Collaborations and SME Internationalization: A Business Network Approach

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“You must do the things you think you can not do”

Eleanor Roosevelt (1884-1962)

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Abstract

If resources are everywhere, why collaboration is not? This is especially an important question for SMEs since they have to face challenges for their survival with their limited resources. Globalization and increasing competition force smaller companies to search new ways to survive. This dissertation tries to provide elements of solution by developing three essays around the business network approach. The first essay enters the black box of business network by providing insights around international collaborations and its benefits for young internationalizing companies. The second essay builds on the international entrepreneurship literature by describing collaborations as a way for smaller companies to speed up their internationalization process. Finally, the third essay deals with the determinants of international collaboration adoption. Besides, this essay also examines the role of institutions within the business network approach of internationalization. Interviews with key public institutes and entrepreneurs suggest that collaboration has a pivotal role to play in SME internationalization, as long as the contextual factors are considered, which in turn, reduces the risks of partnerships. Through phone surveys, the study shows that network variables allow understanding why some SMEs are able to internationalize more early and rapidly than others.

The research is presented in the form of a general introduction which contains an overview of the thesis topic, a literature review, and the method of data collection. This is followed by three studies addressing the research questions put forth in the dissertation. These studies are presented in article format and each article is presented as a chapter in the dissertation. The dissertation is then concluded with a final chapter that summarizes the overall findings and contributions of the research.

Content

To my parents and my love

CHAPTER 1: General Introduction

1.1 Overview and importance

The current economic environment reflects the complex integration of global economies. Small and medium-sized enterprises (SMEs)[1] are affected by globalization and are increasingly forced to act at the international level. Internationalization is an important route through which smaller companies can realize their potential growth (Pangarkar, 2008). Not surprisingly, public-policy makers at the national and supranational level (e.g. European Union) actively seek to promote and support SMEs internationalization and growth (OECD, 2000). Despite the significant contribution made by SMEs to employment (typically 35-45% of total employment) and value added to an economy (typically 30-40% of total value added), a general constraint that many of small firms faces is relatively restricted resource as compared to what is available to larger firms (DHL Express, 2013). The internationalization process requires a level of investments and resources that smaller companies typically do not possess. Smaller firms are less internationalized than bigger ones, but even for them, internationalization is today a reality. The globalization of the markets and the increasing international competition force SMEs to search new ways to survive (Williamson, 1985).

One solution for small firms to overcome their constraints is the adoption of international collaborative approaches. Some researchers affirm that success of SMEs against larger competitors may be determined by their ability to utilize external networks efficiently and create useful collaborations (Noteboom, 1994; Chesbrough, 2003; Narula, 2004). Smaller companies need to internationalize and simultaneously open up to collaborate with external partners such as suppliers, customers or even universities (OECD, 2008). New communication technologies simplify interaction and create new opportunities for collaboration between firms, including the intensive use of international sourcing. A DHL study (2013) shows that SMEs' internationalization no longer has a limited focus on traditional exporting or importing activities, but has become a much more differentiated business activity encompassing subcontracting as well as technical or commercial collaboration.

[11] The European Commission (2009) defines a SME as a private company with fewer than 250 employees, with an annual turnover inferior to €50 million and with an annual total balance sheet lower than €43 million.

Collaboration is a process by which organizations come together, interact, and form psychological relationships for mutual gain or benefit (Smith, Carroll and Ashford, 1995). Collaboration is also often describes as "the act of working together to one end" (Mead, 1976). Amongst others, improving competitiveness, access to new market and technologies, risk sharing, and increased economies scale have been the main motivations justifying collaborations (Bryson et al., 2006). These partnerships are even more fruitful in technological sectors where a high capacity to respond quickly to fast changing demand is a key success factor (Ahern, 1993; Narula, 2004; Van Dijk et al., 1997). Strengthening core competences of the firms can therefore be facilitated by collaborations (Acs and Audretsch, 1991; Van Gils and Zwart, 2004). Relationships with foreign partners provide SMEs with information on the international opportunities not easy to detect at a distance (Senik et al., 2011). Lee et al. (2010) emphases another main incentive of SMEs' collaborations with foreign firms which is related to understanding local demand and formalities in order to ensure a proper adaption of the product as well as the use of an appropriate commercialization process which is critical to penetrate foreign markets. Barlow and Jashapara (1998) argues that collaborations with foreign partners bring organizational learning and provides knowledge regarding foreign institution. Partnership enables to benefit from local experience and avoid administrative mistakes. This is particularly true in countries where sources of information are multiple increasing uncertainties and complexity to internationalization pathway (Senik et al., 2011). Thanks to collaborations, firms can adjust to foreign current rules and regulations faster and in an appropriate way (Senik et al., 2011).

However, international collaborations, in the context of SMEs, are more the exception than the rule. A survey conducted by researchers from the INRPME (St-Pierre et al., 2011), shows that in spite the fact that international partnerships give access to complementary resources and market knowledge, only a small numbers of SMEs develops these type of relationships. Another large survey from Eurostat (CIS, 2004) highlights that the percentage of SMEs that are interested and capable to develop international collaborations is clearly different from one country to another but is still limited. These studies demonstrated that, even if there is evidence of mutual benefits, most SMEs are reluctant to collaborate. This fact encourages studying why and under which conditions SMEs develop international collaborations?

1.2 Outline of the thesis

The thesis is divided into three parts:

• The remainder of the chapter 1 contains a review of the relevant literature, an introduction to the theories which forms the foundation for introducing the research questions of the study and a detailed description of the methodology. These sections focus on the research area and research approach, providing an overall context for the thesis.

• The following chapters (2, 3 and 4) focus on three studies. Each study addresses one of the research questions or sets of research questions that were presented in section 1.4. Combined, the studies contribute to the understanding of the implications of international collaborations for SME internationalization. Each study is presented in article format and is included as a chapter in the thesis.

• The last chapter contains a concluding section that states the intended contributions of the thesis. In doing so it summarizes the key findings from the dissertation. It also includes a discussion of the limitations and suggestions for future research.

1.3 Main streams of research

International Entrepreneurship (IE) is an interesting research literature at the intersection of International Business (IB) and Entrepreneurship theory with many important implications for international management, entrepreneurship and strategic management (Autio, 2005; McDougall and Oviatt, 2000). McDougall and Oviatt (2000) have defined international entrepreneurship as « *the combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations*» (McDougall and Oviatt, 2000: 903). The growth of IE literature over the two decades has added an impressive volume of research.

According to the mid-1970s literature at Uppsala University, firms should choose the optimal mode of entering a market by taking into consideration their own resources and analyzing their costs and risks based on their market context (e.g. Hood and Young, 1979). The stages development of firm internationalization is described as an incremental, risk-averse, and reluctant adjustment to changes in a firm or its environment (Johanson and Vahlne, 1977, 1990). The stage model assumes that internationalization process starts with sporadic overseas sales and continues with bigger and bigger commitments in the foreign markets through sales (Kalinic, 2009). An important feature of the internationalization pattern is the psychic distance, defined as the factors that make it difficult to understand foreign environment. Then internationalization often starts in foreign markets that are close to the domestic market in terms of psychic distance. The traditional pattern is a process in which a firm gradually increases the number and diversity of markets it serves (Johansson and Vahlne, 1977).

According to Oviatt and McDougall (1994), most of the original assumptions of the stage model are not valid anymore, because of the conditions that had changed since the mid-1070. The flow of information from foreign markets had, for instance, been enhanced, the cost of international travel and communication had been reduced and international managerial experience had become more widely available (Oviatt and McDougall, 1994; Autio, 2003). The authors defined international new venture as "*a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources from and the sale of outputs to multiple countries*"(Oviatt and McDougall, 1994: 49).

The distinguishing feature of these firms is that their origins are international, as demonstrated by observable and significant resources (e.g. material, financing, time, people) in more than one nation (Oviatt and McDougall, 2005). In contrast with organizations that evolve gradually from domestic firms to multinational firms, these new ventures begin with a proactive international strategy. These authors found that some SMEs are able to internationalize more rapidly than the stage models predict, jumping over some stages (Oviatt and McDougall 1994, 2005). A new subfield in International Business emerged: “International Entrepreneurship” (McDougall and Oviatt, 2000). One common feature of these new streams is that they place attention on network relationships when trying to understand and explain the rapid internationalization of the firm (Oviatt and McDougall, 1994; Coviello and Munro, 1997; Chetty and Holm, 2000; Johanson and Vahlne, 2003; 2009).

In 2009, Johansson and Vahlne revised their initial Uppsala model and suggest a business network model of the internationalization process. The business network view (BNV) assumes that exchange within a network allows a firm to acquire knowledge about its connection partners, including their resources, capabilities, strategies, and other relationships (Johanson and Vahlne, 2009). Network partners are indirectly a source of relevant business information about their own partners and more distant actors in the network (Johanson and Vahlne, 2009). In the business network view, internationalization is seen as an entrepreneurial process that is embedded in an institutional and social web which supports the firm in terms of access to information, human capital, finance, and other factors (Bell et al., 2003). Network can act as a bridge to foreign markets and represents critical avenues for the acquisition of resources necessary for firm international survival and growth (Gulati, 1998). Therefore, network relationships are important resources facilitating internationalization, especially among companies with limited resources for internationalization (Han, 2006; Kontinen and Ojala, 2011, Varis et al., 2005, Wakkee, 2006). The companies develop their capabilities throughout the entire network and improve their international competitiveness (Park and Luo, 2001).

	Uppsala approach	**INV approach**	**Business Network approach**
Internationalization pattern	*Slow evolutionary* path of international development (Operate for a long time in their home market before international expansion)	*Early and rapidly* path of international development (Aim for international market from inception)	*Rapidly* path of international development through business network (Reach a certain degree of internationalization within a small number of years)

Table 1. Internationalization patterns.

1.4 Literature review and research questions

This review on network in the context of International Entrepreneurship involved several steps. Search items were drawn from the literature and became the objective criteria for admitting or excluding articles. I conducted a keyword research by identifying relevant titles and abstracts from the ABI inform and EBSCO search engines. The search only includes studies that directly and explicitly integrate theory and concepts from International Business, Entrepreneurship and Network theory. The keywords were the following: international entrepreneurship, international business, internationalization, international new venture (INV), born global and network. Books, book chapters, reports and conference papers were excluded due to variability in peer review processes and more restricted availability. In contrast, journal articles are considered to be validated knowledge (Podsakoff et al., 2005). However, rather than restricting the search to journals with the highest impact in their fields, I included all published and accessible journal articles in which the primary focus is on Network and International Entrepreneurship. The scope of the search is from 1994 to 2014, and it began with the first article known that introduces the new scholarly domain of international entrepreneurship: “Toward a theory of international new ventures” (Oviatt and Mc Dougall, 1994). The resulting list was compared to extant reviews of International Entrepreneurship to identify missing items. The screening process resulted in a final database of 97 articles (Table 2).

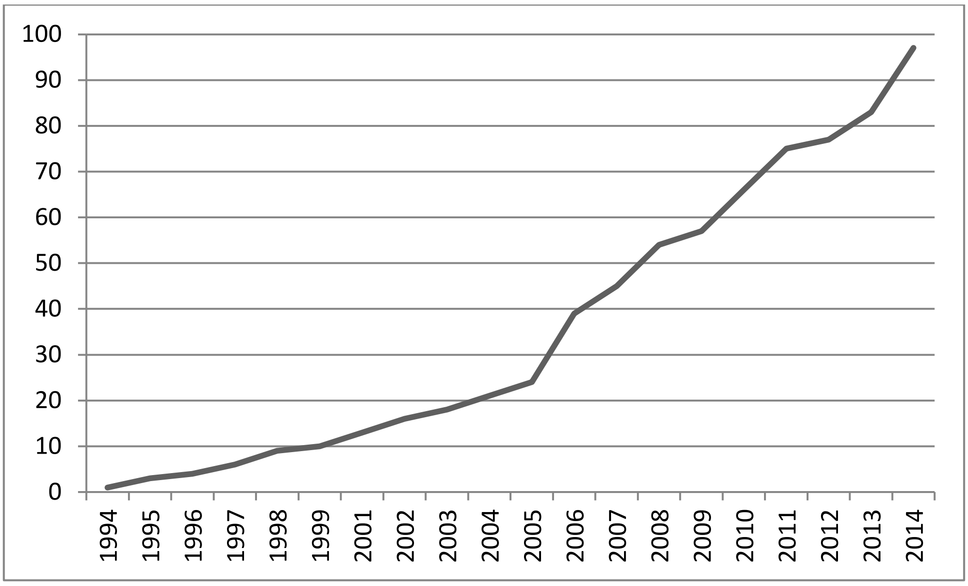


Fig 1. Cumulative time line for publications on the dissertation topic.

We found that the publication outlets for these 97 articles are mostly in Entrepreneurship (20.8%), International Entrepreneurship (16.7%) and International Business journals (15.6%). Thus, over 53% of combined network and IE research is published in journals from either the parent disciplines or in IE journals themselves. The rest are found in Management (16.7%), International Marketing (9.4%), Marketing (8.3%), Small Business (4.2%) or other (8.3%) journals. These results suggest that the chosen dissertation topic is relevant across the wider field of management.

Research in this field is dominated by qualitative methods (50%), such as personal interviews or case studies. These analytical approaches try to understand the complex process under investigation (e.g. the network dynamic). Only a third of the studies uses quantitative approaches. These include mail, telephone, self-administered and combined surveys. However, I believe that for the field to progress, researchers need to address their methodological decisions with a greater congruency and rigor by using quantitative methodological approaches, through large sample, that might better explain the relationships between network and internationalization.

International entrepreneurship's general interest in networks and relationships is first highlighted by Hara and Kanai (1994), Coviello and Munro (1995, 1997) and Hagedoorn (1995). Hara and Kanai were focused on the creation of a successful international strategic alliance between technology-based companies of Kinei in Japan and companies in Silicon Valley, US. Coviello and Munro (1995, 1997) map network patterns to show that market entry modes are often a reflection of the firm's network ties. In 1995, Hagedoorn already stressed the need for a further understanding of cooperative behavior in terms of the extension of core competences of companies. However, the plethora of network-focused research began only to appear in 2006 with Coviello's famous article: "The network dynamic of international new ventures". This year contains the bulk of the studies in this thematic (15 new articles), illustrated in Figure 1. New research questions have been explored by different authors at that time: how network facilitates resource development in the international new venture (Coviello and Cox, 2006); how small firms achieve rapid growth internationally through alliances and how these relationships change over time to meet the changing needs of the partners (Freeman *et al.,* 2006); how networking capability enables identification and exploitation of market opportunities in the born global firm (Mort and Weerawardena, 2006); how foreign network relationships are developed and what is the impact on the internationalization of small knowledge-intensive firms (Prasantham, 2006). Belso-Martinez (2006) has also shown empirically that firms which follow an accelerated internationalization process present greater integration in client networks. Much of the research in the above theme integrates the network concept from a social capital perspective. Prashantham (2008) argues that social capital is a resource for innovation and strategic renewal in new venture internationalization. Presutti *et al.* (2007) add that social capital is a critical source of knowledge acquisition abroad. Berg *et al.* (2008) also focused on the role of social capital relationships in the establishment, management and performance of international governance structures.

Similarly to the early International Entrepreneurship studies, a common approach in network research is to view relationships as a mechanism for internationalization (e.g. Al-Laham and Souitaris, 2008; Elango and Pattnaik, 2007; Gellynck *et al*., 2007; Zhou *et al.,* 2007). Beyond the network itself, some authors focused on network capability and competence with for instance, Mort and Weerawaredena (2006) arguing that network capability plays a central role in rapid and successful internationalization. Some other IE studies explore network building and development (e.g. Evers and Knight, 2008; Loane and Bell, 2006; Ruokonen *et al.*, 2006; Shi *et al.,* 2014; Wakkee, 2006).

Ritter *et al.* (2002) claim that the ability of a firm to develop and manage relations with key suppliers, customers and other organizations and to deal effectively with them, is a core competence. Freeman *et al*. (2006) explore how international new ventures overcome their constraints (lack of economies of scale, lack of resources and aversion to risk) by networking competencies to develop a range of collaborative partnerships. Torkkeli *et al.* (2012) empirically highlight the positive influence that the network competence of SMEs has on their propensity to internationalize, and on their subsequent international performance.

Research in network area adopts different units of analysis (individual and firm levels; see Jack, 2010). Moreover, network is a concept with many different and still vague meanings. Currently the International Entrepreneurship literature mostly refers to networks as relationships of a non-exhange nature between individuals (family, friends, community or professional contacts) defined as *social network* (Ellis, 2000; Ellis and Pecotich, 2001; Evers, 2010; Hoang and Antonic, 2003; Jack, 2010; Stuart and Sorenson, 2007; Zhou *et al.*, 2007). In their international comparative study, Felzensztein and Gimmon (2009) have shown that social networking is important in facilitating international marketing activities. Sasi and Arenius, Ferro *et al.* (2009) and Kiss and Danis (2010) analyzed the contribution of social networks to the speed and success of the internationalization process of small and medium-sized enterprises. Komulainen et al. (2006) and Zhou *et al.* (2007), on their side, explored the role of social network as a mediator in the small firm's internationalization.

Whereas, social network refers to non-exchange relationships between individuals, *business network* refers to inter-organizational relationships between businesses. Business network is defined as sets of interconnected business relationships in which each exchange relation is between business firms conceptualized as collective actors (Anderson et al., 1994). This thesis approaches internationalization from this business network perspective, thereby focusing on how international business relationships are developed and how smaller companies connects to foreign business partners. This perspective makes the internationalization process appear as a collective rather than an individual act.

While there is some support for the notion that networks benefit smaller companies in their internationalization efforts, studies investigating the relationships between specific networks attributes and benefits are relatively sparse (Musteen, 2014). The predictions on which type of network drives internationalization are not obvious and most of the time mixed. Through their survey, Musteen *et al.* (2010, 2014) examined the relationship between the structural, cognitive and relational aspects of the international network of SME and two internationalization outcomes: speed and performance. Andersson *et al.* (2013) and Patel *et al.* (2014) investigated whether local or foreign network partners contribute more in the race to internationalize. There have been calls for greater attention to the geographical dimension of business networks (Kiss and Danis, 2008; Manolova *et al.*, 2010). As Leung *et al.* (2005) advocate, the globalizing trend does not only boost the enterprises to collaborate, it also extends their geographical reach. Besides, SMEs can expand simultaneously their activities across geographical boundaries and along the supply chain (Polenske, 2004). Collaborations do not only include science and technology partners (strategic collaborations) but also value chain partners and other complementary partners (tactical collaborations). Yet, there is still a lack of comprehensibility about what international collaboration actually is in the context of small-sized enterprises. This forms the foundation for the research question of the first study:

What's the impact of strategic and tactical collaborations on new venture internationalization?

If we look at the two main internationalization models, Johanson and Vahlne emphasize constraints to internationalization whereas Oviatt and McDougall's model emphasizes enabling factors (Autio, 2005). The purpose of Johanson and Vahlne was to explain the gradual, constrained pattern of internationalization; it is read as a theory of constraints. The International New Venture model (Oviatt and McDougall, 1994) focuses mostly on explaining how early and rapid internationalization of new venture is possible, whereas the focus of the stage model is on the process of internationalization itself. Then we do not know what‘s the process of rapid internationalization and the impact of International New Ventures on the trajectory of the stage model.

Besides, Oviatt and Mcdougall placed much emphasis on the enabling effect of internationalization experience at individual level for early and rapid internationalization. They turned the spotlight on the role of the entrepreneur.

The contrast between emphasing firm level vs individual level factors naturally also reflects the different empirical scopes of the two perspectives. Future research should now turn the spotlight on the firm and its activities. This forms the foundation for the research question of the second study:

What's the effect of international collaborations on the subsequent speed and trajectory of internationalization?

Except for few scholars, research has been slow to link institutional context with network issues. Kiss and Danis (2008, 2010) explore the role of social networks in the internationalization processes of new ventures in contexts characterized by different levels of institutional development. In 2011, Senik *et al.* identified three interconnected sources of networking for SMEs internationalization, which are government institutions, business associates, and personal relations. Three years later, Shirokova and Mc Dougall (2014) analyzed the influence of networks and institutional context on the internationalization of Russian entrepreneurial firms. This suggests that institutional support and systems thinking are important constructs in the theory stream of International Entrepreneurship. However, approaches to contextualization appear limited. They focus for instance either on categorical data only or concepts like country or nationality (Shenkar and Von Glinow, 1994). Perhaps, most importantly, the scope of International Entrepreneurship is expanding dramatically and research contextualization appears underexplored, despite calls to do so (Buckley, 2002; Child, 2009). For International Entrepreneurship research to remain relevant scholars must more adequately contextualize their theory building. Enright (2002) urges the use of multilevel analysis including supranational, macro, micro and firm levels of analysis. Contextualizing International Entrepreneurship research should focus on the following question: How can we integrate context into our international entrepreneurship research? This reflection forms the two research questions for the third study in the dissertation:

What role do institutions play in establishing international collaborations?

What research methods are most appropriate to uncovering the different and multiple contexts that underlie international activities?

Year	Authors	Thematic	Focus	Method	Journal
2008	Al-Laham, and Souitaris	Business network	Whether inter-organizational factors influence firms' propensity to internationalize by forming international research alliances	Quantitative study	Journal of Business Venturing
2006	Belso-Martinez	Business network	Firms which admitted an accelerated internationalization process present greater integration in client networks and greater international orientation of sector and company	Quantitative study	Entrepreneurship and Regional Development
2007	Camuffo et al.	Business network	Routes towards supplier and production network internationalization	Qualitative study	International Journal of Operations & Production Management
2014	Ciravegna et al.	Business network	Whether firms that found their first international clients through a "proactive" search are likely to export faster, more intensively, and to a larger number of markets	Quantitative study	Journal of Business Research
2013	Fernhaber and Li	Business network	The extent to which international exposure from key informal (geographically proximate firms) and formal (alliance partners) network relationships impacts new venture internationalization	Quantitative study	Journal of Business Venturing
2002	Ford	Business network	Similarities and differences in issues and conceptual structures between three seemingly disparate areas of study over a 50-year period; distribution channels, internationalization, and networks	Conceptual study	International Marketing Review
2014	Ghauri et al.	Business network	How employing corporate social entrepreneurship and developing a network of relationships with non-governmental organisations (NGOs) can support and contribute towards the internationalization of service firms into the base of the pyramid (BOP) markets in emerging markets	Qualitative study	International Marketing Review

1995	Hagedoorn	Business network	Whether alliances establish stable networks of firms, and whether market leading firms dominate the world of strategic partnering	Quantitative study	Strategic Management Journal
1994	Hara and Kanai	Business network	The creation of a successful international strategic alliance between the technology-based companies of Kinei in Japan and 3 companies in Silicon Valley, US	Qualitative study	Journal of Business Venturing
1996	Holm et al.	Business network	Relationship profitability is directly affected by relationship commitment and indirectly through commitment by business network connections	Quantitative study	Journal of International Business Studies
2014	Löfgren	Business network	Innovation facilitates internationalization and the customer network is an important source of technical and market knowledge	Quantitative study	Journal of International Entrepreneurship
2013	MacCarthy and Jayarathne	Business network	Whether or not differences are evident in the types of networks operated by different types of retailers	Quantitative study	International Journal of Operations & Production Management
2005	Macpherson et al.	Business network	Supply chain networks provide a mechanism by which closer relations can create opportunities to improve competitiveness of all the partners	Qualitative study	International Journal of Technology Management
2011	O'Gorman and Evers	Business network	How an intermediary network actor, such as an export promotion organisation (EPO), can influence the internationalization of new ventures located in peripheral regions	Qualitative study	International Marketing Review
2001	Olkkonen	Business network	The appropriateness of a network approach to sponsorship and other service-oriented situations different from the "traditional" production/distribution situations	Qualitative study	The Journal of Business & Industrial Marketing
2001	Overby and Min	Business network	A network orientation is proposed to encourage more integrated levels of I-commerce adoption which, in turn, further strengthens the relationship between a network orientation and its implementation.	Conceptual study	International Marketing Review

2014	Patel et al.	Business network	Whether local or foreign network partners contribute more in the race to internationalize	Quantitative study	Strategic Management Journal
2013	Peng et al.	Business network	The effect of firm size on the effectiveness of innovation continues and the particularities of open innovation from the perspective of emerging market small and medium enterprises (EM SME)	Quantitative study	International Journal of Technology Management
2006	Prashantham	Business network	How foreign network relationships are developed and the impact they have on the internationalization of small knowledge-intensive firms	Qualitative study	International Journal of Entrepreneurship and Innovation Management
2014	Shi et al.	Business network	Partner selection in building international joint ventures (IJVs)	Quantitative study	Journal of International Business Studies
2012	Shirokova and Mcdougall-covin	Business network	The influence of networks and institutional context on the internationalization of Russian entrepreneurial firms	Qualitative study	Journal of International Entrepreneurship
2008	Singh Srai and Gregory	Business network	The impact of configuration on supply network capability	Qualitative study	International Journal of Operations & Production Management
2006	Solberg and Durrieu	Business network	Access to networks and commitment play significant roles in the formation of internationalization strategies	Quantitative study	Management International Review
1998	Tikkanen	Business network	Network approach offers a particularly powerful descriptive tool for analyzing contemporary interorganizational business exchange.	Qualitative study	The Journal of Business & Industrial Marketing
2011	Baffour Awuah et al.	Business network	The extent to which an independent actor(s) actively collaborates with the internationalizing firm so as to jointly determine the choice of market, the mode of entry and the level of investment committed in the market to be entered and even after the entry (i.e. the ongoing activities)	Qualitative study	European Journal of Marketing

2008	Blomqvist et al.	Business network	The role of trust and contracts in technology-intensive born global firms	Conceptual study	Journal of Engineering and Technology Management
2008	Vapola et al.	Business network	Why and How MNCs complement their in-house R&D by forming strategic alliance constellations with small, innovative born globals	Qualitative study	Journal of International Entrepreneurship
2005	Varis et al.	Business network	How entrepreneurial corporate new ventures use partners in their international marketing	Qualitative study	Journal of International Entrepreneurship
2004	Cubillo and Cervino	Business network	The influence of a multinational corporation (MNC) on the exporting activities of local SMEs - both suppliers and non-suppliers	Quantitative study	International Journal of Entrepreneurship and Innovation
2013	Andersson et al.	Network capabilities	Both local and international networks influence firm internationalization processes in different ways	Qualitative study	Entrepreneurship and Regional Development
2003	Assimakopoulos et al.	Network capabilities	The emergence of an informal, collaborative and entrepreneurial organizational culture within the technological community of semiconductor firms in the Silicon Valley, California	Quantitative study	International Journal of Technology Management
2005	Brookfield and Liu	Network capabilities	A new way of thinking about the internationalization of industrial networks	Qualitative study	Asia Pacific Journal of Management
2011	Che Senik et al.	Network capabilities	What are the roles and sources of networking of SMEs internationalization in emerging economies	Qualitative study	Journal of International Entrepreneurship
2010	Chetty and Stangl	Network capabilities	How network relationships are used in the internationalization and innovation of small and medium-sized enterprises (SME) in the software industry	Qualitative study	European Journal of Marketing
2014	Child and Hsieh	Network capabilities	How the use of contrasting decision modes is associated with different information use and patterns of network attachment	Conceptual study	Journal of World Business
2014	Ciravegna et al.	Network capabilities	How SMEs develop and use networks to penetrate their first foreign market	Qualitative study	Journal of Business Research

2006	Coviello	Network capabilities	Set of propositions regarding the network dynamics of early-stage international new ventures	Qualitative study	Journal of International Business Studies
2006	Coviello and Cox	Network capabilities	How network facilitate resource development in the international new venture	Qualitative study	Journal of International Entrepreneurship
2014	Dimitratos et al.	Network capabilities	The effects of the three sets of variables, namely international entrepreneurship, networking and learning on the probability that a firm will become a MNE	Quantitative study	Journal of Business Research
2007	Elango and Pattnaik	Network capabilities	Network scope is beneficial for increasing exposure to international markets only in the case of networks that are either small or medium sized	Quantitative study	Journal of International Business Studies
2001	Etemad et al.	Network capabilities	How smaller firms can use symbiotic, collaborative arrangements with larger firms to overcome inherent constraints of size and to achieve the efficiencies required for world-class competitiveness	Conceptual study	Thunderbird International Business Review
2008	Evers and Knight	Network capabilities	The impact of trade shows on the internationalization of participating small exporting firms in terms of growth and expansion	Qualitative study	International Marketing Review
2006	Freeman et al.	Network capabilities	How small firms achieve rapid growth internationally through alliances with suppliers, distributors, and joint-venture partners and how these relationships change over time to meet the changing needs of the partners	Qualitative study	Journal of International Marketing
2007	Gellynck et al.	Network capabilities	Internationally operating firms benefit from regional networking	Quantitative study	Entrepreneurship and Regional Development
2006	Kenny and Fahy	Network capabilities	How network theory contributes to our understanding of SME internationalization and to measure the effect of network activities on performance in international trade	Conceptual study	International Journal of Entrepreneurship and Innovation Management

2011	Kenny and Fahy	Network capabilities	The relationship between network resources and international performance of high tech small to medium-sized enterprises (HTSME) in the telecommunications industry in Ireland	Quantitative study	Journal of Small Business and Enterprise Development
1998	Kim	Network capabilities	Dynamic interaction between firm capabilities and international production networks	Qualitative study	Management Decision
2006	Loane and Bell	Network capabilities	While the literature tends to focus on the existing networks of firms, there is growing evidence that many rapid internationalizers have to build new networks	Quantitative study	International Marketing Review
1998	Money	Network capabilities	How national culture, organization specific factors, and individual characteristics of the negotiators impact the multilateral negotiation process in a cross-national context	Conceptual study	Journal of International Business Studies
2002	Ritter et al.	Network capabilities	The ability of a firm to develop and manage relations with key suppliers, customers and other organizations and to deal effectively with the interactions among these relations is a core competence of a firm	Conceptual study	The Journal of Business & Industrial Marketing
2010	Tolstoy	Network capabilities	The links between network development and knowledge creation	Quantitative study	Entrepreneurship and Regional Development
2010	Tolstoy	Network capabilities	Knowledge combination in networks is a critical requisite for seizing business opportunities in foreign markets	Qualitative study	International Entrepreneurship and Management Journal
2010	Tolstoy and Agndal	Network capabilities	How smaller biotech firms commercialize innovations by combining resources in their networks in order to enter new foreign markets with existing products and to enter existing foreign markets with new products	Qualitative study	Technovation

2012	Torkkeli et al.	Network capabilities	The positive influence that the network competence of SMEs has on their propensity to internationalize, and on their subsequent international performance	Quantitative study	Journal of International Entrepreneurship
2006	Zain and Ng	Network capabilities	How Indigenous Malaysian SMEs use their network relationships to facilitate their internationalization process	Qualitative study	Thunderbird International Business Review
2011	Zarei et al.	Network capabilities	A media for networking and a system for transferring internationalization best practices across small and medium enterprises under the concept of Best Practice Network	Qualitative study	Journal of International Entrepreneurship
2006	Mort and Weerawardena	Network capabilities	How networking capability enables identification and exploitation of market opportunities, facilitates the development of knowledge-intensive products and firm international market performance in the born global firm	Qualitative study	International Marketing Review
2006	Ruokonen et al.	Network capabilities	The role of partnerships in the internationalization of small software firms	Qualitative study	International Journal of Entrepreneurship and Innovation Management
2011	Evers and O'Gorman	Network capabilities	How do entrepreneurs identify foreign market opportunities and how do they identify foreign market(s) and customers	Qualitative study	Entrepreneurship and Regional Development
2011	Tang	Network capabilties	Associations between networking behaviours, resource availability and internationalization patterns	Quantitative study	International Small Business Journal
2010	Dib et al.	Social and business network	Three sets of internal variables seemed to explain why a firm would follow a born global, rather than a traditional, internationalization process: firm, network, and entrepreneur variables	Quantitative study	Journal of International Entrepreneurship

2013	Eberhard and Craig	Social and business network	The relationships among networking (i.e., inter-personal and inter-organisational networks), international market venturing (i.e., export intensity), and family ownership	Quantitative study	Journal of World Business
2009	Felzensztein and Gimmon	Social and business network	Social networking is important in facilitating inter-firm cooperation in marketing activities	Quantitative study	Journal of International Entrepreneurship
2013	Ge and Wang	Social and business network	A network approach to examine what factors affect the internationalization process of Chinese private enterprises	Quantitative study	Asia Pacific Journal of Management
2010	Manolova et al.	Social and business network	Personal and inter-firm networks are critical for the survival and growth of entrepreneurial ventures in transition economies	Quantitative study	Journal of World Business
2011	Vasilchenko and Morrish	Social and business network	Internationalization opportunity exploration-exploitation model emanating from the entrepreneur's network configuration	Qualitative study	Journal of International Marketing
2014	Chen and Jaw	Social capital	Small world networks which demonstrate better group cohesiveness have attracted much theoretical attention in enhancing performance and creativity in strategic management	Quantitative study	Asia Pacific Journal of Management
2008	Berg et al.	Social capital	The role of social capital relationships in the establishment, management and performance of international governance structures	Conceptual study	International Journal of Entrepreneurship and Innovation
2008	Prashantham	Social capital	Social capital as a resource for innovation and strategic renewal in new venture internationalization	Conceptual study	European Management Journal
2007	Presutti et al.	Social capital	Social capital as a critical source of knowledge acquisition abroad	Qualitative study	International Business Review
1997	Zacharakis	Social capital	Use transaction cost economics to provide a theoretical basis for exploring entrepreneurial entry strategies into foreign markets	Conceptual study	International Business Review

2011	Ibeh and Kasem	Social network	The importance of the relational perspective in explaining the initial internationalization, market selection and internationalization speed of the investigated software firms	Qualitative study	Industrial Marketing Management
2014	Kollmann and Christofor	Social network	The conditions of the initial internationalization decision in the network economy	Quantitative study	Journal of International Entrepreneurship
2009	Cabrol et al.	Social network	Entrepreneurs build on their previous professional experience to mobilize international networks during the start-up phase in order to drive the firm's activities	Qualitative study	International Journal of Entrepreneurship and Innovation
2003	Collinson and Gregson	Social network	How networks of would-be entrepreneurs interact with networks of experienced entrepreneurs and managers, venture capitalists, technical experts, consultants, IPR lawyers and other specialists	Qualitative study	R & D Management
1997	Coviello and Munro	Social network	The influence of network relationships on the internationalization process of small firms	Qualitative study	
1995	Coviello and Munro	Social network	International market choice and mode of entry for small entrepreneurial high-tech firms are largely shaped by the interests of various network players	Qualitative study	European Journal of Marketing
2009	Ferro et al.	Social network	How do social networks contribute to the success of the internationalization process of high-technology small and medium-sized enterprises (SMEs)	Qualitative study	International Journal of Entrepreneurship and Innovation
2014	Gong et al.	Social network	The role and effect of national culture on social networking web sites (SNWs) use and access across countries	Quantitative study	Journal of Research in Interactive Marketing
2006	Hayer and Ibeh	Social network	The impact of ethnic networks on the internationalization of minority ethnic businesses	Quantitative study	International Journal of Entrepreneurship and Innovation Management

2004	Holland et al.	Social network	The translation services market provides rich examples of networks in practice that connect a diverse range of customers who require translation services to a global array of translators ranging from individual experts through to organized groups.	Qualitative study	Journal of Information Technology
2008	Kiss and Danis	Social network	The role of social networks in the internationalization processes of new ventures in contexts characterized by different levels of institutional development	Conceptual study	European Management Journal
2010	Kiss and Danis	Social network	The role of social networks in the internationalization process of new ventures in the context of transition economies	Conceptual study	Journal of International Entrepreneurship
2006	Komulainen et al.	Social network	The very active role that the social network can play as a mediator in the small firm's internationalization.	Qualitative study	International Journal of Entrepreneurship and Innovation Management
1999	Koza and Lewin	Social network	The antecedents and stimuli for the formation of the network members, and the ways in which the network coevolves with its environment and with the adaptation practices of its members	Qualitative study	Organization Science
2014	Manolova et al.	Social network	The role of the diversity of the domestic financial networks for the internationalization of entrepreneurial ventures in transition economies	Quantitative study	International Small Business Journal
2014	Masango and Marinova	Social network	The sources of the relationships underpinning Early Rapidly Internationalizing Small Firm (ERISF) cross border activities, the main characteristics and specific functions of these relationships, and their process of development	Qualitative study	International Entrepreneurship and Management Journal
2010	Musteen et al.	Social network	The relationship between the structural, cognitive and relational aspects of the international network of SME CEOs and two internationalization outcomes - speed and performance	Quantitative study	Journal of World Business

2014	Musteen et al.	Social network	The role of structural and relational embeddedness of international networks in firm internationalization	Quantitative study	Entrepreneurship Theory and Practice
2008	Sasi and Arenius	Social network	Role of networks, particularly social networks, in the rapid internationalization process	Qualitative study	European Management Journal
2010	Thistoll and Pauleen	Social Network	The role of network participants when commercialising high-technology innovation internationally	Qualitative study	Journal of International Entrepreneurship
2006	Wakkee	Social network	International new ventures use e-mail frequently to communicate with globally dispersed contacts	Qualitative study	Journal of International Entrepreneurship
2004	Welch and Welch	Social network	The situation where a company internationalizes over an extended period without changing operation mode	Qualitative study	Journal of International Entrepreneurship
2007	Zhou et al.	Social network	The mediating role of home-based social networks in the relationship between inward and outward internationalization and firm performance	Quantitative study	Journal of International Business Studies
2002	Dodd et al.	Social network	Variable network behaviour across borders exists	Quantitative study	International Small Business Journal
2006	Han	Social Network	Comprehensive distinctions of network relationships, such as in the strength, number and content of ties	Conceptual study	Journal of International Entrepreneurship
2007	Pisano et al.	Social network	A theoretical analysis of the means firms employ to create and exploit competitive advantages in emerging economies	Conceptual study	International Journal of technology Management

Table 2. Literature review on Network in the contect of International Entrepreneurship by thematic.

1.5 Methodology and data collection

1.5.1 The pilot study

Belgium is an interesting country to analyse due to its small and open economy with a very limited domestic market. With respect to environmental factors, an important driver for internationalization relates to the size of the domestic market of the focal firm vis-à-vis the potential of the international market (Knight and Cavusgil, 1996; Evers, 2010). With a foreign trade to GDP ratio of 90%, Belgium is one of the most open economy in the world (ING, 2012). In 2011, Ernst & Young’s Globalization Index ranks Belgium as the fourth most globalized economy, after Hong Kong, Ireland and Singapore. Since economic growth in Belgium is determined to a large extent by its international performance, it is imperative that Belgian firms maintain or improve their position in foreign markets. However, Belgium is losing market share in foreign markets due to structural (limited focus on high growth countries) and competitive (limited focus on knowledge intensive activities) factors. Although the Belgian share of high technology products in total exports has increased over the past decade. The country is still ranked 11th out of EU-15 countries in terms of its share of high technology exports. In order to match this growing demand for innovation, with the global supply of science and technology, the Wallonia Export and Investment Agency (AWEX) has developed a Worldwide Innovation Network (WIN).

In order to better understand international collaborations in the context of smaller companies’ internationalization and the variables involved in this process, I first explored this Worldwide Innovation Network (WIN).
In 2006, the AWEX signed a cooperation agreement with the Texas A&M University System (i.e. one of the largest systems of higher education in the United States) in order to help technological development of Walloon innovative firms and foster their access to the American market**.** Their objective is to build global companies through the simultaneous commercialization of new technologies in the European and the American market, developed within the Texas A&M University System and other universities or companies in Wallonia. The Worldwide Innovation Network includes own Research & Development facilities abroad as well as collaborative arrangements with external partners such as incubators and clusters.

