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Dynamics of internationalization processes of SMEs

This section will discuss in detail the dynamics of SMEs' internationalization processes, in particular the role of firm size in engaging in and pursuing internationalization, as well as the impact of internationalization on firms' performance. As was explained in Section B, internationalization is often defined as how a firm conducts business activities in foreign countries through indirect exports, direct exports, international subcontracting (licensing or outsourcing) or investment.



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Some key facts and findings

- There is no unique theoretical framework able to characterize and explain the dynamic process of internationalization of SMEs mainly because of the heterogeneity characterizing SMEs.
- Some SMEs experience a gradual internationalization, starting with sporadic exports. Conversely, certain SMEs engage in international business activities from the outset or soon after their creation. Other SMEs are able to integrate into global value chains.
- SMEs may be more strongly affected by barriers to foreign market entry than larger firms, which may deter them from participating in international trade. SMEs engaged in international markets tend to be more productive as they need to be able to incur the fixed cost component associated with exporting.
- Although internationalization, and in particular exporting, is often viewed as an important strategic development option for SMEs, empirical evidence on the impact of internationalization on SME performance is limited.
- Some recent studies on African firms show that participation of SMEs in international markets can result in higher growth and employment through economies of scale and in enhanced productivity and innovation through learning effects.



Internationalization is often considered as an important strategic option to enable firms to expand. Firms engaged in international activities, either through export, contractual modes or foreign production, can exploit economies of scale, improve labour productivity and enhance management efficiency with larger production and sales volumes. Internationalized firms can also exploit differences in production costs by (re)localizing their production locations so as to minimize their production costs. Internationalization offers also the possibility to diversify revenue sources from domestic and international markets.

Although much research in marketing, business management and international economics has been devoted to understanding SMEs' internationalization, it remains fragmented. First, there is no unified explanation for why and, most importantly, how SMEs engage in internationalization activities. Part of the fragmentation in the literature stems from the fact that the strategies underpinning SMEs' decisions whether or not to internationalize are heterogeneous. Second, the majority of empirical studies analyse SMEs' internationalization in developed economies. It is therefore unclear to what extent the results of the research apply to SMEs that operate from within developing countries and decide to engage in international markets.

Despite these two caveats, a literature review of the theoretical and empirical studies analysing the dynamics of SMEs' internationalization can still provide useful insights into important patterns.

This section is organized as follows. Section C.1 presents the main modes of internationalization identified in the literature. Some SMEs experience a gradual internationalization process. Other firms, the so-called "born global" or "born-again global" firms, are internationally oriented at their inception or following a specific event, respectively. Other internationalization modes include participation by SMEs in global value chains through direct or indirect exports. A large part of the heterogeneity that characterizes SMEs' internationalization modes stems from internal and external factors and drivers.

Section C.2 gives an overview of the trade theory and explains that firm size remains an important factor in international trade due to the central role of fixed exporting costs. The impacts on an SME's performance of adopting an internationalization strategy, in terms of profit, productivity, innovation and growth in sales and employment, are discussed. Empirical evidence, although limited, shows that the effects of the internationalization process on an SME's performance tend to be firm-specific, and depend on

the firm's size, productivity level, skill intensity and industry affiliation. On the one hand, the probability that SMEs will choose to pursue internationalization activities tends to increase as its levels of productivity and innovation rise. On the other hand, SMEs engaged in international markets can experience higher growth and employment through economies of scale and enhance their productivity and innovation through learning effects. Similarly, SMEs engaged in global value chains can benefit from commercial linkages with domestic and foreign customers and suppliers, as well as training and increased competition, which can create new opportunities to engage in internal markets. These are the reasons why internationalization, and in particular exporting, is often considered a key strategic option enabling SMEs to expand.

1. Forms of internationalization by SMEs

Although SMEs are often considered to be uniform entities, they remain highly heterogeneous, as shown in Section A. This is reflected in their diverse internationalization processes, and defining the full range of these processes is a daunting task due to their very diversity. In addition, the internationalization process is not necessarily sustained, but can be occasional or intermittent, while certain SMEs are domestically oriented and have no intention of ever engaging in international activities. Such firms are typically characterized by unfavourable attitudes or apathy regarding foreign market opportunities.

Different theoretical models and typologies in business management have been developed to explain SMEs' internationalization patterns. Some of the main patterns include:

- (a) the traditional gradual approach;
- (b) "born global";
- (c) "born-again global"; and
- (d) global value chain participation.¹

(a) The traditional gradual approach

The traditional gradual approach involves a series of stages in which SMEs gradually increase their international involvement over time from low and less risky to high and risky commitments overseas.

First, these SMEs start to internationalize through (1) sporadic exports followed by (2) the establishment of agreements with independent intermediaries and

distributors in order to acquire the information needed to export in international markets. It is only at a later stage that traditional SMEs decide to (3) establish their own sale branches overseas and then (4) set up foreign production facilities (Johanson and Vahlne, 1977). The incremental resource commitment and cumulative acquisition, integration and use of knowledge and experience about foreign markets tend first to take place in countries perceived as culturally, economically or geographically close. Traditional SMEs expand their export destinations to more distant countries only when they have learned from exporting activities in neighbouring countries. Similarly, traditional SMEs only engage in more commitment-intensive forms of internationalization, such as foreign direct investment (FDI), when they mature and attain sufficient resources, knowledge and experience to compete.

