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Strategic vs tactic alliances and SMEs’ internationalization: The mediating effect of innovation capacity

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Summary

Small and medium-sized enterprises are affected by globalization and are increasingly forced to act internationally. A general constraint that many of small firms face is relatively restricted resource as compared to what is available to larger firms. One solution for these small firms to overcome their constraints is then by cooperating. SMEs more and more internationalize and simultaneously open up to collaborate with external partners. While there is some support for the notion that collaborations benefit SMEs in their internationalization efforts, there is a considerable lack of studies focusing on collaboration in the context of 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. Besides, studies investigating the relationships between specific network attributes and benefits are relatively sparse. Existing studies examining the impact of networks on internationalization have given limited attention to the significance of the background of the network, especially the effect of tactic or strategic alliances on SME’s international performance (Garette and Dussauge, 2000). With the aim of a better understanding of “inter-firm network in the context of SME’s internationalization”, we conducted face to face and telephone surveys of 370 manufacturing SMEs in Belgium.

Keywords : Internationalization, collaboration, network, alliance, SME.

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The mediating effect of innovation capacity

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Introduction

The current economic environment reflects the complex integration of global economies. Rapidly changing international markets create a lot of challenges and uncertainty for internationalizing companies. Small and medium-sized enterprises (SME) are affected by globalization and are increasingly forced to think and act internationally. 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 (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 face is relatively restricted resource as compared to what is available to larger firms. The internationalization process requires a level of investments and resources that smaller companies typically do not possess. Smaller firms are less internationalized than bigger firms, but even for them, internationalization is today a reality. One solution for these small firms to overcome their constraints is by networking. SMEs need to internationalize and simultaneously open up to external partners (suppliers, customers, universities). New communication technologies simplify interaction within firms and create new opportunities for collaboration, including the intensive use of international sourcing. Some studies have pointed out the role of network for SMEs to access new ideas and business opportunities and benefit from leverage effects through integration in value chain (Coucke and Sleuwaegen, 2007). Extending network to the international arena strengthens the opportunities for SMEs. Internationalization can then be seen as an opportunity to increase sales, but internationalization may also affects the firm’s competitiveness in other ways too, for instance, through improved cost-efficiency by subcontracting abroad; developing know-how and technology competencies via technical cooperation (sharing know-how or technologies); and extending product ranges through commercial partnerships (marketing or distribution). The modern SME may well be engaged in international business activities beyond firm and country borders.

Network studies are still merging in International Entrepreneurship literature. Networks may involve relationships among firms embedded in a formal structure of business connections or an informal structure of personal relations bounded in geographical, social, or institutional spaces (Hitt et al., 2002). While there is some support for the notion that networks benefit SMEs in their internationalization efforts, studies investigating the relationships between specific network attributes and benefits are relatively sparse.

The predictions on which type of network (Formal/Informal, National/International, Strategic/Tactic) drives internationalization are not obvious and most of the time mixed. Our study is different in that unlike most studies, we examine the role of formal business networks in the context of entrepreneurial firms in a small sized economy. Belgium is an interesting country to analyze due to its small and open economy with a very limited domestic market. SMEs in small sized economies face unique challenges associated with the lack of aggregate home demand. With respect to environmental factors, an important driver for internationalization relate 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, Autio, George, & Zahra, 2006). This is particularly evident in Belgium, a country that has developed into one of the most globalized countries in the world. This openness has an important impact on the behavior of firms located in the country.

In the current study, we argue that formal business networks, in particular, national strategic alliances and international tactic alliances, provide small sized economy SMEs technology competencies and foreign market knowledge, which can be leveraged to overcome the liability of foreigness and outsidership and enhance international performance. Most studies on this topic are case based and therefore have limited generalizability (Musteen et al, 2013). By providing empirical evidence supporting hypothesized relationships for 370 manufacturing SMEs, we contribute to the International Entrepreneurship and Interfirm Network literature.