This strong relationship between the AWEX and the Texas A&M University System focuses on six sectors considered as promising: Agriculture and Food Science, Life Science, Aerospace, Environment and Sustainability, Mechanical Engineering Transportation and Logistics. Technological industry is a critical area for collaboration. The AWEX's primary goals throughout this partnership are twofold: increasing the knowledge expertise in Wallonia and facilitating smaller high-technology Belgian SMEs access into the US market through their own university network and research parks. This kind of partnership provides the perfect setting for smaller companies to enter the American market at a minimal cost. This last point is a blessing for these small firms which typically only have few financial and human resources to devote to internationalization. The WIN offers them an efficient way to overcome resource and capability deficiencies for internationalization. This sharing of knowledge, technology, and capital, between companies, universities, and public research organizations open up an array of opportunities that would otherwise not be accessible.The AWEX has now developed the same partnership in India and is discussing to extend it to China, New Zealand, South Africa and to the Middle East.

As observed in this pilot study, smaller high technology companies are capable of exploiting global market opportunities faster through collaborative mode of entry. As a result, international collaboration seems to be an essential strategy that smaller firms should pursue in order to gain mre quickly access to knowledge, to resources, and to better cope with environmental uncertainty in their international operations.

1.5.2 The main study

For the purpose of this dissertation, we conducted face to face and telephone surveys of 380 manufacturing SMEs in Belgium. The telephone interview was used to better introduce the objectives of the study and to increase the response rate. This instrument is advantageous because the progression of the telephone interview can be tailored depending on the given answers (Davidsson, 2008). This enables a better flexibility and ability to customize questions depending on the specific responses.

The survey used in the telephone interviews comes from a study conducted in Canada on a sample of 500 Quebecer SMEs written by professors from the "Université du Québec à Trois-Rivières" and based on an extensive review of literature on SME internationalization (Josée St-Pierre; Louis Raymond ; Frédéric Laurin; Sylvestre Uwizeyemungu). Except for exports, this literature was rather incomplete concerning the other international strategies undertaken by SMEs such as the need to develop international collaborative behaviors in reaction to some domestic deficiencies. This led them to conduct a series of aditional interviews with SMEs being at different levels of internationalization and to organize focus groups with company director.

In order to refine the questionnaire and adapt it to Belgian specificities, I met a dozen of representatives from public authorities. The telephone interviews consisted of 99 questions and took around 30 to 45 minutes to complete. The questions covered characteristics of the firm (i.e. age, size and industry), its operations (i.e. innovation, R&D and performance), its entry modes (i.e. exports, imports, collaborations, outsourcing and FDI), and also characteristics of the entrepreneur and managing team (i.e. education, language and prior experience). This holistic approach to internationalization has indeed been suggested by many researchers to more accurately reflect the reality of SMEs in our global economy (Holmslun et al., 2007; Sousa et al., 2008; Perrault & St-Pierre, 2008; Johanson & Vahlne, 2009).

Sample firms were identified in a databank from the "Union Wallonne des Entreprises" and "Amadeus"[2] since publically available data in Belgium contains information about firms such as their names, address, sector, size and contacts. Our study focuses on small and medium manufacturing enterprises employing less than 250 employees (i.e. in accordance to the European Union's definition of small and medium enterprise). In order to avoid potential resources and cultural influences on decision-making (Bell et al., 2001), SMEs were independent (not a subsidiary of a larger international company) and did not belong to a group. Some of them were predominantly domestic, while others expanded their operations in foreign markets. This resulted in a representative sample of 5752 small-and medium-sized entreprises. The representativity of the sample is crucial to reflect the statistical and theoretical requirements of the study (Davidsson, 2004).

[2] AMADEUS is a pan-European database containing commercial and financial information on nearly 20 million private and public companies in 43 European countries.
http://www.bibeco.ulb.ac.be/database/bvd_amadeus.htm.

Thanks to a financial support from the AWEX, experienced interviewers from a Belgian survey company "SONECOM" were responsible for the telephone interviews. The progress of the interviewing was continuously monitored to maintain consistency across the interviews and took place between March and September 2013. Prior to the commencement of the interviewing process, we followed a number of recommended suggestions for encouraging respondents to participate in the study (Dillman, 2000). The questions were discussed over and explained to the interviewers as well as the purpose of the research. A number of suggestions were given to them to encourage the respondents to participate in this academic research if they were hesitant about doing so. These included explaining to respondents how valuable their participation would be to understand how smaller companies internationalize and the broader implications of having more information about this. Before the telephone interview, a link to the survey questionnaire was sent by email with a clean layout. The respondents were also thanked for taking the time to participate in the study. At the end of the questionnaire, respondents were asked whether they would like a report on the results or not. Over 135 respondents asked for this report which reflects their interest for the study. The questions were asked on a Likert scale and were suitable for asking over the telephone. The questionnaire used in the telephone interviews is included in Appendix II.

Because firms' manager wasn't easy to identify a priori from contact details, all firms were contacted over the telephone and asked the following qualification questions: (1) "Are you actively running the company?" and (2) "Are you able to talk about international transactions?" If they responded positively to both questions, they were asked whether they would be willing to participate in a telephone interview. A total of 380 interviews were conducted with active owner-managers. Based on the total of 5752 firms in the sampling frame, the response rate to the telephone interview was 7%. Approximately 40 % of the respondent sample refused to participate in the study. Main reasons were either due to lack of time or because the respondent did not want to talk about international transactions (Table 3).

Response alternative	Number of respondents
Interviewed	380
Refused	2134
Not reachable - absent	2028
Wrong number	861
Total	5403

Table 3. Response rate to the telephone interviews.

Most of the respondents did not want to be interviewed when they were first contacted. An alternative time was booked for the interview at an agreed upon time. Some contacts needed to be called five times. Over 37% respondents did not answer their phone despite calling them at different times during the day and on weekends. If only the respondents who have been reached over the telephone are considered, the acceptance rate to the telephone interview was 18%. These results reflect the difficultly in reaching respondents when conducting telephone interviews.

To analyze the data, I used logistic regressions with the statistical software programs SPSS and STATA. When it was applicable I ran analyses in PROCESS to test the indirect effects in the mediation (indirect effect) and moderation (interaction effect) models. Whereas past studies on my research topic appear to draw thematic conclusions based on case studies or small samples my research strategy is a large survey. By comparing SME's collaborative behaviors I expect to test theory on the influence of collaborations on internationalization.

SMEs in our sample employ an average of 17 workers (going from a minimum of 1 to a maximum of 235 employees). About 62% of surveyed firms are exporters (achieve part of their turnover abroad), a higher number that is usually found in governmental reports. The leading export market is, as expected, the European Union, but surprisingly not the neighboring countries. Cultural even more than physical proximity with the European market may explain this high rate of exporting firms. For a majority of SMEs, the motivations to export are driven by exploiting a foreign market opportunity (83%), by growth objectives (65%), by the need to respond to a foreign client’s specific requests (55%), and, to a lesser extent, by the saturation of the local market (28%).

On the collaboration side, 30% of firms collaborate with foreign partners. These rates may highlight the influence of globalization and the ensuing intensification of competitive pressures that force firms to improve their competitiveness by collaborating. I define international collaboration as an active participation with other foreign enterprises or non-commercial institutions on technical or commercial activities. It excludes pure contracting out of work with no active collaboration. SMEs in our sample collaborate on average with partners in 5 different countries (going from a minimum of 1 to a maximum of 30 countries). The access to foreign markets is the main motive to collaborate abroad (24%). International collaborations are also motivated by reducing the production costs (16%), expanding the product line (16%) and increasing the innovation (16%). Finally, 22% of surveyed firms simultaneously collaborate and export, where 13% initiated the collaboration with foreign partners before any other international activities. These results highlight the precedence of advanced and collaborative modes initiated before any export activities which point out that the trajectory of the stage model has changed.

1.5.3 The Community Innovation Survey

Finally, in order to integrate institutional context into my research, I studied the Fourth Community Innovation Survey (CIS4), a survey implemented by Eurostat. The aim was to analyse and visualize the collaboration data of this survey and the cross-country differences in collaboration behaviors of about 30.000 SMEs in 15 European countries. The data are based on a common survey questionnaire and methodology, with reference to the Oslo Manual (1997), in order to get comparable, harmonized and high quality statistical results.

The CISs offer a comprehensive database in terms of the number of enterprises surveyed in many different sectors. The Survey covers a range of questionnaire items, including direct measures of innovation and a wide variety of factors such as the national or international collaboration partners. The studied countries are the following: Belgium, Bulgaria, Czeck Republic, Germany, Estonia, Spain, Greece, Hungary, Italy, Lithuania, Latvia, Norway, Portugal, Slovenia and Slovakia.

In order to take into account the multilevel nature of these data, we used hierarchical linear modeling (HLM 7.01) to test our hypotheses (Aguinis et al., 2013; Raudenbush et al., 2004). The data analysis techniques are linear regressions, using multilevel and moderated-mediation models and the softwares Stata, HLM, MPlus and SPSS (macro PROCESS). Recent developments in modeling have opened new opportunities for multilevel approaches when studying international business activity (Peterson et al., 2012). Hierarchical or multilevel linear modeling is a robust approach that combines different levels of analysis into a single model. Focusing on only one level of analysis assumes that most heterogeneity is located at the focal level and that alternate levels of analysis are more or less homogeneous (Gupta *et al.*, 2007; Rothaermel and Hess, 2007). Advances in multi-level modeling allow increased precision in quantitative research, and open-up new methodological and conceptual opportunities. However, they create new challenges and they are still not used in International Entrepreneurship research. Based on these new streams of theoretical and empirical research, we propose a model that helps to integrate cross-country effects in the analysis of a firm's ability to develop international collaborations.

The three studies of the dissertation are presented in the figure below. They each contribute to understand the influence of collaborations on SME internationalization.

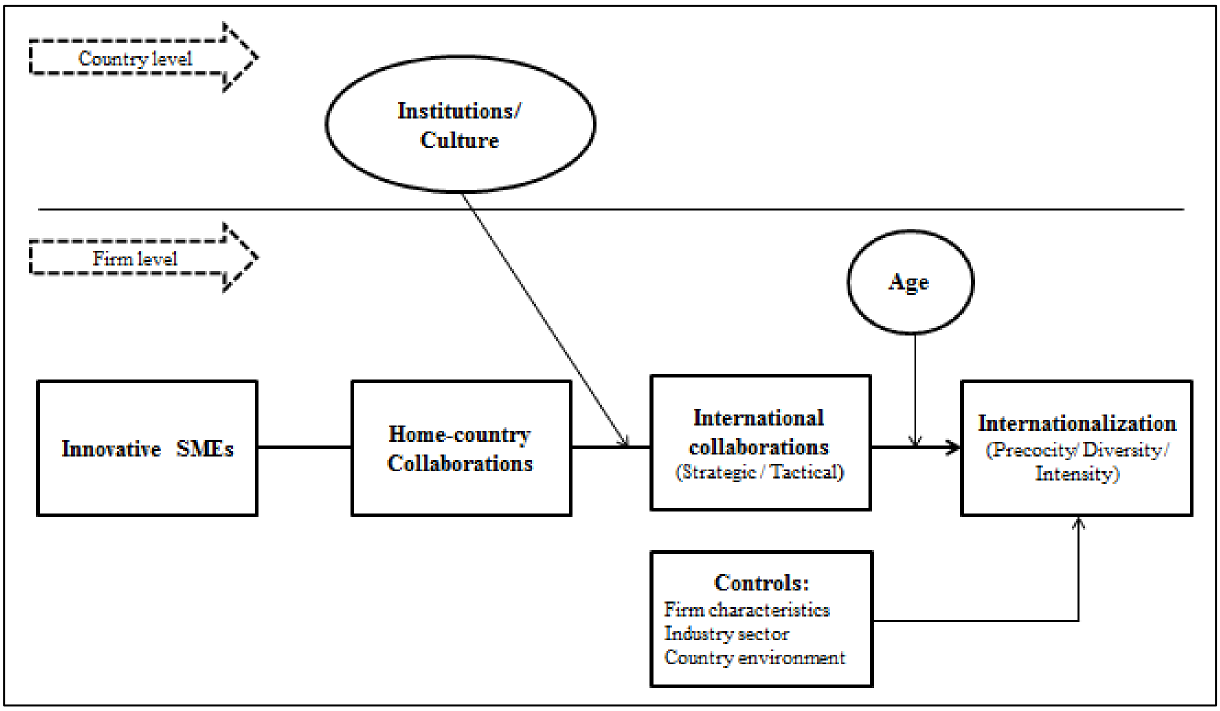


Fig 2. Generalized research model.

CHAPTER 2:

Strategic vs Tactical Collaborations and New Venture Internationalization[3]

Abstract:

Globalizing trend boosts smaller companies to collaborate and also extends their geographical reach. SMEs more and more internationalize and simultaneously open up to collaborate with external partners. Existing studies examining the impact of business networks on internationalization have given limited attention to the significance of the nature of partnerships. In this paper, we argue that international collaborations, in particular, strategic relationships with partners abroad, provide SMEs with technology competencies and foreign market knowledge, which can be leveraged to overcome their liabilities and enhance their internationalization. Our investigation also demonstrates that while international strategic collaboration has a greater impact on internationalization than tactical collaboration, its effect is moderated by the age of the firm.

Keywords: Internationalization, collaboration, network, SME.

[3] Previous versions of the paper were presented at two conferences: the McGill International Entrepreneurship Conference (2014), Universided Adolfo Ibanez (UAI), Santiago, Chile where I received a best paper award and the RENT XXVIII (2014), Luxembourg Chamber of Commerce, Luxembourg.

2.1 Introduction

The current economic environment reflects the complex integration of global economies. Rapidly changing international markets create a lot of challenges and uncertainty for companies. Small and medium-sized enterprises (SME) are affected by globalization and are more and more forced to act at the international level. Internationalization is an important route through which SMEs can realize their growth potential (Pangarkar, 2008). Not surprisingly, public-policy makers at the national and supranational level (e.g. European Union) actively seek to promote and support SMEs internationalization and growth (OECD, 2000). Despite the significant contribution made by SMEs to employment and value added to economy, small firms face relatively restricted resources as compared to what is available to larger and more established firms. The internationalization process requires a level of investments and resources that smaller companies typically do not possess. One solution for these small firms to overcome these constraints is then by collaborating. SMEs need to internationalize and simultaneously open up to external partners (OECD, 2008). New communication technologies simplify interaction between firms and create new opportunities for collaboration, including the intensive use of international sourcing. Some studies have pointed out the role of collaborative approaches for SMEs to access new ideas and business opportunities and benefit from leverage effects through integration in the value chain (Coucke and Sleuwaegen, 2007). Extending collaborations to the international arena strengthens the opportunities for SMEs. Internationalization is mostly seen as an opportunity to increase sales, but it may also affects the firm's competitiveness in other ways as, for instance, through improved cost-efficiency by subcontracting abroad; developing know-how and technology competencies via technical collaboration (sharing know-how or technologies); and extending product ranges through commercial partnerships. The modern SME may well be engaged in international business activities beyond firm and country borders.

Network studies are still emerging in International Entrepreneurship (IE) literature. While there is some support for the benefits brought by networks to SMEs' internationalization, studies investigating the relationships between specific network attributes are, however, relatively sparse. The predictions on which type of network drives internationalization are not obvious and most of the time mixed. In the current study, we argue that business networks, in particular, international collaborations provide smaller companies' technology with competencies and foreign market knowledge. These last benefits can be leveraged to overcome the liability of foreignesss and enhance international performance. Our investigation also demonstrates that the age of the firm moderates the relationship between collaborations and international performance. Whereas most studies on IE are cases based (Musteen *et al.,* 2013) we conducted face to face and telephone surveys of 343 manufacturing SMEs in Belgium. Belgium is an interesting country to analyze due to its small and open economy with a limited domestic market.

This paper makes two important contributions to the IE literature. First, by importing some relevant perspectives and theories on inter-firm network, we extend and develop international entrepreneurship literature. Second by using a moderation model and robust techniques, we improve the methodological and technical quality of international entrepreneurship research.

2.2 Theoretical background

The constructs of this study is based on research on international entrepreneruship and business network, which will permit to combine findings from different studies in order to obtain a global idea of SMEs' collaborative behaviors at the national and international level.

2.2. 1 International Entrepreneurship research

International entrepreneurship can be defined as « *the combination of innovative, proactive, and risk-seeking behavior that crosses national borders and is intended to create value in organizations*» (McDougall and Oviatt, 2000: 903). The growth of IE literature over the two decades has added an impressive volume of research in this domain.

Traditionally, SMEs have to face challenges for their survival with their limited resources. Globalization and increasing international competition force SMEs to search new ways to survive. Contributions conceptually grounded in the resource-based view of the firm argue that a profusion of specialized resources is a prerequisite for the internationalization of SMEs (George, 2005). By contrast, other researchers have shown that the generation of capabilities necessary for internationalization does not need to require resources abundance and can in fact go well under conditions of resource scarcity (Gassman and Keupp, 2007; Katila and Shane, 2005; Sapienza *et al.*, 2006). This latter stream of research indicates that although SMEs may experience a lack of resources in the national market, it may be the availability of resources and opportunities in the external environment that draw firms into international involvement (Mathews and Zander, 2007). Based on the business network view of the internationalization process (Johansson and Vahlne, 2009), this stream of research stresses the importance of network relationships, which may often replace the ownership of physical resources by the access to external resources. According to these predictions, business networks that open up ways to access resources can act as substitutes to the ownership of resources. A solution for small firms to internationalize is then the adoption of collaborative approaches with other organizations.

Most of network-focused research began to appear in 2006 (Coviello, 2006; Coviello and Cox, 2006; Mort and Weerawardena, 2006; Presutti *et al*., 2007; Zhou *et al.*, 2007; Vapola *et al.* 2008; Kiss and Danis, 2008). A common approach in network research is to view relationships as a mechanism for internationalization (Jones *et al.*, 2011). Network studies diverge in their units of analysis, crossing over individuals, teams and organizations. The literature on IE has mostly focused on informational networks which involve social relationships among individuals embedded in an informal structure of personal relations (Hitt *et al.*, 2002). The focus of this study is the organizational level and more specifically on business networks which involve relationships among firms embedded in a formal structure of business connections. Johanson and Vahlne (2009) defined business network as webs of connected business relationships.

Here it seems relevant to point out that clusters clearly differ from networks. While the former refers to "*spatial concentration processes involving a set of related activities in which context firms may, but need not, cooperate, for example, to achieve dynamic purposes*", the latter refers to "*dynamic cooperation in the form of knowledge exchange between firms and other actors that may, but need not, develop these links at the local or regional level*" (Visser, 2009, pp. 168-169). In line with the literature, the most mentioned reasons why such collaborative arrangements are made are to have access to the indispensable resources SMEs do not possess as well as to reduce the economic or financial risks they encounter when they internationalize (Pakkarinen and Harmaakorpi, 2006; Tether, 2002). SMEs' efficient way of using external network has been recognized as their major competitive advantage face to large firms (Nooteboom, 1994; Rothwell and Dodgson, 1994).

2.2.2 Domestic vs International collaborations

Existing studies examining the impact of networks on internationalization have given limited attention to the significance of the network attributes, especially in the international market. There is a considerable lack of studies focusing on collaboration between SMEs at the international level and a need for a clear consensus. There have been calls for greater attention to the international dimension of inter-firm networks (Kiss and Danis, 2008; Manolova *et al,* 2010). As Leung et al. (2005) advocate, the globalizing trend does not only boost the enterprises to collaborate, it also extends their geographical reach. There is thus an impressive increase of cross-border agreements between enterprises (Goerzen and Beamish, 2005; Melkers and Kiopa, 2010). Furthermore, from Zhang et al.'s (2010) perspective, although national collaborations are less costly, international collaborations bring more benefits. The authors point out better knowledge acquisition, access to financial assets and complementary capabilities. Lee *et al.* (2010) highlight two main incentives of SMEs' collaborations with foreign firms. The first one is related to the understanding of local demand and formalities in order to ensure a proper adaption of the product whereas the second concerns the use of an appropriate commercialization process which is critical to penetrate foreign markets. Barlow and Jashapara (1998) argue that partnering brings organizational learning by providing knowledge regarding foreign institutions. Institutional systems are sometimes complicated to understand. Local firms have already experiment various support alternatives and regulations constraints. Partnership enables to benefit from local experience and avoid administrative mistakes.

This is particularly true in countries where sources of information are multiple increasing uncertainties and complexity to internationalization pathway (Senik *et al.,* 2011). Thanks to collaborations, firms can adjust to foreign current rules and regulations faster and more appropriately (Senik *et al.,* 2011). Relationships with local partners provide SMEs with information on the international opportunities not easy to detect at a distance (Senik et al., 2011). In addition, there is a lot to learn from international partner's behavior linked to their culture. This highlights the importance of international background to be able to deal with cultural differences. It is another clear demonstration of knowledge transfer on culture facilitating internationalization. Pittaway *et al.* (2004) add that international business network enables enterprises to access new markets and technologies, to accelerate and diffuse new products to market and within sectors, to benefit from complementary skills and to safeguard property rights.

Hypothesis 1. SMEs that use international collaborations will perform better in foreign markets than SMEs using domestic collaborations.

2.2.3 Strategic vs tactic collaborations

SMEs can expand simultaneously their activities across geographical boundaries and along the supply chain (Polenske, 2004). Hindle and Rushworth (2000) argue that SMEs need to get involved in more than one partnership in order to benefit from different strategic purposes to compare with larger firms. Collaborations do not only include science and technology partners but also value chain partners. Certain types of collaborations might bring competences to SMEs that are internally developed by the partners (Spithoven *et al*., 2013). Following Garette and Dussauge (2000), we classify joint distribution, purchasing or sale/marketing activities as tactical collaborations and production or R&D joint activities as strategic collaborations. The nature of knowledge transfer is less tacit in tactical collaborations than in strategic collaborations. Purchasing tactical collaborations are, for example, useful for obtaining prices advantages and direct increasing growth. It has also an interest from a resource based view which argues that entering collaborations may be motivated by resources and information obtention (Haahti *et al*., 2005; Street and Cameron, 2007). Collaborating with foreign supplier may contribute to access knowledge about the target market. SMEs can indeed use foreign purchasing partnerships as a concrete internationalization tactic.

Exchanging knowledge with clients is also important to SMEs (Van Gils and Zwart, 2004). The main purpose is to increase customers' loyalty (Van Gils and Zwart, 2004). Local collaborators may provide support services (Narula, 2001) which are an important argument for client satisfaction. Educating local customers to use the product properly is also an efficient marketing argument (Asproth and Nyström, 2008). Then, the main goal of international tactical collaborations is to expand market by improving the product regarding the foreign client specific needs and local requirements.

In strategic collaborations for production and R&D joint activities, the nature of knowledge transfer is even more tacit. The more the information is tacit, the more companies are reluctant to share it and the more they prioritize in-house activities (Narula, 2001). There is therefore a trade-off between the potential benefit from knowledge acquisition and the potential loss of unique know-how. In order to benefit from collaborations, SMEs need to be able to generate profit from resources owned by their partners while maximizing their own independence and control (Pfeffer, 1981). Moreover, collaboration takes time and money to be properly monitored. The transaction cost theory demonstrates that firms have therefore to weight the adaptive cost against the resources gained (Polenske, 2004). Then the success or the failure of the firm when entering a new foreign market through strategic collaborations will be closely linked with the additional level of threat to its proprietary intellectual assets. The inability to define complete contracts and the lack of resources to defend their legal rights are likely to encourage opportunistic behaviors by local partners. The risk could be exacerbated in international strategic collaborations because the local partners have better knowledge of domestic regulatory frameworks and business rules. The SMEs have to accept the imminent prospect of additional technology transfer risks when entering into strategic collaborations with foreign partners. These potentials intellectual proprietary threats include: the "hold-up" of specific assets; the appropriation or technological leakage and the spillover of key information to competitors (Williamson, 1991; Ahuja, 2000).

Hypothesis 2. SMEs that use international tactic collaborations will perform better in foreign markets than SMEs using international strategic collaborations.

2.2.4 The moderated effect of age

Our final hypothesis considers the moderating effect of firm age on the strength of the collaboration-internationalization relationships. According to Manolova et al. (2010), the earlier in its life history, the more an SME relies on its business network for valuable resources, operational efficiencies, and cost reduction. Das and Teng (2000) found that the rationale for collaborations is the value-creation potential of firm resources that are pooled together. Through the sharing of skills and assets, younger companies get access to the complementary resources needed to internationalize. New ventures' network benefits for knowledge and resources transfer have been largely recognized in literature. Research on international new ventures (Coviello and Munro, 1997; Tan *et al.*, 2007; Coviello, 2006; Mathews and zander, 2007; Manolova et al., 2010; Oviatt and McDougall, 1994, 2005) consider network as critically important for international opportunities identification. Over time, information and knowledge becomes increasingly internalized (Autio et al., 2000; Oviatt and McDougall, 1994) and the role of network decreased (Coviello, 2006; Hite and Hesterly, 2001).

Hypothesis 3. SMEs that use collaborations at the beginning of their life history will perform better in foreign markets.

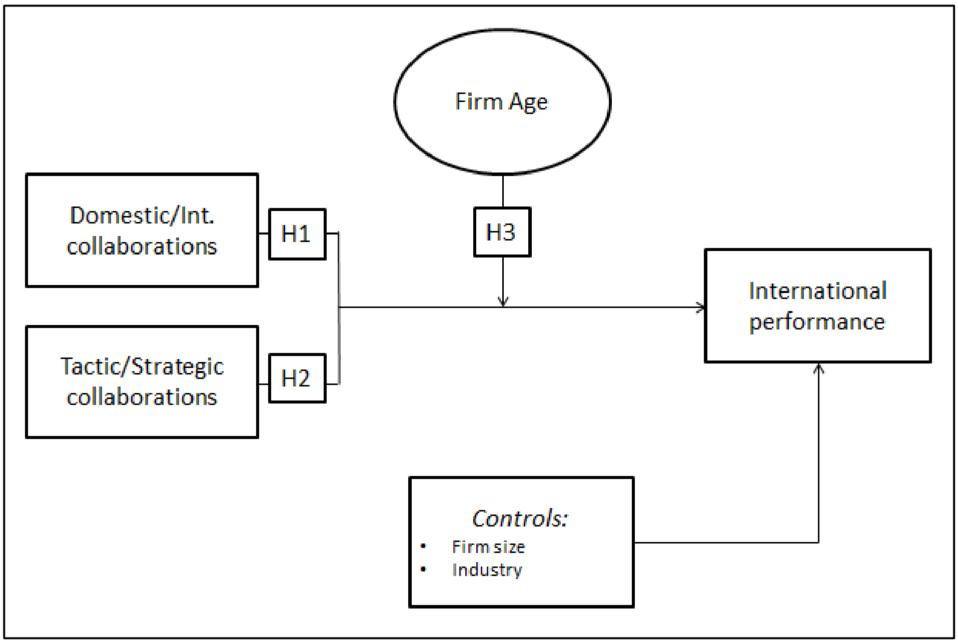


Fig. 2. Conceptual new venture collaborations model.

2.3 Methodology

2.3.1 Research context

Belgium is an interesting country to analyze due to its small and open economy with a limited domestic market. Ernst & Young's Globalization Index ranks Belgium as the fourth most globalized economy in 2011, after Hong Kong, Ireland and Singapore. However, Belgium is losing market share in world markets. The relative decline in export share is due to structural and competitive factors. These factors include the limited focus on high growth countries and knowledge intensive activities (Sleuwaegen *et al.*, 2012). Belgium's export of goods and services are less oriented toward countries outside the European Union (EU). Exports are not only focused on the European market, but those exports are less technology intensive products when compared to other EU countries' exports (UNCTAD, 2011). Although many developed economies specialized in high technology and knowledge intensive goods and services, which are expected to contribute most to growth (Haussmann *et al*., 2007), Belgium does not appear to be strongly focused on these industries and is not characterized by a high R&D intensity. Partnerships within technological industry are then a key area of focus in Belgium, especially with countries outside the European Union.

2.3.2 Participants and procedure

Whereas most network studies on International Entrepreneurship are case based (Musteen *et al*, 2013), in the context of this study we choose a quantitative approach through telephone surveys. This method enables the consideration of larger samples. Furthermore, a quantitative method is suitable when trying to discover relationships between variables and highlighting common trends. With the aim of a better understanding of collaborations in the context of SMEs and the variables involved in this process, we conducted face to face and telephone surveys of 343 manufacturing SMEs in Belgium. The telephone interview was used to better introduce the purpose of the study and increase the response rate. Telephone interviewing is advantageous because the progression of the telephone interview can be tailored depending on the answers given (Davidsson, 2008).

The survey used in the telephone interviews was written in collaboration with our colleagues from the Institute for SME Research of the University of Quebec at Trois-Rivières. The companies of our sample were listed with the AMADEUS and UWE (Union Wallone des Entreprises) databases, which resume financial information on companies located in the Walloon region. Our sample focuses on Walloon manufacturing small and medium enterprises. In accordance with the definition of small and medium enterprise of the European Union, all the companies of our sample employ less than 250 employees. In order to avoid "potential resource and cultural influences on decision-making" (Bell *et al.*, 2001), SMEs were independent (not a subsidiary of a larger international company) and did not belong to a group. In addition, some of them were predominantly domestic, while others expanded their operations in foreign markets.

The data collection took place from March to mid-September 2013. Each telephone survey had a duration of about 30 to 45 minutes and aimed at interviewing managers of SMEs or people with the authority to make strategic decisions regarding international transactions. The questions were asked on a Likert scale and were therefore more suitable for asking over the telephone. Based on the total of 5752 firms in the sampling frame, the response rate to the telephone interviews was 7%. Approximately 40% of the respondents sample refused to participate in the study. Most of the respondents did not want to be interviewed when they were first contacted. An alternative time was booked for the interview at an agreed upon time. Some contacts needed to be called five times. Over 37% respondents did not answer their phone despite calling them at different times during the day and the weekends. If we consider only the respondents who have been reached over the telephone, the acceptance rate to the telephone interview was 18%. These results reflect the difficultly in reaching respondents when conducting telephone interviews.

Through those interviews we collected data on the company profile, including size, industry and international operations. This holistic approach to internationalization has been suggested by many researchers to more accurately reflect the reality of the global economy (Holmslun *et al.,* 2007; Sousa *et al.,* 2008; Johanson & Vahlne, 2009, St-Pierre *et al.,* 2011).

2.3.4 Measures

Dependent Variable

International performance relates to the percentage of foreign sales (Madsen, 2013). The classic mean used by researchers to measure the "International performance of the firm" is to assess the Foreign Sales to Total Sales (FSTS) ratio proposed by Knight and Cavusgil (2004). It is the share of turnover from foreign markets of the total turnover (Kuivalainen *et al.*, 2012b).

Explicative variables

For the purpose of constructing business network measures we utilize the information available on the use of international collaboration areas specified in the survey questionnaire. Collaboration is strictly defined as involving active partnerships with foreign organizations and its specified that pure contractual relationships are to be excluded. The survey requires that respondents identify their collaboration areas between five different groups (production; distribution; purchasing; research and development/conception; marketing/sales) at national and international level. As we first focus on domestic or international collaborations, we compute the variable "Domestic collaborations" which is the sum of each five activities with Belgian partners (from 0 to 5) and the variable "International collaborations" which is the sum of each five activities with foreign partners (from 0 to 5). Second, we focus on the diversity of the collaboration portfolio. Then we compute the variables "Tactical collaborations" which is the sum of each joint distribution, purchasing and sale/marketing activities with foreign partners (from 0 to 3) and the variable "Strategic collaborations" which is the sum of each joint production and R&D activities with foreign partners (from 0 to 2).

Moderator and control variables

We conceptualize the "Age" of the firm as the number of years since the venture inception. The age of the firm may estimate the scale of the firm's knowledge and experience available internally. Finally, we include the "Size" (number of employees) and the "Sector" (industry) of the firm.

2.4 Analyses and results

We test hypotheses developed in this paper using linear regression with SPSS and the macro PROCESS (Preacher and Hayes, 2004, 2008; Hayes, 2013). PROCESS uses logistic regression-based path analytical framework for estimating direct and indirect effects in mediator model. It integrates robust techniques such as nonparametric bootstrapping procedures. As expected in the first hypothesis, international collaborations have a significant positive impact on SMEs' international performance (b = 1.62, p < .01). Foreign partners are an essential source of information for the organization as they are capable of identifying new opportunities for international development. They facilitate the anticipation and identification of market requirements. International collaborations' benefits stem from the firms' ability to tap the market knowledge and technical expertise of their foreign partners. On the other hand, domestic collaborations have a negative impact on SMEs' international performance (b = -0.46, ns). These results may be based on a tendency not to open-up and trust strangers while being stuck in a local strategy. Such a discovery is important for SMEs that have to be careful in their use of combination of different collaboration activities in their internationalization process.

	International Performance		
Variables	b	se	t
Control variables			
AGE	-0,052 ***	0,015	-3,38
SIZE	0,001	0,016	0,05
SECTOR	-0,03	0,065	-0,46
Independent variables			
Domestic Collaborations	-0,467	0,454	-1,027
International Collaborations	1,627 **	0,598	2,722
N= 343			
*p < .05;**p< .01;***p< .001			

Table 4. Regression results predicting international performance.

Opposite to the second hypothesis, international strategic collaborations for production and R&D activities affect positively SMEs' international performance whereas international tactical collaborations are not significant (*b* = 4.41, 0.86, *p* < .001, ns; respectively). Strategic collaborations with international partners appeared thus as a useful strategy for smaller companies to overcome their resource limitations for internationalization. According to Narula (2001), collaborate with foreign partners who locate their innovation activities in high technological cluster abroad enables firms to improve their in-house capacities by benefiting from a spillover effect. Another reason for making strategic collaborations with a foreign firm is the need to be closer to the target market. Having partners established there give them an advantage. Despite the coordination costs and appropriability hazards, engaging in international strategic agreements may help to reduce the risks and costs associated with the development and introduction of new products on foreign market.

	International Performance		
Variables	b	se	t
Control variables			
AGE	-0,029	0,016	-1,743
SIZE	-0,004	0,015	-0,247
SECTOR	-0,02	0,064	-0,318
Independent variables			
Tactical collaborations	0,865	0,676	1,278
Strategic collaborations	4,418 ***	1,05	4,206
Moderator			
Strategic collaborations * AGE	-0,065 **	0,025	-2,559
N= 343			
*p < .05;**p< .01;***p< .001			

Table 5. Bootstrap Regression Results for the Moderation (computed by PROCESS).

Hypothesis 3 specifies that the age of the firm moderates the relationship between international collaborations and international performance. Results reported in Table 5 show that the interactions between strategic collaborations with foreign partners and age is significant (*b* = -0.06, *p* < .01) in predicting international performance. Besides, the conditional effect of strategic collaborations on international performance decreases with age. Table 6 integrates the values for quantitative moderators which are the mean and plus/minus one SD from mean.

AGE	Effect	se	t	p	LLCI	ULCI
3,8814	4,1678	,9849	4,2319	,0000	2,2305	6,1051
33,8105	2,2329	,7648	2,9195	,0037	,7285	3,7373
63,7396	,2980	1,1588	,2572	,7972	-1,9814	2,5774

Table 6. Conditional effects at values of the moderator.

We illustrate the nature of the studied interactions in Figure 3, where the effects of strategic collaborations on internationalization are compared for low age (i.e., one standard deviation below the mean) versus high age (one standard deviation above). The figure confirms that the age alters the effect of strategic collaborations significantly: the slope is clearly positive for young firms (low age) but about flat for established firms (high age).

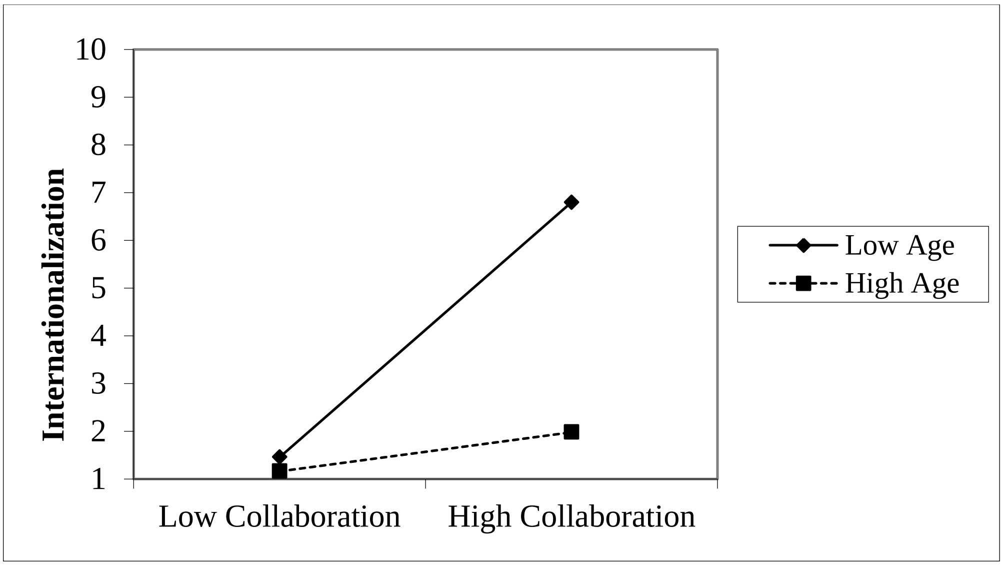


Fig. 3. Nature of interaction effects.

2.5 Discussion

The internationalization process of smaller companies is getting more and more complex. Firms which do not have sufficient in-house resources need to source external expertise through collaborations. These external resources can, then, be combined with the internal resources of the firm. Our results demonstrate that collaborations with foreign partners, for production and R&D activities particularly, are critically important for SMEs' internationalization.

Foreign partners are well embedded into the market and are aware of movements from the competition. They may provide access to this specific market and technology knowledge necessary to internationalize. This is particularly significant when the target market of the firm is still uncertain or when the lack of market information is an obstacle to the firm.

The findings of this study also show that the role of collaborations for internationalization decreases over time. This highlights the important of speed in establishing partnerships with foreign firms. Internationalization of younger firms is facilitated by the establishment of strategic collaborations with foreign firms that allow them to quickly pursue international business opportunities. As Gassman and Keupp (2007) and Manolova *et al.* (2010) indicated, early internationalization is positively associated with a specialized position in an international value chain.

However, if international collaborations speed up internationalization, some researchers point out that this process often result in neglecting the development of opportunity costs. The well-known difficulties that have to be overcome by SMEs to succeed in collaborating are even more amplified when collaboration are at the international or even global level. The conditions necessary to facilitate the sharing and learning process simultaneously magnify the danger of losing core and proprietary knowledge. According to Zaheer (1995), trust can be an effective means to reduce inferred uncertainty by external parties. High network embeddedness promotes the development of this trust (Krachardt, 1992). Then social engagement which alleviates appropriation concerns is necessary to establish reliability in advance of commencing negotiations. Strong social norms and beliefs encourage compliance with business rules and solidarity.

Finally, although business networks have shown their positive effect for SMEs' internationalization, international collaborations in the context of SMEs are more the exception than the rule (30% of the sample SMEs). To benefit from these relationships, we believe there are three main challenges; SMEs need to identify opportunities and select adequate partners having complementary resources and skills to learn (1); SMEs need to be able to exploit the relationship efficiently through learning from partners' tacit and explicit knowledge (2) and SMEs need to develop trust, embeddedness between partners (3).

2.6 Limitations and conclusion

This study has limitations, which need to be considered when its results are interpreted. First, we studied small and medium sized enterprises in a single country. It is likely that collaborations may affect internationalization differently in a different institutional and cultural setting (Tan, 2002; Kiss and Danis, 2008; Shirokova and McDougall, 2012). Further research is warranted that explore empirically the implications of institutional and cultural context on the collaborative behavior of SMEs.

Second, in our measure of tactical and strategic collaborations, we did not evaluate the strength of each partner relationship. Besides, while or study is cross-sectional, recent investigations have indicated that the pathways of SME networking activities are more varied and complex, such as the timing of initial collaboration and phases of increasing or decreasing commitment to foreign partners (Coviello, 2006; Manolova *et al.*, 2010). The question of the factors which account for such variations opens up another field of inquiry.