(b) The “born global” approach

The “born global” approach applies to technology- and knowledge-intensive SMEs – typically, high-technology start-ups in niche markets – that are able to start an internationalization process from inception or in their very early development (Moen, 1999). These “born global” firms, which can also be called “international new ventures”, consider the world as one market place. These start-ups may enter domestic and international markets (including very distant ones) simultaneously and expand into foreign markets, typically niche markets, through different forms, including subsidiaries. Some of these SMEs are able to experience faster non-incremental and radical internationalization patterns, thanks to superior market knowledge and to their managers’ networks. Formal and informal networks and alliances with other SMEs enable them to overcome financial, human and management resource constraints by benefiting from the spillovers from these networks and cooperative links, which may include wider access to a relatively high-skilled labour force and greater opportunities to learn about potentially profitable technologies and products.

(c) The “born-again global” approach

The “born-again global” approach characterizes different types of SMEs that decide to attain more commitment-intensive forms of internationalization following a specific event. In some cases, SMEs attempt to engage in international markets but experience limited success, which leads them to re-concentrate their activities in the domestic market. They later return to international markets by means of great “leaps” after experiencing a significant event. Other types of “born-again global” SMEs follow a gradual internationalization approach until a significant event radically modifies

their strategy, leading them to internationalize rapidly. Types of events that can lead SMEs to shift their internationalization mode include changes in the firms’ ownership and management, or a takeover by another company already involved in overseas activities.

(d) The global value chains approach

The “global value chains approach” refers to SMEs that are able to integrate into global value chains. Global value chains consist of a set of interrelated tasks or activities involved in the design, production, marketing, transport and support of a product or service. Global value chains and production networks are characterized by a lead firm, often larger in size than other involved firms, which is supplied with components and/or services by a number of other firms, including SMEs. These SMEs may participate in the global value chains by exporting directly to large firms located overseas, or, in many cases, indirectly to firms located in the home country. However, SMEs that have integrated global value chains as low-tier suppliers often find themselves in a volatile position, as competition is particularly high and new suppliers can replace the original supplier by proposing better comparative advantages, such as lower costs (Abonyi, 2005). Certain SMEs manage to move along the global value chains by increasing the added value of the products or services they supply. Participation in enterprise linkages facilitates information flows, which can place SMEs in a better position to enter more directly into international markets (Gumede, 2004).

Other SMEs’ international patterns discussed in the literature include “inward-outward connections”, “backsourcers” and “born regional”.

“Inward-outward connections” refer to SMEs that start their internationalization process by engaging in inward international business operations (Korhonen et al., 1996). Certain SMEs initially import goods, such as raw material, parts and components, or machinery needed for the production process of a given good or service. Other inward business operations include investment and technology transfer through non-equity agreements, such as licensing and franchising, and equity agreements, such as foreign direct investment and joint venture. Thanks to the experience gained from these inward operations, in particular the relationship and experience with foreign suppliers, forwarding agents and distributors, these SMEs then opt to expand their outward international business operations, such as direct exports. “Inward-outward connections” are closely linked to the concept of global value chains, but unlike many global or regional global value chains, they do not necessarily involve a lead firm.

Other SMEs, defined as “backsourcers”, are firms that have experienced failure or limited success in international markets, which has led them to withdraw from foreign operations, exit from international markets and turn back to serving only their domestic markets. Conversely, some SMEs, defined as “born regional”, manage to export to neighbouring countries but are unable to expand their internationalization commitments to other market destinations or to engage in commitment-intensive internationalization activities, such as FDI (Smolarski and Wilner, 2005).

The heterogeneity characterizing SMEs, including their internationalization modes, is linked to a number of factors and drivers that can be grouped into internal and external factors (Leonidou et al., 2007). Internal factors encompass various interrelated features specific to firms’ resources and competitiveness, namely management, firms’ characteristics and export marketing strategic capabilities (Nazar and Saleem, 2009). At the level of individual managers, attitudes (for instance towards risk), skills and behaviours influence SMEs’ internationalization patterns (see Box C.1). At the level of the firm, ownership type, firm age, firm size, labour productivity, skill intensity, technology level, foreign contacts and networking, as well as knowledge and experience have been found to have an impact on the internationalization strategy adopted by SMEs.² The last type of internal factors – knowledge and experience – relate to SMEs’ marketing skills, their use

of international market research, their ability to adapt easily to marketing to foreign markets, and their ability to segment and target their products, for instance by offering satisfactory prices to customers.

External factors consist of home- and host-country characteristics. Firms might be pushed to seek to expand their operations in international markets when the domestic market is limited (e.g. due to saturation or shrinkage). Intense domestic competition might also lead firms to adopt an internationalization strategy in order to generate greater revenues. Other home-country factors affecting the decision to engage in international activities include import and export regulations, transport infrastructure, costs and time involved in exporting, and export promotion programmes. On the other side of the border, host-country factors include tariffs, non-tariff measures, intense domestic competition, business climate conditions, political risk factors, and geographical and cultural distance. Section D discusses some of the major trade-related impediments to SMEs’ participation in trade. Overall, the interaction of these, often conflicting, internal and external factors can either enhance or reduce the impact of each one of these factors, depending on the stage of the internationalization process. As a result, the combined interactions of these factors can either stimulate and accelerate, or deter and decelerate, the internationalization process for SMEs.

Box C.1: Entrepreneurship

While recent economic literature on international trade considers firm-level differences in terms of productivity and size, other disciplines, such as management and institutional and organizational theories, point to individual-level aspects of entrepreneurs and managers that enable firms, including SMEs and start-ups, to be successful internationally. Entrepreneurial and management skills can be defined as the ability to capitalize on ideas and opportunities by successfully implementing a business strategy (Porter, 1990). Entrepreneurial skills and management capacity constitute important determinants of a firm’s competitiveness and of its decision whether or not to engage in international activities.