1. Theoretical background

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 & Oviatt, 2000). Oviatt and McDougall 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». The growth of IE literature over the two decades has added an impressive volume of research. Traditionally, SMEs have had to face challenges for their survival with their limited resources. This unfavorable scenario gets worse for SMEs crisis because they do not have access to capital markets and their sources of external financing are much more limited than those of large corporations (Udell, 2009). In addition to these difficulties, globalization of the markets and increasing international competition force SMEs to search for new ways to survive (Williamson, 1985; Holland and Lockett, 1997).
Contributions conceptually grounded in the resource-based view of the firm argue that the abundance of specialized resources is needed for international entrepreneurial activities (e.g. George, 2005). Thus, at least a certain minimum of resource endowment would be prerequisite for the internationalization of the SME. By contrast, other researchers have shown that the generation of capabilities necessary for internationalization do not need to require resource intensity 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 firms 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 involvement across national boundaries (Mathews and Zander, 2007). This stream of research, based on the business network view of the internationalization process (Johansson and Vahlne, 2009) stresses the importance of network relationships, which may often replace the ownership of physical resources by the access to resources. Small firms embedded in business ties can facilitate entry in international markets (Ellis, 2000). According to these predictions, business networks that open up ways to access resources can act as substitutes to the ownership of resources.

A popular alternative for small firms is then the adoption of cooperative approaches with other organizations. From the 90s onwards, a considerable number of businesses in different industries began entering into a variety of cooperative interfirm relationships to perform their business activities (Hagedoorn, 2002).

This new method of business was accompanied by a significant amount of research. Terms such as networking, cooperation, collaboration or alliances have been widely used in literature (Hoffman and Schlosser, 2001; Varamaki and Vesalainen, 2003; Narula, 2004). As observed by Smith et al. (1995, p. 10), “most definitions of collaboration focus on the process by which individuals, groups, and organizations come together, interact, and form psychological relationships for mutual gain or benefit”. 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). The following section attempts to explore some relevant perspectives and theories on inter-firm network and international entrepreneurship.
1.1. Inter-firm network

The increase in inter-firm network has led to the emergence of many different theories and perspectives on the motives that lead firms to collaborate. Rather than providing an exhaustive and detailed list of theoretical approaches, this section discusses the Transaction Cost Economics (TCE) and the Resource-Based View (RBV) as they have been used extensively to understand the phenomenon of inter-firm network.

The Transaction Cost Economics perspective (TCE) focuses on organizational transactions as the unit of analysis and was first introduced to the study of firm and market organization by Ronald Coase in 1937. Inspired by Coase’s article, Williamson has then developed the issue further, thereby contributing to a great part of the literature related to transactions (Williamson, 1975; Williamson, 1985). “The TCE posits that organisations perform optimally by reducing the costs of the transactions they engage in, [which], in turn, drives the transaction’s governance mechanism.” (Gregory, 2011, p. 73)

In relation to inter-firm network, the TCE perspective argues that the decision to engage or not in cooperation and through which type of cooperation actually depends on the anticipated transaction costs of the cooperation (Wevers, 2007). The transaction costs of inter-organisational cooperation are twofold.

“Firstly, the transaction or cooperation involves certain levels of uncertainty and risks about opportunistic behavior from one of the parties. Secondly, stemming from concerns about such uncertainty and risks are the costs made in governance or coordination of the transaction, like costs from negotiation and contractual agreements.” (Wevers, 2007, p. 12) These transaction costs must be compared to the advantages of the cooperation. In this connection, transaction cost efficiency is often emphasized as the most important advantage of inter-firm cooperation. The TCE has therefore been effective in predicting vertical integration among suppliers and buyers in mature industries such as automobile manufacturing (Eisenhardt and Schoonhoven, 1996). According to the TCE, inter-organizational collaboration also allows spreading the costs of R&D over different parties (Hagedoorn, 1993), thereby reducing significantly the risks associated with R&D intensive innovation projects. While helpful, the logic of transaction cost minimization however fails to capture many of the social and strategic motives, such as learning, creation of legitimacy, and fast market entry, which propel many firms into cooperation (Eisenhardt and Schoonhoven, 1996). Especially in R&D cooperation the motives and advantages for the cooperation go beyond the transaction costs involved. In addition, by assuming that at a certain point of time the benefits and costs for cooperation can be weighed against each other to assess the added value of cooperation, the TCE perspective fails to offer a dynamic view of interorganisational cooperation.
On the other hand, the Resource-Based View (RBV) looks at organizations and other economic units in terms of their resource endowments (Wernerfelt, 1984). Wernerfelt (1984, p. 172) defines a firm's resources at a given time as “those (tangible and intangible) assets which are tied semi permanently to the firm”. By extending the resource-based view of the firm to inter-organizational cooperation, Das and Teng (2000) found that the rationale for strategic alliances is the value-creation potential of firm resources that are pooled together. As Wever (2007, p. 13) confirms, “a firm’s cooperation network can be thought of as creating inimitable and non-substitutable value […] as an inimitable resource by itself […]”. Through the sharing of skills and assets, partners get access to the complementary resources needed to succeed in their (innovative) projects and are also able to exploit their own internally held resources better. Hagedoorn (1993, pp. 372-373) further states that today’s “increased complexity and inter-sectoral nature of new technologies and the cross-fertilization of scientific disciplines and fields of technology” seems to call for closer collaboration between firms operating in high-technology industries. When firms do not have a full comprehension of the concerned fields of technology and science, cooperation might provide them with the complementary technology knowledge needed.