Finally, our measure of internationalization, while appropriate for international entrepreneurship measure, only relates to the share of turnover from foreign markets of the total turnover (Knight and Cavusgil, 2004; Kuivalainen *et al.*, 2012b; Madsen, 2013). However, we checked for the robustness of the results by rerunning our analysis on the number of foreign market served, as a proxy of international performance. These results are fully consistent with the model reported here and are available from the authors on request.

The contributions associated with our research are scientific, managerial and public. On the first point, by importing some relevant perspectives and theories on business network and providing empirical evidence supporting hypothesized relationships using rigorous methods, we extend the international entrepreneurship research. The predictions on which type of business network drives internationalization in the context of SMEs are not obvious and we needed for a clear consensus which this paper offers. On the second point, as suggested by Manolova et *al.* (2010), in this paper, we measure the effect of international collaborations in comparison to domestic ones. We have shown that international collaborations provide SMEs foreign market knowledge and contacts, which can be leveraged to overcome their liabilities and enhance SME's internationalization.

Besides, the development of strategic collaborations with foreign partners is critical for SMEs to be competitive in the global market. Such results are important for SMEs that need to integrate the use of combination of different collaboration activities in their value chain for successful internationalization. On the third point, if the multinational companies had understood the importance of internationalization of the value chain, it seems that benefit from this internationalized process applies particularly to smaller firms. Indeed, the increasing cross border competition resulting from globalization disadvantages even more SMEs regarding their bigger competitors because of their resource limitation. Therefore, we believe that governments need to foster international collaboration and enforceability of contracts in order to increase SMEs' global competitiveness.

CHAPTER 3:

SME International Pattern Choice: a Collaborative Model[4]

Abstract

The literature suggests there is no single agreed definition of what constitutes "fast" internationalization, and how to measure it. Moreover, studies generally concentrate on precocity while a limited number of papers explore the subsequent speed of internationalization which definition remains still vague. Therefore, a first purpose of this paper is to propose definitions comprising concrete measures of three dimensions of fast internationalization: precocity, diversity and intensity. Further, we try to better understand the nature of the relationships between these three dimensions and why some smaller companies cross national borders with greater speed than others. By providing empirical evidences supporting hypothesized relationships, our findings highlight that SMEs' collaborations portfolio and knowledge intensity have a positive impact on the speed of international commitment and country scope. Finally, we found that smaller companies using early patterns of internationalization performed significantly better in foreign markets than firms using other patterns.

Keywords: Internationalization, pattern, collaboration, innovation, SME.

[4] Previous versions of the paper were presented at two conferences: the McGill International Entrepreneurship Conference (2014), Universided Adolfo Ibanez (UAI), Santiago, Chile where I received a best paper award and the EGOS Colloquium (2015), American Collage of Greece, Athens, Greece.

3.1 Introduction

In the context of globalization more and more small and medium-sized enterprises opt for an international development in order to face the increasing competition and stimulate their growth. Business models considerably changed compared to past decades and differ more and more from one company to another. Certain models of internationalization have appeared and different factors are now known as determining the internationalization process. The literature suggests there is no single agreed definition of what constitutes “rapid” internationalization, and how to measure it. It therefore appears there is no clear agreement in respect of what constitutes an International New Ventures or a born global. These terms have arguably been used interchangeably to characterize firms that internationalize faster. An issue that appears vague in existing studies is the number of markets served and more specifically their geographic diversity. In order to further complicate our understanding of what constitutes serving global markets; studies have highlighted the commitment issue related to the amount of foreign sales. In short, the issues of market coverage and commitment remain quite controversed in the International Entrepreneurship literature. There is therefore a need to de-mystify and clarify what these terms mean and whether they represent different phenomenons or not. A first purpose of this paper is then to propose definitions comprising concrete criteria in order to improve internationalizing patterns’ classification, in doing so, we aim to make possible the comparison and integration for empirical research findings. Further, our study contributes to the literature in International Entrepreneurship by advancing our knowledge regarding effects of SMEs’ collaborations portfolio and knowledge intensity on their internationalization pattern. We finally determine if early and rapid internationalization patterns provide superior international performance. The empirical part of this paper therefore focuses on the two following research questions: What is the impact of the age of the firm on the subsequent speed of internationalization? Does SME that use a diverse portfolio of collaborations and high knowledge intensity internationalize faster?

3.2 Theoretical background

3.2.1 Dimensions of fast internationalization

The three main areas of research regarding rapid internationalization are precocity, diversity and intensity (Kuivalainen, Saarenketo and Puumalainen, 2012; Zucchella *et al.*, 2007). Precocity refers to the very beginning of the internationalization process, while the diversity and intensity provide an insight of its effectiveness (Kuivalainen *et al.*, 2012b; Zucchella *et al.*, 2007). Unfortunately, most research on internationalization does not make the distinction between these three areas or does not analyse them entirely (Autio *et al.*, 2000; Jones and Coviello, 2005). Moreover, studies generally concentrate on precocity while a limited number of papers explores the longitudinal effects of rapid internationalization where the definition of speed is still vague (Kuivalainen *et al.*, 2012a, 2012b). This is why it is now important to clearly define “precocity”, “diversity” and “intensity” before describing the different types of internationalization patterns (Figure 4).

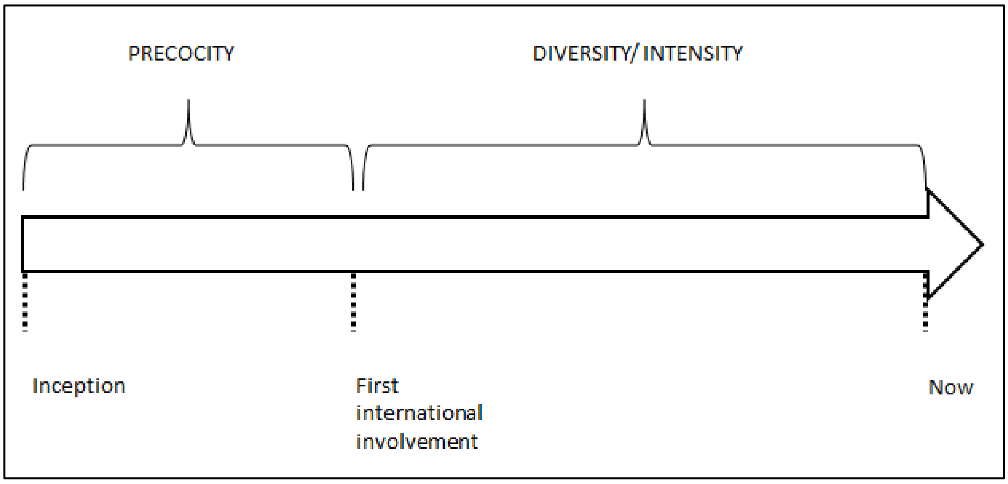


Fig. 4. Dimensions of internationalization speed.

First, we define *precocity* as how rapidly the SME begins its international activities from its inception. This is, the time between the discovery or enactment of an opportunity and its first foreign market entry. An advantage of the precocity dimension is that it enables a distinction between studies that concentrate on born global firms, and those that focus on the internationalization of traditional firms (Kuivalainen *et al.*, 2012b). There is however little consensus in the literature about the right cut-off number for precocity. It has been reported that traditional internationalizing SMEs have an average age of 27 years at first export (Rennie, 1993), while other authors considered firms older than 10 years old at first export as traditional ones (Moen and Servais, 2002).

In both cases, this implies they are only present in the domestic market for a long time before operating beyond the borders (Johanson and Vahlne, 1977, 2009; Moen and Servais, 2002; Rennie, 1993). On the other hand, Bell *et al.* (2001) point out that born global firms may start their business simultaneously in both international and domestic markets. They may even go international before operating in their home market. According to some authors (Kandasaami, 1998; Moen and Servais, 2002; Rennie, 1993) a firm is considered as a born global if it starts internationalizing within two years after its establishment, whereas according to other researchers (Knight and Cavusgil, 2004; Kuivalainen *et al.*, 2012a; Madsen, 2013; Madsen and Servais, 1997), a born global firm's internationalization would rather start within three years after its founding. McDougall, Oviatt and Shrader (2003) and Oviatt and McDougall (1994) consider a venture as new or non-established until its six years old, which implies a born global would internationalize within six years after its foundation. Welbourne and De Cieri (2001) qualify a firm as a born global if it starts its international activities within eight years of inception. Therefore, researchers agree that born global SMEs internationalize "in the early stage", "from inception" or "soon after inception" (Moen and Servais, 2002; Oviatt and McDougall, 1994; Rennie, 1993; Weerawardena *et al.*, 2007).

Second, we define *diversity* as how rapidly the SME increases market diversification once an initial international operation has been made. The diversity then refers to a firm's subsequent international geographic growth or the speed at which country scope is increased. Market concentration generally characterizes the first international activities of a traditional firm. On the other hand, market diversification corresponds more closely to born global firms (Kuivalainen *et al.*, 2012b) as they should have activities in several countries in their early stages (Oviatt and McDougall, 1994). Traditional firms develop their internationalization step by step, by slowly gaining knowledge and experience in foreign countries (Andersen, 1993; Bilkey and Tesar, 1977; Eriksson *et al.*, 1997; Johanson and Vahlne, 1977, 2009; Johanson and Wiedersheim, 1975). Even though no exact criterion has been settled, it results from Johanson and Vahne's study (1977) that it may take several years between stages, or to enter new markets. Then traditional firms' internationalization is usually characterized by a market concentration in the beginning and a slow international development (Ayal and Zif, 1979; Johanson and Vahlne, 1977).

This narrow geographic diversity includes nearby countries in terms of psychic distance (Johanson and Vahlne, 1977). Afterwards, once they have gained experience in the neighboring countries, traditional firms extend their international activities to more remote countries (Eriksson *et al.*, 1997; Johanson and Vahlne, 1977, 2009). By contrast, born global firms internationalize in an accelerated, rapid process (Bell *et al.*, 2001; Jones and Coviello, 2005; Kuivalainen *et al.*, 2012a, 2012b; Knight and Cavusgil, 2004; Oviatt and McDougall, 1994; Rialp *et al.*, 2005a, 2005b; Weerawardena *et al.*, 2007). Oviatt and McDougall (1994) reported that these firms can either omit some traditional stages, or ignore all of them. However, no exact number of countries has been provided through studies on born globals to determine what a "rapid" international growth represents (Acedo and Jones, 2007; Autio *et al.*, 2000; Jones and Coviello, 2005; Kuivalainen *et al.*, 2007, 2012a, 2012b). According to Kuivalainen *et al.* (2012a), the firm's geographical context is a complex issue concerning the market diversification. Depending on the context, a firm will have more or less neighbouring countries. Thus, one might think that a firm present in many countries is more internationalized than another one, while it is not the case. Therefore, researchers have proposed ways to solve this problem. A mean to evaluate a firm's internationalization regarding its market diversification is to consider the number of countries, in addition to the neighbouring countries, in which the company generates sales. Another way is either to estimate the extent of the activities that are undertaken by the firm in different continents. The distance can indeed be considered in the analysis since born global firms may internationalize beyond psychologically close countries from inception (Bell *et al.*, 2001; Gabrielsson *et al.*, 2008; Moen and Servais, 2002; Oviatt and McDougall, 1994, 2005; Rialp *et al.*, 2005a). Therefore, researchers affirm that born global firms generate sales in multiple countries (Oviatt and McDougall, 1994), operate in multiple continents or sell to more national markets than there are neighbouring countries (Kuivalainen *et al.*, 2012a; Moen and Servais, 2002).

Finally, we define *intensity* as how the SME successfully operates in foreign markets. The intensity or extent of internationalization, relates to the expansion of a company's international operations (Kuivalainen et al., 2012a, 2012b) or the speed of international commitment. The slow international development of traditional firms is somewhat also revealed by the intensity dimension.

Indeed, it has been reported in some researches that traditional firms export on average 20 per cent out of their total sales (Rennie, 1993; Moen and Servais, 2002). Traditional firms' internationalization intensity is therefore rather low in terms of foreign sales whereas born global firms generate high shares of foreign sales out of the total turnover (Kuivalainen *et al.*, 2012b; Moen and Servais, 2002; Rennie, 1993). The most frequently used criterion for the scale of born globals is an export ratio of at least 25 per cent within the first three years of foundation (Knight and Cavusgil, 2004; Kuivalainen *et al.*, 2012a, 2012b; Moen and Servais, 2002). It seems nevertheless that there are variations concerning the adequate percentage of foreign sales (Gabrielsson *et al.*, 2008; Madsen, 2013). Different factors influence export ratios, such as the size of the firm's country, its economy, the kind of industry and the neighbouring countries. For instance, setting the standard level of export ratio to 25 per cent may be seen by Europeans as quite easy to achieve. Therefore, a share of foreign sales of at least 50 per cent has been proposed by Finnish researchers (Gabrielsson *et al.*, 2008).

As shown, there are three vital aspects to such speed of internationalization: the time between the discovery or enactment of an opportunity and its first foreign market entry (*Precocity*); the speed at which country scope is increased (*Diversity*) and finally, the speed of international commitment (*Intensity*). Even after a long period of conceptual study, there are still only a few research focuses simultaneously on these three dimensions of internationalization speed. Following the new venture theory of internationalization it seems that there is a direct and positive link between precocity, diversity and intensity. The flexibility of newer firms allow them to rapidly learn the capabilities necessary to pursue a rapid growth in new environment whereas older firms develop learning impediments that hamper their ability to successfully grow in foreign markets (Autio, 2000; Oviatt and McDougall, 2005). That is, the earlier in its history a firm internationalizes, the faster it seems to grow in foreign markets. However, to our knowledge, it has never been tested empirically yet. Morevoer, few is known about the nature of these relationships. As a result, our first hypotheses is the following:

Hypothesis 1: Younger firms tend to prefer rapid pattern of internationalization.

3.2.3 Collaborations portfolio and rapid internationalization

Smaller companies are faster in implementing new technologies and meeting specific buyer needs than multinational entreprises (MNEs) and are therefore increasingly able to serve niche markets worldwide. (Verity, 1994 ; Oviatt and McDougall, 1994 ; Oviatt and McDougall, 1995). However, SMEs usually lack the required resources and capabilities to internationalize their activities which makes their international expansion significantly more challenging than it is for MNEs. The entry mode decision is then considered as an important strategic decision that needs to be investigated in the context of smaller companies (Knight, 2000; Brouthers and Nakos, 2004). Although born globals account for a more and more significant portion of international trade, little is known about how they make international entry mode decisions. By examining the entry mode behavior of born globals, we can determine whether they follow similar patterns as traditional firms.

SMEs can use different ways to enter new international markets. According to the Uppsala model of internationalization, firms should choose the optimal mode of entering a market by taking into consideration their own resources and analyzing their costs and risks based on target markets (e.g. Hood & Young, 1979). The development stages of firms internationalization is described as an incremental, risk-averse, and reluctant adjustment to change in a firm or in its environment (Johanson and Vahlne, 1977, 1990). The stage models assume that internationalization process starts with sporadic overseas sales and continues with bigger and bigger commitments in the foreign markets through sales (Kalinic, 2009). Traditional firms seem to rely on a loose network of business partners (Johanson and Vahlne, 1977, 2009; Rialp *et al.*, 2005a) and tend to expand through unrelated customers or markets (Young and Crick, 2003). More recently, Johansson and Vahlne (2003; 2009) hypothesized that network relationships from which firms learn and benefit lead them to enter foreign markets sometimes incrementally and sometimes quite rapidly. They propose that the establishment and development of network relationships determine much about the nature of international expansion. Complementary, Oviatt and McDougall (1994, 2005) found that some SMEs are able to internationalize more rapidly than the stage models predict, jumping over some stages. The distinguishing feature of international new venture (early adopters) is their origins are international, as demonstrated by observable and significant resources (e.g. material, financing, time, people) in more than one nation (Oviatt and McDougall, 2005).

In contrast with organizations that evolve gradually from domestic firms to multinational firms, these new ventures begin with a proactive international strategy. According to the stage model, most of the firm's products or services are generated in the firm's home base, and the international dimension of the firm's activities is concerned mainly with the international diffusion of its offering. In the Oviatt and McDougall model (1994), the firm operates in an internationally dispersed resource base. The value creation of the firm is based on cross-border combination of valuable resources. International New Ventures internationalize to get access to resources and capabilities across national borders (Kuemmerle, 2002). The act of early internationalization may help SMEs enhance their ability to dynamically adapt to, and take advantage of international opportunities. For example, in international collaborations, companies have the opportunity to take advantage of their complementary resources leading to mutual learning and fix costs sharing (Janssen, 2009).

In this paper, we assume that internationalization can be viewed as the process of transforming international opportunities into foreign commercial outputs. Besides, we argue that collaborations with foreign partners provide important advantages for smaller internationalized firms. The first advantage is the exposure to new technological fields, products and geographical markets which is necessary to identify international opportunities in new foreign markets. The second advantage is the cost, the risk sharing of R&D and also economies of scale, crucial elements to convert international opportunities into practices. The third is the access to target market knowledge which is essential to diffuse firm's products or services on foreign markets. According to these predictions, we then argue that firm's portfolio of international collaborations determines internationalization patterns.

Hypothesis 2: SMEs that use collaborations portfolio will internationalize faster.

3.2.4 Knowledge intensity and rapid internationalization

Rialp *et al.* (2005a) spot the minor role played by intangible assets (e.g., knowledge) in the internationalization of traditional exporters. As for value creation sources, traditional firms tend to have their activities in traditional industries and create products with limited value.

Those are indeed not at the forefront of technology and lack of innovation (Bell *et al.*, 2003; Rialp *et al.*, 2005a). Traditional firms' outputs are even described by some authors as a local, not very specialized and rather common product (Gabrielsson *et al.*, 2008). Therefore, these firms usually translate "well-understood technologies to new foreign markets" (Oviatt and McDougall, 2005, p.543). In doing so, they expand their product life-cycle (Bell *et al.*, 2003). In terms of knowledge intensity, born global firms value intangible assets as they enable their fast internationalization. The uniqueness of these intangible assets enable internationalizing smaller companies to create a competitive advantage by manufacturing innovative, differentiated and highly technological products that can be exploited in multiple countries (Gabrielsson *et al.*, 2008; McDougall *et al.*, 2003; Moen and Servais, 2002; Oviatt and McDougall, 1994, Rennie, 1993; Rialp *et al.*, 2005a). We may then suppose that knowledge intensity have a strong influence on the speed of internationalization.

Hypothesis 3: SMEs with high knowledge intensity will internationalize faster.

3.3 Methodology

3.3.1 National context

Belgium is an interesting country to analyze due to its small and open economy with a limited domestic market. With respect to environmental factors, an important driver for internationalization relates to the size of the domestic market of the focal firm vis-à-vis the potential of the international market (Knight and Cavusgil, 1996), and the relative ease of access to the latter markets (Sapienza, et al., 2006). With a foreign trade to GDP ratio of 90%, Belgium is one of the most open economies in the world (ING, 2012). Since economic growth in Belgium is to a large extent determined by its international performance, it is imperative that Belgian firms maintain or improve their position in world markets. However, Belgium is losing market share in our global economy. Exports from Belgium are growing more slowly than the imports of our trade partners (Sleuwaege *et al.*, 2012). This relative decline in export share is also due to structural and competitive factors. These factors include the limited focus on high growth countries and knowledge intensive activities.

This unfavorable trade structure limits the growth potential of exporting Belgian SMEs (Sleuwaegen et al., 2012). Belgium has not yet been able to reduce this gap and to increase its orientation towards high growth markets. Therefore, the contribution resulting from an increase in the number of exporting SMEs in growing countries could be an important driver of Belgium's competitiveness (Bernard en Jensen, 1999; De Loecker, 2007).

3.3.2 Data collection

With the aim of a better understanding of fast internationalization in the context of smaller companies and the dimensions involved in this process, we conducted face to face and telephone surveys of 343 manufacturing SMEs in Wallonia. The telephone interviews were used to better introduce the purpose of the study and increase the response rate. Telephone interviewing is advantageous because the progression of the telephone interviews can be tailored depending on the answers given (Davidsson, 2008). The survey questionnaire was written in collaboration with scholars from the Institute for SME Research of the University of Quebec at Trois-Rivières. The companies of our sample were listed with the AMADEUS and UWE (Union Wallone des Entreprises) databases, which resume financial information on companies located in the Walloon region. Our sample focuses on Walloon manufacturing small and medium enterprises with less than 250 employees in accordance with the European Union definition of small and medium enterprises.

The data collection took place from March to mid-September 2013. Each telephone survey had duration of about 30 to 45 minutes and aimed at interviewing managers of SMEs or people with the authority to make strategic decisions regarding international transactions. The questions were asked on a Likert scale and were therefore more suitable for asking over the telephone. Based on the total of 5752 firms in the sampling frame, the response rate to the telephone interviews was 7%. Approximately 40% of the respondents sample refused to participate in the study. Most of the respondents did not want to be interviewed when they were first contacted. An alternative time was booked for the interview at an agreed upon time. Some contacts needed to be called five times. Over 37% respondents did not answer their phone despite calling them at different times during the day and the weekends. If we consider only the respondents who have been reached over the telephone, the acceptance rate to the telephone interview was 18%. These results reflect the difficultly in reaching respondents when conducting telephone interviews.

Through those interviews we collected data on the company profile, including age, size, industry and international operations. This holistic approach to internationalization has been suggested by many researchers to more accurately reflect the reality of the global economy (Holmslun *et al.,* 2007; Sousa *et al.,* 2008; Johanson & Vahlne, 2009, St-Pierre *et al.,* 2011).

3.3.3 Empirical methodology

Dependent Variables

According to the measures of fast internationalization, the proposed mean to measure the "Diversity" dimension is the number of foreign markets (Kuivalainen et al., 2012b; Madsen, 2013). It relates to the speed at which country scope is increased: that is, how rapidly are countries entered. For the "Intensity" dimension we assess the share of turnover from foreign markets of the total turnover (Knight and Cavusgil, 2004). It relates to the speed of international commitment; that is, how quickly does the percentage of foreign revenues increase.

Independent Variables

In this survey we use the age at first export (year of first exportation activity – year of establishment) to evaluate the precocity. "*Precocity*" indicates the time lag between the founding of the firm and the commencement of its international operations (Autio, Sapienza and Almeida, 2000; Jones and Coviello, 2005, Zuchella et al., 2007). For the purpose of constructing "Collaborations portfolio" measure, we utilize the information available on the use of collaborations with foreign partners specified in the survey questionnaire. Collaboration is defined strictly as involving active partnerships with foreign organizations where pure contractual relationships are to be excluded. The survey requires that respondents identify their collaboration partners among five categories (customers, suppliers, competitors, consultants, universities or public research institutes). A well-accepted view is that a firm's collaborations porfolio becomes more diverse as its relationships to other firms increase (Burt, 1992). Exporting mode is often the first and simplest option for smaller firms to internationalize (Kuivalainen *et al.*, 2012a), but it provides little control over international operations, and such firms may thus achieve suboptimal international performance if they restrict themselves to this mode (Crick and Jones, 2000; Dimitratos *et al.*, 2003; Dimitratos *et al.* 2014).

Knowledge intensity relates to the percentage of total turnover from new or improved products during the last two years (Freel, 2000; Becheikh *et al.*, 2006). It means that the firm introduced new or significantly improved goods or services onto its market during the period covered by the study. This variable is an outcome of knowledge intensity and we used it as a proxy for the potential of innovation opportunities.

Control variables

The involved control variables are a measure of firm “Age” (in years), “Size” (number of employees) and “Sector” (industry). The pool of employees may estimate the scale of the firm’s knowledge and experience available internally. Besides, incremental firms usually have their activities in traditional industries, whereas born globals tend to focus on high technology industries (Bell *et al.*, 2003; Rialp *et al.*, 2005a; Oviatt and McDougall, 2005).

3.4 Results

We test hypotheses developed in this paper using the macro PROCESS (Table 7). PROCESS uses logistic regressions based analytical framework for estimating direct and indirect effects (Preacher and Hayes, 2004, 2008; Hayes, 2013). This is an optimal computation tool as it integrates robust techniques such as nonparametric bootstrapping procedures. Concerning the results, the first mediation hypothesis is partially validated. The age of the firm is significantly and negatively related to the intensity of internationalization ($b = -0.051$, $p < 0.001$) but there is also a direct positive effect on the diversity of internationalization ($b = 0.057$, $p < 0.01$). However, there is an indirect negative effect of the age of the firm on the diversity of internationalization via the intensity. The estimated indirect effect of the age of the firm on the diversity through the extent of internationalization, is negatively significant, and the bias-corrected confidence interval (CI) from 1,000 bootstrap samples did not include zero (indirect effect = -0.007; 95% CI [-0.016, -0.004]). As a result, the younger the firms at first international inception, the higher will be their international commitment wich will then allow an increase in their international geographic growth. In other terms, younger firms will subsequentely internationalize faster than older ones.

Concerning the second hypothesis, international collaborations portfolio affect positively the intensity of internationalization (b = 1.068, p < 0.01) but there is no direct impact on the diversity of internationalization. Nevertheless, the PROCESS results show that there is an indirect positive relationship between international collaborations portfolio and internationalization's diversity via the intensity (indirect effect = 0.164; 95% CI [0.024, 0.624]), which validate our second hypothesis.

	INTENSITY			DIVERSITY		
Variables	*b*	*se*	*t*	*b*	*se*	*t*
Independent variables						
Collaboration Portfolio	1,068	0,362	2,948 **	0,141	0,556	0,253
Knowledge Intensity	0,034	0,016	2,113 *	0,071	0,025	2,858 **
Control variables						
Age	-0,051	0,015	-3,293 ***	0,057	0,023	1,856 **
Size	0,002	0,015	-0,16	0,063	0,023	2,701 **
Sector	-0,043	0,064	-0,82	-0,181	0,097	-1,854
Mediator						
INTENSITY				0,153	0,082	1,856 *
F	5,672***			5,624***		
R2	0,077			0,091		
	Efffect		Boot SE	LL		UL
Standardized indirect effect of Age on Diversity	-0,007		0,003	-0,016		-0,004
Standardized indirect effect of Collab. Port. on Diversity	0,164		0,156	0,024		0,6244
Standardized indirect effect of Knowledge Int. on Diversity	0,005		0,005	0,001		0,023

Note . N = 343. *SE* = Standard Error, *LL* = Bootstrap Confidence Interval Lower Limit, UL = Bootstrap Confidence Interval Upper Limit. Computed by PROCESS (Hayes, 2013). * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 7. Regression results for Simple Mediation Models using PROCESS.

For the third hypothesis, there is a direct positive effect of knowledge intensity on international commitment (b = 0.034, p < 0.05). Besides, knowledge intensity affects positively the diversity the firm's subsequent international geographic growth (b = 0.071, p < 0.01). Finally, the size of the firm has no impact on the intensity of internationalization but is positively related to the speed to which market diversification is increased. This means that the pool of employees may estimate the scale of the firm's knowledge and experience to enter psychically distant countries.

3.5 Discussion

The concept of “fast internationalization” is often tricky for the research community to deal with. Therefore, our study contributes to the literature in International Entrepreneurship by advancing our knowledge regarding the relationship between the three dimensions of fast internationalization: precocity, diversity and intensity. The research on internationalization has so far not sufficiently distinguished these three closely related but separate issues. The findings of this study show that early adopters seem to be more committed in foreign market which enables them to enter more quickly multiple countries.

This paper also highlights the effect of SME’s collaborations portfolio and knowledge intensity on its internationalization pattern. Collaborative mode of entry provides more control over international activities which will allow the firm to achieve superior international performance. Early adopters need to internationalize and open up to foreign partners in order to make value creation possible, not only to disseminate outputs. This reflects a Schumpeterian, supply-push approach to value creation. The competitive advantage of the firm being based on cross-border resource combinations. International collaborations can become a source of competitive advantage for smaller firms. These results confirm that born global firms do not follow similar patterns as traditional firms.
Finally, knowledge intensity affects positively international commitment and country scope. Knowledge intensity helps SMEs to overcome an important barrier for internationalization caused by the lack of legitimacy in the new environment (Arenius, 2005). Knowledge intensity may enhance attractiveness in the eyes of potential foreign customers. These results confirm one of Oviatt and McDougall’s (1994) key insights asserting that innovative SMEs do not follow a sequential and incremental learning process described by the internationalization stage model (Johanson and Vahlne, 1977, 1990). On the contrary, they are able to internationalize more rapidly than the stage models predict, jumping over some stages.

3.6 Conclusion

In this article we make two important contributions to the International Entrepreneurship literature. First, whereas past studies on internationalization patterns seems to draw conclusions based on case studies or small samples, we conducted face to face and telephone surveys of 343 Beglians manufacturing SMEs. Besides, by exploring the PROCESS tool for testing direct and indirect effects (Hayes, 2013), we improve the methodological quality of International Entrepreneruship research. Second, by examining the relationships between the three dimensions which account for fast internationalization patterns, we extend and develop theory. By providing empirical evidences supporting hypothesized relationships, we highlight that SMEs' collaboration portfolio and knowledge intensity have a positive impact of the speed of international commitment and country scope. Finally, we found that SMEs using early pattern of internationalization (precocity) performed significantly better in foreign markets (intensity) than firms using other patterns. There is a performance advantage in rapid internationalization and it enables firms to quickly enter multiple countries (diversity).

As for most empirical research, some limitations apply to our study. First, our study focuses on Belgian SMEs and therefore lacks a comparative value on an international scale. Thus we cannot state if some institutional or cultural factors affects internationalization patterns. Second, although we used established measure of international collaborations, we do not know the specific countries in which the relationships were gathered. For future research it would be interesting to assess whether the impact of international collaborations on internationalization patterns depends on the congruence between the "source" country and the "partner" country. Third, longitudinal research designs could delineate changes in international activities over time and their impact on the internationalization path. The purpose of Johanson and Vahlne (1977) was to explain the gradual, constrained pattern of internationalization; it is read as a theory of constraints. Although the focus of the stage model is on the process of internationalization, the International New Ventures model (Oviatt and McDougall, 1994) focuses mostly on explaining how early and rapid internationalization of new venture is possible. Therefore, we do not know what the process of rapid internationalization is and its impact on the trajectory. Our results induce that exporting mode is not the first option for smaller firms to internationalize. Collaborative mode of entry provides indeed more control over international activities increasing the success of these firms in foreign markets. Those specific results need to be further explored.

CHAPTER 4:

Overcoming the Liability of Home Countryness: a Multilevel Approach of Small Firm Collaborations across Borders[5]

Abstract

Innovative small firms need to collaborate with partners to develop their business internationally. While issues related to the Liability of Foreignness have been widely studied, we point out the complementary existence of a "liability of home countryness" that small firms face when searching for opportunities outside their country. The liability of home countryness arises from the firm's lack of domestic business relationships at the micro level and the home country's lack of protective informal and formal institutions at the macro level. The theoretical contribution of this study is supported by empirical evidence from a large-scale set of SMEs (29,119) from 15 European countries.

Keywords: Internationalization, liabilities, collaboration, innovation, SME.

[5] Previous versions of the paper were presented at two conferences: the BABSON College Entrepreneurship Research Conference (2013), Convention Center of Lyon, France and the Annual meeting of the Academy of Management (2013), Orlando, Florida. The final manuscript has been submitted to the Journal of International Business Studies in November 2015.

4.1 Introduction

In the international arena, innovative small firms might have the greater need for collaborations across borders. They must find ways to achieve production economies of scale and to market their products and services effectively. Nevertheless, research on value chain collaborations, beyond foreign sales, is still under-developed in the field of International Entrepreneurship. Furthermore, small firms that coordinate a diversified portfolio of international collaborations are still more the exception than the rule. This fact encourages studying why, in spite of the advantages, such as the access to complementary resources and new geographical market, international collaborations are not common among small firms.
First, small firms can face search costs, such as time and energy consuming activity, to find reliable and good foreign partners, and a lack of credibility in the eyes of potential international partners that will abstain from joining forces with firms of uncertain quality. Second, international collaborations involve appropriability hazard and hold up problems (Williamson, 1991). The propension to enter multiple international collaborations will be closely linked with the additional level of threat to its proprietary intellectual assets. The inability to define complete contracts and the lack of resources to defend their legal rights are likely to encourage opportunistic behaviors by foreign partners (Coeurderoy & Murray, 2008). These problems are exacerbated in the specific case of innovative small firms. The transfer of novel technologies raises the potential problems of appropriation (Autio et al., 2000; Zahra et al., 2000). Therefore, these obstacles may induce small firms to turn to a go-it alone strategy (Gans et al., 2002). In this study, we argue that their home-based business and regulatory environment help them overcome these liabilities and influence small firms' propension to collaborate with value chain partners across borders.

We believe that our paper makes a unique theoretical contribution by introducing the liability of home countryness concept to international entrepreneurship research. We define this concept as all the difficulties a firm trying to expand abroad through value chain collaborations incurs from its home-country environment. The liability of home countryness arises from at least two, not necessarily independent, sources: (1) difficulties resulting from the company's lack of domestic business relationships and (2) difficulties resulting from the specificities of the home country institutions.

In this study we argue that the relative importance of these difficulties and the way companies can deal with them vary by firm and institutional environment. Consequently, researchers working on internationalization strategies should explicitly integrate this factor when analyzing internationalization decisions by firms in different countries.

Besides, we hope to improve the methodological and technical quality of International Entrepreneurship research by proposing a theoretical and empirical model differentiating collaboration opportunities of small firms across countries. One-level modeling has limited the empirical capability to deal with samples made up of companies from different origins (Hennart, 1991). The emergence of cross-country research however has demonstrated the importance of taking the country of origin into account: the broad research agenda launched by academics (La Porta et al., 1998 is a seminal contribution) and international organizations (World Bank, 2015) has found strong evidence of how the institutional conditions for doing business can vary across countries. Recent developments in modeling have also opened new opportunities for multilevel approaches when studying international business activity (Peterson, Arregle, & Martin, 2012). Based on these new streams of theoretical and empirical research, we propose a model that helps integrate cross-country effects in the analysis of a firm's ability to leverage international collaborations from its innovation activities. Our empirical modeling provides a framework for assessing multilevel effects as is strongly recommended in such cases (Hitt et al., 2007; Peterson et al., 2012). Our research complements the liability of foreignness concept (Zaheer, 1995) and shines a light on the other side of international entrepreneurship challenges for internationalizing small firms.

We run regression models on a large and representative sample made up of almost 30,000 innovative SMEs in fifteen European countries. Because we differentiate effects at both the macro and micro levels, we use multilevel analysis to fully address the embeddedness of small firms in their national institutional environment. Our empirical analysis demonstrates that while innovation is important for the development of international collaborations by small firm, its effect is channeled through the firm’s domestic portfolio of relationships. In the debates on international entrepreneurship, we find that domestic roots remain a sound basis for international collaborative activities.

By providing an institutional perspective, our results also show that a country's institutional environment moderates the effects of an innovative small firm's domestic relationships on the development of international collaborations. Small firms impacted by the liability of home countryness experience more difficulties to acquire and manage a diversified portfolio of collaborations across countries.

4.2 Theoretical background and hypotheses

4.2.1 The liability of home countryness

From the seminal papers published by Knight and Cavusgil (2004) and Oviatt and McDougall (1994), we can define global startups as business organizations that seek to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries from or near their founding. The distinctive features of these ventures are originated into the fact that their competitive advantage is primarily found in the coordination of multiple value chain activities across borders (Oviatt & McDougall, 1994: 59). These firms proactively act on opportunities to acquire resources and sell outputs abroad. They are able to control assets, especially unique knowledge, that create value in foreign markets (Knight & Cavusgil, 2004). Their emphasis on controlling rather than owning assets is due to resource scarcity that is common among small and medium-sized enterprises (SMEs). As pointed out by Oviatt and McDougall (1994), global startups are not small MNEs based on foreign direct investments but entrepreneurial firms managing a diversified portfolio of international collaborations sustaining their value chain.

Empirical research in International Entrepreneurship has confirmed the relevance of this new phenomenon of global startups but also added two complementary points (Jones et al., 2011). Firstly, the phenomenon of global startups mainly concerns innovation-driven ventures (Lu & Beamish, 2001). These firms are privileged candidates for international collaborations as they own valuable proprietary assets (Autio *et al.*, 2000). They do not follow the step by step process of accumulation of resources and market knowledge based on export sales but they tend to internationalize through more risky and high-commitment modes of internationalization (Oviatt & McDougall, 1994; Coeurderoy & Murray, 2008).

Secondly, albeit generally supported by innovation, integration in international value chains remains a huge challenge for entrepreneurs because it involves to master a corporate network of complex and diversified international collaborations under scarce resources (Coviello, 2006). These global start-ups still remain more the exception than the rule within the overall population of small firms across the world, albeit they have noticeably grown in number for the last two decades (Cavusgil & Knight, 2015). Their extreme case, however, draws the attention of international entrepreneurship researchers on the difficulties small firms face when they integrate international value chains through collaborations, considered as long term collaborations crafted for control purpose such as joint ventures, licences or outsourced relations (Oviatt & McDougall, 2005).

Many difficulties involved in expanding abroad are well-known in international business and have been popularized through the "liability of foreignness" concept coined by Zaheer (1995). The liability of foreignness can be defined as the additional tacit and social difficulties that foreign firms face when entering a particular host market (Denk et al., 2012). It can be associated with spatial distance, because of the costs of travel or the requirements of arm's length coordination (Dunning, 2009). More fundamentally, the liability of foreignness also stems from the firm's unfamiliarity with the host country environment (Petersen & Pedersen, 2002; Zaheer, 1995) because of trade barriers, institutional hazards or cultural features (Coeurderoy & Murray, 2008; Henisz, 2000; Oxley & Sampson, 2004). Basically, the liability of foreignness relates these internationalization difficulties to the features of the host country, either in absolute terms for the foreign country risk (Miller, 1992) or in relative terms for the distance between home and host countries (Xu & Shenkar, 2002).

Empirical approaches mainly focus on the host country and provide much conclusive evidence of the liability of foreignness as a strong inhibitor to international entrepreneurship ventures (see Denk et al., 2012 for a recent review). However, a complementary perspective focused on the home country environment remains relatively unexplored. This perspective suggests that the "rules of the game" (North, 1990) created by the domestic institutional environment itself may also impact the ability of small firms to coordinate and control value chain collaborations across borders. Said otherwise, entrepreneurs across countries are not equal: they are differentially hampered by their home country in the pursuit of international opportunities.

We define the "liability of home countryness" as all the difficulties faced by firms trying to expand abroad through value chain collaborations that originate in the home-country environment. The liability of home countryness results from two main effects:

(1) *Difficulties resulting from the company's lack of domestic business relationships*. The way companies do business mainly depend on the experiential learning they acquire when developing their venture and before (De Clerck et al., 2005; Sapienza et al., 2006). Internationalizing firms need to learn how to develop different and transferable relationships in alternative situations (Fernhaber et al., 2008; Hoang & Rothaermel, 2005). As Johansson and Vahlne (2009) pointed out in their business network view of internationalization, learning how to coordinate sets of relationships primarily with domestic partners is critical. Because collaborating involves know-how in negotiating and crafting agreements, and in monitoring relations, the difficulty of designing clear contracts and defending legal rights is likely to constraint entrepreneurial collaborative experience (Coeurderoy & Murray, 2008). As a consequence, a small firm may suffer from a lack of relationship knowledge at home and make extra efforts to discover and exploit opportunities. In that case, the small firm is hampered by a deficit of the institutional capital (Lu et al., 2010).

(2) *Difficulties resulting from the specificities of home country institutions*. A small firm may also be harmed by the idiosyncratic features of its home country's regulatory, cultural and social framework in the international arena (Scott, 1995; Kostova, 1997). For example, the level of assertiveness in language varies greatly across cultures and this can lead to miscommunication, misinterpretation of motivations and hard feelings. As a consequence, a firm may experience difficulties communicating with foreign firms and have to make additional efforts to build bridges across borders (in terms of language, of course, but also in symbolic and cognitive terms). Moreover, in a country with a lack of supportive institutions for business, companies must develop know-how and skills specific to their country and poorly valuable abroad. More generally, a high level of idiosyncrasies in one country creates a country of origin effect that makes more difficult to set up collaborations with foreign partners (Peterson & Jollibert, 1995; Zhou & Guillen, 2015).