A large number of typologies of entrepreneurial motivation have been devised in the literature. One of the most common conceptualizations of entrepreneurial motivation distinguishes between necessity (push) and opportunity (pull) motivation (Stoner and Fry, 2016). Entrepreneurship can be the result of a positive choice made to take advantage of a business opportunity. For instance, an individual might decide to become involved in a (new) business in order to gain greater independence and freedom in his/her working life and/or to increase or maintain his/her personal income. Conversely, entrepreneurship can surge when the individual has no better choices for work, for instance, following a job loss.

Although necessity-driven entrepreneurship is often equated with lower entrepreneurial skills, this might be an oversimplification of reality (Stephan et al., 2015). The launch of a business on necessity grounds is not specific to individuals with lower entrepreneurial skills. Individuals who are skilled but discriminated against in their workplace might be motivated to pursue a new business opportunity. In addition, empirical evidence shows that motivation and skills can influence each other. As individuals learn how to start and run a business, this experience can, in turn, affect their entrepreneurship motivation (Estrin et al., 2013).

Box C.1: Entrepreneurship (continued)

Entrepreneurial orientation and international learning efforts tend to be positively related with internationalization (De Clercq et al., 2005). For instance, “born-global” SMEs tend to be founded by individuals who already possess international experience (Reuber and Fischer, 1997). International experience embodies knowledge that enables SMEs to better respond to opportunities and threats present in international markets. Similarly, the fact that individual entrepreneurs have a global mind-set can have a positive influence on management attitudes towards internationalization and the choice of internationalization mode (Kyvik et al., 2013). The proactive orientation of SMEs’ management towards initiating export activities appears to be highly correlated not only with the speed of initial exporting activities, but also the subsequent number of different foreign markets served (Ciravegna et al., 2014). Managerial motivation also seems to influence positively the initiation of exporting (Wood et al., 2015).

The role of entrepreneurship also differs depending on the type and structure of ownership, which may in turn affect the decision to internationalize. Most SMEs are managed by one or a few managers, who also happen to be the firm’s owner(s). Involvement of the owning family in the management of SMEs may result in a risk-averse strategy and difficulty in attracting professional and qualified managers. Empirical evidence suggests that family-owned firms are less likely to engage in commitment-intensive internationalization activities because of limited financial resources, willingness to establish relations with new partners and interest in international expansion (Fernandez and Nieto, 2005). Conversely, the presence of foreign shareholders in SMEs tends to have a positive impact on export propensity.

2. Which firms export and why does foreign market access matter for SMEs?

Section C.1 showed, from a business perspective, how small firms become involved in international trade and which factors may encourage them to look abroad. This subsection will examine the role of firm size in the economic literature. Section C.2(a) discusses recent trade theories and related empirical findings that have focused on firm differences, including size. On the basis of this discussion, Section C.2(b) investigates why barriers to foreign markets may be of particular concern to SMEs.

(a) Firm size and international trade

Traditional theories of international trade focus on country differences in endowments and productivity and the importance of comparative advantage to explain why countries trade with one another. New models developed in the 1980s, notably by Helpman and Krugman (1985), show how consumers’ love for variety and economies of scale can explain the observed levels of intra-industry trade and the large trade flows between countries that have similar characteristics. In the 1990s, detailed firm-level data became available which revealed a number of observations that had remained unexplained by previous theories. In particular, the new data showed significant differences in size and productivity between exporting and non-exporting firms. While most firms do not export at all, exporting firms are on average larger (and hire more workers), more productive (and pay higher wages) and older than non-exporters.³

A number of papers have since shown that size, productivity and experience are firm characteristics that may be closely related. For instance, Arndt et al. (2012) examines German micro-level firm data and finds that “size and productivity are the main determinants of foreign activities at the firm level”, confirming also that larger and more productive firms are more likely to export. Furthermore, Berthou and Vicard (2015), Love et al. (2015) and Majocchi et al. (2005), having studied a wide range of European firms, show not only that exporters are more productive than non-exporters, but also that this divergence increases with export experience, i.e. that long-standing, regular exporters are more productive than firms that started to export only recently. This implies that export experience reinforces the relationship between firm size and productivity, with the most productive firms not only being larger to begin with, but also becoming larger over time through exporting.

At the same time, for those SMEs (from both developing and developed economies) that engage in trade, foreign markets are more important in terms of the share of overall sales than for large firms, i.e. SMEs (if they export) rely more on international markets and are more export-intensive (Lejárraga et al., 2014).

Firm-level data have also revealed that important differences exist among firms concerning the range of products they export and the countries they trade with. Cebeci et al. (2012) analyse the Exporter Dynamics Database of the World Bank, which contains firm-level information from 45 mostly developing countries, and find that multi-product, multi-destinations exporters account for a major share of total exports (and are

also important players in the domestic market), while accounting for only a small share of the total number of exporting firms. Freund and Pierola (2015) confirm that the so-called “export superstars”, i.e. the top 1 per cent of exporting firms across 32 countries, were already large when entering export markets, grew fast and quickly reached the top 1 per cent range (on average after less than three years), were responsible for at least half of their home country’s total exports, and traded a wide range of product varieties. In fact, the authors highlight that these firms account for much of the variation in the sectoral distribution of exports across countries, demonstrating again the importance of large individual firms in determining international trade patterns and volumes.