This statement is actually related to the Knowledge Based View (KBV), an extension of the RBV perspective that considers knowledge as the most strategically significant resource for an organisation (Wevers, 2007). According to the KBV, Strategic alliances are defined as “inter-firm cooperative arrangements aimed at achieving the strategic objectives of the partners. Joint ventures, minority equity stake, coproduction and joint research and development are just some forms of strategic alliances.” (Das and Teng, 1998, p. 491). Firms do not necessarily cooperate to reduce transaction costs but do so because higher levels of integration provide a more effective means of accessing and transferring knowhow that is tacit, difficult to imitate, and likely to lead to above-normal returns. As Wevers (2007) argues, the RBV and KBV perspectives can be highly relevant in the context of innovation, where specific and unique knowledge or resources have a strong influence on the innovative performance of firms.

In line with the reasons cited above, the most mentioned reasons why such collaborative arrangements are made is 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 Harmakorpi, 2006; Tether, 2002).
1.2. Domestic VS International Inter-firm network and the internationalization of SMEs

Network benefits for knowledge transfer have been largely recognized in literature. By sharing knowledge, costs and risks while remaining flexible, SMEs’ efficient way of using external network has long been recognize as their major competitive advantage face to large firms (Nooteboom, 1994; Rothwell and Dodgson, 1994). Existing studies examining the impact of networks on internationalization have given limited attention to the significance of the background of the network, 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) 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 (1998) argues that alliances bring organizational learning. It provides 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 (Zizah Che Senik, Brenda Scott-Ladd, Lanny Entrekin, Khairul Akmaliah Adham, 2011). Thanks to collaborations, firms can adjust to foreign current rules and regulations faster and in an appropriate way (Zizah Che Senik, Brenda Scott-Ladd, Lanny Entrekin, Khairul Akmaliah Adham, 2011). Relationships with local partners provide SMEs with information on the international opportunities not easy to detect at a distance (Zizah Che Senik, Brenda Scott-Ladd, Lanny Entrekin, Khairul Akmaliah Adham, 2011). In addition, there is a lot to learn from international partner’s behaviour 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 inter-firm 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.

1.3. Strategic VS tactic collaborations and the internationalization of SMEs

SMEs can expand simultaneously their activities across geographical boundaries and along the supply chain (Karen R. Polenske, 2004). Hindle and Rushworth (2000) argues that SMEs needed to get involved in more than one alliances in order to benefit from different strategic purposes to compare with larger firms. Collaborations can help firms to access a foreign market more rapidly, understand better the cross border population from the different class regarding their level of adoption and in turn, increase the speed of innovation diffusion. Collaboration will be fruitful to ensure this process by creating tailor-made solutions and preventing the "disadvantage of foreignness". Barlow (1998) argues that alliances bring organizational learning. It provides knowledge regarding foreign institution. Institutional systems are sometimes complicated to understand. Local firms have already experiment various support alternatives and regulations constraints. Partnerships enable firms to benefit from local experience and avoid administrative mistakes. Thanks to collaborations, firms can adjust to foreign current rules and regulations faster and in an appropriate way (Zizah Che Senik, Brenda Scott-Ladd, Lanny Entrekin, Khairul Akmaliah Adham, 2011). Such information can be helpful to decide when and how to internationalize (Johanson and Wattsson 1988). Relationships with local partners provide SMEs with information on the international opportunities not easy to detect at a distance (Zizah Che Senik, Brenda Scott-Ladd, Lanny Entrekin, Khairul Akmaliah Adham, 2011).