The Liability of Home Countryness concept adds a complementary but distinctive perspective to the Liability of Foreignness. The Liability of Foreignness addresses all the specific costs of doing business abroad in comparison with target market competitors (Zaheer, 1997).

That approach is driven by an assessment of host country features and potentially the distance with the home-country. With the Liability of Home Countryness concept, we introduce the idea that the heterogeneity of country business and regulatory environment makes a difference to small fims' ability to coordinate and control value chain collaborations across borders. In other words, *equibus paribus*, small firms are not all endowed with the same chances, depending on their birth place.

4.2.2 The coordination of value chain collaborations

In the previous section, we defined the “liability of home countryness” as all the difficulties that the home-country business and regulatory environment imposes on firms trying to expand abroad through value chain collaborations across borders.

At the level of the firm, Johanson and Vahlne (2009) have developed the idea that exchanges within a domestic network allow a firm to acquire knowledge about its partners, including their resources, needs, capabilities, strategies, and other foreign relationships. The local networks where small firms develop their business are often a critical source of first contacts for possible international collaborations and where they start learning how to collaborate (Jones et al., 2011; Rosenkopf et Almeida, 2003). Several scholars argue that home-based business networks are vital for internationalizing firms to create and extend connections with foreign partners (Ellis, 2000; Ellis & Pecotich, 2001), to gain access to foreign markets (Ellis, 2000) and to develop specific competitive advantages through the accumulation of internationalization knowledge (Sapienza et al, 2006). Small firms developing innovation as a source of competitive advantage need to access multiple stakeholders for inputs, technologies, or knowledge transfers.

According to Johansson and Vahlne (2009), business partners are indirectly a source of useful business information about their own partners and more distant partners. For example, a focal firm may need to have products delivered to a customer in a foreign market and might ask another internationalized firm in its home network to handle this (Johanson & Vahlne, 2009). In this case, the focal firm’s embeddedness in a domestic network may help it to enter the foreign market.

A small firm internationalization path is very likely to be an extension of its business ties, primarily those in the domestic market (Ruzzier et al., 2006). Internationalizing firms have to proactively build relational ties with local partners to mitigate their liabilities and mobilize network resources to create new capabilities that can help them find reliable foreign partners (Coviello & Cox, 2006; Dhanaraj & Beamish, 2003; Lu et al., 2007). These relationships enable firms to quickly identify opportunities and act on such information (Dow, 2006; Ellis, 2000; Lu et al., 2007). Home-country collaborations are an efficient means of obtaining information resources for developing international connections (Zhou et al., 2007).

Furthermore, the local business network is a key place to learn how to form and coordinate partnerships. Such learning might be developed first in relationships with partners from the same local environment. Internationalization requires a firm to be well established in one or more domestic networks in order to acquire this relationship knowledge (Johanson & Vahlne, 2009). Domestic relationships serve as the initial basis from which a formal network of business linkages is developed in new territories (Chen & Chen, 1998; 2003).

By consequence, the involvement of firms in local collaborations improves their ability to gather and process information about foreign partners and enhances their visibility and credibility in the eyes of potential international partners (Slotte-Kock & Coviello, 2010). Domestic business networks can therefore amplify the potential for international development generated by a firm's innovation intensity (Autio et al., 2000).

Hypothesis 1.a. The higher the small firms' innovation intensity, the higher the likelihood to develop a portfolio of international collaborations (direct effect)

Hypothesis 1.b. The development of domestic collaborations will positively mediate the relationship between innovation intensity and international collaborations (indirect effect)

At the country level, as the firm is embedded in a specific institutional environment, networking is primarily shaped by the features of this environment. Institutions impose constraints and rules, but also provide incentives that influence the choices made by parties in the governance of exchanges (Zenger et al., 2002). As mentioned before, these institutions constitute the political, legal and social environment of the economic system (Davis & North, 1971) and can be either formal or informal in nature (North, 1990).

Zenger et al. define formal institutions as "rules that are readily observable through written documents or rules that are determined and executed through formal position, such as authority or ownership" and informal institutions as "rules based on implicit understandings, being in most part socially derived and therefore not accessible through written documents or necessarily sanctioned through formal position" (Zenger et al., 2002: 279).

Formal institutions. Formal institutions such as the policies and regulations of individual governments are the most visible potential barriers to collaborative activities created by home-country governance (Henisz & Zellner, 2004). Ambiguity and complexity in regulation can generate significant difficulties in the development of multiple collaborations. In particular, regulation plays a key, direct role in property rights (Barzel, 1989). The potential difficulties caused by institutional hazards are numerous: appropriation risk owing to poor IP protection (Kim & Park, 2010; Williamson, 1991) or technological leakage that is hard to defend against (Davidson, 1980; Oxley, 1999). A rather hazardous formal environment is also likely to encourage opportunistic behaviors leading to "hold-up" risks for specific assets (Anderson & Gatignon, 1986; Henisz, 2000; Williamson, 1991) and free-riding on brand name and reputation (Anderson & Coughlan, 1987; Delios & Beamish, 1999).

The number and magnitude of institutional hazards varies across countries (World Bank, 2014). Some governing frameworks are seen as less protective of business transactions than others (Hennart, 1986; La Porta et al., 1998; Williamson, 1991). A country's failures in designing a regulatory framework can impair the stability of inter-firm relationships because of increasing dissension and conflicts (Burt, 2002; Camerer & Vepsalainen, 1988; Krackhardt, 1992). In countries that lack a stable political regime or clear regulation, small firms will bear higher costs owing to uncertainty (Williamson, 1991) and be reluctant to develop domestic but also international collaborations.

This local disadvantage can hinder the ability to reach agreements with foreigners as the parties involved may be more worried about opportunistic behaviors and may be more risk adverse and therefore reluctant to share knowledge and information with each other.

Hypothesis 2. The less protective a country's formal institutions, the more difficult it is for innovative SMEs to benefit from domestic collaborative activity in building a portfolio of international collaborations.

Informal institutions. Some authors argue that informal rules matter as much as formal ones – maybe more – because informal relationships based on trust and social norms can support international expansion through collaborative modes without the cost and complexity incurred with formal contracts (Gulati, 1995; Powell, 1990; Ring & van de Ven, 1994; Uzzi, 1996). In accordance with this view, Sitkin and Roth (1993: 376) posit that formal rules "can erode the interpersonal foundations of a relationship they are intended to bolster because they replace the reliance on an individual's 'good will' with objective, formal requirements."

Social norms support the emergence of trust because partners can expect to form some collaboration even when a formal framework is absent (Zenger, 2001). One of the most discussed social norms is reciprocity, meaning that individuals tend to collaboratively respond to an offer even if it is against their own self-interest (Berg et al., 1995; Bridoux et al., 2011; Rabin, 1993). According to Hoffman et al. (1998: 338), reciprocity functions as an enforcement mechanism because it "leads to property rights". Since partnerships are essentially socially constructed, intentions, expectations, and interpretations are important.

Cultural values are particularly useful in understanding attitudes toward collaborative activities. Hofstede defines culture as "the collective programming of the mind distinguishing the members of one group or category of people from others" (Hofstede et al., 2010: 6). In their study, Nakamura et al. (1997) demonstrate that national culture has an influence on value systems and attitudes toward collaboration, and thus affects the predisposition of employees to collaborate. Culture also influences the acceptability of different types of collaboration as well as the way collaboration is organized (Hennart & Zeng, 2002; Nakamura et al., 1997). Informal institutions can thus lead to complex and hard-to-anticipate effects on the firm's portfolio of domestic but also international collaborations. For instance, Japanese culture is known to drive cooperative relations within Japanese firms, but these cooperative modes can make cooperation more difficult with firms from other cultures (Aoki, 1990).

Following Stephan and Uhlaner (2010) and Stephan et al. (2014), a “socially supportive culture” is characterized by a high positive loading of humane orientation (positive loading of Power distance and Femininity) and a high negative loading of assertiveness (negative loading of Collectivism and Uncertainty Avoidance). "Humane orientation" refers to whether individuals are sensitive towards others, friendly, generous and tolerant of mistakes. "Assertiveness" reflects whether people are dominant, assertive and tough (House et al., 2004). Thus we infer that a lack of norms that would bring about high humane orientation and low assertiveness will result in a more costly societal climate in which people must make greater efforts to work together. In this paper, therefore, we theorize that poorly supportive informal institutions can limit the firm’s portfolio of domestic and international collaborations.

Hypothesis 3 The less supportive the informal institutions in a country, the more difficult it is for innovative small firms to benefit from domestic collaborative activity in building a portfolio of international collaborations.

Our overall analysis can be summarized in a multilevel model (Figure 5).

FIGURE 5 GOES ABOUT HERE

4.3 Methods

4.3.1 Sample

This study is based on a representative database collected by Eurostat, the statistical office of the European Union, across 15 European countries. The data were taken from the fourth wave of the Community Innovation Survey (CIS-4). They were collected through surveys based on the recommendations of the OECD’s Oslo Manual (OECD, 2005), which aims to gather comparable, harmonized and high quality data on the innovation activities of European companies.

Community Innovation Surveys (CIS) are becoming the most comprehensive Europe-wide data source for measuring innovation in Europe (Block, Thurik, & Zhou, 2013; Griffith, Huergo, Mairesse, & Peters, 2006). The reliability of the CIS data is ensured by the sampling procedure that is described in Eurostat (2009). As sampling rates may differ across European countries, CIS are based on a stratified sampling procedure and weighting procedures to ensure that the samples are representative of the total population of firms in each country. CIS offer comprehensive data in terms of the range of firms surveyed and cover a large variety of industries as well as small and large firms. CIS data are widely used in innovation research (Griffith et al., 2006; Hoelzl, 2009; Block et al., 2013; Mairesse & Mohnen, 2002).

CIS-4 was conducted in 2005 and collected data from around 100,000 enterprises in Europe, engaged in different types of innovation in the three-year period from 2002 to 2004. Most questions in CIS-4 cover the firm’s products (goods or services), organizational and process innovations and expenditures. The survey is comprehensive in terms of the range of items, including direct measures of innovation activities and a wide variety of variables such as domestic or international collaborations. The unit of analysis in CIS-4 is the firm, which may stand alone or belong to a wider corporate group. Fifteen European countries are studied in this paper: Belgium, Bulgaria, Czech Republic, Germany, Estonia, Spain, Greece, Hungary, Italy, Lithuania, Latvia, Norway, Portugal, Slovenia and Slovakia. In our study setting, we focus on SMEs, whose official definition is based on a threshold of 250 employees,[6] and which represent nearly 89% of the total sample. These criteria yielded 29,119 SMEs in 28 manufacturing and service sector industries. In our sample, 45% of the firms have fewer than 50 employees and are considered small firms. However, 51% operate in international markets. Concerning their innovative behavior, 34% have introduced goods or services that where new to the market. Concerning their collaborative behavior, 23% have developed national collaborations and 12% have developed international collaborations (35% with partners outside Europe). Table 8 clearly indicates that the percentage of SMEs that develop domestic or international collaborations differs from one country to another. Finally, on average, these countries have borders with five different countries and 90% have maritime access.

[6] In the European Union, an SME is defined as a private company with fewer than 250 employees, with an annual turnover of less than 50 million euros and an annual balance sheet total of less than 43 million euros (European Commission, 2009).

TABLE 8 GOES ABOUT HERE

4.3.2 Firm-level measures

Innovation capacity and home-country and international collaborations were measured and analyzed at the firm level.

Innovation capacity. We used data obtained from CIS-4 on R&D investments and activities aimed at improving the innovation process. The R&D variable is the most often used proxy to study innovation in large-scale studies (Scherer and Ross, 1990). The variable ranges from 0 to 8 depending, for example, if the SME has developed intramural or extramural R&D, has undertaken creative work to increase the stock of knowledge or has established internal or external training for employees, aimed at supporting innovation activities and developing an appropriate innovation culture.

Home-country and international collaborations We used the CIS-4 dataset to capture the domestic and international collaborations of SMEs. In the survey, collaborations are defined as "inter-firm collaboration via shared R&D, licensing, joint ventures and so on" (OECD, 2005: 26). This definition excludes purely commercial agreements and formal contractual relationships. The measure is based on the geographical distribution of collaboration partners. Specifically, respondents were asked to identify their collaboration partners among seven types of actor groups (customers, suppliers, competitors, consultants, other companies of the same group, universities or other higher education institutions, and government or public research institutes) in four geographical locations (their country, Europe, the United States, and all other countries). We measured home-country collaborations as the number of partners in the home country (from 0 to 7, as there are seven types of partners) and international collaborations as the number of partners in the international context (from 0 to 21, as there are seven types of partners in three different geographical locations: Europe, the United States, and all other countries).

4.3.3 Country-level measures

Institutional and cultural characteristics were measured and analyzed at the country level.

Characteristics of formal institutions. To operationalize the formal institutional characteristics of the fifteen countries in our study, we used data from the Worldwide Governance Indicators (WGI) managed by the World Bank. The WGI are a research dataset collected from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms. They are composite governance indicators based on 30 underlying data sources. This data is rescaled, normalized, and combined to create the six aggregate indicators using a statistical methodology known as an unobserved components model, running from approximately -2.5 to 2.5, with higher scores indicating better institutional arrangements (Kaufmann, Kraay, & Mastruzzi, 2010). We used the six WGI measures to capture institutional differences between countries: *Government effectiveness*, *Regulatory quality*, *Rule of law*, *Control of corruption*, *Voice and accountability*, and *Political stability*. According to Kaufmann et al. (2010), *Government effectiveness* relates to the quality of public services, the quality of the civil service and its degree of independence from political pressures, and the credibility of the government's commitment to such policies. *Regulatory quality* relates to a government’s ability to establish sound policies that promote business development, especially in the private sector, and hence foster competition in that country. *Rule of law* measures the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement and property rights. *Control of corruption* reflects the extent to which public power is exercised for private gain. *Voice and accountability* relates to the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media. *Political stability* measures the likelihood that a government will be destabilized or overthrown by unconstitutional or violent means (Kaufmann et al., 2010). We calculated the average of indicator values for each country for the period corresponding to CIS-4.

Characteristics of informal institutions. We used Hofstede's (2001) four cultural dimensions: *Individualism*, *Power distance*, *Uncertainty avoidance,* and *Masculinity,* which are widely used in international research (Bird & Osland, 2006; Dwyer et al., 2005; Gilbert & Rosinski, 2008; Hitt et al., 2005; Leung et al., 2005; Samaha, Beck, & Palmatier, 2014; Steenkamp, 1999). In this model, scores range from 0 to 112 for each dimension. Countries are classified as high or low based on their scores for the different indexes. *Individualism* (vs. *collectivism*) concerns the predominance of group or individual interests. *Power distance* is "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed inequality" (Hofstede, 2001: 98). *Uncertainty avoidance* is defined as "the extent to which the members of a culture feel threatened by uncertain or unknown situations" (Hofstede, 2001: 161). *Masculinity* (vs. *femininity*) refers to conventional gender roles and captures the degree to which "tough" (masculine) values and goals prevail over "tender" (feminine) values and goals in a society (Hofstede, 2001; Hofstede, Hofstede, & Minkov, 2010).

Control variables. There are a number of firm-level characteristics and country-level characteristics that can potentially impact home-country and international collaborations. At the firm level, we used the CIS-4 data to control for *public financial support*, *intellectual property rights*, *market diversity*, *firm size*, and *industry*. *Public financial support* indicates whether the SME has received financial support (e.g., tax credits or deductions, grants, subsidized loans, and loan guarantees) for its innovation activities from local, national or European authorities. *Intellectual property rights* were measured by the number of patent applications and copyright claims during the period covered by CIS-4. *Market diversity* reflects the size of the relevant market. Since the stream of literature developed around the PIMS database (Buzzell et al., 1987), it is usual to identify the "relevant market" as the main market in which a firm pursues its business strategy. In the present research, we focus on the geographical market of the firm: local, regional, national, European, or international. *Firm size* was measured by the logarithmic value of turnover defined as the market sales of goods and services. Finally, we included 28 *industry* dummies in the analyses, though their coefficients have been omitted from our results tables for clarity, given the space constraints. At the country level, we controlled for *Geographic size* (logarithmic value), *per capita GDP* (logarithmic value), *maritime access*, *number of country borders,* and the *level of internet access* to capture the geographic and economic characteristics of the country.

4.3.4 Analytic strategy

In order to take into account the multilevel nature of our data and model, we used hierarchical linear modeling with HLM 7.01 (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004) to test our hypotheses. Hierarchical or multilevel linear modeling is a robust approach that combines different levels of analysis into a single model. Conventional methods for testing moderation were inappropriate for this study, because the firm-level data was nested within countries, resulting in non-independent observations and biased standard errors (Aguinis, Gottfredson, & Culpepper, 2013). Moreover, researchers in international business have called for more studies using multilevel analysis techniques that take into account the nested nature of cross-national data and accurately model context and lower-level effects (Peterson, Arregle, & Martin, 2012). Focusing on only one level of analysis assumes that most heterogeneity is located at the focal level and that alternate levels of analysis are more or less homogeneous (Gupta et al., 2007; Rothaermel & Hess, 2007). Moreover, in considering only one level of analysis, researchers presume that the chosen level of analysis is basically independent of interaction with other levels of analysis (Klein, Dansereau, & Hall, 1994). For example, firm-level heterogeneity is assumed to be relatively independent of the institutional environment that affects firms operating in different countries (Sahaym & Nam, 2013).

To test mediation at the firm-level, we used the PROCESS tool developed by Hayes (2013) in SPSS 22. PROCESS is an optimal computation tool for testing direct and indirect effects as it integrates robust techniques such as nonparametric bootstrapping procedures (Hayes, 2013). A bootstrapping procedure (5,000 replications) was used to establish confidence intervals for the indirect effect of innovation capacity on international collaborations via domestic collaborations. Following the recommendations of Aguinis et al. (2013) and Andersson et al. (2014) for estimating cross-level interaction effects, we adopted an incremental model-building approach. This approach allows sequential model testing (i.e., *Null model* [step 1], *Random Intercept and Fixed Slope* [step 2], *Random Intercept and Random Slope* [step 3], and *Cross-level Interaction* [step 4]). The null model (step 1) is needed to check whether multilevel analyses are appropriate. The inter-correlation coefficient [ICC1] reflects the amount of variance found at the firm and country levels. Only if there is significant variance at both levels of analysis is a multilevel model needed (Hox, 2010).

Random Intercept and Fixed Slope and Random Intercept and Random Slope (steps 2 and 3) are needed to check whether firm-level slopes differ between countries before explaining differences in slopes (Aguinis et al., 2013; Peterson et al., 2012).

Given that this study included ten interaction effects, the analyses were conducted at separate times, following the recommendations of Aguinis et al. (2013), in order to preserve statistical power, given the small size of the country-level sample. To test cross-level interaction effects and to facilitate interpretation of the results, we group-mean centered the firm-level variables (with the exclusion of dummy variables) and centered the country-level variables at the grand mean (Hofmann & Gavin, 1998; Aguinis et al., 2013).

4.4 Results

Table 9 shows the descriptive statistics and intercorrelations between study variables. Table 10 shows the results for the mediating effect of domestic collaborations between innovation capacity and international collaborations. Tables 10 and 11 show results for the moderating effects of institutional and cultural characteristics. In spite of the stronger correlation between some institutional and cultural characteristics at the country level, Table 8 shows that the variance inflation factors were lower than 10 for all parameter estimates, implying that multicollinearity was not an issue here (Belsley, 1991).

TABLE 9 GOES ABOUT HERE

Hypothesis 1 is that innovation capacity positively influences international collaborations through the mediation of domestic collaborations. The results reported in Table 9 indicate that, at the firm-level, innovation capacity is positively related to home-country collaborations (b = 0.12, $p < 0.01$) and home-country collaborations significantly predicts international collaborations (b = 0.40, $p < 0.01$). We also examine the statistical significance of the mediation effect by calculating the indirect effect using Hayes' (2013) recommended bootstrap procedure.

The estimated indirect effect of innovation capacity on international collaborations through home-country collaborations is significant and the bias-corrected confidence interval (CI) from 5,000 bootstrap samples did not include zero (indirect effect = 0.14; $p < 0.01$; 95% CI [0.13, 0.16]). We also used kappa-squared (Preacher and Kelley, 2011) to estimate the size of the mediation effect (mediation effect size = 0.15, $p < 0.01$). Hypothesis 1 is thus supported.[7] Domestic partners are indirectly a source of relevant business knowledge about their own partners and more distant actors at the international level. Moreover, domestic networks provide the complementary knowledge needed to coordinate a set of international relationships. Our research results show that network ties, primarily with domestic partners, are an important resource that facilitates internationalization, especially among SMEs with limited resources for internationalization. It provides evidence of a strong complementary effect between domestic and international collaborations for innovative SMEs.

TABLE 10 GOES ABOUT HERE

Hypothesis 2 predicts that a country's formal institutional characteristics will moderate the relationship between domestic collaborations and international collaborations, such as the firm-level positive influence of domestic collaborations on international collaborations, which will be stronger when government effectiveness, regulatory quality, rule of law, voice and political stability are high and corruption is low. Before testing the multilevel model, we checked for a significant variance between countries in international collaborations with a null model. Results show that there is significant unexplained variance at the firm level (*var*. = 0.95, $p < 0.01$) as well as at the country level (*var*. = 0.07, $p < 0.01$). The ICC1 is hence equal to 0.07, showing that *country* accounts for 7 percent of the variability in data. Multilevel analyses are therefore appropriate for our data (Hox, 2010). The results of HLM, displayed in Table 11 (step 4), indicate that interactions between home-country collaborations and government effectiveness, rule of law, control of corruption, and political stability (b = 0.09, 0.05, 0.03, and 0.20, $p < .01$, respectively) are statistically significant in predicting international collaborations. Our results show that the moderating effects of regulatory quality and voice/accountability are not significant (b = -0.03 and 0.02, ns., respectively).

[7] We reran the mediation analyses using HLM. The results were similar. We present these results using bootstrap regressions in Table 2.

TABLE 11 GOES ABOUT HERE

Following the recommendations of Andersson et al. (2014) and using Preacher's macro system (Preacher, Curran, & Bauer, 2006), we plotted the regression lines of international collaborations on home-country collaborations at 1 SD below and 1 SD above the mean of institutional characteristics having significant moderating effects, i.e., government effectiveness, rule of law, control of corruption, and political stability (Aiken & West, 1991). Figures 6a to 6d graphically depict the interaction effects and indicate that the relationship between international collaborations and home-country collaborations is stronger when government effectiveness, rule of law, control of corruption, and political stability are high (1 SD above the mean) than when they are low (1 SD below the mean). Overall, these results offer partial support for Hypothesis 2.

FIGURES 6a to 6d GO ABOUT HERE

Establishing new international relationships thus appears to be costly and consumes time, energy and financial resources when there are malfunctioning formal institutions. Government ineffectiveness and bureaucracy may make it more difficult to form collaborative agreements with foreigners. The propensity to engage in international collaborations also decreased when intellectual property rights and contracts were poorly protected. This is understandable as international collaborations may be faced with opportunity cost concerns because of greater problems of self-interest and knowledge spillover. The risk of losing proprietary technologies may inhibit international collaboration decisions, especially for innovative SMEs. The major role of formal institutions is to reduce uncertainty by establishing a relatively stable legal framework that facilitates exchanges between economic actors. If firms perceive that this framework is not stable or that its changes cannot be predicted, it will be extremely difficult for them to estimate the costs and risks of international collaborations. Less protective formal institutions exacerbate the intensity of the conflict between "trying to learn" and "trying to protect".

TABLE 12 GOES ABOUT HERE

Hypothesis 3 states that cultural characteristics (at the country level) will moderate the relationship between domestic collaborations and international collaborations. For example, the firm-level positive influence of domestic collaborations on international collaborations will be stronger when individualism and power distance are high and uncertainty avoidance and masculinity are low. The results reported in Table 12 (step 4) show that the interactions between domestic collaborations and individualism, uncertainty avoidance, and masculinity are significant (b = 0.01, -0.01, and -0.01, p < .01, respectively) in predicting international collaborations, while the moderating effect of power distance is not significant (b = 0.0003, *ns*.).

To understand the form of these interactions, we plotted the regression lines of home-country collaborations on international collaborations at 1 SD below and 1 SD above the mean of cultural characteristics having significant moderating effects (cf. Aiken & West, 1991). As shown in Figures 7a to 7c, the relationship between domestic collaborations and international collaborations is stronger when individualism is high, and uncertainty avoidance and masculinity are low. This offers partial support for Hypothesis 3.

FIGURES 7a to 7c GO ABOUT HERE

Concerning a socially supportive culture, our results thus indicate that collectivist countries are less likely to foster international collaborations. The capacity of individualistic people to open up will facilitate the building of international collaborations. The most obvious examples of such countries are Hungary, Italy and Belgium. Since international collaborations engender risks, uncertainty and change, our results also indicate that high uncertainty avoidance countries would tend to avoid them. While strong uncertainty avoidance countries are very resistant to change and intolerant of ambiguous situations, weak uncertainty avoidance countries believe uncertainties are inevitable. People in weak uncertainty avoidance countries have a natural tendency to feel relatively secure and tolerate risk easily. The top three examples are Norway, Slovakia, and Estonia.

Finally, our results confirm that in feminine countries there is a tendency toward less aggressive and more cooperative behavior with foreign partners. Feminine culture expects people and institutions to be nurturing and supportive and therefore trustworthy. The norms for solidarity restrict the range of acceptable behaviors and the cost of deviant behavior is high. Typical examples here are Lithuania, Slovenia, Latvia and Norway.

There are a number of firm-level control variables that impact international collaborations. Table 10 shows that financial support for innovation activities from governments and past performance significantly predicts international collaborations ($b = 0.04$; $b = 0.02$, $p < 0.001$, respectively). The propensity to engage in international collaborations also increases with the number of patent applications or copyrights claimed by the SME ($b = 0.05$, $p < 0.001$) and the number of markets the SME operates in ($b = 0.16$, $p < 0.001$). Finally, at the country level, Geographic size is negatively related to international collaborations ($b = -0.17$, $p < 0.05$). Large countries are more likely to possess the relevant specialized assets within their borders and thus do not need to develop international collaborations. Although there are other economic and geographic factors (consumer wealth, access to waterways, the number of borders, and the level of internet access) that influence transportation costs and the information infrastructure for cross-border relations, they are not significant. We also considered the broad sectors the SMEs operated in. There are some industry effects, but we do not present the coefficients of these dummies in the tables.

4.5 Discussion

4.5.1 Overview

The international entrepreneurship literature almost always adopts the perspective of the host-country, providing conclusive evidence of the liability of foreignness. The first contribution of our research is that international entrepreneurship concerns start at home. Small firms seeking to expand internationally must deal with constraints from their home-country. We have called this set of constraints the "Liability of Home Countryness", defined as all the difficulties a firm incurs from its home-country environment when trying to collaborate with value chain partners to develop their business internationally. The specific institutions of the home country do indeed have an impact on the ability of firms to develop relations abroad, whatever the target country.

Therefore, we develop a multilevel framework in which we disentangle the macro and micro levels and empirically test their effects on small firms' ability to collaborate internationally. Our empirical results support our approach and we can provide evidence of the influences from the macro to the micro level.

Whereas there is some previous literature on the Country of Origin effect (COO effect), our research goes in the same direction. The COO effect has mainly been analyzed in marketing research (Bilkey & Nes, 1982; Peterson & Jolibert, 1995; Usunier, 2006; Verlegh & Steenkamp, 1999) and to a lesser extent in organization and human relations studies (Almond, 2011; Elango & Sethi, 2007; Harzing & Sorge, 2003; Noorderhaven & Harzing, 2003; Pudelko & Harzing, 2007). There is a lack of theoretical comprehension of the COO effect (Magnusson & Westjohn, 2011). In this paper, we provide an institutional perspective, which aims to lay down the theoretical foundations of liability of home countryness concerning both formal and informal institutions.

Concerning formal institutions, the strong influence of political stability is noticeable. The major role of formal institutions is to reduce uncertainty by establishing a relatively stable legal framework that facilitates exchanges between economic actors (North, 1990). If firms perceive that this framework is not stable or that its changes cannot be predicted, it will be extremely difficult for them to estimate the costs and risks of both domestic and international collaborations. Other variables of formal environment provide however less conclusive insights. We must particularly note the counter-intuitive effect of control of corruption on collaborative activities. Basically, the global results for formal institutions suggest the importance of sound policies, even if small firms seem more than expected able to adapt to less favorable conditions in their environment on a whole.

Concerning informal institutions, our results indicate that more collectivist countries are less likely to foster international collaborations. The capacity of individualistic people to open up will facilitate the building of international collaborations. International collaborations engender risks, uncertainty and change, and our results indicate that high uncertainty avoidance countries tend to avoid them.

While strong uncertainty avoidance countries are very resistant to change and intolerant of ambiguous situations, people in weak uncertainty avoidance countries believe uncertainties are inevitable and they have a natural tendency to feel relatively secure and tolerate risk easily. Finally, our results confirm that in feminine countries there is a tendency toward less aggressive and more cooperative behavior with foreign partners. Feminine culture expects people and institutions to be nurturing and supportive and therefore trustworthy. The norms for solidarity restrict the range of acceptable behaviors and the cost of deviant behavior is high. For similar reasons, we can understand that low power distance has a higher leverage on collaborative activities, albeit not hypothesized. Basically, the global results for informal institutions suggest that a socially supportive culture characterized by a high positive loading of humane orientation and a high negative loading of assertiveness is key to coordinate multiple value chain collaborations across borders through the development of domestic collaborations.

We also make a contribution to the role of networks in International Entrepreneurship research. Most network-focused research began to appear in 2006 in the field of International Entrepreneurship (Coviello, 2006; Coviello & Cox, 2006; Johanson & Vahlne, 2009; Kiss & Danis, 2008; Mort & Weerawardena, 2006; Presutti et al., 2007; Vapola et al. 2008; Zhou et al., 2007). A common approach in network research is to view relationships as a mechanism for internationalization (Jones et al., 2011). Some researchers have shown that resource intensity is not necessary to create the capabilities needed for internationalization but that this can be achieved under conditions of resource scarcity (Gassmann & Keupp, 2007; Katila & Shane, 2005; Sapienza et al., 2006). This stream of research suggests that although firms may experience a lack of resources internally, the availability of resources in the external environment may draw SMEs into international development (Mathews & Zander, 2007). This stream of research stresses the importance of network relationships, which may often replace the ownership of physical resources by providing access to these resources (Gassmann & Keupp, 2007; Katila & Shane, 2005; Sapienza et al., 2006).
Our study contributes to this literature by advancing our knowledge of the relationship between domestic and international business networks. The research on internationalization has not sufficiently distinguished these structural patterns.

For small innovative firms, the domestic networks where they develop their business are critical for them to access complementary resources and skills, to share the cost and risks of R&D and to develop economies of scale, but mostly to find reliable foreign partners. Through exchanges within a local network, innovative SMEs find their first contacts for possible international collaborations and start learning how to collaborate. Our research results show that network ties, primarily with home-country partners, are a critical resource that drives the development of relations abroad.

The third contribution concerns the methodology used in our study. We have developed a multilevel theoretical model to examine the interactions between the country-level regulatory environment and firm-level capacity. Multilevel modeling can simultaneously test hypotheses at several levels of analysis. In our study, we link formal and informal institutions to features of SMEs that are nested within nations. We posit that a more complete picture of this phenomenon will emerge when these effects are considered together. Focusing on only one level of analysis assumes that most heterogeneity is located at the first level and that higher levels of analysis are rather homogeneous (Gupta et al., 2007; Rothaermel & Hess, 2007). Moreover, by considering only one level of analysis, researchers presume that the focal level is independent of interactions with the other levels of analysis (Klein, Dansereau, & Hall, 1994). For example, firm-level heterogeneity is assumed to be relatively independent of the institutional environment that affects firms operating in different countries (Sahaym & Nam, 2013). Multilevel linear modeling is a robust approach that combines different levels of analysis into a single model (Peterson et al., 2012). Advances in multilevel and moderated-mediation modeling increase precision in International Entrepreneurship research and open up new methodological and conceptual opportunities.

4.5.2 Limitations and extensions of the study

The first limitation of this study is that the choice of variables was restricted by the available data. Using data from a survey that was not designed for our specific research questions had implications for the results obtained, which only partially explain variations between firms.

Further research could try to evaluate the strength of each partner relationship and the objectives pursued (developing new products, accessing complementary knowledge, speeding product to market, etc.).

Such indications would be beneficial in evaluating the motivations for entering collaborations. Whereas past studies on International Entrepreneurship appear to draw thematic conclusions based on case studies or small samples, CIS-4 collected data for almost 30,000 enterprises in Europe. In order to increase external validity, one research tactic is to use a large sample and the quality criterion of this research is statistical generalization. As advised by Peterson et al. (2012: 454), we can take advantage of these large-scale datasets while being aware of their limitations.

Second, although our data is rich, it focuses on 15 European home countries, so our results may not be so relevant for SMEs outside Europe. It would strengthen the generalizability of our model if corroborating data were available from non-European countries. Evidence from other continents would add to the findings of our study. However, on the basis of our research findings, we expect that our theoretical model concerning institutions and innovative SMEs' collaborative behavior may well be similarly robust for SMEs from other national contexts.

Third, while our study is cross-sectional, recent investigations have indicated that the pathways of SME internationalization are more varied and complex with respect to features such as the timing of initial entry into international markets, the number of foreign markets served, and phases of increasing or decreasing commitment to foreign markets. The question of the factors that account for such pattern variation and its performance consequences opens up another field of inquiry.

Finally, to operationalize the characteristics of formal and informal institutions, we chose to use governance and cultural indicators as proxies. Even though these indicators do not cover all the aspects of such a complex concept as institutions, the study of formal institutions has been abstracted from the importance of informal institutions and vice versa. Scholars have analyzed them independently, resulting in some theoretical weakness. In this paper, we assess whether formal and informal institutions support or undermine the development of international collaborations.

In order to study cultural dimensions as an explanatory variable, we chose to use Hofstede's framework because he undeniably conducted one of the most comprehensive studies of how values in the workplace are influenced by culture (Hofstede, 2001). Over the years, however, his model has been subject to some criticism. The deduction of general results about national cultures in many countries from English-language surveys of IBM employees has raised concerns about the representativeness of respondents, the influence of IBM business, and potential translation problems (McSweeney, 2002). Hofstede's detractors also argue that the data is out of date and too condensed to capture the full concept of culture. However, it should be pointed out that although the framework has some limitations, Hofstede's measures have passed rigorous validity and reliability tests, and have been applied extensively in many scientific studies. Today Hofstede's framework is still considered the theoretical foundation upon which most cross-cultural research is based, which largely justifies its use in the present study.

4.6 Conclusion

If innovation is a powerful driver for internationalization, small firms need to collaborate to develop their business internationally within value chains, far beyond the issue of selling abroad. While issues related to the Liability of Foreignness have been widely studied, we point out the complementary existence of a "liability of home countryness". The liability of home countryness arises from the firm's lack of domestic business relationships at the micro level and the home country's lack of protective informal and formal institutions at the macro level. To sum up, in this paper we argue that small firms' domestic partnerships and regulatory environment help them to cope with information asymmetries and mitigate appropriability hazards, which figures prominently in explaining the likelihood that these small firms will establish international collaborations with business partners. In our study, we show that these constraints may diminish as small firms gain relationship knowledge through collaboration with local market partners. These firms enjoy an advantage with respect to other firms due to the information intermediation function performed by their domestic market partners. Moreover, SMEs may face a lack of credibility in the eyes of potential international partners that are reluctant to join forces with firms of uncertain quality. In our work, we show that the certification effect of endorsement by local networking activities helps signal the quality of an SME to foreign parties.

The theoretical contribution of this study is supported by empirical evidence from a large-scale set of SMEs from 15 European countries. In our opinion, the empirical outcomes of the study demonstrate the need to develop multilevel models when analyzing large cross-country samples. We hope this paper will help to advance the research agenda in International Entrepreneurship by narrowing the gap between micro-theories of firms' resources and capabilities and macro-theories of the contextual environment.

4.7 Appendixes

TABLE 8

Key Figures on Innovation and Collaboration Activities across Countries

Proportion of SMEs that develop…	New or significantly improved good or services	National collaborations	International collaborations
All sample	33.9%	23.9%	12.6%
Belgium (BE)	44.5%	34.8%	28.6%
Bulgaria (BG)	56.4%	16.9%	12.6%
Czech Republic (CZ)	45.9%	35.5%	24.1%
Germany (DE)	25.3%	13.8%	4.5%
Estonia (EE)	39.1%	31.4%	28.2%
Spain (ES)	25.6%	23.1%	7.8%
Greece (GR)	45.5%	21.5%	16.1%
Hungary (HU)	33.5%	36.7%	19.9%
Italy (IT)	32.1%	17%	4.1%
Lithuania (LT)	38.6%	50.6%	35.1%
Latvia (LV)	35.3%	33%	23.7%
Norway (NO)	36.1%	33.9%	23.5%
Portugal (PT)	29%	20.4%	11.1%
Slovenia (SI)	46.5%	39.5%	29.1%
Slovakia (SK)	41.4%	35.9%	31.3%

% figures indicate the proportion of firms responding more than 0

TABLE 9
Descriptive statistics and Zero-Order Correlations for Firm-Level and Country-Level Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	Mean	Firm-level SD	Country-level SD
Main firm-level variables [a]																
1. Innovation capacity	-													4.10	2.14	
2. Home-country collaborations	0.30**	-												0.60	1.25	
3. International collaborations	0.21**	0.51**	-											0.31	1.05	
Main country-level variables [b]																
4. Government effectiveness				-										1.06		0.49
5. Regulatory quality				0.80**	-									1.15		0.23
6. Rule of law				0.92**	0.77**	-								0.91		0.51
7. Control of corruption				0.89**	0.76**	0.92**	-							0.83		0.60
8. Voice and accountability				0.88**	0.76**	0.93**	0.89**	-						1.14		0.31
9. Political stability				0.47	0.33	0.57*	0.40	0.46	-					0.61		0.34
10. Individualism (vs. Collectivism)				0.46	0.62*	0.34	0.23	0.21	0.21	-				54.07		17.48
11. Power distance				-0.11	-0.37	-0.23	-0.18	-0.12	-0.22	-0.41	-			50.80		25.52
12. Uncertainty avoidance				-0.14	-0.40	-0.04	-0.07	0.08	-0.17	-0.52*	0.31	-		76.93		18.37
13. Masculinity (vs. Femininity)				-0.09	0.06	-0.18	-0.17	-0.02	-0.28	0.14	0.50*	0.02	-	45.67		29.20

where N = 29,119 firms in 15 countries. SD = standard deviation. *a* and *b*. Given the space constraints and for clarity, we have not included control variables at the firm-level and country-level in the table.

* $p < .05$** $p < .01$*** $p < .001$ (two-tailed tests).