By contrast, the vast majority of exporting firms are small and export only a few product varieties to a limited number of destinations (Wagner, 2015). In fact, single-product, single-destination firms on average represent more than a third of exporters and account for only a minimal share of total exports.⁴

The relationship between firm size and the likelihood of exporting or export performance in the services sector is relatively more ambiguous. Part of this ambiguity might be related to data limitations, but could also be explained, at least partially, by the fact that, unlike exporting manufactures, cross-border trade in services often does not entail large fixed costs. Some empirical studies challenge the assertion of any direct impact of firm size on the firm’s likelihood to enter foreign services markets or export intensity (Ebling and Janz, 1999; Engel et al., 2013; Love and Mansury, 2009). Conversely, several other studies have identified a linear positive relationship between firm size and the probability of exporting services (Gourlay et al., 2005). A few studies have found a “U”-shaped relationship between firm size and export intensity in services, suggesting that export intensity decreases initially with firm size but once the firm reaches a medium size, export intensity rises as the firm size increases (Chiru, 2007). Conversely, other studies suggest an inverted “U”-shaped relationship between firm size and export likelihood or export intensity, whereby export intensity increases as small-sized firm becomes a medium-sized one, but then decreases as the firm becomes larger (Lejarraga and Oberhofer, 2015; Love and Mansury, 2009). The specific evidence of an inverted “U”-shaped curve could be linked to the high incidence of “born global” SMEs operating in the services sector.

While small firms tend to have a lower chance of surviving as exporters initially, they grow more quickly than large firms if they do survive, and are highly persistent in foreign markets (Wagner, 2012; Lejarraga et al., 2015; Lejarraga and Oberhofer, 2015).⁵ Small

firms also appear to be more flexible, entering and exiting markets more rapidly and changing their export product composition (so-called “churning”) more quickly than large firms (Verwaal and Donkers, 2002). One of the principal reasons for this flexibility may be that a smaller firm size allows for faster decision-making and limited coordination costs (Vossen, 1998). Consequently, as Hummels and Klenow (2005) and Onkelinx and Sleuwaegen (2010) are able to demonstrate empirically, smaller firms play a dominant role in the creation of new exports. Argüello et al. (2013) shows that new exporters (the so-called “extensive margin” of trade) are important to generate export growth in the short run, while in the longer run, trade grows more strongly along the intensive margin, i.e. via increases in trade volumes from established exporters.

In summary, based on the main insights from recent firm-level trade data, SMEs participate less in trade, but can make a significant contribution to further export growth if they manage to access and survive in foreign markets. Section C.2(b) will examine why the reduction of market access barriers may be of particular importance for SMEs.

(b) Firm size and trade barriers

An important reason why it is harder for SMEs to begin to engage in international trade is related to market entry costs (see Box C.2 for more details). In his seminal paper, Melitz (2003) combines the presence of such costs with the existence of firm differences in order to model export dynamics. This framework cannot only explain which firms are more likely to export, but also what reductions in trade costs (and increased foreign market access) might entail for different types of firms.⁶

At the outset, only firms that have a productivity level above a certain threshold can afford to cover market entry costs, which exist in both the domestic and foreign markets, with the former being assumed to be lower than the latter. The productivity threshold required for exporting is thus higher than for local production. These productivity “cut-off levels” divide existing firms into two groups: those that produce for the domestic market only, and the most productive firms that are able to overcome export entry costs and sell products both domestically and abroad. This theoretical framework explains well the data on exporting firms which suggests that only a fraction of local producers also supply foreign markets. It is only the most productive firms that manage to pay the (higher) costs related to exporting. At the same time, sales overseas allow the most productive firms to further expand in size, confirming the observed pattern that the biggest producers are likewise the most productive firms and account for a large part of a country’s exports.⁷

Box C.2: Market entry costs

Market entry costs, also known as beachhead costs, refer to expenses a firm has to incur in order to gain access to a market. Examples of such costs are setting up a distribution network, complying with regulations, and obtaining brand recognition, patents and licences. As these examples show, such market entry costs can often be conceived of as fixed costs, as they have to be incurred regardless of the level of trade. As such, they entail higher costs per unit for lower trade volumes and may therefore be more burdensome for smaller firms. But trade costs can also be variable in nature, such as *ad valorem* tariffs, which increase in proportion to the volume of trade.

Melitz (2003) models these trade costs jointly and shows that a reduction in both variable and fixed costs lowers a firm's productivity threshold and allows more firms to become exporters, with the aforementioned effect of increasing the size and market share of the most productive and larger firms.

However, fixed trade cost reductions can have different impacts on different-sized firms, unlike reductions in variable costs, which impact all firms equally, independent of the level of output. This may not be the case when the responsiveness of import demand varies with the level of trade volumes. In fact, as detailed in the main text, the literature finds that firms producing at relatively higher costs and exporting smaller trade volumes (arguably, the smaller and less productive firms in the Melitz framework) react more strongly to changes in tariffs (Berman et al., 2012; Gopinath and Neiman, 2014; Spearot, 2013). In addition, tariffs can involve bureaucratic hurdles and extensive paperwork, and hence in practice entail an important fixed cost component, which is likely to be more cumbersome for SMEs to overcome (Henn and Gnutzman-Mkrtchyan, 2015).

It has also been argued that SMEs are more sensitive to trade barriers more generally, as they have fewer resources available to deal with such obstacles, for instance because they face higher borrowing costs than large firms (European Central Bank, 2013; Vossen, 1998).