External collaborations do not only include science and technology partners but also value chain partners and other complementary partners. Certain types of collaborations might bring competences to SMEs that are internally developed by larger firms (Spithoven A., Vanhaverbeke W., and Rotjakkers N., 2013). Garette and Dussauge (2000) classify joint distribution, purchasing and sale/marketing activities as tactical alliances. In contrast to strategic alliances, the nature of knowledge transfer is less tacit than for production and R&D joint activities. At least, the know-how shared regarding these activities will not prevent one partner to penetrate a market if the others do. For that matter, tactical alliances are used a lot between competitors to expand their product range whereas strategic alliances are most of the time formed with firms producing complementary goods (Van Gils, A.; Zwart, P.; 2004).
Purchasing alliances are useful for obtaining price advantages and increasing growth directly. It has also an interest from a resource based view perspective which argues that entering collaboration may be motivated by resource and information obtention (Haahiti, Madupu, Yavas, & Babakus, 2005; Street & Cameron, 2007). Collaborating with foreign supplier may contribute to access knowledge about the target market. SMEs can indeed use foreign purchasing alliances as a concrete internationalization tactic. Currently, purchasing tend to focus on domestic firms export activities but SMEs should switch their interest in purchasing as an active internationalization strategy (Korhonen, Luostarinen, & Welch, 1996; OECD, 2008b; Welch & Luostarinen, 1993). Exchanging knowledge over the production process with clients is also important to SME (Van Gils, A.; Zwart, P.; 2004). The main purpose is to increase customers loyalty (Van Gils, A.; Zwart, P.; 2004).

Furthermore, local collaborators can also provide support services (Narula 2001) which is another argument for client satisfaction. Educating local customers to use the product properly is an efficient marketing argument (Asprot and Amcoff Nyström, 2008). Then, the main goal of tactical alliances is to expand market by improving the product regarding the foreign client specific needs and local requirement.

Hypotheses 1. International tactical alliances will have a greater positive impact than national tactical alliances on SME’s international performance.

In strategic alliances for production and R&D joint activities, the nature of knowledge transfer is even more tacit. The main goal here is to stimulate innovation. The more the information are tacit, the more companies are reluctant to share it and the more they prioritize in-house activities (Narula 2001). This is particularly the case when SMEs are leader within their industry, when they need to remain independent and/or if they distrust their potential partners (Van Gils, A.; Zwart, P.; 2004). Companies which evolve within a fast changing environment like high technological SMEs are even more concerned. Furthermore, they avoid sharing critical information with partners that possess the necessary resource to product the innovation and introduce it on the market before them (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 monitor. The transaction cost theory demonstrated that firms have therefore to weight the adaptative cost against the resources gained (Karen R. 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 behavior by local partners. The risk could be exacerbated because the local partners have better knowledge of domestic regulatory frameworks and business rules. The SME have to accept the imminent prospect of additional technology transfer risks when entering into the international market of partners. These potential intellectual proprietary threats include: the “hold-up” of specific assets; the appropriation or technological leakage and the spill over of key information to competitors in international alliances (Williamson, 1991; Ahuja, 2000).

**Hypotheses 2. National strategic alliances will have a greater positive impact than international strategic alliances on SME’s international performance.**

### 1.4. The mediating effect of innovation capacity

Due to its importance for growth of firms, especially for SMEs (Shane and Venkataraman (2000), innovation is a key for internationalization. Roper and Love (2002) showed the positive linkage between innovation and exportation. Indeed, exporting is a strategic mistake when the product quality is bad or obsolete. Instead, firms should first improve its product quality and competitiveness thanks to innovation before entering foreign markets. However, innovate alone seems to be impossible for the majority of SMEs (Tether, 2002).