Table 10. Bootstrap Regression Results for the Mediator Effect of Home-country Collaborations between Innovation Capacity and International Collaborations

	Home-country Collaborations				International Collaborations			
	b	SE	*LL*	*UL*	*b*	SE	*LL*	*UL*
Control variables [a]								
Public financial support	0.29***	0.02	0.27	0.32	0.04***	0.01	0.02	0.06
Intellectual property rights	0.06***	0.01	0.05	0.09	0.05***	0.01	0.03	0.07
Market diversity (firm)	0.02	0.02	–0.03	0.05	0.16***	0.01	0.14	0.19
Firm size (turnover) [b]	0.03***	0.00	0.02	0.04	0.02***	0.01	0.01	0.02
Model variables								
Innovation capacity	0.12***	0.00	0.11	.13	0.02***	0.00	0.01	0.03
Home-country collaborations					0.40***	0.00	0.38	0.41
F	123.05***				307.54***			
R^2	0.13***				0.28***			

	Effect	Boot SE	*LL*	*UL*
Standardized indirect effect of innovation capacity on international collaborations [c]	0.14	0.00	0.13	0.16
Ratio of indirect to total effect of innovation capacity on international collaborations [c]	0.69	0.02	0.65	0.74
Mediation effect size [d]	0.15	0.01	0.14	0.16

where N = 29,119, SE = Standard Error, *LL* = Bootstrap Confidence Interval Lower Limit, UL = Bootstrap Confidence Interval Upper Limit. *a*. Regression model presented in the table after controlling for industry dummy variables. *b*. We used the logarithm of turnover to correct for the normal distribution and central tendency of the measure. *c*. Computed by PROCESS (Hayes, 2013). *d*. We used kappa-squared (Preacher and Kelley, 2011) to estimate the size of the mediation effect. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table 11. Results of Multilevel Analyses for the Moderating Effects of Institutional Variables

	Model: DV = International Collaborations							
	Null (Step 1)		Random Intercept and Fixed Slope (Step 2)		Random Intercept and Random Slope (Step 3)		Cross-level Interaction (Step 4)	
Level and variable	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Firm-level (level 1)								
Intercept	0.47**	0.06	0.47**	0.07	0.47**	0.04	0.47**	0.04
Control variables [a]								
Public financial support			0.08**	0.01	0.08**	0.00	0.08**	0.00
Intellectual property rights			0.06**	0.00	0.06**	0.00	0.06**	0.00
Market diversity (firm)			0.14**	0.01	0.14**	0.01	0.14**	0.01
Firm size (turnover) [b]			0.02**	0.00	0.02**	0.00	0.02**	0.00
Main variables								
Innovation capacity			0.02**	0.00	0.02**	0.00	0.02**	0.00
Home-country collaborations			0.37**	0.00	0.37**	0.00	0.37**	0.00
Country-level (level 2)								
Control variables								
Geographic size [c]					–0.17*	0.07	–0.17*	0.07
Per capita GDP [d]					0.03	0.16	0.03	0.16
Maritime access					–0.03	0.13	–0.03	0.13
Number of borders					–0.03	0.03	–0.03	0.03
Internet access					0.01	0.00	0.01	0.00
Main variables [e]								
Government effectiveness					0.52*	0.16	0.52*	0.16
Regulatory quality					0.42	0.27	0.42	0.27
Rule of law					0.26	0.18	0.26	0.18
Control of corruption					0.16	0.14	0.16	0.15
Voice and accountability					0.11	0.48	0.11	0.48
Political stability					0.25	0.18	0.25	0.18
Cross-level interactions [f]								
Government effectiveness							0.09**	0.00
Regulatory quality							–0.03	0.02
Rule of law							0.05**	0.00
Control of corruption							0.03**	0.00
Voice and accountability							–0.02	0.01
Political stability							0.20**	0.01

where N (Level 1) = 29,119 and N (Level 2) = 15. SE = Standard Error. *a*. Regression model presented in the table after controlling for industry dummy variables. *b, c*, and *d*. We used the logarithm of Turnover, Geographic size, and per capita GDP to correct for the normal distribution and central tendency of the measure. *e* and *f*. Considering the small size of Level 2, we conduct a separate test with each main and interaction effect (Aguinis et al., 2013).* $p < 0.05$; ** $p < 0.01$.

Table 12. Results of Multilevel Analyses for the Moderating Effects of Cultural Variables

	Model: DV = International Collaborations							
	Null (Step 1)		Random Intercept and Fixed Slope (Step 2)		Random Intercept and Random Slope (Step 3)		Cross-level Interaction (Step 4)	
Level and variable	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Firm-level (level 1) [a]								
Intercept	0.47**	0.06	0.47**	0.07	0.47**	0.04	0.47**	0.04
Control variables [a]								
Public financial support			0.08**	0.01	0.08**	0.00	0.08**	0.00
Intellectual property rights			0.06**	0.00	0.06**	0.00	0.06**	0.00
Market diversity (firm)			0.14**	0.01	0.14**	0.01	0.14**	0.01
Firm size (turnover) [b]			0.02**	0.00	0.02**	0.00	0.02**	0.00
Main variables								
Innovation capacity			0.02**	0.00	0.02**	0.00	0.02**	0.00
Home-country collaborations			0.37**	0.00	0.37**	0.00	0.37**	0.00
Country-level (level 2)								
Control variables								
Geographic size [c]					–0.17*	0.07	–0.17*	0.07
Per capita GDP [d]					0.03	0.16	0.03	0.16
Maritime access					–0.03	0.13	–0.03	0.13
Number of borders					–0.03	0.03	–0.03	0.03
Internet access					0.01	0.00	0.01	0.00
Main variables [e]								
Individualism (vs. Collectivism)					0.01**	0.00	0.01**	0.00
Power distance					–0.01	0.01	–0.01	0.01
Uncertainty avoidance					–0.01*	0.00	–0.01*	0.00
Masculinity (vs. Femininity)					–0.01	0.01	–0.01	0.01
Cross-level interactions [f]								
Individualism (vs. Collectivism)							0.01**	0.00
Power distance							0.00	0.00
Uncertainty avoidance							–0.01**	0.00
Masculinity (vs. Femininity)							–0.01**	0.00

where N (Level 1) = 29,119 and N (Level 2) = 15. SE = Standard Error. *a*. Regression model presented in the table after controlling for industry dummy variables. *b*, *c*, and *d*. We used the logarithm of Turnover, Geographic size, and per capita GDP to correct for the normal distribution and central tendency of the measure. *e* and *f*. Considering the small size of Level 2, we conduct a separate test with each main and interaction effect (Aguinis et al., 2013).

* $p < 0.05$

** $p < 0.01$.

Figure 5. A Model of Home Country Impact on Small Firms' Capacity to Manage a Portfolio of International Collaborations

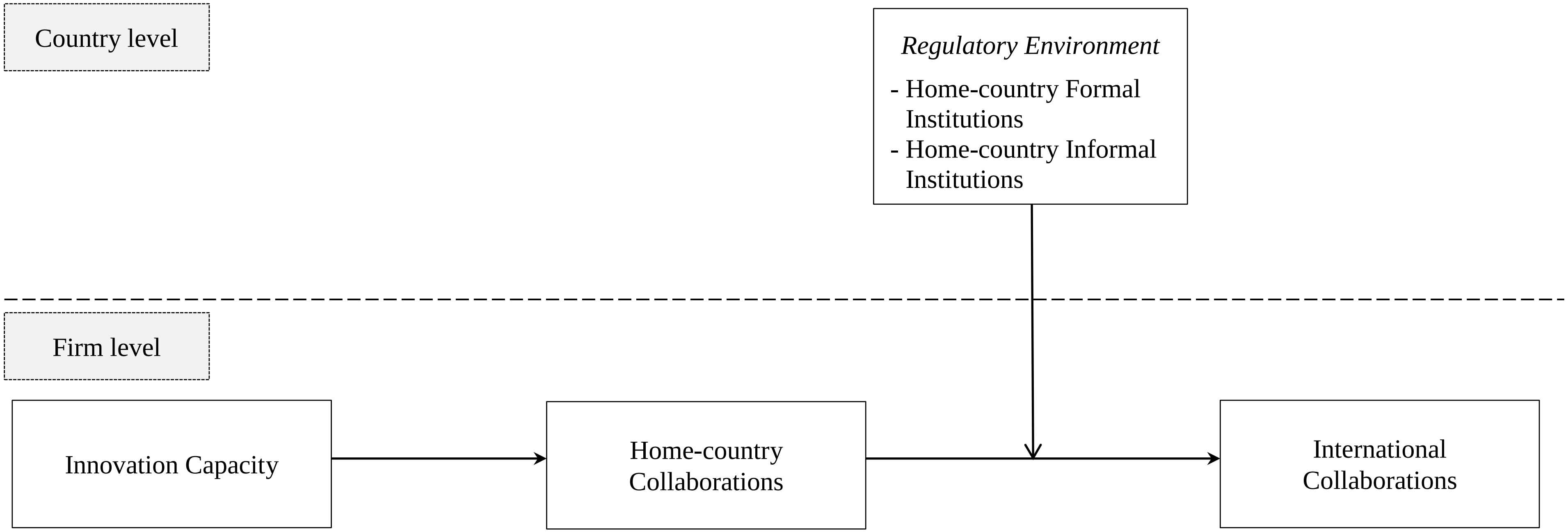


Figure 6a. The Moderating Effect of Government Effectiveness on the Relationship between Home-country Collaborations (HBBN) and International Collaborations

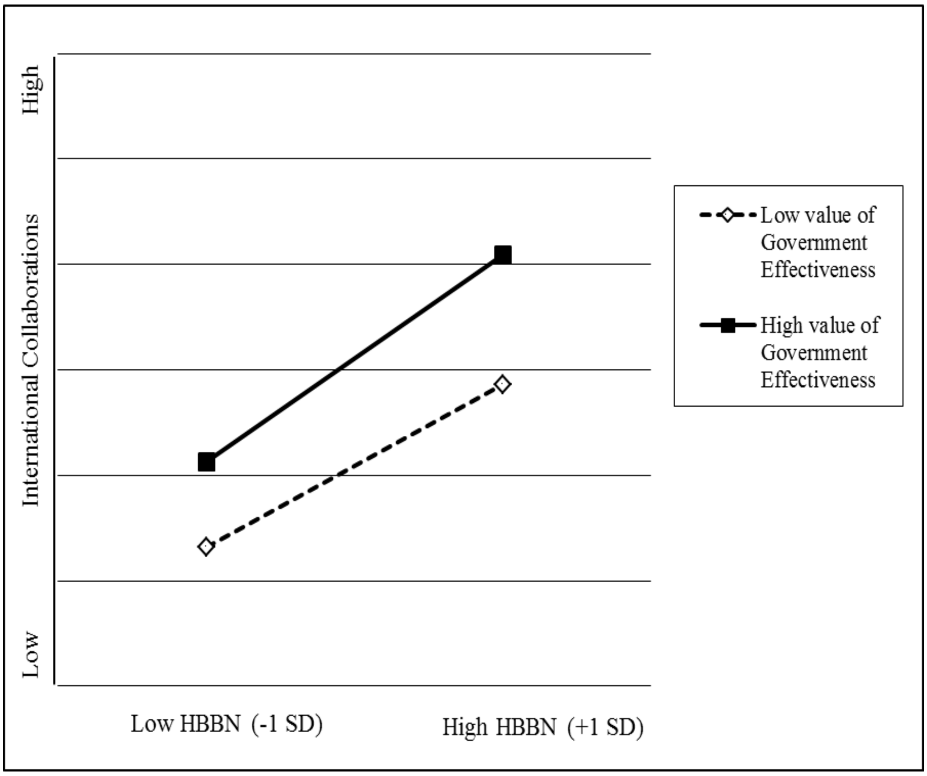


Figure 6b. The Moderating Effect of Rule of Law on the Relationship between Home-country collaborations (HBBN) and International Collaborations

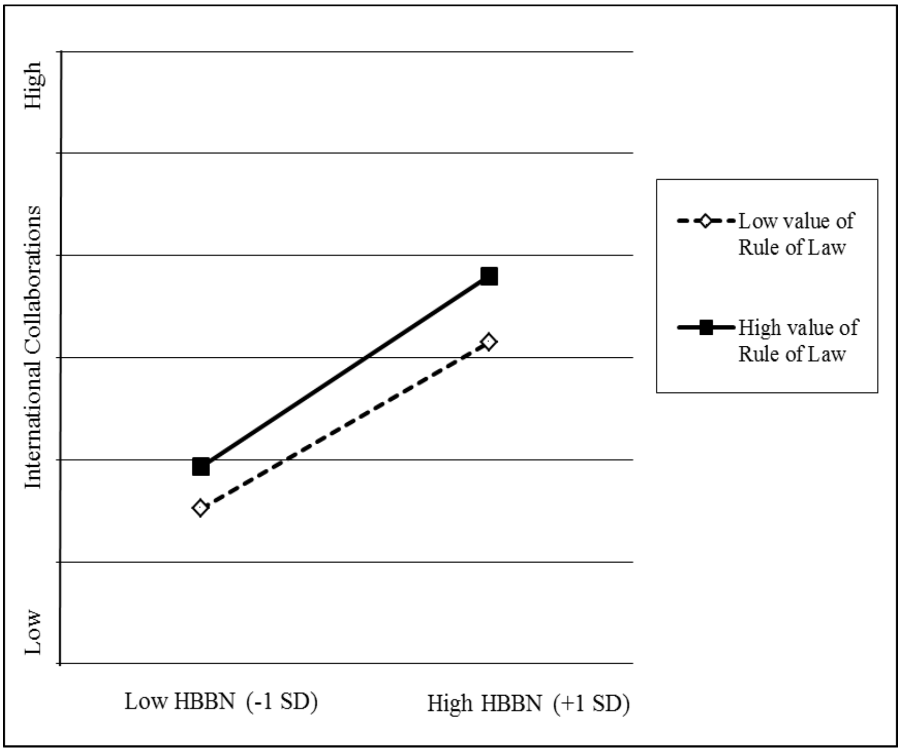


Figure 6c. The Moderating Effect of Corruption control on the Relationship between Home-country Collaborations (HBBN) and International Collaborations

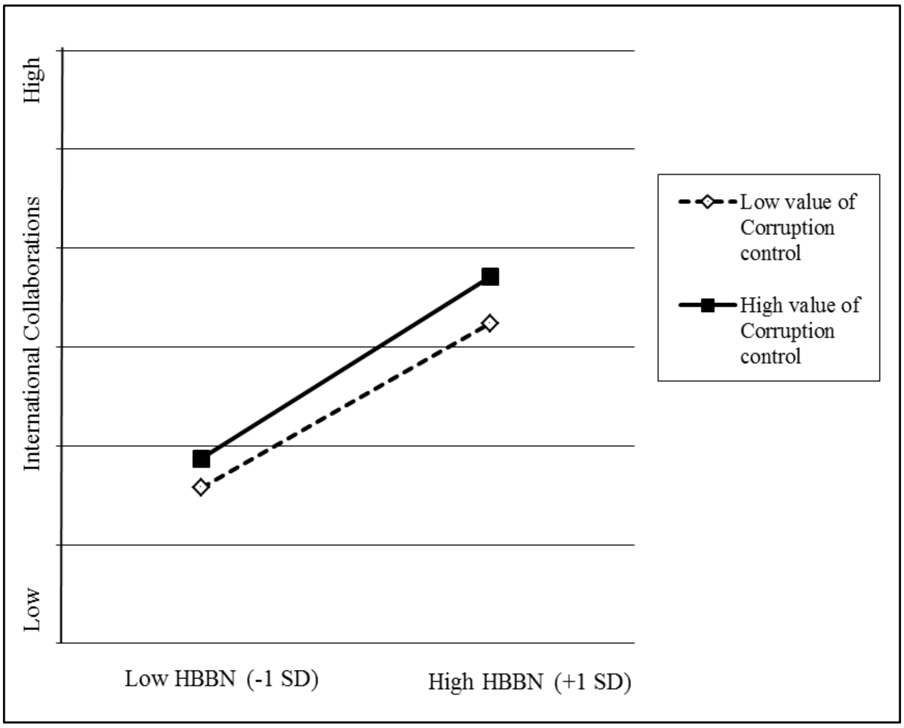


Figure 6d. The Moderating Effect of Political Stability on the Relationship between Home-country Collaborations (HBBN) and International Collaborations

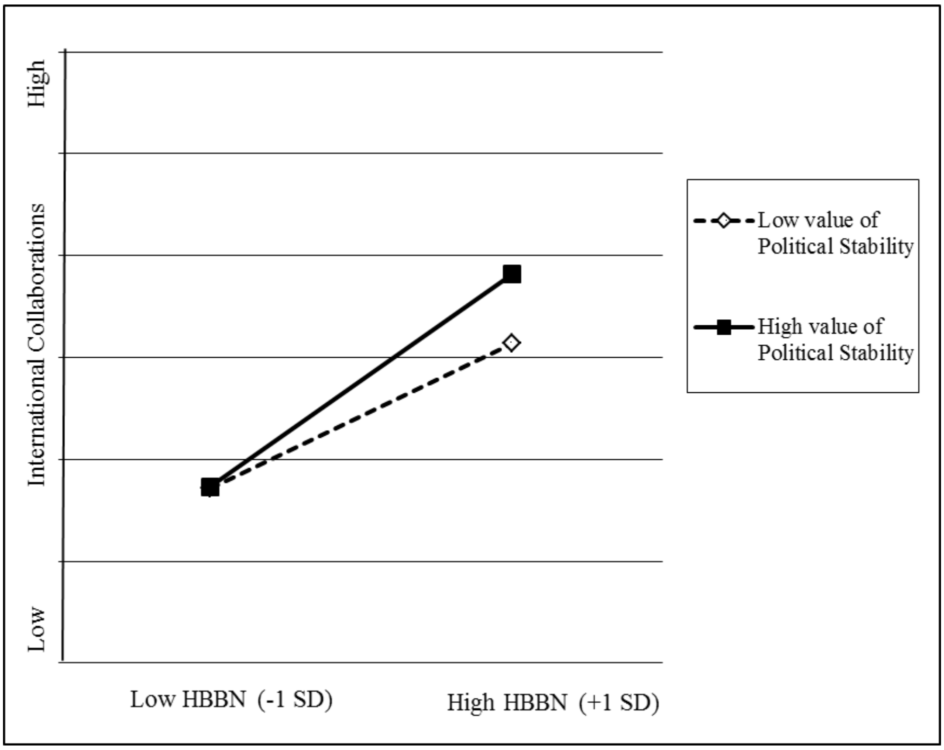


Figure 7a. The Moderating Effect of Individualism on the Relationship between Home-country Collaborations (HBBN) and International Collaborations

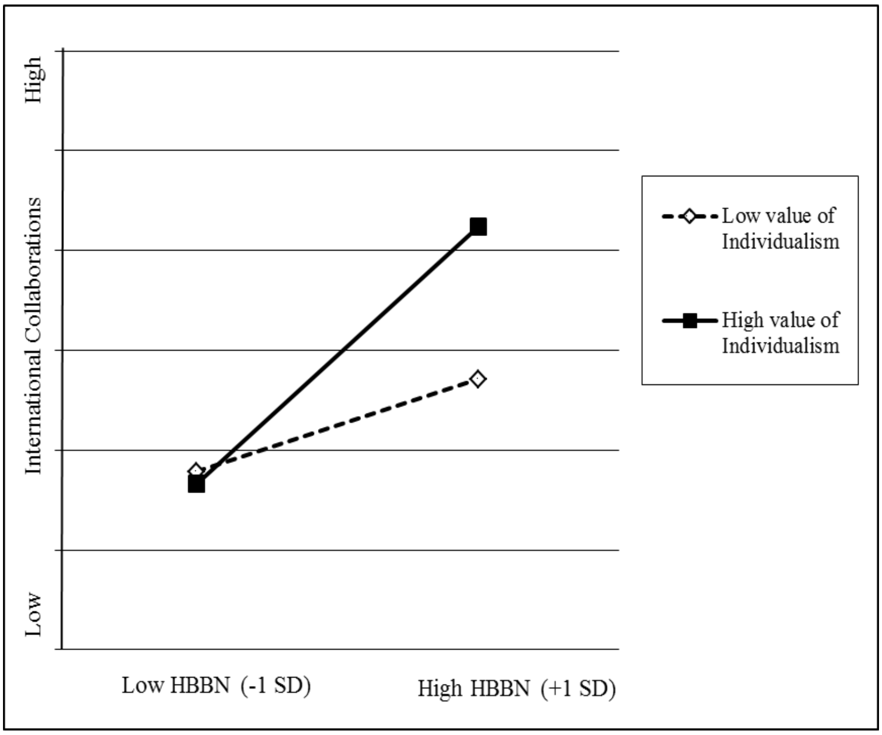


Figure 7b. The Moderating Effect of Uncertainty Avoidance on the Relationship between Home-country Collaborations (HBBN) and International Collaborations

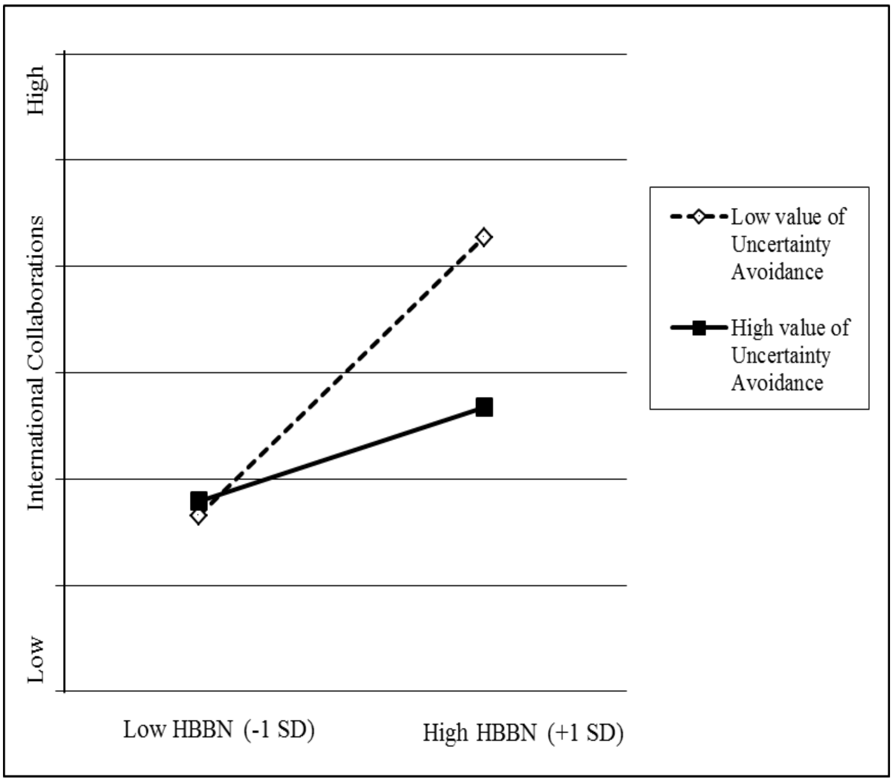
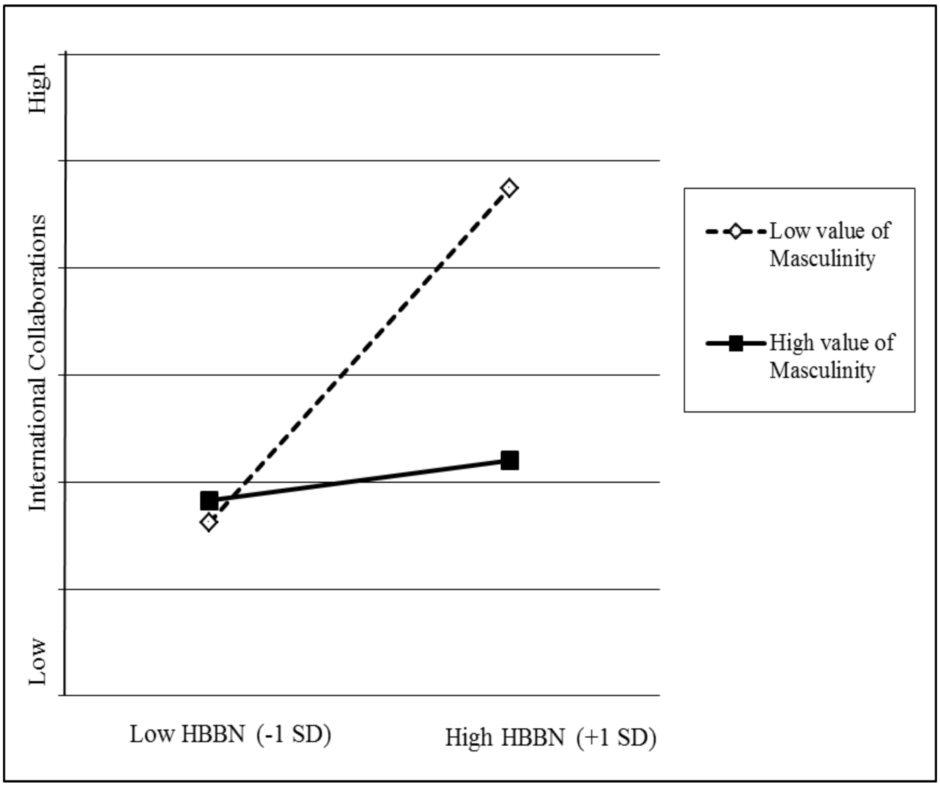


Figure 7c. The Moderating Effect of Masculinity on the Relationship between Home-country Collaborations (HBBN) and International Collaborations



CHAPTER 5: Conslusion and contributions

The purpose of the thesis is to investigate the effect of collaborations on SME's internationalization through three different studies in article format. In this section I first outline the main conclusions from these studies, their limitations and suggest avenues for future research. I then include contributions to the International Entrepreneurship literature. I conclude the thesis with my final thoughts as reflections from the process of researching the implications of the thesis for governments and entrepreneurs.

5.1 Main conclusions from the studies

The first study highlights that the internationalization process of smaller companies is getting more and more complex. Firms without sufficient in-house resources need to source external expertise through collaborations. These external resources can, then, be combined with the internal resources of the firm. The results of the first paper demonstrate that collaborations with foreign partners, for production and R&D activities particularly, are critically important for SMEs' internationalization. Foreign partners are well embedded into the market and are aware of movements from the competition; they may provide access to this specific market and technology knowledge necessary to internationalize. This is particularly significant when the firms' target market is still uncertain or when the lack of market information is an obstacle to the firm. International collaborations provide SMEs foreign market knowledge and contacts, which can be leveraged to overcome their liabilities and enhance SME's internationalization.

The findings of this study also show that the role of collaborations for internationalization decreases over time. This highlights the important of speed in establishing partnerships with foreign firms. Internationalization of younger firms is facilitated by the establishment of strategic collaborations with foreign firms that allow them to quickly pursue international business opportunities. As Gassman and Keupp (2007) and Manolova et al. (2010) indicated, early internationalization is positively associated with a specialized position in an international value chain. If the multinational companies had understood the importance of internationalization of the value chain, the benefits from this internationalized process apply particularly to smaller firms. Indeed, the increasing cross border competition resulting from globalization disadvantages even more SMEs regarding their bigger competitors because of their resources limitation. Therefore, we believe that governments need to foster international collaboration and the enforceability of contracts in order to increase SMEs' global competitiveness.

The concept of "fast internationalization" is often tricky for the research community to deal with. Therefore, the second study contributes to the literature in International Entrepreneurship by advancing our knowledge regarding the relationship between the three dimensions of fast internationalization: precocity, diversity and intensity. The research on internationalization has so far not sufficiently distinguished these three closely related but separate issues. The findings of this study show that early adopters seem to be more committed in foreign markets and it enables them to quickly enter multiple countries.

This paper also highlights the effect of SME's collaborations portfolio and knowledge intensity on its internationalization pattern. Collaborative mode of entry provides more control over international activities allowing these firms to achieve superior international performance. Early adopters need to internationalize and open up to foreign partners in order to make value creation possible, not only to disseminate outputs. This reflects a Schumpeterian, supply-push approach to value creation. The competitive advantage of the firm being based on cross-border resource combinations. International collaborations can become a source of competitive advantage for smaller firms. These results confirm that born global firms do not follow similar patterns as traditional firms. The purpose of Johanson and Vahlne was to explain the gradual, constrained pattern of internationalization; it is read as a theory of constraints.

The International New Ventures model focuses mostly on explaining how early and rapid internationalization of new venture is possible. Therefore, we do not know what is the process of rapid internationalization and its impact on the trajectory. Our results induce that exporting mode is not the first option for smaller firms to internationalize and that the trajectory have changed.

If innovation is a powerful driver for internationalization, small firms need to collaborate to develop their business internationally, far beyond the issue of selling abroad. While issues related to the Liability of Foreignness have been widely studied, the third paper point out the complementary existence of a "liability of home countryness". The liability of home countryness arises from the firm's lack of domestic business relationships at the micro level and the home country's lack of protective informal and formal institutions at the macro level. In this paper we argue that small firms' domestic partnerships and regulatory environment help them to cope with information asymmetries and mitigate appropriability hazards, which figures prominently in explaining the likelihood that these small firms will establish international collaborations with business partners. In our study, we show that these constraints may diminish as small firms gain relationship knowledge through collaborations with local market partners. These firms enjoy an advantage with respect to other firms due to the information intermediation function performed by their domestic market partners. Moreover, SMEs may face a lack of credibility in the eyes of potential international partners that are reluctant to join forces with firms of uncertain quality. In our work, we show that the certification effect of endorsement by local networking activities helps to signal the quality of an SME to foreign parties. The empirical outcomes of the study demonstrate the need to develop multilevel models when analyzing large cross-country samples. This paper will help to advance the research agenda in International Entrepreneurship by narrowing the gap between micro-theories of firms' resources and capabilities and macro-theories of the contextual environment.

5.2 Limitations and future research

The most important limitations and how they relate to potential future research are outlined in the current section. First of all, there was substantial heterogeneity in regard to the types of firms in the sampling frame. For example, there was heterogeneity regards to the age of the firms and the size of the firms. This reflects potential variance in profitability and potential success that the firm may have experienced prior to internationalize. There were established firms that have been in international operations for a number of years and small firms that went global before ever really establishing themselves in the domestic market. On one hand, a strength of the sample was that these differences have been controlled in the different studies and, thus, an over-arching picture of the implications of collaborations on SME internationalization have been obtained. On the other hand, a more homogeneous sample of born globals (i.e. for example, only firms that develop international operations within six years from inception) may enable a better investigation of some of the tested theoretical relationships. Another important methodological issue here is the generalizability of findings to other contexts than Belgium. Context introduces additional heterogeneity to this research. Thus, the specific context can influence the strength and the relative importance of these different identified relationships. However, we explore the contextualizing issue of International Entrepreneurship research in the third study of the dissertation, integrating multilevel analysis to push forward the research agenda in International Entrepreneurship. This suggests that International Entrepreneurship scholars must more adequately contextualize their studies.

Another main source of limitations relates to the theories chosen to shed light on the research questions. Besides, by selecting to address some specific research questions, I excluded a range of important factors that are likely to influence SMEs' internationalization and collaborative behaviors. This dissertation did not consider the role of the entrepreneur's wider learning process. The learning process is complex and there are a range of factors that influence what is learnt from partners. However, collaborations might be interpreted as a stressful experience for entrepreneurs. By turning the spotlight on the firm-level, this dissertation couldn't study whether the entrepreneur interpreted the experience as an opportunity to learn.

Further research may focus on what the entrepreneur is currently doing and thinking about their relationships and if their initial motivations for entering international collaborations have been reached. We could also investigate other variables such as characteristics of the entrepreneur and managing team (i.e. education, language and prior experience).

Finally, although I attempted to locate and account for as many SMEs as possible, there were a large number of SMEs for whom no information could be obtained. It is difficult to calculate the exact influence this has on the results. In the cases where the respondent gave a reason for not participating, this fell fairly evenly into two categories: either the respondent did not have time or they did not want to talk about their international actvitvities. The latter case reflects that the emotional implications of internationalization have not been captured in this study. For example, some entrepreneurs might not want to reveal some information about their sourcing strategy. The reason could be the social and environmental impact of internationalization and the lack of transparency in some industries. Indeed, there is a growing demand for locally sourced products. Therefore, the link between international and social entrepreneurship could be a future research area of great interest. That being said, the response rate in this study is on par with most published research in the field of International Entrepreneurship.

5.3 Contributions to the literature

While the two main internationalization frameworks appear quite converging when looking at the *necessary knowledge for internationalization*, they differ in terms of *sources of knowledge*. The focus of this chapter is to try to look at these sources and more specifically the direct and indirect accumulated experience and network relationships as different sources of knowledge for internationalization. Our interest is the knowledge that smaller firms needs for internationalization and how they source it.

5.3.1 Necessary knowledge for internationalization

A basic assumption of the Uppsala model is that the lack of knowledge about foreign markets and international operations is a major obstacle to internationalization (Johansson and Vahlne, 2003). It is possible to distinguish between market specific and general knowledge. Then, the former concerns institutional and business conditions in the specific market and cannot without great difficulties be transferred to other markets, while the latter refers to ways of organizing and developing international operations and relationships. General internationalization and relationship knowledge can more easily be transferred from market to market. In this paper, we highlight four types of barriers for internationalization and relationship building: the liabilities of foreignness and outsidership (respectively the lack of market-specific international and relationship) and the liabilities of expansion and embeddedness (respectively the lack of general international and relationship knowledge), see table 13.

…Knowledge	**International**	**Relationship**
Market specific	*Liability of Foreignness:* the lack of complementary knowledge needed to operate in a specific institutional environment	*Liability of Outsidership:* the lack of complementary knowledge needed to operate in a specific business environment
General	*Liability of Expansion:* the lack of complementary knowledge needed to conduct a business abroad	*Liability of Embeddedness:* the lack of complementary knowledge needed to coordinate a set of international relationships

Table. 13. Barriers to itnernational relationship building.

The liability of foreignness (the lack of market-specific international knowledge). The liability of foreigness relates to the lack of complementary knowledge needed to operate in a specific institutional environment. That is, the lack of knowledge about language, laws, and rules in the target market (Eriksson *et al.*, 1997).

Internationalizing firms suffer from liability of foreignness because they are new to foreign countries. They have no active presence on the market and are missing a shared history and a shared context. International business is considered risky because it may involve loss of assets as a result of changes in political, economic, social and legal factors in foreign markets. When the company moves into a new country with a different institutional environment, it may need complementary resources for dealing with other entities and prevailing rules of behavior (Zaheer, 2002). The institutional environment and the set of norms that constrain human behavior, such as culture, language, religion, and the political, legal and economic systems (North, 1990), affects all firms operating in the country. It include laws and written conventions but also codes of conduct, norms, values and behavioral conventions (North, 1990). This lack of complementay resources needed for understanding the new institutions creates difficulties. Psychic distance is defined as the factors that make it difficult to understand foreign environment (Johanson and Vahlne, 1990). Firms must then adjust to a foreign national culture and be prepared for challenges, such as differences in lifestyles, cultural standards, consumers preferences, and purchasing power (Sousa and Bradley, 2005).

The liability of expansion (the lack of general international knowledge*)*. The liability of expansion relates to the lack of complementary knowledge needed to conduct a business abroad. More specifically, smaller firms which intend to go abroad can suffer from the lack of knowledge about how to operate at a larger scale. It reflects a firm’s resources and its capabilities to engage in international business (Eriksson et al., 1997; Welch & Luostarinen, 1988). Internationalization is often accompanied by adding new operations. It requires the firm to deal with additional transportation, communication and complexity costs (Tallman and Li, 1996). These managerial costs involved with internationalization are usually higher than in a domestic context (Vernon, 1977). The liability of expansion represents then the additional costs of doing a business abroad. A firm has a reduced risk of facing the liabilty of expansion when it has already developed direct or indirect experience from operating accross several geographic locations.

The liability of outsidership (the lack of market-specific relationship knowledge). The liability of outsidership relates to the lack of complementary knowledge needed to operate in a specific business environment.

In 2009, Johnason and Vahlne add to their model the concept of liability of outsidership that includes knowledge about each partner's heterogeneous resources and capabilities. The lack of market-specific business knowledge is related to a firm's business environment that, according to the business network view, consists of current or potential business partners and the relationships between them (Johnason and Vahlne, 2009). The pace at which an international venture penetrates a new market is affected by the speed at which it is able to locate customers and suitable partners, and close deals (Karagozoglu and Lindell, 1988). For entering a new country market, the firm will experience transaction costs (Teece, 1986; Zacharakis, 1997) such as search costs to find reliable business partners. In her study, Arenius (2005) shows that another important barrier for internationalization is caused by the lack of legitimacy and influence in the new environment. Internationalizing ventures lack attractiveness in the eyes of potential partners because they lack information about the firm's competences and reliability. In previous research, former network appears to be useful for screening and evaluating potential exchange partners in target market (Ellis, 2000; Harris and Wheeler, 2005) and for enhancing the legitimacy and the reputation of the internationalizing firms (Chetty and Wilson, 2003; Coviello, 2006).

The liability of embeddedness (the lack of general relationship knowledge). Another key liability that we would like to suggest in our study is the liability of embeddednes which relates to the lack of complementary knowledge needed to coordinate a set of international relationships. Internationalizing firms need to learn about ways in which they can develop different and transferable relationships in alternative situations (Hoang and Rothaermel, 2005). The importance of business network coordination, as Johansson and Vahlne wrote in their business network view of internationalization (2009), suggests that learning how to coordinate sets of relationships is essential. Following Burt (2000) and Mors (2010), the difficulties could be the lack of common understandings and shared meanings within the partners. Furthermore, the success or the failure of international collaborations will be closely linked to with the additional level of threat to the proprietary intellectual assets. The inability to define complete contracts and the lack of resources to defend the legal rights are likely to encourage opportunistic behavior. The company has to control the imminent prospect of additional technology transfer risks when entering international collaborations.

These potentials intellectual proprietary threats include: the “hold-up” of specific assets; the appropriation or technological leakage and the spill over of key information to competitors (Williamson, 1991; Ahuja, 2000). This problem is specifically relevant in smaller high-technology firms because the transfer of novel technologies raises the potential problem of appropriation and opportunity cost (Autio *et al.,* 2000; Zahara *et al.,* 2001). The intangibility of the technological componant of the product or service increases the transactional hazards (Knight and Cavusgil, 2004). According to Zaheer (1995), trust can be an effective means to reduce inferred uncertainty by external parties and can be reinforced by high network cohesion (Blomqvist *et al.,* 2008; Krachardt, 1992). Strong social norms and embeddness within the network encourage compliance with business rules and solidarity (Adler and Know, 2002; Al-Laham and Souitaris, 2008).

5.3.2 Sources of knowledge for internationalization

Both Uppsala and International New Ventures (INV) approaches see internationalization as a learning intensive process in which knowledge has a central role but they emphasizes different sources of knowledge for internationalizing firms. The Uppsala model emphasizes direct experiential knowledge to be critical to a firm’s selection of foreign markets, how it enters markets, and the speed of its launch in those markets (Casillas *et al.*, 1975). Firms internationalize with a series of incremental decisions, increasingly investing in greater involvement in markets more physically or psychologically dissimilar to their home market as they experientially acquire the necessary knowledge (Eriksson *et al.,* 1997; Johanson and Wiedersheim, 1975). Learning for internationalization is therefore regarded as a cumulative and path dependent process (Johanson and Vahlne, 1977, 2006) which suggests a gradual and incremental approach to internationalization (Eriksson *et al*., 1997). Firms then acquire some of their knowledge through their own first hand, direct experience (Huber, 1991). The Uppsala research affirms current business activity to be the main source of knowledge for internationalization, because it provides the opportunity to acquire, integrate and use knowledge about foreign markets and operations (Johanson and Vahlne, 1977; Johanson and Vahlne, 1990).

The International New Venture (INV) approach suggests that founding entrepreneurs and top management teams support new firms' early internationalization with their particular prior knowledge, abilities and experience (Oviatt & McDougall, 1995). Internationalizing firms therefore need additional new knowledge to pursue internationalization successfully (Fernhaber, McDougall-Covin, & Shepherd, 2009). For entrepreneurs, foreign markets knowledge comes from innovatively and proactively pursuing entrepreneurial opportunities overseas rather than by passively accumulating foreign market experience (Zhou, 2007). Indirect experience, referred to as second-hand experience by Huber (1991), is knowledge needed but not learned directly. Indirect experiential knowledge also involves hiring people or acquiring business units (Huber, 1991). There is a possibility that this necessary knowledge might not be available or exist (Johanson & Vahlne, 1977), but it has become increasingly possible to recruit internationally experienced managers (Oviatt & McDougall, 1995).

	Uppsala approach	**INV approach**	**Business Network approach**
Internationalization pattern	*Slow evolutionary* path of international development (Operate for a long time in their home market before international expansion)	*Early and rapidly* path of international development (Aim for international market from inception)	*Rapidly* path of international development through collaboration (Reach a certain degree of internationalization within a small number of years)
Source of knowledge	*Internal* source of knowledge through *direct* experience (firm's foreign market experience)	*Internal* source of knowledge through *indirect* experience (management team's previous international experience)	*External* source of knowledge through *indirect* experience (partner's international experience)

Table 14. Internationalization patterns and sources of knowledge.