The dynamics of the Melitz model come into play when countries open up to trade and become exposed to international competition (Melitz and Ottaviano, 2008). Trade liberalization (i.e. the reduction in foreign market entry costs) affects the composition of firms in the industry in two ways. First, reductions in trade costs lower the productivity threshold required for exporting, which allows more firms to start selling abroad and grow by exporting. The second effect comes from the tougher competitive environment in the domestic market. The increased potential for selling abroad, including for firms that have not exported before, allows exporting firms to attract more resources and increase their overall market share at the expense of the least productive domestic firms that are forced to exit the market. Hence, competition reinforces the link between productivity and size, as the most productive firms will survive and grow, while the least productive ones will stay small or go out of business.⁸

A large number of studies assess or simulate the effects of trade opening on overall trade volumes. While the responsiveness of trade to changes in trade costs has traditionally been found to vary by sector and trading partner, as well as over time,⁹ more recent work has also emphasized the importance of firm characteristics. Importantly, Gopinath and Neiman's (2014) empirical work has provided a strong indication that smaller firms respond more strongly to trade opening than larger

firms, and this even for reductions in trade barriers, rather than fixed costs, which naturally have a more than proportionally positive effect on SMEs.

At least two explanations have been given for this finding. First, empirically, it has been established that long-time market participants (i.e. arguably larger firms trading on the "intensive margin") are less sensitive to changes in trade costs than new or relatively recent exporters (Berman and Héricourt, 2010; Fitzgerald and Haller, 2014). Established firms have already committed time and resources to establishing familiarity with and relationships within foreign markets, and they are therefore likely to maintain such relations rather than pursuing new trading opportunities at first sight. Conversely, for firms at the "extensive margin" (i.e. new exporters), trade cost reductions may present an immediate opportunity to grow by building new trading relationships in foreign markets. As SMEs have been found to make up a large part of this "extensive margin", they can be expected to react more strongly to measures of trade opening.

In a similar vein, Spearot (2013) observes that large suppliers are likely to respond less to tariff opening than small firms, even for highly substitutable product varieties.¹⁰ The underlying rationale is that, for a range of assumptions about consumer behaviour, it has been shown that demand for low-cost varieties that already

earn large revenues is less responsive to changes in trade costs than demand for high-cost varieties (arguably produced by less productive, smaller firms) with limited amounts of sales (see Section D.2(a) for a more detailed discussion and empirical evidence).

To conclude, SMEs may be more strongly affected by barriers to foreign market entry and may therefore participate less in international trade than larger firms. At the same time, several studies have noted that SMEs embody an enormous potential for further export growth and may benefit disproportionately from trade opening. Section C.3 will further elaborate on these benefits by pointing out how exporting may positively affect the performance of SMEs and allow them to grow.

3. The impact of internationalization on SME performance

As discussed in Section C.2, empirical evidence suggests that internationally oriented firms tend to be larger and more productive compared to firms serving only domestic markets. Only the more productive firms can make a profit from serving international markets once they have covered the variable and fixed (often sunk, i.e. incurred and unrecoverable) costs associated with internationalization. As a result, the most efficient firms will, on average, become large companies serving international markets (i.e. multinationals) and the least efficient ones will only serve the domestic market. Firms exhibiting average performance will in turn opt to become exporters, given that export activities, compared to other international operations, require a lower commitment of organizational resources and involve fewer business risks.

In this context, determining the causal direction between the internationalization process and the firm's performance is of particular relevance. This relationship remains a controversial issue. Although some empirical studies report no relationship or even a negative relationship between internationalization and firms' performances (Lu and Beamish, 2004), a large body of empirical literature in business management, marketing and international trade economics suggests that internationalization tends to have a positive impact on firm's performance (Sapienza et al., 2006; Pangarkar, 2008). Firms engaged in international operations have to enhance their performance not only to bear the additional costs of internationalization, but also to remain competitive in increasingly competing international markets. In addition, the choice of international entry mode tends to have significant implication on the firm's performance. Once a given strategy is adopted, firms may find it difficult to change their internationalization strategy, at least in the short term.

Despite the fact that there is ample empirical evidence that internationalization tends to improve the performance of many firms, the evidence on the impact of internationalization on SMEs' performance is more nuanced (Hitt et al., 1997; Wright et al., 2007). SMEs are not simply smaller versions of large firms (Lu and Beamish, 2001). They are characterized by different ownership forms, resources, organizational structures and management systems. These factors define SMEs' internal constraints and ability to compete in international markets, which ultimately determine, at least partially, how internationalization can potentially impact on their performance.

The limited number of empirical studies analysing the effects of the internationalization process exclusively on SMEs' performance suggest that the impact of internationalization tends to be firm-specific and depends on a number of factors, including the firm's productivity level, skill intensity and industry affiliation. Part of the mixed evidence stems also from the variety of indicators used to measure the multidimensional nature of firms' performance:¹¹ (i) profits, (ii) productivity, (iii) innovation and (iv) growth (in sales and employment).

(a) Impact on SMEs' profits

The relationship between internationalization and financial performance has received particular attention in the business management literature. Despite extensive research, there remains no consensus on the impact of the internationalization process on firms' profitability when measured by return-on-assets, return-on-sales and return-on-equity. Different forms depicting the relationship between internationalization and financial performance have been proposed in the literature (Benito-Osorio et al., 2016). Some theoretical and empirical studies assert that the relationship between internationalization and financial performance is linear. This linear relationship is found to be positive in some studies and negative in others, when the benefits associated with the internationalization process, including economies of scale and risk diversification, are, respectively, larger or smaller than associated costs such as coordination and transportation.

Conversely, other studies challenge the assertion of a linear and monotonic impact of the degree of internationalization on financial performance and suggest a non-linear relationship. Some of these studies identify a "U"-shaped relationship in which the costs associated with internationalization initially outweigh the associated benefits. It is only beyond a given degree of internationalization that the benefits start to become larger than the associated costs, thus improving the firms' financial performance.