Nowadays products are most of the time multi-technology. The underlying competitive requirement is therefore to manage multiple competences, capacities and technologies. One single SME cannot be efficient and developed in all of these needs simultaneously. Innovation is increasingly dependent on extramural knowledge (Arndt and Sternberg, 2000). Economies are indeed interconnected which means that the access to innovations from foreign locations is required to "work on the last-best" (Archibugi and Iammarino, 2000). Firms cannot innovate regarding their last innovation but regarding the last innovation used on the current market. Collaborating with companies abroad is consequently required if the SME needs specific assets to improve their innovation level which can only be found abroad.

Another reason for making alliances with a foreign firm is the need to be closer of the target market (Kyung-Nam Kang and Hayoung Park, 2012). Alliances with a foreign firm provide an opportunity to monitor innovation progress in the target country (Narula, 2001). According to Hymer (1960) and Zaheer (1995), firms may face a “disadvantage of foreignness” when they want to introduce their innovation abroad. Indeed, local competitors as well as other foreign competitors which are not local but more familiar with conditions and conventions prevailing in overseas markets get an advantage.
Alliances might be built in order to benefit from partners’ familiarities with the target market. Notably, alliances can develop SMEs awareness of competitors, international standards, requirements and quality (Yakhlef and Maubourguet, 2004).

The recent study of Kyung-Nam Kang and Hayoung Park (2012) regarding the influence of inter-firm collaborations on SMEs’ innovation in Korean biotechnology SMEs reveals that collaboration has a positive impact on innovation performance. Those findings are in agreement with previous studies highlighting the positive linkage between collaboration and innovation performance (Baum et al., 2000; Belussi et al., 2010). Innovation is one of the SMEs’ main purpose to initiate collaborations (Van Gils, A.; Zwart, P.; 2004). Collaborations offer opportunities to create new relationships as well as innovation and organizational learning (Barlow et al., 1998). Thanks to resource and knowledge transfer, development and sharing of innovative designs or processes, strategic collaborations bring competitive advantage over other firms (Barlow et al., 1998). Notably, when information transfer is realize in an informal and flexible way, collaborations enable firm to adjust rapidly to economic conditions. If a firm wants to fill the gap between its technological level and the market leader’s one, collaboration on research and development appears very useful (Narula, 2001). While strategic alliances contribute to create an innovative product competitive on the global market, Tactic alliances can be useful to increase speed of innovation diffusion.

Hypotheses 3. Innovation capacity will mediate the relationship between strategic and tactic alliances and SME’s international performance.
2. Methods

2.1 Participants and procedure

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 while trying to discover relationships between variables and highlight common trends. With the aim of a better understanding of inter-firm network in the context of SMEs and the variables involved in this process, we conducted face to face and telephone surveys of 386 manufacturing SMEs in Wallonia. Our study 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 not belonging to a group. In addition, some of them were predominantly domestic, while others expanded their operations in foreign markets.

The survey used in the telephone interviews comes from a study conducted in Canada on a sample of 500 Quebecer SMEs and was written by the Institute for SME Research of the University of Quebec at Trois-Rivières. Furthermore, the companies of the sample were listed with the AMADEUS‡ database and the website of the Walloon region, which resume information on companies located in the Walloon region. The data collection took place from March to mid-September 2013. Each 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. Through those interviews we collected data on the company profile (size, age, sector) and operations (networks, R&D, performance) and the managing team’s profile (education, experience, languages). Moreover, we learned about the different modes of entry (exports, imports, collaborations, FDI, outsourcing) adopted by the different companies to go to the international level. 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; Perrault & St-Pierre, 2008; Johanson & Vahlne, 2009).

‡ 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.
2.2 Context of the study