The Network approach recognises the influence of external organizations such as customers, suppliers, other business partners, institutions and competitors on the internationalization of the firm (Coviello, 2006; Johanson and Vahlne, 2009), in both business and social relationships. The findings from this dissertation suggest that, through external knowledge acquisition, firms learn from the experience of others, for example by observing them in networks, or through international collaborations (Table 14). Knowledge from network partners can help overcome liabilities in foreign markets, and the tacit knowledge learned in business relationships can stimulate early and rapid internationalization. As observed in my dissertation, smaller companies are capable of exploiting foreign markets opportunities faster through international collaborations. According to these results, the original features of the internationalization pattern have changed. Collborations with foreign partners is an essential strategy that smaller firms need to prioritize in order to gain access to knowledge and resources, and cope with environmental uncertainty in their international operations.

5.4 Policy implications

The financial crisis has changed public opinion, and governments are pushed to change regulations and stimulate growth. The European commission pushes governments to play a more active role in helping firms overcome the barriers of internationalization. SMEs in particular benefit from public policy support, given their limited resources. However, only 7% of internationalized SMEs use available support mechanisms, calling for a greater awareness of support inititatives (European Commission, 2011). Besides, if large companies have understood the importance of internationalization of the value chain, it seems that benefits from this collaborative process apply particularly to small firms. The increasing cross border competition resulting from globalization disadvantages indeed even more SMEs regarding their bigger competitors because of their resource limitation. Therefore, governments need to foster international collaboration and enforceability of contracts in order to increase SMEs' global competitiveness.

10 resons why governments should foster international collaborations:

1. **Create new businesses opportunities**. From a strategic perspective, collaboration opens up the possibility of creating new business models or joining developments in collaboration with other partners which would otherwise not be possible.

2. **Find complementarities**. Sometimes related to economies of scale, collaboration permits SMEs to complement their resources, including R&D, production, marketing or management capabilities.
3. **Innovate**. Firms increasingly rely on external sources of innovation by emphasizing the sharing of ideas, knowledge, resources and individuals. Besides, collaborating with partners with better know-how can influence positively on the quality of the product.
4. **Foster external communication and reputation**. Working with partners leads to improved branding and communication power. Also, collaboration enhances credibility.
5. **Overcome uncertain economic periods**. As a response to insecurity, networks represent an alternative to complement their own capacity, reducing the barriers to develop or adapt new technologies.
6. **Save costs** by sharing resources (e.g: space, transport, etc). Sharing of resources results in a reduction of individual costs. Further, sharing the risks of activities that are beyond the scope or capabilities of a single firm is a smart approach to explore new ideas and markets.
7. **Increase sales, performance and competitiveness**. Some types of collaboration permit to achieve a better selling position to enter new markets. Collaboration represents a vital source of knowledge for most SMEs which affect the quality of their human capital and the firm's performance. SMEs can improve their competitiveness by providing access to external resources.
8. **Gain buying**. If some firms act together, normally they increase the buying power to its suppliers, permitting them to obtain better deals. Acting together, companies can increase their negotiating power and influence their decisions
9. **Increase flexibility**. Outsourcing and collaboration with other firms permit SMEs to reduce investments in internal tasks and be more flexible to market demands.
10. **Internationalize.** Collaboration permits SMEs to access international markets and to select partners in terms of quality of services/products provided independently of their location. It offers a better position to face the fast-changing and increasingly competitive global market.

10 resons why smaller companies do not collaborate:

1. **Partners search and selection**. Lack of time for partners search and problems to find appropriate partners.
2. **Scarcity of resources**. Traditionally SMEs have little to offer.
3. **Investment**. SMEs with limited resources are not willing to invest in collaborations.
4. **Bad collaboration planning**. Most SMEs' decisions are made by the owners, without a clear strategic plan. It is important to have a clear idea about the collaboration objectives and the type of collaboration before the beginning.
5. **Fear**. SMEs' propensity to cooperate is significantly less than that of large companies because they are more reluctant to share internal know-how.
6. **Lack of skilled personnel**. The lack of skilled personnel hinders the implementation of collaborative approaches.
7. **Trust, commitment and compromise**. Lack of mechanisms to overcome trust, credibility and compromise problems related with win-win collaboration.
8. **Inability to detect new business opportunities**. Due to lack of time and know-how, a lot of SMEs lose the opportunity to create new business, enter new markets or create new products in collaboration with other SMEs.
9. **Information asymmetry**. The lack of knowledge about specific success factors of collaborations.
10. **Unwillingness to collaborate**. SMEs do not want to enter collaborative relationships.

The implications of SME internationalization has recently received increased attention in public policy. In many countries, entrepreneurs receive a range of support from the government in terms of financial assistance and training to facilitate the internationalization of their company. Similar programs should be developed for entrepreneurs who aim to develop collaborations. I recommend having more training courses for entrepreneurs throughout the life of their business. Because the entrepreneurship process is characterized by critical events, incorporating the findings from this dissertation that relate to business network can encourage entrepreneurs to more systematically adopt collaborative approaches. Providing increased support for collaborations could also help to reduce the general fear of expropriation that hinders many potential entrepreneurs from starting collaboration. This could finally help to increase the likelihood that SMEs internationalize.

There is a need to support agencies to shift their focus from providing objective knowledge to support experiential learning and network development. This clearly has important implications for policy makers, given the contribution of SMEs to economic growth.

I would like to conclude the dissertation with some final reflections from my experience researching the implications of cross-border collaborations for smaller companies internationalization and how my research could help governments and entrepreneurs. As outlined at the very start of this dissertation, collaboration is inherent to the internationalization process. It is part of the dynamism in an economy which contributes to positive economic development and renewal. Besides, innovations would not come to markets if people did not share ideas. In particular, new and small firms need to collaborate in order to overcome their resources limitations. In this vein, I would like to suggest a practical applicability of my dissertation, called Cloz'ep.

In order to connect the world's entrepreneurs and make smaller companies more international and competitive, I believe that government should create a multi-sided platform dedicated to entrepreneurs. More than a social network, it is a real business platform which focuses solely on entrepreneurial networking. The objective is to help entrepreneurs to find foreign partners and thus built a robust legitimacy in the collaborative world through a multi-sided platform. Said otherwise, this platform will cater the needs of three categories of professionals: Entrepreneurs (connect with entrepreneurs all over the world and find opportunities for new development), Private and Public organisms (access to a captive worldwide entrepreneur base). Two types of entrepreneur profiles are targeted: Active entrepreneurs who are active collaboration seekers and Passive entrepreneurs who are not actively looking for a collaboration partner but may be approachable. The access to passive entrepreneurs is very valuable for active entrepreneurs: some profiles are hidden from the internet market and access is expensive (time costs). The goal is to build up an entrepreneur base with state of the art entrepreneur profile and reputation management. Through this platform, entrepreneurs will be able to update their company profile regularly, share content (photos, videos), connect with other entrepreneurs to grow their network and find reliable partners. Besides, in order to decrease entrepreneurs' fear of collaboration, partners' competences can be endorsed by their network and the platform can calculate the distance separating you from another entrepreneur.

By developing an industry and geography entrepreneur search tool, this platform will revolutionize the way entrepreneurs leverage their contacts. At the moment, they are using address books which are non-comprehensive, non-searchable, non-updated, limited to fist degree contacts and doesn't allow to display mutual contacts. With the platform "Cloz'ep", they will be able to use a real-time entrepreneur network which is searchable, updated in real time, open to 1st and 2nd degree contacts and which provides a rapid access to the relevant contact.

Fig.8. Suggested practical applicability for policy makers.

The suggested platform will also revolutionize the way entrepreneurs search for business partners and find matching company; use entrepreneurs referrals and increase trust; brand companies online (entrepreneur page); engage with collaborators (in complement to international forums and fairs). Besides, Cloz'ep may become the first site to gather data on entrepreneur histories and the go-to place for developing collaborations.

5.5 Managerial implications

As explained in this dissertation, developing and introducing products in foreign markets is getting more and more complex. Firms which do not have sufficient in-house resources need to source external expertise through collaborations with outside partners of various nature; suppliers, customers, competitors, consultants, professional and industrial associations, universities, public research organizations. I tried to sum-up the reasons why collaboration with different types of partners is critical for small companies to internationalize.

Collaborations with supplier:

- Access to the technological/market knowledge and expertise of suppliers.
- Identify technological opportunities.
- Reduce the product development cycle time.
- Faster answer to competitor moves.
- Align the supplier’s technology development effort with the firm’s needs.

Collaborations with customers:

- Identify new ideas for development.
- Understand users’ needs, thereby reducing the risk of failure for the firm.
- Facilitate the anticipation of market requirements. This is particularly significant when the target market of the firm is still fuzzy or when the lack of market information is an obstacle to the firm.
- Increase users’ confidence in new product offerings, which consequently reduces the risk associated with introducing the product on the market.
- Increase the customer's motivation to recommend the product to third parties.

Collaborations with competitors:

- Access to complementary resources and knowledge for the development of a new product or service.
- Access competencies that can be difficult, time-consuming and costly to develop.
- Reduce the risks and costs associated with the introduction of new products on the market, which is particularly important for complex innovation projects.
- Facilitate the setting of an industry standard, whereby firms agree to introduce products or services based on a jointly developed, common standard.

Collaborations with private science partners (consultants and commercial labs):

- Provide fundamental scientific or technological knowledge, but more commonly provide applied knowledge, specialized skills and information.
- Assist companies in identifying weaknesses in their existing processes and draw their attention to possible improvements.
- Advise the firm on the internationalization process in general.
- Provide experience sharing, helping firms to articulate and define their particular needs for internationalization; and acting as broker, pairing companies with needs and solutions.

Collaboration with private science partners (universities and public research institutes):

- Supply new scientific and technological knowledge.
- Complement existing internal R&D resources and get access to specialist technical support, including experts and special equipment.
- Provide training for personnel and skilled/graduated workforce.
- Access to results from universities research that need to be commercialized.

Nevertheless, if external sources speed up internationalization, some researchers point out that this process often result in neglecting the development of opportunity costs. The well-known difficulties that have to be overcome by SMEs to succeed in collaborating are even more amplified when collaboration are at the international or even global level. Although international collaborations have shown their benefit effect for SMEs, international collaborations in the context of SMEs are more the exception than the rule. To manage these relationships successfully, we believe there are three main steps; SMEs need to identify opportunities and select adequate partners having complementary resources and skills to learn; SMEs need to be able to exploit the relationship efficiently through learning from partners' knowledge and SMEs need to develop trust, embeddedness between partners.

First of all, concerning the *initiation and selection phase*, identifying opportunities and select appropriate partners is the initial crucial step for affecting the success of collaboration. Being able to asses ones competences and the potential partners complementary capacities is a key ability in order to select appropriate partners.

Besides, the starting point for managing collaborations successfully consist in forming the partnership only if the achievement of a priority goal has been determined and if the partners cannot reach the common goal if they act alone. Unfortunately, I believe that many firms do not allocate sufficient time to weight the pro's and con's of collaboration and check that partner's intentions, competencies, and perspectives match their needs and expectations.

Second, the *implementation phase* concerns the partner's ability to add new knowledge to its existing knowledge. The collaboration success is directly related to the transfer of knowledge. To ensure transfer knowledge achievement, firms need to build a culture of learning. Building such a culture implies making consensus, sharing goals and values.

Finally, the *control phase* stems from the fact that collaborations magnify the danger of losing core and proprietary knowledge. The intangibility of the component of the transaction increases the transactional hazards for SMEs. Trust and proximity plays then determinant role for successful collaborations. Communication and information sharing is at the basis of trust building. Firms which have developed more international relationships or for a longer period of time develop expertise in managing foreign operations. These control mechanism enable international experimented firms to reduce behavioral uncertainties.

Such discoveries are important for smaller companies that need to integrate the use of combination of different collaboration activities in their value chain for successful internationalization. The results of this dissertation imply that managers should consider business networks as an efficient means to go international more rapidly and profitably. From a perspective of firm strategy, evidence of the role of business network suggests that firms must prioritise the participation in these types of collaborations and pursue such opportunities in an assiduous and strategic manner. Managerial implications include the importance of leveraging network relationships proactively, and with discernment.

APPENDIX I: Awex report

UCL
Louvain School of Management

Globalization and SME internationalization

A study commissioned by **AWEX**

Coordinated by **Marine Falize**

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L’intensification de la mondialisation dans les dernières années a modifié de façon radicale les marchés économiques et les conditions d’opération dans les milieux d’affaires, imposant ou facilitant un engagement international à un grand nombre de PME. Cet engagement n’est cependant pas uniforme et peut prendre des allures très différentes d’une entreprise à l’autre. Ainsi, on ne parle pas seulement d’exportation, mais désormais d’intégration à un marché de plus en plus global où l’ouverture des frontières et certaines avancées technologiques incitent les entreprises à explorer de nouvelles opportunités et des façons de faire qui les amènent à travailler davantage à l’extérieur de leurs limites territoriales. Par le biais de cette importante enquête sur l’internationalisation des PME, nous avons pour objectif de faire évoluer les connaissances sur les comportements, les actions et les décisions stratégiques des dirigeants de Petites et Moyennes Entreprises (PME) ainsi que d'éclairer les gouvernements en matière de politique d'aide aux entreprises.

La plupart des travaux sur l’internationalisation des PME s’intéressent aux différentes activités internationales prises isolément et très peu abordent une vision d’ensemble qui consisterait à approfondir et comprendre comment et pourquoi les PME s’engagent dans des activités qui dépassent leurs frontières, que ce soit pour y trouver des facteurs de production essentiels à leur compétitivité, des ressources qui permettent de rencontrer des objectifs d’innovation ou de qualité afin de percer des marchés hautement concurrentiels et de trouver des partenaires d’affaires. Pourtant, l’importance de mieux comprendre le comportement des PME à l’égard de ces différentes stratégies est proportionnelle à l’impact de la mondialisation sur leurs capacités à survivre et se démarquer et sur l’obligation de renouveler leur modèle d’affaires. Cette vision plus globale de l’internationalisation des PME nous conduit à y intégrer non seulement les activités traditionnelles d’import-export, prenant la forme de flux internationaux de marchandises (dimension mercantile), mais aussi l’adoption par la PME de technologies ou de systèmes de fabrication provenant de l’étranger (dimension technologique), ainsi que des activités de partage d’informations, de collaboration et d’innovation avec des partenaires étrangers (dimension organisationnelle).

Trop peu de PME exportent… ou les PME n'exportent pas suffisamment! Combien de fois avons-nous entendu ou lu cette affirmation dans les dernières années? Encore récemment, plusieurs enquêtes concluaient au faible engagement international des dirigeants de PME. Ces affirmations sont peu nuancées et ont tendance à considérer les PME comme un tout homogène ayant les mêmes caractéristiques, les mêmes capacités, les mêmes objectifs et les mêmes trajectoires de développement. Les statistiques considèrent implicitement que «toutes» les PME ont le potentiel ou la volonté d'exporter ; ce qui est de plus en plus discuté et critiqué par différentes enquêtes ou recherches. Or, toutes les PME ne sont pas vouées à réussir sur les marchés étrangers parce qu'elles n'ont pas les atouts nécessaires (stratégie, produit, expertise, ressources, compétences). Les statistiques générales ont donc pour effet de sous-estimer l'ampleur du niveau d'internationalisation des PME.Des exemples d'entreprises qui s'internationalisent dès les premières années de leur création, des PME qui ont des collaborateurs à l'autre bout de la planète, des dirigeants de petites sociétés qui ont des bureaux sur différents continents se multiplient faisant en sorte que les «modèles d'affaires» des PME sont de moins en moins communs. Jadis considérée comme un des principaux déterminants de l'internationalisation des firmes, la proximité, qu'elle soit physique, culturelle ou humaine laisse place à d'autres particularités qui ne sont pas encore bien définies. Aussi, ces relations avec l'étranger dépassent les relations commerciales d'achats et de ventes de marchandises qui demeurent les activités internationales de base. L'internationalisation a donc pris des dimensions plus globales et holistiques par des échanges de marchandises certes, mais aussi par des collaborations, du partage d'information et des activités conjointes d'innovation.

Ce nouveau projet de recherche international permet de poursuivre la recherche sur un panel plus large de PME et d'aborder la question de l'internationalisation sous un angle privilégiant ses différentes dimensions, à savoir l'export mais également l'import, la sous-traitance, la collaboration et les investissements directs à l'étranger. Ce projet de recherche s'articule autour d'une enquête de grande envergure auprès des PME belges. Cette enquête part d'une autre enquête qui a déjà été réalisée au Canada et est en cours de développement en France et au Brésil. Cette étude, menée par l'Institut de recherche sur les PME au Québec, a été développée en collaboration avec une entreprise de sondage afin d'obtenir un échantillon représentatif de PME Québécoises. Afin d'adhérer à ce consortium international, nous avons suivi les mêmes standards de qualité au niveau de la méthodologie.

Pour rencontrer ces objectifs de recherche, nous avons tout d'abord rencontré une dizaine de chefs d'entreprises et de représentants d'organismes publics pour une période d'environ une heure afin de valider notre questionnaire d'enquête. Ces entrevues ont permis d'adapter notre questionnaire qui a ensuite été soumis à 205 autres PME par téléphone.

Les objectifs de cette enquête sont multiples mais, à un premier niveau, nous souhaitons mieux connaître les différentes formes d'internationalisation des PME, les motivations et les impacts, le pourcentage d'entreprises que cela touche et finalement les relations entre ces formes afin d'en dégager différents éléments de complexité. Nous adoptons ainsi une vision globale de l'internationalisation des PME en considérant toutes les dimensions de leur organisation, allant des inputs jusqu'à la vente à l'étranger en passant par différentes activités de soutien qui permettent de créer de la valeur dans l'entreprise. Avant toutefois de présenter cette vue intégrée, nous allons discuter individuellement des activités internationales les plus connues et du comportement des PME à leur égard, après avoir aussi rappelé l'influence du propriétaire dirigeant de la PME pour mieux comprendre son attitude face à l'international.
Dans ce rapport de recherche, nous ferons ainsi état du comportement des PME belges francophones face aux activités internationales, celles-ci touchant aux flux de marchandises, aux relations d'affaires et à l'organisation de leurs activités. Notons d'entrée de jeu que la taille moyenne des PME de notre échantillon (7 salariés) pourra faire valoir un niveau relativement faible d'engagement à l'international. À l'occasion, une présentation par taille des résultats montrera certains comportements spécifiques. Finalement, nous discuterons de quatre profils qui se distinguent dans les PME enquêtées et qui montrent qu'une vision globale est révélatrice d'un engagement nettement plus important que ce que laissent croire certaines enquêtes. Cet engagement confirme aussi que beaucoup de dirigeants savent utiliser les ressources internationales de différentes façons permettant de les qualifier des PME *« Traditional »*, *« Born-local »*, *« Born-global »* et *« ReBorn-global »* sur le plan de l'internationalisation.

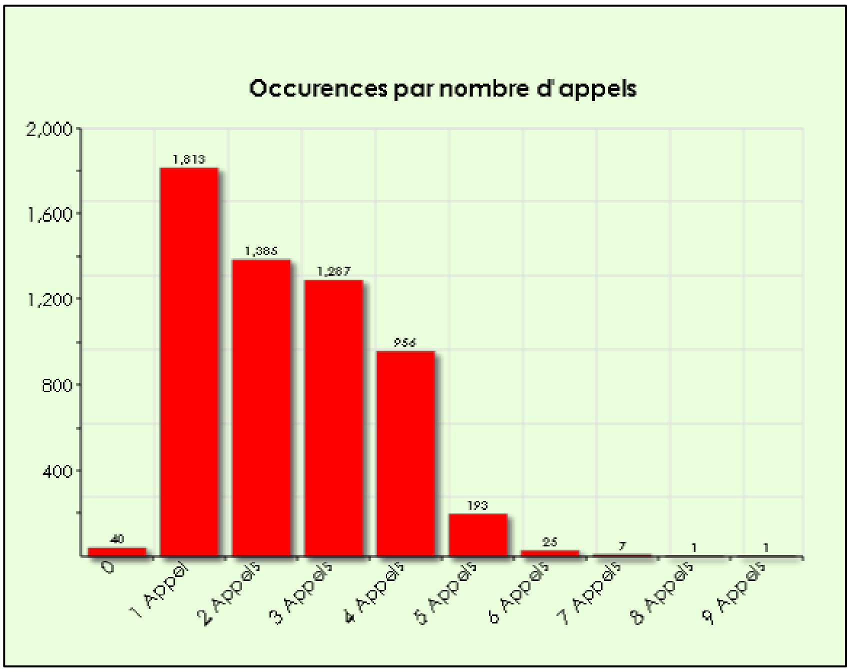
Collecte de données : processus et outils

De façon à mieux comprendre et appréhender les différents modes d'internationalisation des PME (importation, exportation, sous-traitance, IDE, etc.), les déterminants de ces activités et les impacts sur l'entreprise, nous avons conduit une enquête téléphonique auprès de 206 PME manufacturières en Belgique. L'enquête a également permis de relever des informations sur le profil et le fonctionnement de l'entreprise (réseau, pratiques d'affaires, performance, innovation) et le profil du dirigeant (formation, expérience, contrôle, orientation stratégique).

Un questionnaire d'enquête a été rédigé à partir d'une importante recension des écrits sur les modes d'internationalisation des PME, réalisée par nos collègues chercheurs de l'Institut de Recherche sur les PME au Québec (les professeurs Josée St-Pierre, Ph.D ; Louis Raymond, Ph.D ; et Frédéric Laurin, Ph. D ainsi que Sylvestre Uwizeyemungu). La littérature étant relativement limitée sur les différents « comportements internationaux » des PME, dont la nécessité de délocaliser à l'étranger ou de collaborer pour pallier à certaines déficiences nationales, ils ont conduit des entrevues auprès de PME internationalisées à divers degrés et organisé des forums de discussion réunissant des chefs d'entreprise et des représentants des pouvoirs publics (St-Pierre, 2009b). Pour réaliser l'étude en Belgique, nous avons tout d'abord rencontré une dizaine de chefs d'entreprises et de représentants d'organismes publics. Ces entrevues ont permis d'adapter notre questionnaire qui a ensuite été soumis à 205 autres PME par téléphone.

Afin de réaliser l'enquête en Belgique, nous avons travaillé en collaboration avec le bureau d'étude Sonecom. Les objectifs de cette enquête concernaient la passation du questionnaire préalablement élaboré par l'Université de Québec et adapté par le CRECIS et l'AWEX auprès de 205 PME (Wallonie et Bruxelles). La population de référence est composée de PME de divers secteurs d'activité économique en Belgique francophone et le public cible est composé de responsables de PME (patrons ou gérants). Autrement dit, la personne invitée à répondre à l'enquête devait occuper un poste qui l'habilite à s'exprimer sur le sujet au nom de sa structure et avoir connaissance des informations qui étaient demandées. L'échantillon de 205 PME interviewées devait également être représentatif de l'échantillon théorique que nous avions établi grâce à la base de données de l'Union Wallonne des Entreprises, tant au niveau des secteurs d'activités qu'au niveau des zones géographiques d'implantation de ces PME. L'enquête a débuté en juillet 2013 et s'est clôturée en septembre 2013.

Les interviews téléphoniques ont été réalisées à l'aide d'une interface de gestion de contacts qui permet d'opérer sur un fichier de gestion unique, informe de l'avancement de l'étude et offre une meilleure gestion des rendez-vous ainsi que la possibilité de pouvoir effectuer une recherche pour retrouver les coordonnées d'une entreprise. L'enquête est réalisée par téléphone, en saisie directe via cet interface Les réponses sont directement encodées dans une base de données commune. Le questionnaire a été mis en ligne afin de simplifier l'utilisation du matériel informatique et de pouvoir envoyer à l'entreprise désireuse de participer le lien d'accès au questionnaire. 5717 numéros ont été appelés (2134 refus, 2028 absents, 859 numéros erronés, 2 pas de numéro), ainsi qu'une dizaine d'emails ont été nécessaires afin de réaliser les 205 enquêtes. Les occurrences par nombre d'appels sont reprises dans le graphique ci-dessous. La proportion de réussite par contacts effectifs est de 8%.



Graphique1 : Occurrences par nombre d'appels effectués (Sonecom)

Nous avons pu recueillir les données sur 205 PME de diverses communes de Belgique et de différents secteurs. De façon à nous conformer à la définition des PME de l'Union Européenne, nous avons extrait de notre enquête les entreprises ayant plus de 250 salariés. Les entreprises de notre échantillon comptent en moyenne 7 employés (min : 1 ; max : 120) et ont des activités internationales très diverses. En effet, 84% de notre échantillon sont des TPE, soit des très petites entreprises qui comptent moins de 10 employés.

Les entreprises engagées à l'exportation

Les données de notre enquête montrent que 44,4 % des PME sont exportatrices et que le pourcentage des exportations dans le chiffre d'affaires global pour l'ensemble des PME étudiées s'élève en moyenne à 40,9% % (écart-type de 32.8 %). Le pourcentage du chiffre d'affaires réalisé à l'étranger est relativement plus élevé que ce qui a été observé dans d'autres enquêtes notamment au Canada (30.8%). Cela peut se justifier de par la taille de notre pays. Les secteurs les plus représentés dans notre échantillon de PME exportatrices sont l'impression (18.7% des PME exportatrices), la fabrication de produits en métal (12% des PME exportatrices), la fabrication de machines ou équipements (8.8% des PME exportatrices), la production de produits alimentaires (7.7% des PME exportatrices), la production de bois et d'articles en bois et en liège (6.6% des PME exportatrices).

De façon plus détaillée, on peut discuter de l'activité d'exportation chez les PME comme suit.

Les marchés visés par les PME exportatrices. Comme on pouvait s'y attendre, les pays limitrophes représentent le premier partenaire d'affaires international des PME belges : 73.6 % des PME qui exportent destinent leurs produits aux pays limitrophes à la Belgique. Il faut noter cependant que pour les PME en affaires avec les pays limitrophes, les ventes réalisées là-bas représentent une valeur moyenne de 29.9 % du chiffre d'affaires. Le deuxième partenaire d'affaires est l'Union Européenne où 38.5 % des PME exportatrices destinent leurs produits. La portion du chiffre d'affaires réalisé dans cet espace économique est cependant supérieure, soit en moyenne 35.4% de leur chiffre d'affaires global. Concernant le reste de l'Europe, 10.1% des PME sont concernées par ces exportations avec un pourcentage des ventes tout de même en moyenne de 31.9%. Les autres régions sont visées par peu de PME soit 9,9 % pour l'Amérique du Nord (moyenne de 21,8 % du CA), 7,7 % pour l'Afrique (moyenne de 10.4% du CA) et 4.4% vers l'Asie (moyenne de 15.25% du CA). On notera également que près de 7.7 % des PME exportent dans d'autres régions du monde pour une valeur moyenne de 33.1% des ventes globales. Nous pouvons constater que les exportations se concentrent essentiellement sur les pays limitrophes à la Belgique ainsi que l'Union Européenne. Il est étonnant de constater le faible engagement des PME à l'égard des marchés hors Europe. Tout en reconnaissant les particularités de ces pays en terme de croissance économique.

Cependant, ces pays présentent une plus grande complexité pour les PME belges, par exemple, à cause des distances physiques et culturelles qu'elles doivent franchir. Il semble que les organismes de soutien à l'internationalisation devraient se concentrer sur cette problématique et tenter de répondre aux besoins ou aux aspirations des dirigeants de PME vers ces pays à forte croissance.

Le nombre de marchés d'exportation**;** Si 21,6 % des PME exportatrices n'exportent que dans un seul pays, la majorité exporte dans deux pays : 28,4 %. Si l'on reprend par catégories, 64.8% des PME exportent dans 1 à 4 pays différents, 13.2% des PME exportent dans 5 à 9 pays différents, 10.1% des PME exportent dans 10 à 19 pays différents, tandis que 9.8% exportent dans 20 à 55 pays différents. En moyenne, une PME belge exportatrice vend dans 5 pays différents (moyenne de 5,6 pays, avec un écart-type de 8,15); ce qui présente un chiffre supérieur au nombre de pays limitrophes à la Belgique. La majorité des PME exportatrices peuvent dès lors être considérées comme globales; ce qui implique une plus grande complexité en terme de coordination des marchés. Cette réalité montre ainsi que la proximité des PME avec leurs parties prenantes jugée comme l'une de leurs principales caractéristiques est peut-être en voie de modification; ce qui demande d'être exploré davantage et sera analysé plus en profondeur dans la dernière partie de ce rapport.

L'étendue de l'expérience d'exportation**.** Les différents travaux de recherche reconnaissent la complexité que peuvent présenter les activités internationales pour les entreprises ayant des ressources limitées, justifiant du même coup qu'une proportion non négligeable de PME arrête leurs efforts d'exportation après la première année. Cependant l'étendue moyenne de l'expérience d'exportation de notre échantillon d'entreprises est de 20,68 années, et près des trois quarts des entreprises exportent depuis plus de dix ans. Cette expérience acquise est considérée comme un important facteur de réduction des risques puisque les dirigeants font face à une incertitude moins grande dans leurs activités, ayant déjà développé les compétences requises pour réussir dans des contextes d'affaires plus complexes. Notre échantillon d'entreprises présente une autre particularité, à ce titre 38,6% des PME exportent dès la première année de leur création, sans expérience domestique préalable. Cela peut être mis en relation avec la littérature des entreprises à internationalisation précoce. Nous reviendrons aussi sur ce point ultérieurement.

L'exportation : barrières et motivations

Sur les 205 PME de l'échantillon, 114 (soit 55,6 %) réalisent la totalité de leur chiffre d'affaires en Belgique. Les justifications sont très diverses, à l'image de la population des PME. Vouloir accroître le nombre de PME exportatrices demande de bien comprendre les réactions des dirigeants face à l'exportation.

Pour plus de la moitié (54,4%) des entreprises qui n'exportent pas, les dirigeants considèrent que le marché national est satisfaisant pour leur entreprise. Ce pourcentage de non exportateurs évoquant la taille suffisante du marché national est étonnant étant donné la petite taille de notre pays. Soit ces dirigeants souhaitent prendre de l'expansion sur le marché local avant d'exporter ; ce qui s'apparente à la démarche traditionnelle d'exportation par étapes, soit ces dirigeants ont une faible volonté de croissance et pour eux l'exportation ne présente pas un intérêt pour leur entreprise.

Par ailleurs, les ressources financières limitées des PME sont souvent mentionnées comme contraintes à l'exportation. On voit ici que leur importance vient au deuxième rang. Pour près d'un tiers des dirigeants interrogés l'expertise à l'international semble être un frein au même niveau que l'absence de contact à l'étranger. Tel que déjà évoqué, la taille moyenne des entreprises interrogées peut influencer nos conclusions. Les ressources financières pourraient être une contrainte effective surtout pour les plus petites entreprises qui ont un accès réduit aux marchés financiers souvent à cause de la rareté des garanties qu'elles peuvent offrir.

Tableau 1. Barrières évoquées par les PME pour ne pas exporter	Pourcentage de PME
Le marché belge est satisfaisant	54.4%
Vos ressources financières sont limitées	28.1%
Votre expertise à l'international est limitée	22.8%
L'absence de contact à l'étranger	22.8%
La concurrence sur le marché étranger est trop forte	19.3%
Les difficultés pour identifier les opportunités d'affaires à l'étranger	18.4%
La réglementation et les barrières sur le marché étranger sont complexes	15.8%
La compétitivité de vos prix est insuffisante	13.2%
La barrière de la langue	8.8%
Le manque de soutien public à l'exportation	7.9%
L'inadéquation des produits/services à la demande étrangère	7.1%

Si l'on regarde du côté des exportateurs, les deux raisons dominantes pour justifier l'exportation révèlent de décisions autonomes d'une part pour exploiter une opportunité de marché à l'étranger et d'autre part pour accélérer la croissance. En troisième rang, nous retrouvons les PME qui vont s'internationaliser en réponse à la demande d'un client étranger. Cette forme d'internationalisation, que l'on rencontre souvent chez les PME offrant un produit distinctif, est considérée comme passive car en réponse à une demande non sollicitée. Finalement, on voit aussi que pour 15% des PME les programmes et l'appui des pouvoirs publics peuvent être un déclencheur significatif ou une motivation à exporter. Ces aides peuvent être considérées comme des « facilitateurs ».

Tableau2. Motivations à l'origine de l'exportation des PME	Pourcentage de PME
Exploiter une opportunité de marché à l'étranger	83.7%
Accélérer votre croissance	65.1%
Répondre à la demande d'un client	55.8%
Réduire votre dépendance au marché belge	43.1%
La saturation du marché belge	27.9%
Profiter des programmes et l'appui gouvernemental	15.1%
Utiliser une capacité de production excédentaire	13.9%
Liquider un surplus d'inventaire	3.5%

L’exportation : sources d’information et dispositifs de soutien

L’incertitude sur les activités internationales peut être réduite par une bonne connaissance des réseaux, des éléments culturels, des sources de difficultés, des institutions en place, etc. Cela suppose une recherche active d’information vers des sources qui peuvent être différentes des sources habituelles, et qui ne sont pas exclusivement confinées aux réseaux d’affaires des entreprises (Johanson et Vahlne, 2009). Plus les sources d’information sont éloignées de l’entreprise (proximité physique, mais aussi relationnelle et culturelle), plus elles sont supposées fournir une information nouvelle susceptible de réduire l’incertitude par un accroissement sensible des connaissances utiles aux dirigeants pour prendre des décisions plus éclairées. Cette information est aussi considérée comme un élément d’apprentissage important servant à développer les compétences internationales des entreprises permettant de faciliter et d’accélérer les processus d’internationalisation, tout en réduisant les difficultés ou les possibilités d’échec (Johanson et Vahlne, 2009; St-Pierre, 2009b).

Le tableau 3 présente les différentes sources d’information en Belgique ou à l’étranger avec le pourcentage correspondant de PME exportatrices qui y recourent pour leurs décisions d’exportation. On y voit le rôle plus important des clients pour la moitié des dirigeants et des fournisseurs pour un tiers des dirigeants. Ces sources d’information sont utilisées en Belgique mais aussi à l’étranger. Ce constat confirme l’importance des réseaux locaux pour favoriser l’internationalisation des PME (Zho, Wu et Luo, 2007), ceux-ci pouvant aider à mieux utiliser les ressources de l’environnement national pour développer les compétences clés nécessaires à l’étranger. On remarque également que les consultants, agences de soutien et autres institutions publiques demeurent moins utilisés, avec un maximum de 15% des dirigeants de PME. Mentionnons ici les efforts des organismes publics et d’accompagnement comme l’AWEX pour inciter les PME à participer à des « missions commerciales » à l’étranger leur permettant de réduire leurs coûts et profiter de la dynamique collective pour développer leurs réseaux autant en Europe qu’à l’étranger.

Tableau3. Sources d'information pour l'exportation	En Belgique	A l'étranger
Vos clients	51.6%	45.1%
Vos fournisseurs	32.9%	26.4%
Vos concurrents	20.5%	23.1%
Des consultants	7.9%	8.9%
Des agences de soutien à l'exportation	**15.9%**	6.6%
Autres institutions publiques	11.3%	2.2%

Par ailleurs, les dirigeants de PME mentionnaient que ce sont souvent dans les déplacements à l'étranger et dans les salons qu'ils réussissent à élargir leurs réseaux avec des partenaires d'affaires. Ce constat confirme l'importance des réseaux développés à l'étranger pour favoriser l'internationalisation des PME. Près de 70% des PME exportatrices se servent des voyages à l'étranger comme source pour leurs décisions d'exportation. Ces voyages peuvent être réalisés à partir de missions commerciales organisées par le gouvernement ou des organismes d'appui à l'exportation comme souligné plus haut. Ces déplacements à l'étranger permettent aussi de mieux appréhender les différences culturelles et institutionnelles dans le pays visé, celles-ci pouvant être source de difficultés dans les relations d'affaires internationales.

Le tableau 4 montre que ce sont les sources plus facilement accessibles et contrôlables par les dirigeants qui sont plus sollicitées pour l'exportation. Ces résultats ne sont pas étonnants vu les faibles coûts qu'implique l'utilisation de l'Internet et des revues, mais aussi le fait que les informations recueillies ne demandent pas d'être filtrées comme l'exigent les informations transmises par des individus avec qui la confiance ne serait pas établie (Johanson et Vahlne, 2009). L'usage des sources d'information externes d'internationalisation telles que Internet et des revues / journaux spécialisés peuvent aider à se faire une idée du projet, des difficultés, des ressources à mobiliser mais elles ne sont pas suffisantes pour « justifier » une décision finale d'internationalisation. Les contacts personnels sont essentiels pour approfondir les informations relevées initialement, leur donner plus de crédibilité et aussi mesurer des facteurs humains qui sont autrement imperceptibles. Des différences de valeur et de points de vue, qui font souvent échouer des relations un peu complexes, doivent être détectées le plus tôt possible dans un processus d'engagement avec des partenaires étrangers.

Tableau4. Autres sources d'information pour l'exportation	Pourcentage de PME
Internet	70.1%
Des voyages à l'étranger	67.8%
Des salons et expositions	58.7%
Des revues professionnelles ou des journaux d'affaires	34.5%
Des réseaux de PME	21.8%

Au niveau des dispositifs de soutien à l'exportation, les PME exportatrices de notre échantillon utilisent essentiellement des services d'organismes privés de conseil, d'assurance ou d'accompagnement à l'exportation. Ensuite, près d'un quart des entreprises exportatrices interrogées utilisent les services informationnels, commerciaux mais aussi financiers de l'Awex (Agence Wallone à l'Exportation). On remarque que les services proposés par les chambres de commerce, les pôles de compétitivité et les ambassades sont peu utilisés par les PME.

Tableau5. Dispositifs de soutien à l'exportation	Pourcentage de PME
Services d'organismes privés de conseil, d'assurance ou d'accompagnement à l'exportation	37.4%
Service informationnel de l'AWEX (études de marchés,...)	26.4%
Service commercial de prospection de l'AWEX (missions, salons,...)	23.1%
Service d'incitants financiers de l'AWEX	20.9%
Programme Explort de l'AWEX	16.5%
Service de chambres de commerce et de l'industrie	7.7%
Service des pôles de compétitivité ou clusters	4.4%
Service des ambassades	2.2%
Instrument de financement de la SOFINEX ou FINEXPO	1.1%
Missions princières	0%

L'exportation : difficultés rencontrées

Pour un quart des entreprises qui exportent, les ressources financières limitées semblent être la principale source de difficultés ; ceci reprend les coûts de prospection mais aussi de représentation sur les marchés étrangers. Les capacités internes de l'entreprise semblent aussi être un handicap face à la forte concurrence sur les marchés étrangers. Enfin le manque de ressources humaines en interne ayant de l'expertise à l'international se place en troisième position concernant les difficultés rencontrées lors du développement international.

Tableau6. Difficultés évoquées par les PME pour le développement international	Pourcentage de PME
Vos ressources financières étaient limitées (coûts de prospection des marchés, de représentation...)	25.3%
La concurrence sur les marchés étrangers était forte (entreprise trop petite)	23.1%
Votre expertise à l'international était limitée (manque de ressources humaines internes)	18.7%
La réglementation et les barrières tarifaires (ou non) sur les marchés étrangers sont complexes	15.4%
Un manque de contacts à l'étranger	15.4%
Un manque d'information par rapport aux opportunités d'affaires à l'étranger	9.9%
La compétitivité de vos prix était insuffisante	7.7%
La barrière de la langue, les difficultés pour aborder une culture différente	5.5%
La carence des dispositifs publics de soutien à l'exportation	4.4%
Le déficit d'image de la Belgique à l'étranger	3.3%
Une mauvaise adéquation de vos produits à la demande étrangère	1.1%

Les impacts de l'exportation sur l'organisation

Pour comprendre les ressources et compétences nécessaires pour réussir à exporter, nous avons demandé aux dirigeants d'indiquer quels ont été les impacts des activités d'exportation sur leur organisation. L'élargissement du réseau d'affaires est l'élément le plus important pour la plupart des entreprises. Vient ensuite l'identification de nouvelles opportunités ou de nouveaux fournisseurs à l'étranger.