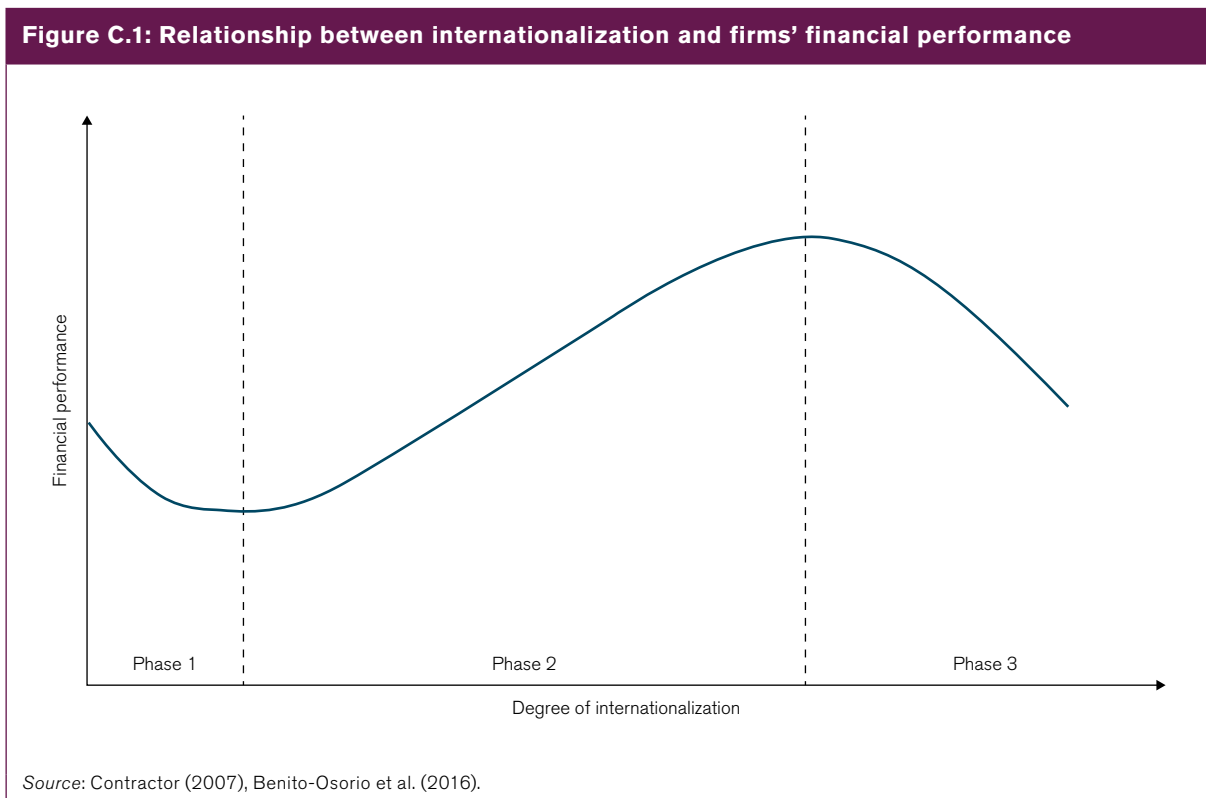
In other studies, the relationship between internationalization and financial performance is characterized by a bell-shaped curve (inverted “U”), according to which the benefits associated with internationalization outweigh at first the associated costs up to a certain degree of internationalization.

More recently, a number of studies have suggested a horizontal “S”-shaped relationship between internationalization and firms’ profitability. This horizontal “S”-shaped representation reconciles, to some extent, the apparent contradictory empirical findings by considering the linear, “U”-shaped and inverted “U”-shaped relationships as a subset of the general horizontal “S”-shaped relationship.

As depicted in Figure C.1, the horizontal “S”-shaped relationship is composed of three stages: (1) initially, the financial performance declines with early internationalization due to the additional costs resulting from limited local knowledge and difficulties in managing and coordinating the firms’ activities in foreign markets; (2) beyond a certain level of internationalization the financial performance improves thanks to the international competencies developed through intense foreign business activities; (3) up to another, greater, level of internationalization, financial performance starts again to decrease or stagnate because of increasing corporate coordination costs.

Overall, empirical evidence suggests that the relationship between internationalization and firm profitability is highly context-dependent (Bausch and Krist, 2007). Research and development (R&D) intensity, product diversification, country of origin, firm age and firm size are major factors affecting the firms’ profitability attributable to internationalization. Lower firm age tends to contribute positively to firms’ performance, irrespective of whether these firms are small or large. Younger firms, many of which are SMEs, may benefit from a learning advantage of newness, which enable them to deploy their internal resources more flexibly (Autio et al., 2000).

Empirical evidence on the relationship between internationalization and SMEs’ profitability is not only scanty but also mixed. Some studies find a positive and linear impact of internationalization on SMEs’ financial performance (Qian, 2002; Pangarkar, 2008). In some cases, SMEs’ profitability seems to be determined by the ability to gain access to specific markets, and not necessarily by export intensity (Majocchi and Zucchella, 2003). Several other studies uncover a “U”-shaped relationship, highlighting the fact that, although SMEs’ profitability tends to decline at first, greater levels of internationalization tend to be associated with higher SMEs’ profitability in the medium and long run (Lu and Beamish, 2001; 2006). Conversely, a few studies report an inverted “U”-shaped curve (Chiao et al.,



2006; Hsu et al., 2013). A limited number of studies have uncovered a greater horizontal “S”-shaped curve for SMEs compared to larger firms (Fisch, 2012). Some recent studies further suggest that the relationship between internationalization and SMEs’ profitability is also likely to be different according to firm size (Benito-Osorio et al., 2016).