With a foreign trade to GDP ratio of 90%, Belgium is one of the most open economies in the world (ING, 2012). Ernst & Young’s Globalization Index ranks Belgium as the fourth most globalized economy in 2011, after Hong Kong, Ireland and Singapore. 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 world markets. Export from Belgium is growing slower than the import of our trade partners. The relative decline in export share is due to structural and competitive factors. These structural factors include the limited focus on high growth countries and knowledge intensive activities. Belgium’s export of goods and services are less oriented toward countries outside the European Union (EU). This unfavorable trade structure limits the growth potential of exporting Belgian SMEs. Belgium has not yet been able to reduce this gap and to increase its orientation towards high growth markets. Exports are not only focused on the European market, but those exports outside the EU-27 are less technology intensive products when compared to other EU countries’ exports (source: UNCTAD). Whereas many developed economies specialize 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. Although the share of high technology products in total exports has increased over the past decade, Belgium is still ranked 11th out of EU-15 countries in terms of its share of high technology exports. Technological industry is then a key area of focus in Belgium. We know from a substantial literature that technology-based firms are particularly likely to internationalize (Brugel and Murray, 2000; Rialp et al., 2005). Madsen and Servais (1997) has suggested that this phenomenon may be the result of insufficient, aggregate home demand for highly specialized, that is, niche, products and services. This argument is essentially a description of defensive actions by firms pushed out of their home small markets, such as Belgium (Coeurderoy and Murray, 2008). This is particularly evident in Belgium, a country that as developed into one of the most globalized countries in the world. This openness has an important impact on the behavior of firms located in the country. Belgium is an interesting country to analyze due to its small and open economy with a very limited domestic market. With respect to environmental factors, an important driver for internationalization relate 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, Autio, George, & Zahra, 2006).
2.3 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 FSTS ratio proposed by Knight and Cavusgil (2004). It is “the share of turnover from foreign markets of the total turnover (foreign sales to total sales, FSTS)” (Kuivalainen et al., 2012b, p. 374).

**Explicative variables**

For the purpose of constructing inter-firm network measures we utilize the information available on the use of international business partner groups specify in the survey questionnaire. Collaboration is defined strictly as involving mutual exchanges of knowledge such as alliances, partnerships and joint-ventures, and its specified that pure contractual relationships are to be excluded. The survey requires that respondents identify their collaboration areas between five different actors groups (production; distribution; purchasing; research and development/conception; marketing/sales at national and international level. As we focus on strategic and tactic collaborations, we compute the variables “INT/NATTacticalAlliance” which is the sum of each joint distribution, purchasing and sale/marketing activities (from 0 to 3) at the national or international level and the variable “INT/NATStrategicAlliance which is the sum of each joint production and R&D activities (from 0 to 2) at the national or international level.

“Innovation capacity” indicates how many innovation activities are implemented in the firm amongst five types of innovation, as listed in the harmonised OECD/Eurostat definition of innovation, and taking a value between 0 (did not do any of these activities) to 5 (realized all these activities). The survey indicate whether the company has developed 1. R&D activities; 2. Product innovation: new product; 3. Product innovation: significantly improved product; 4. Process innovation (new or significantly improved production or delivery method); 5. Marketing innovation (new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing).

**Control variables**

Three control variables are included in our model. We capture the “AGE” (number of years since inception) and the “SIZE” (number of employees) of the SME.
The age and the pool of employees may estimate the scale of the firm’s knowledge and experience available internally. Finally, we include 27 industry dummies ("I.SECTOR") in the regression, albeit their coefficients are omitted from our tables.

3 Analyses and results

As expected in the first hypothesis, international tactical alliances for purchasing activities have a significant positive impact on SMEs’ international performance. These partners are an essential source of information for the organization as they are capable of identifying new ideas for development in foreign markets. They indeed facilitate the anticipation and identification of market requirements and opportunities. 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. As Wevers (2007) and Miotti and Sachwald (2003) argue, collaboration with foreign suppliers provide access to technological knowledge and market-oriented knowledge. Indeed, suppliers are well embedded into the market and are aware of movements from the competition; they may provide access to specific market information and opportunities. Ragatz et al. (1997) also report that supplier integration in the international development process has a significant impact on the cost and quality of purchased materials and helps reduce the product development cycle time by providing access to technology. Benefits also stem from the ability to tap the knowledge and expertise of suppliers. According to Knudsen (2007), we confirm that involving supplier early in the internationalization process is a driving force for faster releases of new products and responses to competitor moves.

