a high competition level should think, if it's not already done, about the opportunity to internationalize to be sure to maintain their growth on the long term. The single fact to increase their client base should be sufficient to not ignore this opportunity. A lot of SME's in precarious situations linked to a lack of competitiveness compared to bigger companies should think about it. If they are behind regarding the globalization, SME's amplify the risks to be overtaken by multinationals. Nowadays, at the same level as ICT, internationalization becomes a requirement regarding the development of the firms.

This research was an attempt to find an integrative model to be able to understand which are the main variables that allow the International new ventures to speed up their internationalization process. Since we isolated several internal and external factors that have a positive impact on the speed of internationalization, we can conclude that the only difference do not consist in a time variable (compression of the time in which the internationalization process is running) but that there are several and significant differences between International new ventures and the more traditional firms.

Limits

The first and the main limit of our model is that the database we used to test our hypothesis and next to construct our model wasn't made by us. The study was financed by the EU with the purpose to know if there was a link between the international operations of the European firms and factors like the structure of the firms, their workforces, their investments (in R&D and innovation e.g), their internationalization process, their environment and their financial structure. If the main theme is the same (to know what are the factors that helps firms to internationalize), our subject is a bit more specific because we focused on the time variable with the purpose to know if there was a real difference between the International new ventures and the more traditional firms. If we are aware of the impact of this limit on our model, we want to point out that regarding the international character of our research question and the precision of information we needed to test our hypothesis, it would have been real complicated for us to collect the data's we needed by ourselves and so this database was a real opportunity for us. Because of this, we did not have enough information to test hypotheses that seemed important to us. The main one is the question about the networks; we are convinced that the fact to be member of an international network would have a positive and high impact on the rapidity of the internationalisation process of a firm.

There is also the problem of the precision of our model. Indeed, if the entire variables that enter into account in our model are significant (p-value < 0.05), there is the problem of the R-squared. The better, as explained in our methodology, is to have an R^2 the closer of 1. The R^2 of our model is around 0.3 what's far from 1. It doesn't means that our model is wrong but it inform us that a lot of other variables than the one we selected are to take into account to explain the rapid internationalization process of international new ventures compare to more "traditional" firms. Considering, the new and exploratory nature of this study, we can suppose those 30% as satisfactory.

Our model classifies well 78,3% of the companies in total. 92,3% of the so-called traditional companies were well classified and this tells us that they do not have the characteristics we made to define the INV's, and thus are different. On the other side only 33,5% of the International new ventures were well predicted, this for us is due to the lack of crucial variables we wanted to analyse.

This low rate of INV's that are detected could also be due to the independent variable we chose (to be a global exporter). We chose this variable instead of the export ratio because we wanted to prevent the fact that firms which export only in neighbouring countries can have a high export ratio but are not considered as INV's. But we can observe that some of the firms our predictive model defined as INV's are not global exporter but have a high export ratio. It would be interesting for future researches to go further and to find a way to take the two aspects into account.

We also have to point out that we were not able to use the entire information that was collected by the EFIGE study. Actually, on a total of 14759 firms, we only tested our hypothesis on 1043 of it. This is due to the fact that we had to be sure that the firms we selected were International new ventures or "traditional" firms. This is why we only tested our model on firms which had less than 6 years because for the firms which had more than 6 years, there was no way to differentiate them properly.

Another limit of our model is that the interviews on which the EFIGE dataset is based were realised between 2008 and 2010. It would be interesting if the study would be actualised to see if the variables we extracted still have an impact on the rapidity of the internationalisation of firms. But regarding the fact that our conclusions were relatively close to the articles we read for our literature review and that some of those article dated for more than 20 years and others from last year, there is a high probability that the results would be quite the same.

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