(b) Impact on SMEs’ productivity

The relationship between productivity and internationalization, in particular exports, has also been the object of a large number of theoretical and empirical studies.¹² According to the “self-selection hypothesis”, only the more productive firms decide and start to export (Bernard and Wagner, 1997; Bernard and Jensen, 1999). Conversely, the “learning-by-exporting” hypothesis posits that firms become exporters and later become more productive by acquiring knowledge from their experiences (Clerides et al., 1998).

Firms’ productivity enhancement materializes through two main channels: (1) the exploitation of economies of scale, enabling firms to reduce average costs, and (2) the accumulation of new information and knowledge from international markets. Firms engaged in overseas markets may gain experience from customers’, as well as from competitors’, managerial and marketing know-how or production technology. As mentioned previously, empirical evidence confirms the self-selection hypothesis, given that more productive firms self-select themselves into foreign markets (Wagner, 2007).

Empirical evidence of the “learning-by-exporting” hypothesis is not only mixed, but the uncovered “learning-by-exporting effect” typically applies to firms that were already highly productive prior to exporting (Biesebroeck, 2005; De Loecker, 2007; Serti and Tomasi, 2008; Brambilla et al., 2014). A very limited number of studies finds some evidence of the “learning-by-exporting” effect for less productive firms (Albornoz and Ercolani, 2007; Golovko and Valentini, 2011). Firms with low or medium productivity levels were able to improve their productivity through either technological information obtained from their contacts abroad or great incentives to innovate (see Box C.3).

More generally, learning-by-exporting is likely to depend on a firm’s ability to process and integrate knowledge, which is based on various factors, including the firm’s export experience, level of highly skilled workers and share of imported inputs. That is why learning-by-exporting tends to be heterogeneous and occurs in limited circumstances, namely: (1) among younger firms, in particular in emerging and developing economies and in new entrants into international markets; (2) in firms operating at some distance from the technological frontier; (3) in firms exporting intensively; (4) in specific industries; and (5) in firms exporting to high-income countries (Silva et al., 2012; Ciuriak, 2013). In particular, empirical evidence suggests that, while exporting firms in developed countries do not tend to further improve their productivity, certain exporting firms in developing countries experience a “learning-by-exporting” effect.

Box C.3: Exporter viability

Part of the “learning-by-exporting” process stems from the fact that many firms discover their viability as exporters only after having actually started exporting. Despite the risk of high failure rates, some firms, including less productive ones, are willing to incur the sunk costs associated with exporting when international expansion is potentially highly profitable (Albornoz et al., 2012). This seems to be particularly the case in relatively larger export markets, considered by firms to be a source of potential large revenues. Firms with lower productivity, typically smaller firms, that decide to export to larger markets, are still able to make sufficient profits to overcome the fixed export costs by enjoying economies of scale (Bernard et al., 2011b). As a result, the number of exporting firms serving a specific market is higher if that market is larger (Cebeci, 2014).

Learning about local demand conditions is often viewed as an important driver of exporters’ dynamics (Buono and Fadinger, 2012). In parallel, firms that opt to export often have to find a local partner in each foreign market (Benguria, 2015). As a solution, some firms contract intermediaries located overseas in order to overcome knowledge gaps on the foreign markets conditions, find foreign customers more easily and mitigate risks and uncertainties involved in serving international markets. Choosing the most suitable distributor overseas often represents one of the issues that exporting firms, in particular SMEs, may face (Neupert et al., 2006).

In situations involving incomplete information and imperfect enforcement of contracts, reputation plays a key role and exporters are compelled to learn about the reliability of their trading partners (Aeberhardt et al., 2012). Learning to match exporters and importers often requires time (Eslava et al., 2015). The cost of searching for customers and ensuring a match between sellers and buyers can be particularly high for SMEs. In this context, tailored export promotion programmes can facilitate the learning process for SMEs and can contribute positively to their export performance (Alvarez, 2004; Wilkinson and Brouters, 2006; Durmusoglu et al., 2012).

Empirical studies analysing the impact of internationalization on SMEs productivity are limited. Many of the small firms that have been studied were able to enhance their productivity, often shortly after their entry into export markets (Andersson and Lööf, 2009; Eliasson et al., 2012). In some cases, the effect of exporting on productivity appears to be larger for small firms than larger companies, at least in the short run (Serti and Tomasi, 2008). In other cases, post-entry productivity gains seem to be relatively less significant for small firms than for large companies (Manez-Castillejo et al., 2010). Some small firms managed to improve their technical efficiency through knowledge transfers (Atkin et al., 2014), others by increasing investments in physical capital prior to exporting (Eliasson et al., 2012).

(c) Impact on SMEs' innovation

Innovation and productivity are intrinsically connected. Productivity enhancement often materializes through innovation (Lileeva and Trefler, 2010). As mentioned previously, internationally oriented firms tend to be larger and more productive. Similarly, firms that innovate are more likely to start exporting (Sterlacchini, 1999; Basile, 2001; Roper and Love, 2002; Lachenmaier and Woessmann, 2006; Crespi et al., 2008; Cassiman and Golovko, 2011). In some cases, the innovation of both products and processes, and in particular of their combination, appears to be a driver of firms' disposition to export (Van Beveren and Vandebussche, 2010; Caldera, 2010). In other cases, only product innovation has a significant impact on firms' propensity to export (Cassiman et al., 2010).