Table 1. Results predicting international performance (using linear regression “Reg” in Stata)

<table>
<thead>
<tr>
<th>Variables</th>
<th>International Performance</th>
<th>b</th>
<th>se</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.651</td>
<td>0.171</td>
<td>3.83</td>
<td>***</td>
</tr>
<tr>
<td>AGE</td>
<td>0.054</td>
<td>0.076</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>i.SECTOR</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lINTTacticalAlliance</td>
<td>12.74</td>
<td>3.98</td>
<td>3.2</td>
<td>**</td>
</tr>
<tr>
<td>lINTStrategicAlliance</td>
<td>25.32</td>
<td>4.17</td>
<td>6.07</td>
<td>***</td>
</tr>
<tr>
<td>NATTacticalAlliance</td>
<td>-10.96</td>
<td>5.51</td>
<td>-1.99</td>
<td>*</td>
</tr>
<tr>
<td>NATStrategicAlliance</td>
<td>-1.71</td>
<td>4.09</td>
<td>-0.42</td>
<td></td>
</tr>
</tbody>
</table>

N= 570
*p < .05; **p < .01; ***p < .001
On the other hand, national tactical alliance for purchasing activities has a significant but negative impact on SMEs’ international performance. Such a discovery is important for SMEs that have to be very careful in their use of combination of different collaboration activities in their value chain. These arguments may be based on a tendency to not open-up and trust strangers and to be stuck in a local strategy.

Surprisingly, opposite to the second hypothesis, international strategic alliances for production and R&D activities affect positively SMEs’ international performance whereas national strategic alliances have no significant impact. Strategic alliances with international partners appeared as a useful strategy for SMEs to overcome their resource limitations. This conflict stems from the fact that conditions necessary to facilitate the sharing and learning process simultaneously magnify the danger of losing core and proprietary knowledge. The intangibility of the technological component of the product or service increases the transactional hazards for SMEs. 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 (Krachtardt, 1992). This 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. Despite the coordination costs and appropriability hazards, engaging in international strategic agreements may help reduce the risks and costs associated with the development and introduction of new products or services on foreign market.

Table 2. Regression results for Simple Mediation Model (using linear regression “Reg” in Stata)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Innovation Capacity</th>
<th>International Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.024</td>
<td>0.503</td>
</tr>
<tr>
<td>AGE</td>
<td>0.006</td>
<td>0.053</td>
</tr>
<tr>
<td>I SECTOR</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTTacticalAlliance</td>
<td>1,936</td>
<td>8.29</td>
</tr>
<tr>
<td>INTStrategicAlliance</td>
<td>1,475</td>
<td>21.93</td>
</tr>
<tr>
<td>NATTacticalAlliance</td>
<td>-2.445</td>
<td>-10.4</td>
</tr>
<tr>
<td>NATStrategicAlliance</td>
<td>1.063</td>
<td>-4.15</td>
</tr>
<tr>
<td>Innovation Capacity</td>
<td>2.3</td>
<td>0.449</td>
</tr>
</tbody>
</table>

N=370

*p < .05; **p < .01; ***p < .001
Concerning the third hypothesis, due to its importance for growth of firms, especially for SMEs, innovation capacity has a significant positive impact on SMEs’ international performance. In order to export, firms should first improve their product quality and competitiveness thanks to innovation. However, innovate alone seems to be difficult for the majority of SMEs. Our results highlight that international strategic alliances at the national but also international level have a significant positive impact on innovation capacity. Collaborating with companies abroad is consequently required if the SME needs specific assets to improve their innovation level which can only be found abroad.

According to Narula (2001), collaborate with foreign partners who locate their innovation activities in high technological cluster abroad, enable firms to improve their in-house capacities. They will benefit from the spillover effect without extending activities over there. Another reason for making strategic alliances with a foreign firm is the need to be closer of the target market. Having partners established there give them an advantage. Strategic and tactic alliances with firms over there provide an opportunity to monitor innovation progress in the target country.

4 Discussion

As explained in this paper, developing and introducing products in foreign markets is getting more and more complex. Firms which are not able to perform sufficient in-house R&D need to source external expertise through collaborations with outside partners of various nature; customers, suppliers, competitors, universities, public research organizations, consultants, professional and industrial associations. These external resources can, then, be combined with the internal resources of the firm. However, if external sources speed up innovation and foreign market entry, some researcher 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 level. Although international tactical and strategic alliances 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, following Van Gils and Zwart (2004), we believe there are three main challenges; 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’ tacit and explicit knowledge and SMEs need to develop trust, embeddedness between partners.

First of all, 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.
As a result, identifying opportunities and select appropriate partners is the initial crucial step for affecting the success of collaboration. Being able to assess one’s competences and missing competences and the potential partners’ capacities is a key ability in order to select appropriate partners. SMEs’ ability to select adequate partners and enter collaboration plays an important role for SMEs to get internationalized. Unfortunately, we believe that many firms do not allocate sufficient time to weight the pros and cons of collaboration and verify that partner’s intentions, competencies, and perspectives match their needs and expectations.