Globalement, on peut remarquer que les impacts en termes de développement du marché viennent en tête des impacts les plus enregistrés par les PME exportatrices et que les impacts en termes de structure organisationnelle sont loin derrière. Cela nous permet ainsi de comprendre les sources de croissance des PME exportatrices qui, au-delà de la vente de leurs produits, peuvent accéder à de nouveaux marchés grâce à un réseau informationnel plus étendu et un accès à des ressources leur permettant peut-être d'accroitre leur compétitivité.

Tableau7. Les impacts de l'exportation sur l'entreprise (% d'entreprises)	Pourcentage de PME
L'élargissement de votre réseau d'affaires	80.7%
L'identification de nouvelles opportunités pour l'entreprise	61.4%
L'identification de nouveaux fournisseurs à l'étranger	53.4.%
L'augmentation de votre rentabilité	48.8%
L'intensification des activités d'innovation	30.6%
La modification des systèmes/structures de production	26.1%
L'embauche de personnel spécialisé	22.7%
L'intensification des activités de veille stratégique	21.6%

Importation : 2e forme classique d'internationalisation

Le rôle de l'importation sur la dynamique internationale des entreprises est peu étudié. Pourtant l'importation d'inputs et de biens d'équipements confronte tout autant les entreprises aux marchés internationaux. Dans le rapport de l'enquête réalisée par EIM & GDCC (2009), on considère que malgré l'importance de l'importation chez les PME, ces activités ne sont que rarement voire jamais soutenues par les programmes publics. Toutefois, l'importation offre aux PME la possibilité d'améliorer leurs compétences internationales grâce aux échanges avec d'autres dirigeants et avec des gens d'autres cultures vivant dans des contextes différents, sans compter que cette activité vient enrichir l'expérience d'affaires à l'international de la PME.

Par ailleurs, l'approvisionnement à l'étranger via l'importation s'inscrit dans une tendance lourde induite par la mondialisation à la fragmentation des processus de production où ces activités sont de moins en moins réalisées entièrement sur le territoire national (OCDE, 2007).

Les motivations à l'origine des importations

Dans notre enquête, 38 % des PME font des achats d'intrants (pour la production) à l'étranger et 40.5% des PME font des achats de biens d'équipements. Ceci révélant peut-être l'influence de la mondialisation et la pression qu'elle exerce sur les entreprises pour accroître leur compétitivité. L'absence des ressources nécessaires sur le marché national est la première motivation à l'importation d'équipements (70.6 %) et d'intrants (72.2 %) tout comme cela a été observé en Finlande par Holmlund *et al.* (2007). L'importation d'équipements est aussi motivée pour 46.7 % des PME par le besoin d'accroître les capacités de production et pour 42.6% des PME par le besoin d'accroître les capacités d'innovation. Pour 36% des PME, l'importation d'inputs quant à elle est motivée par la volonté de réduire les coûts d'approvisionnement et la volonté d'accroître la capacité d'innovation de l'entreprise. En moyenne, pour les PME belges qui importent soit des équipements, soit des intrants, ces importations représentent 45.1 % de tous les achats d'équipements et 45,2 % des achats totaux d'intrants.

La provenance des importations

Le tableau 8 présente la distribution des PME en fonction de la provenance de leurs importations d'équipements et d'intrants. Le marché d'importation d'équipements est dominé par les pays limitrophes à la Belgique (56.4 % d'entreprises), suivi du marché européen (56.4 %). Pour les importations d'intrants, les pays limitrophes (61.1%) et l'Union Européenne (59%) viennent toujours en tête. Le pourcentage de PME important des équipements ou des inputs provenant de l'Asie est de 15,4%.

Tableau8. Pourcentage de PME important des différentes zones économiques	**Importation d'équipements**	**Importation d'inputs**
Des pays limitrophes	56.4%	61.1%
De l'Union Européenne	56.4%	59%
Du reste de l'Europe	14.1%	12%
De l'Amérique du Nord	8.9%	10.1%
De l'Asie	15.4%	14.5%
De l'Afrique	0%	4.8%
Du reste du monde	3.8%	8.4%

Au-delà des activités d'exportation et d'importation, l'internationalisation des PME peut passer par les activités de sous-traitance à l'étranger, l'établissement de différentes collaborations mais aussi la réalisation d'investissements directs à l'étranger.

La sous-traitance internationale

La sous-traitance peut être définie, selon Erber et Sayed-Ahmed (2005), comme l'achat de produits ou services réalisés sur mesure selon les spécifications techniques d'un client ou d'un donneur d'ordre. Elle suppose des interactions entre l'entreprise cliente et l'entreprise qui fabrique, de sorte qu'elle a longtemps été considérée comme une activité réservée aux grandes entreprises dans le but de pouvoir profiter de la flexibilité d'autres firmes pour, notamment, maintenir leurs capacités d'innovation. Or, la forte pression concurrentielle de réduction de coûts et d'augmentation des spécificités des produits oblige de plus en plus les PME à recourir à cette stratégie de production. Elle offre l'avantage de réduire les besoins en équipements diminuant les pressions sur les liquidités, mais aussi la nécessité d'embaucher du personnel spécialisé pour opérer ces équipements (Bengtsson et Dabhilkar, 2008). La rareté de la main d'œuvre dans certains secteurs d'activités peut dès lors être compensée par des stratégies de production incitant l'établissement de collaborations avec d'autres firmes, qu'elles soient locales ou étrangères ; ce qui permet aussi de « libérer » des ressources financières pouvant être allouées à d'autres activités.

Aussi, la sous-traitance dans les secteurs de la fabrication concernait essentiellement des activités de production faites sur mesure selon les spécifications techniques d'un client (Erber et Sayed-Ahmed, 2005), mais elle implique désormais une étendue plus grande d'activités permettant aux entreprises de fabrication de se recentrer sur leur cœur de métier (Bengtsson et Kabhilkar, 2008). Dans une étude réalisée sur des PME américaines, Sen et Haq (2010) indiquent que les PME sous-traitent pour avoir accès à l'expertise, aux connaissances et aux technologies absentes dans leur organisation. On pourra alors s'attendre à voir un effet sur les capacités d'innovation des entreprises, profitant ainsi de l'expertise d'autres entreprises (Mohiuddine, 2011; Elmuti et Kathawala, 2000) ou à tout le moins des transferts de connaissances découlant de l'ensemble des relations avec les sous-traitants.

Outre les objectifs de réduction de coûts et d'accroissement de l'efficacité et de la productivité, on peut aussi sous-traiter pour se rapprocher des marchés d'exportation comme le soulignent Di-Gregorio *et al.* (2009). Encore ici, on pourra voir dans la sous-traitance internationale une possibilité pour les PME d'accroître leurs compétences dans la gestion des activités internationales leur permettant d'être mieux armées pour voir venir la concurrence et y répondre efficacement (Sinha *et al.*, 2011).

Seulement 15.12% des PME belges enquêtées font appel à la sous-traitance pour une partie de leur production. Pour la grande majorité des entreprises (85,2 % des PME), la sous-traitance représente en moyenne 25.7 % de la valeur de leurs achats totaux d'intrants. La part de la sous-traitance provenant de l'étranger est en moyenne de 36.6% et provient en moyenne de 3.5 pays différents. Les pays limitrophes demeurent les premiers pays privilégiés pour le choix d'un sous-traitant pour la totalité des PME interrogées, suivi des pays de l'Union Européenne (tableau 9). On voit que l'Asie et l'Afrique sont relativement peu considérées par les PME belges.

Tableau9. Pourcentage de PME ayant recours à la sous-traitance dans différentes zones économiques	**Importation d'inputs**
Des pays limitrophes	100%
De l'Union Européenne	41.2%
Du reste de l'Europe	17.6%
De l'Amérique du Nord	11.7%
De l'Asie	5.8%
De l'Afrique	5.8%
Du reste du monde	11.7%

Le tableau 10 présente les motivations à l'origine de la décision de sous-traitance à l'étranger. Un peu plus de la 80% des PME voulaient profiter de l'expertise du sous-traitant et 100 % ont été motivées par la nécessité de satisfaire les demandes de leur client principal. La sous-traitance à l'étranger est souvent vue sous l'angle de la réduction de coûts imposée par l'émergence des pays à bas coûts de main d'œuvre. Or, la sous-traitance permettant une réduction des coûts est la quatrième motivation des PME belges ; ce qui pourtant pourrait sembler étonnant à première vue.

Tableau10. Motivations évoquées pour sous-traiter à l'étranger	Pourcentage de PME
Satisfaire les demandes de votre client principal	100%
Profiter de l'expertise du sous-traitant	85.7%
Se rapprocher du marché	57.1%
Profiter des bas coûts de la main d'oeuvre	42.8%

La collaboration internationale

Des 205 PME de l'échantillon, 88 PME coopèrent à des alliances ou des ententes (collaborations) avec divers partenaires belges pour la réalisation de certaines activités. Au niveau des collaborations internationales, 15 PME ont développé des accords purement contractuels avec d'autres organisations étrangères (franchise, accord de license, consortium) et 17 PME ont développé des collaborations actives avec d'autres organisations étrangères (alliances, partenariats, co-entreprises). On remarque que le phénomène des partenariats établis à l'étranger reste limité à un petit nombre d'entreprises (15.6 % des PME interrogées).

Les raisons principales évoquées pour ne pas développer de collaborations internationales sont le manque d'expertise mais aussi de contact à l'international. 15% des PME interrogées évoquent aussi la peur d'expropriation de leurs ressources, compétences clés. La notion de contrôle et de confiance est très importante dans le développement de collaborations internationales. En outre, les coûts liés à la recherche de partenaires à l'étranger mais aussi liés aux barrières culturelles et règlementaires sont mis en avant par plus de 10% des PME de notre échantillon. Enfin un certain nombre d'entreprises ont aussi évoqué le fait qu'ils ne pensaient pas avoir besoin de développer ce type de collaborations.

Tableau11. Barrières évoquées par les PME pour ne pas collaborer à l'international	Pourcentage de PME
Votre expertise à l'international est limitée	21.4%
Un manque de contact à l'étranger	20.2%
Une crainte que le partenaire potentiel s'approprie une de vos ressources/compétences clés	15%
Les coûts de recherche de partenaires sont trop importants	12.2%
La réglementation et les barrières sur le marché étranger sont complexes	10.9%
Un manque de crédibilité dans les yeux du partenaire potentiel	8.1%
Un manque de ressources financières	5.8%

Le tableau 12 présente les domaines dans lesquels ces collaborations sont établies en distinguant les partenariats belges des partenariats étrangers: le partenariat belge ou étranger dans le domaine de la production vient en tête avec plus de 50 % d'entreprises, suivi de la distribution pour les partenariats étrangers et des achats et approvisionnements pour les partenariats belges. On remarque que les collaborations dans le domaine de la conception et de la Recherche et Développement sont importantes au niveau international.

Talbeau12. Domaines dans lesquels sont établies ces collaborations	**En Belgique**	**A l'étranger**
Production	67.6%	50%
Distribution	23.5%	37.5%
Achat / approvisionnement	38.2%	12.5%
Conception / R&D	14.7%	34.4%
Marketing / ventes	8.8%	0%

L'élargissement de la gamme de produits/services est la principale motivation des PME pour établir des collaborations à l'étranger (62.5 % d'entreprises qui collaborent). L'accès aux nouveaux marchés est la seconde motivation des PME pour établir des collaborations internationales (50% d'entreprises qui collaborent). D'ailleurs nous avons remarqué que 78% des PME qui ont développé des collaborations internationales exportent aussi des biens à l'étranger. En troisième et quatrième places viennent la réduction des coûts de production et la volonté d'assurer la qualité des produits.

Tableau13. Motivations évoquées pour développer des collaborations internationales	Pourcentage de PME
Élargir la gamme de produits / services	62.5%
Permettre l'accès à de nouveaux marchés	59.4%
Réduire les coûts de production	56.2%
Assurer la qualité des produits	50%
Accroître les innovations	37.5%
Permettre l'accès à des matières premières	21.8%
Permettre l'accès à des savoir-faire	9.4%
Permettre l'accès à des financements	9.4%

Les pays limitrophes et les pays de l'Union Européenne demeurent les premiers pays privilégiés pour le développement de collaborations internationales quel que soit le type de partenaire, suivi des pays du reste de l'Europe (tableau 14). On voit que les entreprises interrogées vont favoriser les pays Asiatiques pour les collaborations internationales avec des fournisseurs alors qu'aux Etats-Unis elles vont privilégier les collaborations avec des clients ou concurrents.

Tableau14. Partenaires	Pays limitrophes	Union Européenne	Reste de l'Europe	Amérique du Nord	Asie Afrique	Reste du monde
Vos clients	31.1%	**53.1%**	12.5%	3.12%	3.12%	9.4%
Vos fournisseurs	**81.2%**	50%	9.3%	0%	9.3%	6.2%
Vos concurrents	31.2%	**34.4%**	6.25%	3.12%	3.12%	12.5%
Des consultants	**43.7%**	18.8%	3.12%	0%	0%	6.25%
Des institutions publiques	**25%**	21.8%	0%	0%	0%	3.12%

Les investissements directs à l'étranger

Au sein de notre échantillon, 13 entreprises possèdent au moins une filiale à l'étranger, soit 6.4% des entreprises interrogées. Nous avons pu remarquer que 91.6% des PME qui ont réalisé des investissements directs à l'étranger exportent aussi des biens à l'étranger. Concernant les différentes zones géographiques, nous retrouvons en première place les pays d'Europe faisant partie ou non de l'Union Européenne. En outre, 23.1% des entreprises qui ont réalisé des investissements directs à l'étranger possèdent au moins une filiale en Asie.

Tableau15. Pourcentage de PME ayant réalisé des investissements directs à l’étranger dans différentes zones économiques	**Importation d’inputs**
Pays limitrophes	23.1%
Union Européenne	**30.7%**
Reste de l'Europe	**53.8%**
Amérique du Nord	0%
Asie	23.1%
Afrique	0%
Reste du monde	23.1%

L’internationalisation : une approche spécifique aux PME

Le phénomène de l’internationalisation des PME s’est manifesté de façon de plus en plus évidente au cours des deux dernières décennies, celui-ci prolongeant la dimension commerciale de l’exportation. La capacité de s’internationaliser est devenue une nécessité stratégique pour plusieurs de ces entreprises, assurant leur survie et favorisant leur croissance dans un contexte de mondialisation. De façon concomitante, ce phénomène a retenu l’attention des chercheurs qui ont d’abord voulu caractériser le processus d’internationalisation et le comportement d’exportation des PME, pour ensuite identifier les déterminants et les conséquences de l’internationalisation (Raymond et St-Pierre, 2011). Or, pour mieux répondre aux attentes des entrepreneurs, des gouvernements et autres parties prenantes pour qui la survie, la croissance et la compétitivité de ces entreprises constitue un enjeu stratégique sur le plan économique, social et environnemental, nous avons tenté par cette recherche d’approfondir et de mieux comprendre pourquoi certaines PME s’engagent dans des activités internationales diverses.

Profils d’internationalisation des PME

Sur la base d’une analyse typologique des différentes activités d’internationalisation établies par les 205 PME de l’enquête, nous avons pu identifier, en guise de conclusion, quatre profils distincts d’entreprises que nous nommerons les entreprises *« Traditional »* (n = 27), *« Born-local »* (n =28), *« Born-global »* (n = 23) et *« ReBorn-global »* (n = 13) sur le plan de l’internationalisation.

Internationalisation	***Traditionnelle***	***Précoce***
Locale	Traditional	Born-local
Globale	ReBorn-global	Born-global

Le groupe des PME « ***Born-global*** » se distingue par :

- Une internationalisation précoce; c'est-à-dire que les exportations ont débuté endéans les 6 premières années après la création de l'entreprise.
- Une internationalisation globale; c'est-à-dire que l'entreprise exporte soit ses produits dans un autre continent (distance psychique) soit dans plus de 4 pays différents (distance géographique).

Le groupe de PME « ***Traditional*** » s'identifie quant à lui par :

- Une internationalisation non précoce; c'est-à-dire que les exportations ont débuté après les 6 premières années depuis la création de l'entreprise.
- Une internationalisation locale; c'est-à-dire que l'entreprise exporte soit ses produits uniquement en Europe (distance psychique) soit dans moins de 4 pays différents (distance géographique).

Pour ce qui est du groupe de PME « ***Born-local*** », il se caractérise par :

- Une internationalisation précoce; c'est-à-dire que les exportations ont débuté endéans les 6 premières années après la création de l'entreprise.
- Une internationalisation locale; c'est-à-dire que l'entreprise exporte soit ses produits uniquement en Europe (distance psychique) soit dans moins de 4 pays différents (distance géographique).

Et enfin, pour ce qui est du groupe de PME « ***ReBorn-global*** », il se caractérise par :

- Une internationalisation non précoce; c'est-à-dire que les exportations ont débuté après les 6 premières années depuis la création de l'entreprise.

- Une internationalisation globale; c'est-à-dire que l'entreprise exporte soit ses produits dans un autre continent (distance psychique) soit dans plus de 4 pays différents (distance géographique).

TABLEAU16. REGROUPEMENT DES PME SUR LA BASE DE LEURS ACTIVITÉS D'INTERNATIONALISATION 1. 2.

Activités d'internationalisation **Profil**	**« *Traditional* » (n = 27)**	**« *Born-global* » (n = 23)**	**« *Born-local* » (n =28)**	**« *ReBorn-global* » (n = 13)**
Activités d'exportation et internationales				
• Exportation en Europe	96 %	91 %	100 %	92 %
• Exportation hors Europe	0 %	74%	0 %	46 %
• Sous-traitance à l'international	15 %	35 %	29 %	31 %
• Collaborations internationales	26 %	39 %	25 %	15%
Activités d'importation				
• Importation (intrants)	56 %	57 %	43 %	38 %
• Importation (équipements)	44 %	57 %	43 %	31 %
Activités à l'étranger				
• Filiale à l'étranger	11 %	17 %	4 %	23 %
• Investissement direct à l'étranger	0 %	0 %	0 %	0 %
Performance à l'international				
• Exportations dans plus de 4 pays	0 %	87 %	0 %	85 %
• Plus de 25% des ventes réalisées à l'étranger	26 %	83 %	50 %	85 %

Tel que présenté dans le tableau ci-dessus, on observe de prime abord que le groupe des PME « *Born-global* » se distingue par :

- une plus forte présence d'activités d'exportation hors Europe et internationales en général (activités de sous-traitance à l'international et de collaborations internationales);

- une présence d'activités d'importation la plus forte par rapport aux autres groupes de PME;
- des exportations dans plus de 4 pays, ce qui représente plus de 25% des ventes réalisées à l'étranger pour plus de 80% des PME de ce groupe.

Le groupe de PME *« ReBorn-global »* s'identifie quant à lui par :

- une présence d'activités d'exportation en Europe et dans des pays autres que l'Europe et des activités de sous-traitance à l'international un peu plus faible que le groupe de PME *« Born-global »*;
- une présence d'activités d'importation la plus faible par rapport aux autres groupes de PME;
- la présence d'activités à l'étranger, soit la présence d'une filiale la plus forte;
- des exportations dans plus de 4 pays, ce qui représente plus de 25% des ventes réalisées à l'étranger pour près de 85% des PME de ce groupe.

Pour ce qui est du groupe de PME *« Born-local »,* il se caractérise par :

- l'absence d'activités internationales autres que l'exportation en Europe;
- Une présence d'activités internationales presque aussi fortes que le groupe de PME *« Born-global »;*
- La quasi-absence d'activités à l'étranger telle que les filiales à l'étranger;
- La moitié des PME de ce groupe réalisent plus de 25% de leur chiffre d'affaires à l'étranger.

Enfin, pour ce qui est du groupe de PME *« Traditional »,* il se caractérise par :

- l'absence d'activités internationales autres que l'exportation en Europe;
- le taux le plus faible de sous-traitance à l'international;
- une présence d'activités d'importation presque aussi forte que le groupe de PME *« Born-global »;*
- le plus faible taux de performance à l'international.

Capacité concurrentielle

TABLEAU17. ÉLÉMENTS QUI CONSTITUENT UN AVANTAGE QUI DÉMARQUE VOTRE ENTREPRISE DE VOS CONCURRENTS 3. 4. 5.

A l'étranger : Profil	« *Traditional* » (n = 27)	« *Born-global* » (n = 23)	« *Born-local* » (n =28)	« *ReBorn-global* » (n = 13)
• Votre prix	4 %	13 %	7 %	8 %
• Votre produit (design, sécurité, performance, etc.)	**55 %**	**74%**	**68 %**	**77 %**
• La qualité du réseau de distribution	15 %	39 %	43 %	46 %
• La qualité du service à la clientèle	**52 %**	**78 %**	**75 %**	**77 %**
• Votre capacité d'innovation	37 %	**52 %**	**68 %**	46 %
• Votre rapidité à réagir aux demandes nouvelles	**55 %**	**74 %**	**61 %**	**62 %**
• Vos ressources humaines dédiées à l'internationalisation	11 %	22 %	36 %	23 %
• Vos moyens de financement	15 %	13 %	11 %	15 %
• Le soutien public (informationnel, commercial, financier)	0 %	4 %	14 %	8 %
• Votre appartenance à un pôle/cluster	4 %	0 %	4 %	8 %
• Votre appartenance à un réseau/projet international	7 %	4 %	4 %	0 %

Les éléments principaux qui constituent un avantage qui démarque l'entreprise de ses concurrents à l'étranger sont le produit (design, sécurité, performance), la qualité du service à la clientèle et la rapidité de réaction face aux demandes nouvelles. On remarque que la capacité d'innovation constitue aussi un élément différenciant à l'international pour plus de la moitié des entreprises à internationalisation précoce. La soutien public (informationnel, commercial, financier) semble être un élément important pour les PME « Born-local ». L'appartenance à un pôle ou à un réseau n'apparait pas comme un élément différenciant de ses concurrents ou est peut-être peu utilisé par les PME en général.

Capacité d'innovation

TABLEAU18. ACTIVITÉS DE R&D OU D'AMÉLIORATION CONTINUE 6. 7. 8.

En Belgique ou à l'étranger : Profil	*« Traditional »* (n = 27)	*« Born-global »* (n = 23)	*« Born-local »* (n =28)	*« ReBorn-global »* (n = 13)
• Des activités de recherche et développement (R&D)	33 %	**57 %**	43 %	38 %
• Le développement de nouveaux produits/services	37 %	**61 %**	46 %	31 %
• L'amélioration de produits/services existants	41 %	**61 %**	**50 %**	38 %
• L'amélioration ou le développement de nouveaux procédés ou processus	37 %	48 %	32 %	38 %
• L'amélioration des activités de mise en marché et de commercialisation	22 %	30 %	32 %	31 %

Dans le tableau ci-dessus on remarque directement que les entreprises les plus innovantes sont les PME *« Born-Global »*, plus de la moitié des PME faisant partie de ce groupe développent des activités de recherche et développement (R&D), de nouveaux produits ou services et améliorent des produits ou services existants. A l'inverse, les PME à internationalisation incrémentale (non précoce) présentent les taux les plus faibles en termes de capacité d'innovation. On peut en déduire un lien positif entre le degré d'innovation d'une PME et la précocité de son engagement à l'international.

Capacité de gestion des ressources humaines (GRH)

TABLEAU19. COMPÉTENCES ET LA QUALIFICATION DES EMPLOYÉS À L'INTERNATIONAL		9. 10.	11.	
Organisationnel (PME) : **Profil**	***« Traditional »* (n = 27)**	***« Born-global »* (n = 23)**	***« Born-local »* (n =28)**	***« ReBorn-global »* (n = 13)**
• Nombre moyen de langues différentes parlées dans l'entreprise	2.7	**3.6**	2.6	**3.7**
• Nombre moyen d'employés ayant une expertise dans les activités internationales (ventes, financement, etc.)	0.8	**1.9**	1	**2**
• Nombre moyen d'employés dédiés à temps plein aux activités internationales	0.5	**1.7**	0.7	**1.8**
• Nombre moyen d'employés (temps plein)	8.7	**8.1**	4.4	**33.5**
Individuel (dirigeant) :				
• Age moyen du dirigeant	51.5	50.9	51.4	52.5
• Niveau de scolarité le plus élevé (%)				
○ Primaire ; Secondaire	0%	0%	0%	0%
○ Candidatures/Baccalauréat (hautes écoles)	30%	13%	21%	15%
○ Candidatures/Baccalauréat (universitaire)	26%	26%	21%	31%
○ Maitrise/Master (universitaire)	11%	17%	18%	23%
• Nombre moyen d'années de direction dans la présente entreprise	16.5	11.9	13.1	18.8
• Nombre moyen d'années d'expérience dans le secteur	29	19	10	18
• Expérience avec d'autres cultures (%)				
○ Avoir étudié à l'étranger	30%	18%	21%	8%
○ Avoir vécu à l'étranger	27%	27%	32%	38%
○ Parler plusieurs langues	69%	**95%**	**75%**	92%
○ Voyager souvent à l 'étranger	65%	86%	71%	**100%**
○ Côtoyer souvent d'autres cultures	**85%**	77%	57%	85%

On observe en premier lieu que les PME globales (« Born-global » et « ReBorn-global) se distinguent nettement des PME locales, les premières ayant développé de plus fortes capacités de gestion des ressources humaines (GRH) au niveau organisationnel, se manifestant par le nombre d'employés dédiés aux activités internationales et ayant une expertise dans de telles activités (ventes, financement, etc.) et par le nombre de langues différentes parlées dans l'entreprise.

En outre, les PME globales bénéficient d'un contexte entrepreneurial plus propice à l'internationalisation, incluant un propriétaire dirigeant plus scolarisé (formation candidature ou de baccalauréat de niveau universitaire); un propriétaire dirigeant ayant de meilleures compétences à l'international, associé au fait de parler plusieurs langues, de voyager fréquemment à l'étranger et de souvent côtoyer des gens d'autres cultures.

Par ailleurs, certaines caractéristiques semblent être communes à tous les groupes de PME, par exemple :

- Un nombre d'employés assez faible, en dessous de 10 employés sauf pour les PME « ReBorn-Global » qui comptabilisent un nombre moyen d'employés supérieur (33.5);
- Un âge moyen du dirigeant assez élevé à savoir en moyenne une cinquantaine d'années;
- Un niveau de scolarité supérieur au secondaire mais inférieur à la maitrise ou au master universitaire, nous pouvons donc en déduire que la majorité des dirigeants ont effectué trois années d'études en hautes écoles ou à l'université après les secondaires;
- Un nombre moyen d'années de direction dans l'entreprise assez élevé (plus ou moins 15 ans) ainsi qu'un nombre moyen d'années d'expérience dans le secteur supérieur à 10 ans. Ces moyennes étant les plus élevées dans le cas des PME à internationalisation incrémentale, soit non précoce (« Traditional » et « ReBorn-global »);
- Le fait d'avoir étudié ou vécu à l'étranger ne semble pas être très fréquent pour les dirigeants de PME internationales. Par contre la majorité de ces dirigeants parlent plusieurs langues et voyages souvent à l'étranger ou côtoient des personnes d'autres cultures.

Processus d'internationalisation

Le modèle d'Uppsala développé par Johanson et Vahlne en Suède dans les années septante reste encore aujourd'hui la théorie de référence dans le domaine de l'internationalisation des PME. L'internationalisation y est pensée comme un processus progressif, incrémental qui s'effectue à travers différentes étapes. Les auteurs distinguent quatre étapes :

1. l'entreprise n'a pas d'activités d'exportation régulières;
2. les exportations via un agent indépendant;
3. l'implémentation d'une filiale de vente;
4. la production dans le pays étranger.

L'engagement des ressources se fait dès lors de manière graduelle sur la base de l'information et de l'expérience acquise.

A travers cette étude transversale nous avons aussi voulu mettre en évidence le caractère dynamique du comportement des PME à savoir à quelle vitesse elles développent chacune leurs activités internationales, plus spécifiquement l'antériorité de certaines d'entre elles. Ainsi nous avons regardé les âges moyens auxquels les entreprises ont développé les différentes activités internationales.

1. Les collaborations internationales (en moyenne après 7.2 années)
2. Les importations d'inputs (en moyenne après 8.5 années)
3. Les importations d'équipements (en moyenne après 8.9 années)
4. La sous-traitance à l'étranger (en moyenne après 12 années)
5. L'exportation (en moyenne après 14.7 années)
6. L'investissement direct à l'étranger (en moyenne après 20.9 années)

Ceci remet totalement en cause le modèle de base de l'internationalisation. En effet les PME de notre échantillon semblent prioritairement développer des collaborations internationales dans le but d'avoir accès à de nouveaux marchés. Ce type de partenariat international permet de bénéficier de ressources ou compétences complémentaires, de développer des économies d'échelles mais aussi d'avoir accès à des nouvelles technologies, des nouveaux produits.

Les résultats de cette étude montrent aussi que les entreprises commencent leur apprentissage de l'international souvent par l'importation ou la sous-traitance à l'étranger. L'importation aurait donc une influence déterminante sur la propension à exporter des PME. Laurin et St-Pierre (2011) rapportent les mêmes conclusions sur les PME québécoises en estimant que les firmes importatrices ont presque deux fois plus de chances d'exporter que les entreprises qui n'importent pas.

Le développement de filiales ou l'investissement direct à l'étranger semble tout de même rester la dernière étape dans le processus d'internationalisation des PME ; ce qui est concordant avec le modèle d'Uppsala.

Conclusion

Ces résultats apportent un éclairage nouveau et très complémentaire aux nombreux travaux réalisés dans les dernières années afin de mieux appréhender le comportement des PME face à la mondialisation. Nombreux auteurs montrent que les PME tardent à internationaliser leurs activités malgré les ressources et les actions déployées par les pouvoirs publics. Or, nos résultats montrent bien que bon nombre de PME sont engagées de façon importante dans ces activités, dès leur plus jeune âge et de façon globale. Nos résultats montrent aussi et surtout que cet engagement prend différentes formes remettant en cause le modèle de base d'internationalisation.

Les résultats parfois très nuancés présentés dans ce rapport supportent l'idée de départ de revoir notre conception de l'engagement international des PME. Nous convenons que seule une approche holistique, tenant compte à la fois du dirigeant de la PME, des particularités de son environnement et de son entreprise, permettra de décrire un portrait « juste » de la réalité et d'identifier des pistes d'intervention adéquates pour inciter les entreprises à s'adapter ou s'intégrer à la mondialisation. Cette étude confirme la nécessité de mieux comprendre l'orientation stratégique des PME ainsi que les ressources et compétences d'affaires internationales requises par ces entreprises si l'on désire leur fournir un soutien approprié. Lorsque des changements dans l'environnement d'affaires nécessitent des décisions stratégiques qui affectent le développement à l'international des PME, ces décisions et leurs conséquences doivent être liées aux capacités existantes de l'entreprise afin de prévenir les difficultés et échecs à l'international.

Les politiques publiques visant à stimuler l'internationalisation des PME devraient être formulées pour atteindre des cibles stratégiques bien précises en prenant par exemple en compte les différents profils d'internationalisation identifiés dans cette étude. En ce qui concerne l'internationalisation des PME, les politiques publiques ne prenant pas en compte les particularités de chacune d'entre elles sont donc peu appropriées. Compte tenu de leurs ressources et compétences, les PME ne peuvent mettre en œuvre des pratiques d'affaires internationales ou adopter des comportements qui ne sont pas ajustés avec leurs objectifs stratégiques. Les politiques publiques devraient ainsi moduler leurs programmes et leur soutien aux PME en fonction de cette diversité de profils.

APPENDIX II: Questionnaire from the main survey

Internationalisation des PME en Belgique(Sonecom)

1.

Le Centre de recherche CRECIS (Center for Research in Entrepreneurial Change and Innovative Strategies) de la Louvain School of Management réalise présentement une importante étude sur l'internationalisation des PME (en collaboration avec l'Institut de recherche sur les PME de l'Université du Québec à Trois-Rivières). Le but de cette recherche est de comprendre l'impact de la mondialisation sur le comportement, les actions et les décisions stratégiques des dirigeants de PME. Votre participation à cette importante recherche qui sera réalisée aussi dans d'autres pays, est essentielle pour une meilleure compréhension du comportement des PME, de leur réalité et de leurs défis. Les résultats aideront les professeurs à améliorer la formation de leurs étudiants et aux pouvoirs publics à développer des outils ou politiques de soutien qui conviennent aux besoins des PME.

La confidentialité de votre entreprise sera strictement protégée.

Régis Coeurderoy,
Professeur en management stratégique

Marine Falize,
Doctorante en entrepreneuriat international

Louvain School of Management, Belgique

Josée St-Pierre,
Professeure en finance

Frédéric Laurin,
Professeur en économie

Université du Québec à Trois-Rivières, Canada

2.

Le questionnaire s'adresse au propriétaire-dirigeant de l'entreprise.

***1. Est-ce que vous dirigez une entreprise:**

- ○ de l'industrie manufacturière (secteur de la fabrication, produits industriels)
- ○ de services industriels
- ○ de services (autres que services industriels)
- ○ autre (agriculture, sylviculture, pêche et chasse, extraction minière, exploitation en carrière)

3.

***2. Veuillez sélectionner l'énoncé qui décrit le mieux votre entreprise :**

- ○ Une entreprise de moins de 250 employés
- ○ Une entreprise de 250 employés et plus
- ○ Une filiale d'une entreprise belge ou étrangère
- ○ Une division de société mère

4.

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Internationalisation des PME en Belgique(Sonecom)

Nous vous remercions pour l'intérêt que vous portez à cette recherche mais vous ne faites malheureusement pas partie des entreprises que nous ciblons.

N'hésitez pas à parler de cette étude à votre réseau de PME.

Bien cordialement,

L'équipe du projet.

5. SECTION 1 / 4

3. En quelle année votre entreprise a-t-elle été crée ?

- Ne sais pas
- Précisez :

4. Nombre d'employés de votre entreprise en 2012 (équivalent temps plein, faire une moyenne annualisée) :

- Ne sais pas
- Précisez :

5. Quelle a été l'évolution de vos ventes ces deux dernières années ?

- Faiblement à la baisse
- À la baisse
- Faiblement à la hausse
- À la hausse
- Les ventes sont restées stables

6. Vos trois principaux clients représentent quel pourcentage de votre chiffre d'affaires ?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

7. Veuillez indiquer ce qui caractérise le mieux votre principal produit sur les marchés où vous êtes présents:

- ☐ Un petit produit très simple
- ☐ Un produit très spécialisé
- ☐ Un produit à fort contenu technologique
- ☐ Un produit nécessitant un entretien ou service après-vente spécialisé
- ☐ Ne sais pas

Autre (précisez) :

6. SECTION 2 / 4

Exportations

***8. Est-ce que votre entreprise réalise une partie de son chiffre d'affaire à l'étranger?**

- ◯ Oui
- ◯ Non

7. SECTION 2 / 4

Exportations (suite)

9. Parmi les raisons suivantes, lesquelles expliquent que votre entreprise réalise 100% de son chiffre d'affaire en Belgique?

- ☐ Le marché belge est suffisant
- ☐ Vos ressources financières sont limitées
- ☐ Votre expertise à l'international est limitée
- ☐ La concurrence sur le marché étranger est trop forte
- ☐ La réglementation et les barrières sur le marché étranger sont complexes
- ☐ La compétitivité de vos prix est insuffisante
- ☐ L'absence de contacts à l'étranger
- ☐ Le manque de soutien public à l'exportation
- ☐ L'inadéquation des produits/services à la demande étrangère
- ☐ Les difficultés pour identifier les opportunités d'affaires à l'étranger
- ☐ La barrière de la langue
- ☐ Autre (précisez) :

Internationalisation des PME en Belgique(Sonecom)

8. SECTION 2 / 4

Exportations (suite)

10. Veuillez indiquer la répartition géographique approximative de votre chiffre d'affaires au cours de l'année 2012 en pourcentage :
(N.B. le total doit donner 100, n'utilisez pas de (%) ni de point (.), 30 pour 30%)

Belgique	
Pays limitrophes	
Union Européenne	
Reste de l'Europe (PECO)	
Amérique du Nord	
Asie	
Afrique	
Reste du monde	

11. Au total, dans combien de pays exportez-vous vos produits ?

- ◯ Ne sais pas
- ◯ Précisez :

12. En quelle année avez-vous réalisé vos premières exportations ?

- ◯ Ne sais pas
- ◯ Précisez :

13. Prévoyez-vous d'accroître vos exportations dans la prochaine année ?

- ◯ Oui
- ◯ Non
- ◯ Ne sais pas

Internationalisation des PME en Belgique(Sonecom)

14. Est-ce que l'exportation a entraîné les impacts suivants sur votre entreprise ?

	Oui	Non
La modification des systèmes/structures de production	◯	◯
L'embauche de personnel spécialisé	◯	◯
L'intensification des activités d'innovation	◯	◯
L'intensification des activités de veille stratégique	◯	◯
L'identification de nouvelles opportunités pour l'entreprise	◯	◯
L'identification de nouveaux fournisseurs à l'étranger	◯	◯
L'élargissement de votre réseau d'affaires	◯	◯

15. Est-ce que l'exportation a été motivée par les éléments suivants ?

	Oui	Non
Utiliser une capacité de production excédentaire	◯	◯
Répondre à la demande d'un client	◯	◯
Profiter des programmes et l'appui gouvernemental	◯	◯
Accélérer votre croissance	◯	◯
La saturation du marché belge	◯	◯
Réduire votre dépendance au marché belge	◯	◯
Liquider un surplus d'inventaire	◯	◯

16. Concernant vos décisions d'exportation, pouvez-vous indiquer si vous avez utilisé les sources d'information suivantes et si ces sources sont au en belgique et/ou à l'étranger... :

	En Belgique	À l'étranger	Pas utilisé
Vos clients	☐	☐	☐
Vos fournisseurs	☐	☐	☐
Vos concurrents	☐	☐	☐
Des consultants	☐	☐	☐
Des agences de soutien à l'exportation	☐	☐	☐
Autres institutions publiques	☐	☐	☐

17. Est-ce que vos exportations des deux dernières années ont affecté votre rentabilité... ?

◯ À la baisse

◯ Aucunement

◯ À la hausse

◯ Ne sais pas

9. SECTION 2 / 4

Importations : Équipements de production

***18. Importez-vous des équipements de production directement de fournisseurs à l'étranger ?**

- Oui
- Non

10. SECTION 2 / 4

Importations : Équipements de production (suite)

19. Parmi les raisons suivantes, lesquelles expliquent que votre entreprise n'importe aucun équipement de l'étranger ?

- [ ] La disponibilité des équipements en Belgique
- [ ] L'accès au financement
- [ ] Les capacités du personnel à maîtriser ces équipements
- [ ] Le service après-vente sur de tels équipements
- [ ] L'absence de contacts à l'étranger

Autre (veuillez préciser)

11. SECTION 2 / 4

Importations : Équipements de production (suite)

20. Ces importations représentent environ quel pourcentage de vos achats d'équipement ?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

- Ne sais pas
- Précisez :

21. Parmi les régions suivantes, d'où importez-vous ces équipements ?

- ☐ Des pays limitrophes
- ☐ De l'Union Européenne
- ☐ Du reste de l'Europe (PECO)
- ☐ De l'Amérique du Nord
- ☐ De l'Asie
- ☐ De l'Afrique
- ☐ Du reste du monde
- ☐ Ne sais pas

22. Au total, de combien de pays importez-vous ces équipements?

- ○ Ne sais pas
- ○ Précisez :

23. En quelle année avez-vous réalisé vos premières importations d'équipement?

- ○ Ne sais pas
- ○ Précisez :

24. Est-ce que l'importation d'équipements a été motivée par les éléments suivants ?

	Oui	Non
Profiter d'un taux de change favorable	○	○
Profiter des services/programmes d'appuis gouvernementaux	○	○
Vous conformer aux standards de l'industrie	○	○
Ces équipements ne sont pas disponibles en Belgique	○	○
Accroître votre capacité de production	○	○
Vous conformer à une exigence de votre principal client	○	○
Accroître votre capacité d'innovation	○	○
Vous avez été démarché par un fournisseur étranger	○	○

25. L'importation de ces équipements a-t-elle entraîné ... ?

- ☐ L'augmentation de votre capacité d'innovation
- ☐ L'élargissement de votre réseau d'affaires
- ☐ L'embauche de personnel spécialisé
- ☐ L'ajustement à vos systèmes/structures de production
- ☐ Des besoins supplémentaires de formation du personnel
- ☐ L'augmentation de votre rentabilité

26. Concernant vos décisions d'importation d'équipement, pouvez-vous indiquer si vous avez utilisé les sources d'information suivantes et si ces sources sont en Belgique et/ou à l'étranger... :

	En Belgique	À l'étranger	Pas utilisé
Vos clients	☐	☐	☐
Vos fournisseurs	☐	☐	☐
Vos concurrents	☐	☐	☐
Des consultants	☐	☐	☐
Des agences de soutien à l'internationalisation	☐	☐	☐
Des autres institutions publiques	☐	☐	☐

12. SECTION 2 / 4

Importations : Inputs (matières premières, des pièces ou des biens semi-finis)

27. Vos trois principaux fournisseurs représentent quel pourcentage des achats totaux d'inputs ? (Les inputs sont des matières premières ou des produits entrant dans votre production)
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

◯ Ne sais pas

◯ Précisez :

***28. Importez-vous des inputs (matières premières, des pièces ou des biens semi-finis) directement de fournisseurs à l'étranger ?**

◯ Oui

◯ Non

13. SECTION 2 / 4

Importations : Inputs (matières premières, des pièces ou des biens semi-finis) (suite)

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29. Parmi les raisons suivantes, lesquelles expliquent votre décision de n'importer aucun input (intrant) de l'étranger ?