Second, according to the accumulation theory and organizational learning theory (Argyris and Schon, 1978; Huber, 1991; Nonaka and Takeuchi, 1995), knowledge absorption depends on the partner’s ability to add new knowledge to its existing knowledge (Van Gils and Zwart, 2004). This theory describes the knowledge accumulation process developed by Penrose (1959) and central to the creation of capabilities (Van Gils and Zwart, 2004). Teece (1987) adds that knowledge appropriability is essential to benefit from knowledge transfer which is defined as the ability of the owner of the resource to receive a return equal to the value created by the resource (Van Gils and Zwart, 2004).

Finally, trust, learning, and proximity play a determinant role for successful collaborations (Karen and Polenske, 2004). Actually, these three factors are linked and influence each other. In the current knowledge-based economy (Van Gils and Zwart, 2004), success of innovative based exploitative collaboration is related to the transfer of tacit knowledge. To ensure transfer knowledge success, firms need to build a culture of learning (Macpherson et al. 2003). Building such a culture implies making consensus, sharing goals and values (Das and Teng, 1998; Bower, Garber, and Watson 1996). Obviously, communication and information sharing is at the basis of trust building. Whereas many studies reveal that communication suffers from distances (Howells, 1999 from Jeroen P.J. De Jong, Mark Freel, 2009), communication is one of the factors that links proximity to trust.

According to Baum (2002), systemic mechanisms put in place to regulate opportunistic behavior can compensate for the lack of trust between collaborators. Theories regarding control mechanism state that firms involved in foreign relationships develop controlling competences (Brouthers and Nakos, 2004). Firms which have developed more international relationships or for a longer period of time develop expertise in managing foreign operations (Brouthers and Nakos, 2004; Johansson and Vahlne, 2009). These control mechanisms enable international experimented firms to reduce behavioral uncertainties (Brouthers and Nakos, 2004). Gomes-Casseres (1993) adds that sharing of control is a necessary compromise for getting access to complementary skills or knowledge.
Conclusion

The constructs of this study is based on research on International Entrepreneurship and Interfirm Network, which will permit to combine findings from different studies and to obtain a global idea of SME cooperative behavior at the national and international level. If the multinational companies had understood the importance of internationalization of the value chain, it seems that benefit from this internationalized process apply particularly to small firms. Indeed, the increasing cross border competition resulting from globalization disadvantages even more SMEs vis-à-vis their bigger competitors because of their resource limitation and absence on the strategic location with high level of agglomeration of innovation in their industry (Kuemmerle, 1999).

Even if geographical proximity is recognized as a characteristic facilitating collaboration success, in some case, geographically distant partners are especially looked for. Notably, the increasing speed at which innovation is diffuse make competitors, suppliers and clients at great distance interesting to target as well. Torré and Rallet (2005) questioned therefore the necessity of geographical proximity (De Jong and Freel, 2009). Cross boundaries tactic collaborations help to entry distant foreign market and facilitate the anticipation and identification of market requirements and opportunities. These partners are an essential source of information for the organization as they are capable of identifying new ideas for development in foreign markets. 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. On the other hand, strategic collaboration to foster innovation is one of the key for high technology SMEs to be competitive in the global market.

The contributions associated with our research are scientific, commercial and public. First, the predictions on which type of business network drives internationalization in the context of SMEs are not obvious and most of the time mixed and we needed for a clear consensus. In this paper, we have shown that international strategic and tactical alliances provide SMEs foreign market knowledge and contacts, which can be leveraged to overcome the liability of foreignness and outsidership and enhance SME’s innovation capacities and international performance. Second, although national collaborations are less costly, international collaborations bring more benefits. These arguments may be based on a tendency to not open-up and trust strangers and to be stuck in a local strategy. Such a discovery is important for SMEs that have to be very careful in their use of combination of different collaboration activities in their value chain. Finally, public support need to foster international cooperation and enforceability of contracts in order to increase SMEs competitiveness and international performance.
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Strategic vs tactic alliances and SMEs’ internationalization


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