- ☐ La disponibilité de vos intrants sur le marché local
- ☐ Les coûts de transport
- ☐ Le besoin de collaborer directement avec vos fournisseurs
- ☐ Les difficultés de financement
- ☐ L'absence de contacts à l'étranger
- ☐ Autre (précisez) :

14. SECTION 2 / 4

Importations : Intrants (matières premières, des pièces ou des biens semi-finis) (suite)

30. Vos importations représentent environ quel pourcentage de vos achats totaux d'inputs?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

- ◯ Ne sais pas
- ◯ Précisez :

31. Parmi les régions suivantes, indiquez celles d'où vous importez ces inputs ?

- ☐ Des pays limitrophes
- ☐ De l'Union Européenne
- ☐ Du reste de l'Europe (PECO)
- ☐ De l'Amérique du Nord
- ☐ De l'Asie
- ☐ De l'Afrique
- ☐ Du reste du monde
- ☐ Ne sais pas

32. Au total, de combien de pays importez-vous ces inputs ?

- ◯ Ne sais pas
- ◯ Précisez :

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33. En quelle année avez-vous réalisé vos premières importations d'inputs ?

- ◯ Ne sais pas
- ◯ Précisez :

34. Est-ce que l'importation d'inputs a été motivée par les éléments suivants ?

	Oui	Non
Réduire les coûts d'approvisionnement	◯	◯
Ces produits ne sont pas disponibles en Belgique	◯	◯
Se conformer à une exigence de votre principal client	◯	◯
Réduire la dépendance face à certains fournisseurs belges	◯	◯
Accroître votre capacité d'innovation	◯	◯
Vous avez été démarché par un fournisseur étranger	◯	◯

35. Ces importations d'inputs ont-elles entraîné... ?

- ☐ L'augmentation de votre capacité d'innovation
- ☐ L'élargissement de votre réseau d'affaires
- ☐ L'organisation d'activités de veille stratégique
- ☐ L'identification de nouvelles opportunités à l'étranger
- ☐ L'augmentation de votre rentabilité

36. Concernant vos décisions d'importation d'inputs pouvez-vous indiquer si vous avez utilisé les sources d'information suivantes et si ces sources sont en Belgique et/ou à l'étranger... :

	En Belgique	À l'étranger	Pas utilisé
Vos clients	☐	☐	☐
Vos fournisseurs	☐	☐	☐
Vos concurrents	☐	☐	☐
Des consultants	☐	☐	☐
Des agences de soutien à l'internationalisation	☐	☐	☐
Des autres institutions publiques	☐	☐	☐

15. SECTION 2 / 4

Sous-traitance

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***37. Avez-vous recours à la sous-traitance à l'étranger (faire fabriquer ou faire faire par d'autres entreprises une partie de votre production, à partir de vos propres spécifications) ?**

- ◯ Oui
- ◯ Non

16. SECTION 2 / 4

Sous-traitance (suite)

38. Les montants dépensés en sous-traitance représentent environ quel pourcentage de vos achats totaux d'intrants ?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

- ◯ Ne sais pas
- ◯ Précisez :

39. Quelle part (en pourcentage) de la sous-traitance provient de l'étranger ?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

- ◯ Ne sais pas
- ◯ Précisez :

40. Parmi les régions suivantes, indiquez celles d'où provient la sous-traitance ?

- ☐ Des pays limitrophes
- ☐ De l'Union Européenne
- ☐ Du reste de l'Europe (PECO)
- ☐ De l'Amérique du Nord
- ☐ De l'Asie
- ☐ De l'Afrique
- ☐ Du reste du monde

41. Au total, de combien de pays provient la sous-traitance?

- ◯ Ne sais pas
- ◯ Précisez :

42. En quelle année avez-vous réalisé la première sous-traitance à l'étranger?

◯ Ne sais pas

◯ Précisez :

43. Qu'est-ce qui motive votre décision de sous-traiter à l'étranger ? Est-ce pour ... ?

- ☐ Profiter des bas coûts de la main d'œuvre
- ☐ Se rapprocher du marché
- ☐ Profiter de l'expertise du sous-traitant
- ☐ Satisfaire les demandes de votre client principal

44. Est-ce que la sous-traitance à l'étranger a entraîné les impacts suivants sur votre entreprise :

- ☐ L'embauche de personnel supplémentaire
- ☐ L'augmentation du taux d'innovation de vos produits
- ☐ L'augmentation des ventes
- ☐ La réduction de personnel au Canada
- ☐ Autre (précisez) :

45. Concernant vos décisions de sous-traitance, pouvez-vous indiquer si vous avez utilisé les sources d'information suivantes et si ces sources sont au en belgique et/ou à l'étranger... :

	En Belgique	À l'étranger	Pas utilisé
Vos clients	☐	☐	☐
Vos fournisseurs	☐	☐	☐
Vos concurrents	☐	☐	☐
Des consultants	☐	☐	☐
Des agences de soutien à l'internationalisation	☐	☐	☐
Des autres institutions publiques	☐	☐	☐

17. SECTION 3 / 4

***46. Est-ce que votre entreprise collabore présentement avec divers partenaires belges pour la réalisation de certaines activités ?**

- ◯ Oui, nous avons développé des accords purement contractuels avec d'autres organisations belges (franchise, accord de license, consortium)
- ◯ Oui, nous avons développé des collaborations actives avec d'autres organisations belges (alliances, partenariats, co-entreprises)
- ◯ Non, nous ne collaborons pas avec des partenaires belges
- ◯ Ne sais pas

18. SECTION 3 / 4

47. Veuillez indiquer dans quel(s) domaine(s) sont établies ces collaborations avec vos partenaires belges :

	Oui	Non	Ne s'applique pas
Production	◯	◯	◯
Distribution	◯	◯	◯
Achat / approvisionnement	◯	◯	◯
Conception / R&D	◯	◯	◯
Marketing / ventes	◯	◯	◯

Autre (veuillez préciser)

19. SECTION 3 / 4

***48. Est-ce que votre entreprise collabore présentement avec divers partenaires étrangers pour la réalisation de certaines activités?**

- ◯ Oui, nous avons développé des accords purement contractuels avec d'autres organisations étrangères (franchise, accord de license, consortium)
- ◯ Oui, nous avons développé des collaborations actives avec d'autres organisations étrangères (alliances, partenariats, co-entreprises)
- ◯ Non, nous ne collaborons pas avec des partenaires étrangers
- ◯ Ne sais pas

20.

***49. Parmi les raisons suivantes, lesquelles expliquent que vous ne collaborez pas avec des partenaires étrangers?**

- ☐ Les coûts de recherche de partenaires sont trop importants
- ☐ Un manque de crédibilité dans les yeux du partenaire potentiel
- ☐ Une crainte que le partenaire potentiel s'approprie une de vos ressources/compétences clés
- ☐ Votre expertise à l'international est limitée
- ☐ La réglementation et les barrières sur le marché étranger sont complexes
- ☐ Un manque de contacts à l'étranger
- ☐ Un manque de ressources financières
- ☐ Autre (précisez) :

21. SECTION 3 / 4

50. Veuillez indiquer dans quel(s) domaine(s) sont établies ces collaborations avec vos partenaires étrangers :

- ☐ Production
- ☐ Distribution
- ☐ Achat / approvisionnement
- ☐ Conception / R&D
- ☐ Marketing / ventes
- ☐ Autres

51. Au total, avec combien de pays collaborez-vous?

- ○ Ne sais pas
- ○ Précisez :

52. En quelle année avez-vous réalisé vos premières collaborations à l'étranger?

- ○ Ne sais pas
- ○ Précisez :

53. Veuillez indiquer avec quel(s) type(s) de partenaire(s) sont établies ces collaborations avec vos partenaires étrangers (par région) :

	Pays limitrophes	Union Européenne	Reste de l'Europe	Amérique du Nord	Asie	Afrique	Reste du monde
Vos clients	☐	☐	☐	☐	☐	☐	☐
Vos fournisseurs	☐	☐	☐	☐	☐	☐	☐
Vos concurrents	☐	☐	☐	☐	☐	☐	☐
Des consultants	☐	☐	☐	☐	☐	☐	☐
Des institutions publiques	☐	☐	☐	☐	☐	☐	☐

54. Pouvez vous indiquez dans quelle mesure vous vous estimez proches (avoir une relation de confiance, de réciprocité) de chacun de ces partenaires étrangers?

	Spécialement proche	proche	Pas si proche	Distant
Vos clients	☐	☐	☐	☐
Vos fournisseurs	☐	☐	☐	☐
Vos concurrents	☐	☐	☐	☐
Des consultants	☐	☐	☐	☐
Des institutions publiques	☐	☐	☐	☐

55. Pouvez vous indiquez à quelle fréquence vous communiquez avec chacun de ces partenaires étrangers?

	Tous les jours	Chaque semaine	Chaque mois	Moins souvent
Vos clients	☐	☐	☐	☐
Vos fournisseurs	☐	☐	☐	☐
Vos concurrents	☐	☐	☐	☐
Des consultants	☐	☐	☐	☐
Des institutions publiques	☐	☐	☐	☐

56. Parmi les raisons suivantes, lesquelles ont motivé ces collaborations avec des partenaires étrangers. Est-ce pour... ?

- ☐ Réduire les coûts de production
- ☐ Élargir la gamme de produits / services
- ☐ Accroître les innovations
- ☐ Assurer la qualité des produits
- ☐ Permettre l'accès à de nouveaux marchés
- ☐ Permettre l'accès à des matières premières
- ☐ Permettre l'accès à des savoir-faire
- ☐ Permettre l'accès à des financements

Autre (veuillez préciser)

57. Concernant vos décisions de collaboration, pouvez-vous indiquer si vous avez utilisé les sources d'information suivantes et si ces sources sont en belgique et/ou à l'étranger... :

	En Belgique	A l'étranger	Pas utilisé
Vos clients	☐	☐	☐
Vos fournisseurs	☐	☐	☐
Vos concurrents	☐	☐	☐
Des consultants	☐	☐	☐
Des agences de soutien à l'internationalisation	☐	☐	☐
Autres institutions publiques	☐	☐	☐

22.

58. Votre entreprise a-t-elle réalisé des investissements directs à l'étranger ?

- ◯ Oui, mon entreprise possède une filiale à l'étranger
- ◯ Oui, mon entreprise exerce le contrôle sur la gestion d'une entreprise étrangère
- ◯ Non

59. Parmi les régions suivantes, indiquez celles où vos investissements ont-été réalisés?

- ☐ Belgique
- ☐ Pays limitrophes
- ☐ Union Européenne
- ☐ Reste de l'Europe (PECO)
- ☐ Amérique du Nord
- ☐ Afrique
- ☐ Reste du monde

60. Au total, dans combien de pays avez-vous effectué vos investissements?

- ◯ Ne sais pas
- ◯ Précisez :

61. En quelle année avez-vous réalisé vos premiers investissements?

- ◯ Ne sais pas
- ◯ Précisez :

23.

Internationalisation des PME en Belgique(Sonecom)

62. Concernant vos décisions d'internationalisation, avez-vous utilisé :

	Oui	Non
Internet	◯	◯
Des voyages à l'étranger	◯	◯
Des revues professionnelles ou des journaux d'affaires	◯	◯
Des salons et expositions	◯	◯
Des réseaux de PME	◯	◯

63. Toujours concernant vos décisions d'internationalisation, avez-vous eu recours à des dispositifs de soutien?

- [ ] Service informationnel de l'AWEX (études de marchés,...)
- [ ] Service commercial de prospection de l'AWEX (missions, salons,...)
- [ ] Service d'incitants financiers de l'AWEX
- [ ] Programme Explort de l'AWEX
- [ ] Service de chambres de commerce et de l'industrie
- [ ] Service des pôles de compétitivité ou clusters
- [ ] Service des ambassades
- [ ] Missions princières
- [ ] Instrument de financement de la SOFINEX ou FINEXPO
- [ ] Services d'organismes privés de conseil, d'assurance ou d'accompagnement à l'exportation

Autre (veuillez préciser)

Internationalisation des PME en Belgique(Sonecom)

64. Quelles difficultés avez-vous rencontrées dans votre développement à l'international?

- [ ] Vos ressources financières étaient limitées (coûts de prospection des marchés, de représentation...)
- [ ] Votre expertise à l'international était limitée (manque de ressources humaines internes)
- [ ] La concurrence sur les marchés étrangers était forte (entreprise trop petite)
- [ ] La réglementation et les barrières tarifaires (ou non) sur les marchés étrangers sont complexes
- [ ] La compétitivité de vos prix était insuffisante
- [ ] Un manque de contacts à l'étranger
- [ ] La carence des dispositifs publics de soutien à l'exportation
- [ ] Une mauvaise adéquation de vos produits à la demande étrangère
- [ ] Un manque d'information par rapport aux opportunités d'affaires à l'étranger
- [ ] La barrière de la langue, les difficultés pour aborder une culture différente
- [ ] Le déficit d'image de la Belgique à l'étranger

Autre (veuillez préciser)

65. Est-ce que les éléments suivants constituent un avantage qui démarque votre entreprise de vos concurrents?

	Oui, en Belgique	Oui, à l'étranger	Non	Ne Sais pas
Votre prix	☐	☐	☐	☐
Votre produit (design, sécurité, performance, etc.)	☐	☐	☐	☐
La qualité du réseau de distribution	☐	☐	☐	☐
La qualité du service à la clientèle	☐	☐	☐	☐
Votre capacité d'innovation	☐	☐	☐	☐
Votre rapidité à réagir aux demandes nouvelles	☐	☐	☐	☐
Vos ressources humaines dédiées à l'internationalisation	☐	☐	☐	☐
Vos moyens de financement	☐	☐	☐	☐
Le soutien public (informationnel, commercial, financier)	☐	☐	☐	☐
Votre appartenance à un pôle/cluster	☐	☐	☐	☐
Votre appartenance à un réseau/projet international	☐	☐	☐	☐

24. SECTION 3 / 4

***66. Au cours de l'année 2012, avez-vous réalisé des activités de R&D ou d'amélioration continue ?**

◯ Oui

◯ Non

25. SECTION 3 / 4

67. Parmi les activités suivantes, veuillez indiquer celles que vous avez effectuées en Belgique et/ou à l'étranger :

	Oui en Belgique	Oui à l'étranger	Non
Des activités de recherche et développement (R&D)	☐	☐	☐
Le développement de nouveaux produits/services	☐	☐	☐
L'amélioration de produits/services existants	☐	☐	☐
L'amélioration ou le développement de nouveaux procédés ou processus	☐	☐	☐
L'amélioration des activités de mise en marché et de commercialisation	☐	☐	☐

68. Quel était le budget approximatif (en % de vos ventes) consacré à ces activités : (N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

◯ Ne sais pas

◯ Précisez :

69. Quel était le nombre de personnes en équivalent temps plein affectées à ces activités en Belgique :

◯ Ne sais pas

◯ Précisez :

70. Quel était le nombre de personnes en équivalent temps plein affectées à ces activités à l'étranger :

◯ Ne sais pas

◯ Précisez :

26. SECTION 3 / 4

*71. Parmi les éléments suivants, veuillez indiquer ceux que possède votre entreprise :**

- [ ] Une norme reconnue de qualité (ISO, QS, CSA, etc.)
- [ ] Un produit/service maison (Un produit conçu par l'entreprise et commercialisé sous son nom seulement)
- [ ] Un ou des dessins industriels
- [ ] Une ou des marques de commerce
- [ ] Un ou des droits d'auteur
- [ ] Un ou des brevets
- [ ] Nous ne possédons aucun de ces éléments

27. SECTION 3 / 4

72. Vos innovations sont-elles protégées sur les marchés où vous exportez ?

- ◯ Oui
- ◯ Non
- ◯ Nous n'exportons pas
- ◯ Ne sais pas

28. SECTION 3 / 4

73. Pour les deux dernières années, quel est le pourcentage approximatif des ventes totales qui sont issues de produits nouveaux ou améliorés ?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

- ◯ Ne sais pas
- ◯ Précisez :

***74. Êtes-vous le seul et unique actionnaire de l'entreprise ?**

- ◯ Oui
- ◯ Non

29. SECTION 4 / 4

Informations sur le chef d'entreprise et l'équipe de direction (suite)

75. Pouvez-vous indiquer le pourcentage d'actions votantes détenues par le dirigeant et sa famille ?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

76. Le dirigeant et sa famille sont-ils majoritaires (+50%) ?

- ◯ Oui
- ◯ Non

30.

Les informations suivantes sont très importantes pour mieux analyser le comportement des PME. Nous vous demandons de répondre à toutes les questions avec le plus de précisions possibles.

***77. Quel a été votre chiffre d'affaires approximatif en 2012 ?**

- ◯ Ne souhaite pas répondre
- ◯ Approximativement :

31.

78. Dans ce cas, pouvez-vous indiquer dans quelle tranche se situait votre chiffre d'affaires en 2012 ?

- ◯ De 10 000 à 99 999 euros
- ◯ De 100 000 à 999 999 euros
- ◯ De 1 million à 9,9 millions euros
- ◯ De 10 millions à 24,999 millions euros
- ◯ De 25 millions et plus
- ◯ Ne sais pas

***79. Et votre chiffre d'affaires approximatif en 2011 ?**

- ◯ Ne souhaite pas répondre
- ◯ Approximativement :

32.

80. Dans ce cas, pouvez-vous indiquer dans quelle tranche se situait votre chiffre d'affaires en 2011 ?

- ◯ De 10 000 à 99 999 euros
- ◯ De 100 000 à 999 999 euros
- ◯ De 1 million à 9,9 millions euros
- ◯ De 10 millions à 24,999 millions euros
- ◯ De 25 millions et plus
- ◯ Ne sais pas

81. Quelle croissance du chiffre d'affaires (en pourcentage) aimeriez-vous réaliser dans les deux prochaines années (2013-2015) au total ?
(N.B. n'utilisez pas de (%) ni de point (.), 30 pour 30%)

- ◯ Ne sais pas
- ◯ Précisez :

82. Parmi les fonctions suivantes, lesquelles sont confiées exclusivement à un responsable autre que le propriétaire-dirigeant ?

- ☐ Ventes/marketing
- ☐ Comptabilité/finance
- ☐ Gestion des ressources humaines
- ☐ Production
- ☐ Recherche et développement (R&D)
- ☐ Exportation
- ☐ Logistique
- ☐ Aucune fonction

83. Quel est le nombre approximatif de langues différentes parlées dans l'entreprise ?

- ◯ Ne sais pas
- ◯ Précisez :

84. Quel est le nombre d'employés ayant une expertise dans les activités internationales (ventes, financement, etc.) ?

- ◯ Ne sais pas
- ◯ Précisez :

85. Est-ce que vos activités de formation permettent de développer les compétences «internationales» de certains membres de votre organisation ?

- ◯ Oui
- ◯ Non
- ◯ Ne sais pas

86. Quel est le nombre d'employés dédiés à temps plein aux activités internationales ?

- ◯ Ne sais pas
- ◯ Précisez :

87. Veuillez indiquer votre âge :

88. et votre genre :

- ◯ Homme
- ◯ Femme

89. Quel est le niveau de scolarité le plus élevé que vous avez atteint :

- ◯ Primaire
- ◯ Secondaire
- ◯ Candidatures/Baccalauréat (hautes écoles)
- ◯ Candidatures/Baccalauréat (universitaire)
- ◯ Maitrise/Master (universitaire)
- ◯ Autre (précisez) :

90. Quels sont vos domaines de spécialisation (cochez plusieurs réponses au besoin) :

- ☐ Ingénierie/Sciences
- ☐ Economie/Gestion
- ☐ Droit
- ☐ Autre (précisez) :

91. Depuis combien d'années dirigez-vous la présente entreprise ?

- ◯ Ne sais pas
- ◯ Précisez :

***92. Avant de diriger la présente entreprise, avez-vous auparavant travaillé dans le même secteur d'activités ?**

- ◯ Oui
- ◯ Non

33.

93. Indiquez le nombre d'années d'expérience dans ce secteur d'activités (incluant l'expérience acquise dans la présente entreprise) :

- ◯ Ne sais pas
- ◯ Précisez :

34.

94. Est-ce que vous avez des «expériences» personnelles, professionnelles ou familiales suivantes avec d'autres cultures que la culture belge?

	Oui	Non, pas d'expérience
Avoir étudié à l'étranger	◯	◯
Avoir vécu à l'étranger	◯	◯
Parler plusieurs langues	◯	◯
Voyager souvent à l'étranger	◯	◯
Côtoyer souvent des gens d'autres cultures	◯	◯

95. Est-ce que les membres de votre équipe de direction ont des «expériences» personnelles, professionnelles ou familiales suivantes avec d'autres cultures que la culture belge ?

	Oui	Non, pas d'expérience	Ne sais pas
Avoir étudié à l'étranger	◯	◯	◯
Avoir vécu à l'étranger	◯	◯	◯
Parler plusieurs langues	◯	◯	◯
Voyager souvent à l'étranger	◯	◯	◯
Côtoyer souvent des gens d'autres cultures	◯	◯	◯

Internationalisation des PME en Belgique(Sonecom)

96. Veuillez indiquer dans quelle province est située votre entreprise ou votre établissement principal :

- ◯ Anvers
- ◯ Limbourg
- ◯ Flandre orientale
- ◯ Brabant flamand
- ◯ Flandre occidentale
- ◯ Brabant wallon
- ◯ Hainaut
- ◯ Liège
- ◯ Luxembourg
- ◯ Namur

97. Veuillez indiquer votre secteur d'activité :

- ◯ 311- Aliments
- ◯ 312- Boissons et tabac
- ◯ 313- Usines de textiles
- ◯ 314- Usines de produits textiles
- ◯ 315- Vêtements
- ◯ 316- Produits en cuir
- ◯ 321- Produits en bois
- ◯ 322- Papier
- ◯ 323- Impression
- ◯ 324- Produits du pétrole et du charbon
- ◯ 325- Produits chimiques
- ◯ 326- Produits en plastique et en caoutchouc
- ◯ 327- Produits minéraux non métalliques
- ◯ 331- Première transformation des métaux
- ◯ 332- Produits métalliques
- ◯ 333- Machinerie
- ◯ 334- Produits informatiques et électroniques
- ◯ 335- Matériel, appareils et composants électriques
- ◯ 336- Matériel de transport
- ◯ 337- Meubles et produits connexes
- ◯ 339- Autres activités de fabrication

98. Pouvez-vous indiquer le nom de votre entreprise (cette informations restera strictement confidentielle mais nous aidera à approfondir nos analyses):

99. Seriez-vous intéressé à obtenir les résultats ? Si oui, transmettez-nous svp une adresse courriel ?

APPENDIX III: Questionnaire from the Community Innovation Survey

The Fourth Community Innovation Survey
(CIS IV)

THE HARMONISED SURVEY QUESTIONNAIRE

The Fourth Community Innovation Survey **(Variable names: October 20 2004)**

This survey collects information about product and process innovation as well as organisational and marketing innovation during the three-year period 2002 to 2004 inclusive. Most questions cover new or significantly improved goods or services or the implementation of new or significantly improved processes, logistics or distribution methods. Organisational and marketing innovations are only covered in section 10. In order to be able to compare enterprises with and without innovation activities, we request all enterprises to respond to all questions, unless otherwise instructed.

Person we should contact if there are any queries regarding the form:

Name: ____________________
Job title: ____________________
Organisation: ____________________
Phone: ____________________
Fax: ____________________
E-mail: ____________________

General information about the enterprise

Name of enterprise ______		*ID*
Address[1] ______		*NUTS*
Postal code ______	**Main activity**[2] ______	*NACE*

1.1 Is your enterprise part of an enterprise group? *GP*

(A group consists of two or more legally defined enterprises under common ownership. Each enterprise in the group may serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group.)

Yes ☐ In which country is the head office of your group located? [3] ______ *HO*

No ☐

If your enterprise is part of an enterprise group, please answer all further questions <u>only</u> for your enterprise in [your country]. Do not include results for subsidiaries or parent enterprises outside of [your country]

1.2 In which geographic markets did your enterprise sell goods or services during the three years 2002 to 2004?

	Yes	No	
Local / regional within [your country]	☐	☐	*MARLOC*
National	☐	☐	*MARNAT*
Other European Union (EU) countries, EFTA, or EU candidate countries*	☐	☐	*MAREUR*
All other countries	☐	☐	*MAROTH*

*: Include the following countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Slovakia, Switzerland, Turkey, Spain, Sweden and the United Kingdom.

[1] NUTS 2 code
[2] NACE 4 digit code
[3] Country code according to ISO standard

2. Product (good or service) innovation

A product innovation is the market introduction of a **new** good or service or a **significantly** improved good or service with respect to its capabilities, such as improved software, user friendliness, components or sub-systems. The innovation (new or improved) must be new to your enterprise, but it does not need to be new to your sector or market. It does not matter if the innovation was originally developed by your enterprise or by other enterprises.

2.1 During the three years 2002 to 2004, did your enterprise introduce:

	Yes	No	
New or significantly improved goods. (Exclude the simple resale of new goods purchased from other enterprises and changes of a solely aesthetic nature.)	☐	☐	*INPDGD*
New or significantly improved services.	☐	☐	*INPDSV*

If no to both options, go to question 3.1, otherwise:

2.2 Who developed these product innovations? *INPDTW*

	Select the most appropriate option only
Mainly your enterprise or enterprise group	☐
Your enterprise together with other enterprises or institutions	☐
Mainly other enterprises or institutions	☐

2.3 Were any of your goods and service innovations during the three years 2002 to 2004:

		Yes	No	
New to your market?	Your enterprise introduced a new or significantly improved good or service onto your market before your competitors (it may have already been available in other markets)	☐	☐	*NEWMKT*
Only new to your firm?	Your enterprise introduced a new or significantly improved good or service that was already available from your competitors in your market	☐	☐	*NEWFRM*

Using the definitions above, please give the percentage of your total turnover[4] in 2004 from:

Goods and service innovations introduced during 2002 to 2004 that were **new to your market**	☐☐☐	%	*TURNMAR*
Goods and service innovations introduced during 2002 to 2004 that were **only new to your firm**	☐☐☐	%	*TURNIN*
Goods and services that were **unchanged or only marginally modified** during 2002 to 2004 (include the resale of new goods or services purchased from other enterprises)	☐☐☐	%	*TURNUNG*
Total turnover in 2004	1 0 0	%	

[4] For Credit institutions: Interests receivable and similar income, for insurance services: Gross premiums written

3. Process innovation

A process innovation is the implementation of a **new** or **significantly** improved production process, distribution method, or support activity for your goods or services. The innovation (new or improved) must be new to your enterprise, but it does not need to be new to your sector or market. It does not matter if the innovation was originally developed by your enterprise or by other enterprises. Exclude purely organisational innovations.

3.1 During the three years 2002 to 2004, did your enterprise introduce:

	Yes	No	
New or significantly improved methods of manufacturing or producing goods or services	☐	☐	*INPSPD*
New or significantly improved logistics, delivery or distribution methods for your inputs, goods or services	☐	☐	*INPSLG*
New or significantly improved supporting activities for your processes, such as maintenance systems or operations for purchasing, accounting, or computing	☐	☐	*INPSSU*

If no to all options, go to section 4, otherwise:

3.2 Who developed these process innovations? *INPCSW*

	Select the most appropriate option only
Mainly your enterprise or enterprise group	☐
Your enterprise together with other enterprises or institutions	☐
Mainly other enterprises or institutions	☐

4. Ongoing or abandoned innovation activities

Innovation activities include the acquisition of machinery, equipment, software, and licenses; engineering and development work, training, marketing and R&D[5] when they are *specifically* undertaken to develop and/or implement a product or process innovation.

4.1 Did your enterprise have any innovation activities to develop product or process innovations that were abandoned during 2002 to 2004 or still ongoing by the end of 2004?

Yes ☐

No ☐ *INONAB*

If your enterprise had no product or process innovations or innovation activity during 2002 to 2004 (no to all options in questions 2.1, 3.1, and 4.1), go to question 8.2.

Otherwise, go to question 5.1

[5] Include basic R&D as an innovation activity even if not specifically related to a product and/or process innovation

5. Innovation activities and expenditures

5.1 During the three years 2002 to 2004, did your enterprise engage in the following innovation activities:

		Yes	No	
Intramural (in-house) R&D	Creative work undertaken within your enterprise to increase the stock of knowledge and its use to devise new and improved products and processes (including software development)	☐	☐	*RRDIN*
	If yes, did your firm perform R&D during 2002 to 2004: Continuously? ☐ Occasionally? ☐			*RDENG*
Extramural R&D	Same activities as above, but performed by other companies (including other enterprises within your group) or by public or private research organisations and purchased by your enterprise	☐	☐	*RRDEX*
Acquisition of machinery, equipment and software	Acquisition of advanced machinery, equipment and computer hardware or software to produce new or significantly improved products and processes	☐	☐	*RMAC*
Acquisition of other external knowledge	Purchase or licensing of patents and non-patented inventions, know-how, and other types of knowledge from other enterprises or organisations	☐	☐	*ROEK*
Training	Internal or external training for your personnel specifically for the development and/or introduction of new or significantly improved products and processes	☐	☐	*RTR*
Market introduction of innovations	Activities for the market introduction of your new or significantly improved goods and services, including market research and launch advertising	☐	☐	*RMAR*
Other preparations	Procedures and technical preparations to implement new or significantly improved products and processes that are not covered elsewhere.	☐	☐	*RPRE*

5.2 Please estimate the amount of expenditure for each of the following four innovation activities in <u>2004</u> only. (Include personnel and related costs)[6]

Tick 'nil' if your enterprise had no expenditures in 2004		**Nil**	
Intramural (in-house) R&D (Include capital expenditures on buildings and equipment specifically for R&D)		☐	*RRDINX*
Acquisition of R&D (extramural R&D)		☐	*RRDEXX*
Acquisition of machinery, equipment and software (Exclude expenditures on equipment for R&D)		☐	*RMACX*
Acquisition of other external knowledge		☐	*ROEKX*
Total of these four innovation expenditure categories		☐	*RTOT*

[6] Give expenditure data in national currency units to eight digits.

5.3 During the three years 2002 to 2004, did your enterprise receive any public financial support for innovation activities from the following levels of government? Include financial support via tax credits or deductions, grants, subsidised loans, and loan guarantees. Exclude research and other innovation activities conducted entirely for the public sector under contract.

	Yes	No	
Local or regional authorities	☐	☐	*FUNLOC*
Central government (including central government agencies or ministries)	☐	☐	*FUNGMT*
The European Union (EU)	☐	☐	*FUNEU*
If yes, did your firm participate in the EU's 5th (1998-2002) or 6th (2003-2006) Framework Programme for Research and Technical Development	☐	☐	*FUNRTD*

6. Sources of information and co-operation for innovation activities

6.1 During the three years 2002 to 2004, how important to your enterprise's innovation activities were each of the following information sources? Please identify information sources that provided information for new innovation projects or contributed to the completion of existing innovation projects.

		Degree of importance				
		Tick 'not used' if no information was obtained from a source.				
	Information source	**High**	**Medium**	**Low**	**Not used**	
Internal	Within your enterprise or enterprise group	☐	☐	☐	☐	*SENTG*
Market sources	Suppliers of equipment, materials, components, or software	☐	☐	☐	☐	*SSUP*
	Clients or customers	☐	☐	☐	☐	*SCLI*
	Competitors or other enterprises in your sector	☐	☐	☐	☐	*SCOM*
	Consultants, commercial labs, or private R&D institutes	☐	☐	☐	☐	*SINS*
Institutional sources	Universities or other higher education institutions	☐	☐	☐	☐	*SUNI*
	Government or public research institutes	☐	☐	☐	☐	*SGMT*
Other sources	Conferences, trade fairs, exhibitions	☐	☐	☐	☐	*SCON*
	Scientific journals and trade/technical publications	☐	☐	☐	☐	*SJOU*
	Professional and industry associations	☐	☐	☐	☐	*SPRO*

6.2 During the three years 2002 to 2004, did your enterprise co-operate on any of your innovation activities with other enterprises or institutions? Innovation co-operation is active participation with other enterprises or non-commercial institutions on innovation activities. Both partners do not need to commercially benefit. Exclude pure contracting out of work with no active co-operation.

Yes ☐
No ☐ **(Please go to question 7.1)** *CO*

6.3 Please indicate the type of co-operation partner and location *(Tick all that apply)*

Type of co-operation partner	[Your country]	Other Europe*	United States	All other countries
A. Other enterprises within your enterprise group	*Co11*	*Co12*	*Co13*	*Co14*
B. Suppliers of equipment, materials, components, or software	*Co21*	*Co22*	*Co23*	*Co24*
C. Clients or customers	*Co31*	*Co32*	*Co33*	*Co34*
D. Competitors or other enterprises in your sector	*Co41*	*Co42*	*Co43*	*Co44*
E. Consultants, commercial labs, or private R&D institutes	*Co51*	*Co52*	*Co53*	*Co54*
F. Universities or other higher education institutions	*Co61*	*Co62*	*Co63*	*Co64*
G. Government or public research institutes	*Co71*	*Co72*	*Co73*	*Co74*

*: Include the following European Union (EU) countries, EFTA, or EU candidate countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Slovakia, Switzerland, Turkey, Spain, Sweden and the United Kingdom.

6.4 Which type of co-operation partner did you find the most valuable for your enterprise's innovation activities? (Give corresponding letter) ________ *PMOS*

7. Effects of innovation during 2002-2004

7.1 How important were each of the following effects of your product (good or service) and process innovations introduced during the three years 2002 to 2004?

		Degree of observed effect				
		High	Medium	Low	Not relevant	
Product oriented effects	Increased range of goods or services	☐	☐	☐	☐	*ERANGE*
	Entered new markets or increased market share	☐	☐	☐	☐	*EMAR*
	Improved quality of goods or services	☐	☐	☐	☐	*EQUA*
Process oriented effects	Improved flexibility of production or service provision	☐	☐	☐	☐	*EFLEX*
	Increased capacity of production or service provision	☐	☐	☐	☐	*ECAP*
	Reduced labour costs per unit output	☐	☐	☐	☐	*ELBR*
	Reduced materials and energy per unit output	☐	☐	☐	☐	*EMAT*
Other effects	Reduced environmental impacts or improved health and safety	☐	☐	☐	☐	*EENV*
	Met regulatory requirements	☐	☐	☐	☐	*ESTD*

8. Factors hampering innovation activities

8.1 During the three years 2002 to 2004, were any of your innovation activities or projects:

	Yes	No	
Abandoned in the concept stage	☐	☐	*HCON*
Abandoned after the activity or project was begun	☐	☐	*HBEG*
Seriously delayed	☐	☐	*HDLAY*

TO BE ANSWERED BY ALL ENTERPRISES:

8.2 During the three years 2002 to 2004, how important were the following factors for hampering your innovation activities or projects or influencing a decision not to innovate?

		Degree of importance				
		High	Medium	Low	Factor not experienced	
Cost factors	Lack of funds within your enterprise or group	☐	☐	☐	☐	*HFENT*
	Lack of finance from sources outside your enterprise	☐	☐	☐	☐	*HFOUT*
	Innovation costs too high	☐	☐	☐	☐	*HCOS*
Knowledge factors	Lack of qualified personnel	☐	☐	☐	☐	*HPER*
	Lack of information on technology	☐	☐	☐	☐	*HTEC*
	Lack of information on markets	☐	☐	☐	☐	*HINF*
	Difficulty in finding cooperation partners for innovation	☐	☐	☐	☐	*HPAR*
Market factors	Market dominated by established enterprises	☐	☐	☐	☐	*HDOM*
	Uncertain demand for innovative goods or services	☐	☐	☐	☐	*HDEM*
Reasons not to innovate	No need due to prior innovations	☐	☐	☐	☐	*HPRIOR*
	No need because of no demand for innovations	☐	☐	☐	☐	*HMAR*

9. Intellectual property rights

9.1 During the three years 2002 to 2004, did your enterprise:

	Yes	No	
Apply for a patent	☐	☐	*PROPAT*
Register an industrial design	☐	☐	*PRODSG*
Register a trademark	☐	☐	*PROTM*
Claim copyright	☐	☐	*PROCP*

8

10. Organisational and marketing innovations

An organisational innovation is the implementation of new or significant changes in firm structure or management methods that are intended to improve your firm's use of knowledge, the quality of your goods and services, or the efficiency of work flows. A marketing innovation is the implementation of new or significantly improved designs or sales methods to increase the appeal of your goods and services or to enter new markets.

10.1 During the three years 2002 to 2004, did your enterprise introduce:

		Yes	No	
Organisational innovations	New or significantly improved knowledge management systems to better use or exchange information, knowledge and skills within your enterprise	☐	☐	*ORGSYS*
	A major change to the organisation of work within your enterprise, such as changes in the management structure or integrating different departments or activities	☐	☐	*ORGSTR*
	New or significant changes in your relations with other firms or public institutions, such as through alliances, partnerships, outsourcing or sub-contracting	☐	☐	*ORGREL*
Marketing innovations	Significant changes to the design or packaging of a good or service (Exclude routine/ seasonal changes such as clothing fashions)	☐	☐	*MKTDES*
	New or significantly changed sales or distribution methods, such as internet sales, franchising, direct sales or distribution licenses.	☐	☐	*MKTMET*

10.2 If your enterprise introduced an organisational innovation during the three years 2002 to 2004, how important were each of the following effects?

	Degree of observed effect				
	High	**Medium**	**Low**	**Not relevant**	
Reduced time to respond to customer or supplier needs	☐	☐	☐	☐	*EFORED*
Improved quality of your goods or services	☐	☐	☐	☐	*EFORQU*
Reduced costs per unit output	☐	☐	☐	☐	*EFORCO*
Improved employee satisfaction and/or reduced rates of employee turnover	☐	☐	☐	☐	*EFORSA*

11. Basic economic information on your enterprise

11.1 What was your enterprise's total turnover for 2002 and 2004?[7] Turnover is defined as the market sales of goods and services (Include all taxes except VAT[8]).

2002	2004
☐☐☐☐☐☐☐☐	☐☐☐☐☐☐☐☐
TURN02	*TURN04*

11.2 What was your enterprise's total number of employees in 2002 and 2004?[9]

2002	2004
☐☐☐☐☐☐☐☐	☐☐☐☐☐☐☐☐
EMP02	*EMP04*

[7] Give turnover in '000 of national currency units to nine digits.

[8] For Credit institutions: Interests receivable and similar income; for Insurance services: Gross premiums written

[9] Annual average. If not available, give the number of employees at the end of each year. Give figures to six digits.

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