Empirical evidence of the role of internationalization on innovation remains limited, partly because of the difficulties in assessing the causal direction. A number of studies confirm that exporting firms, including in emerging and developing economies, are more likely to experience higher innovation activity (Salomon and Shaver, 2005; Crespi et al., 2008; Lileeva and Trefler, 2010; Golovko and Valentini, 2011; Bratti and Felice, 2012; Bas, 2012; Altomonte et al., 2013). Internationalization exposes firms to higher competition and international best practices, which provide them with the opportunity to learn and integrate new and innovative ways of doing business. In some cases, the positive effect of exporting seems to be limited to process innovation (Damijan et al., 2010). In other cases, the impact of R&D offshoring on firms' product innovation is greater than process innovation (Niето and Rodriguez, 2011).

In addition, the propensity to innovate products and processes via patent applications and R&D tends to be significantly larger for firms engaged in the most

commitment-intensive modes of internationalization, namely FDI (Castellani and Zanfei, 2007; Frenz and Ietto-Gillies, 2007; Criscuolo et al., 2010).

Part of the positive impact of internationalization on innovation can be explained by firms' expectations regarding their revenue. The prospect of exporting increases firms' incentives to improve their productivity and invest more in R&D, because economies of scale enable firms to make productivity gains more profitable (Lileeva and Trefler, 2010). In such situations, a reduction in trade barriers is likely to encourage both exports and innovation, while each activity by itself reinforces the payoff of engaging in the other (Atkeson and Burstein, 2010; Burstein and Melitz, 2011). The anticipation of trade opening can change a firm's expectations and bring forward the decision to innovate relative to its export market participation (Costantini and Melitz, 2008). Empirical evidence suggests that firms in sectors experiencing larger reductions in tariffs tend to invest faster in better technology due to the prospect of higher revenues (Bustos, 2011). Similarly, some firms take advantage of trade opening by using high-quality inputs to upgrade the quality of their exports (Bas and Strauss-Kahn, 2012).

Empirical evidence attesting that export activities spur SMEs to engage in product and/or process innovation is much more limited. Yet, as argued in Section A of this report, high-technology start-ups are traditionally important sources of innovation. This typically translates into a higher per-employee patenting rate than for large firms (Audretsch, 2002; Bresnahan and Gambardella, 2004). According to Aw et al. (2008), part of these small firms' relatively high propensity to innovate stems from their quicker decision-making process, willingness to take risks, and flexibility in responding to new market opportunities (Vossen, 1998; Autio et al., 2000).

Several studies confirm the complementary relationship between a SME's decision to export and its decision to innovate (Lu and Beamish, 2006; Musteen et al., 2010; Love et al., 2015). On the one hand, small firms with a track record of innovation are more likely to export than non-innovating firms (Love and Roper, 2015; Love et al., 2015). On the other, SMEs engaged in export activities are likely to increase their chances of investing in R&D activities, which, in turn, increases their likelihood of succeeding in export activities and of making innovation and complementary export strategies (Golovko and Valentini, 2011; Esteve-Perez and Rodriguez, 2013). As a result, the probability, as well as the benefits, of investing in R&D tend to increase if a firm has been active in foreign markets (Aw et al., 2008; Yang et al., 2004).

However, the impact of SME's internationalization process on innovation performance is likely to be

industry- and firm-specific. For instance, exposure to export markets tends subsequently to enhance high-tech SMEs' innovation, but without necessarily leading them to become more innovation-intensive. High-tech SMEs engaged in services seem also to be able to capitalize the benefits associated with exporting at a relatively earlier stage of the internationalization process than SMEs involved in manufacturing activities (Love and Ganotakis, 2013). Other forms of SMEs' internationalization, such as FDI, have also been found to have a positive impact on SMEs' innovation output (Siedschlag and Zhang, 2015).

(d) Impact on SMEs' growth

Extensive empirical literature confirms that exporting tends to lead to a rise in employment and sales (Bernard and Jensen, 1999; Wagner, 2002; Serti and Tomasi, 2008). Similarly, commitment-intensive forms of internationalization, such as offshoring and FDI, have a positive and large impact on sales and the value-added of domestic activities (Barba Navaretti et al., 2010; Debaere et al., 2010; Hijzen et al., 2011; Wagner, 2012).

Despite the fact that the internationalization of SMEs is often viewed in the literature as a growth strategy, little is in reality known about the relationship between SMEs' growth and export activities. A limited number of papers have analysed the impact of SMEs' export participation on subsequent employment and output growth. Although a number of earlier studies have concluded that SMEs' propensity to export did not seem to spur subsequent employment growth and/or sales, nor to improve firms' survival (Westhead et al., 2001), more recent empirical evidence suggests that exporting SMEs tend to have significantly higher employment and output growth than non-exporting SMEs (Lu and Beamish, 2006; European Commission, 2014; Boermans and Roelfsema, 2015).

The link between export and firm growth seems to vary significantly across sectors, including with respect to skill intensity. The positive impact of export on SMEs' performance tends to be particularly significant in fast-growing sectors (Rasheed, 2005). In addition, exporting SMEs engaged in manufacturing and business services tend to grow faster than SMEs active in other services industries (European Commission, 2014). Employment growth seems also to be higher for SMEs that are operating in export-oriented sectors belonging to regional value chains (Jung et al., 2011, see also Box C.4). Similarly, higher geographic diversification of export markets tends to lead to better SME performance, including sales return and growth (Pangarkar, 2008; Cieslik et al., 2012). A higher and more diversified number of export markets might accelerate firms' learning processes, especially

when firms experience success in some of these foreign markets (Lages et al., 2006). The few available empirical studies on the relationship between electronic commerce and SMEs' performance further suggest that the adoption of electronic commerce strategies tend to have a positive impact on SMEs' average sales growth rates. In addition, SMEs engaged in electronic commerce seem to experience significantly higher sale growth rate compared to firms that have not adopted electronic commerce technologies (Abebe, 2014).

The relationship between a firm's initial size and its subsequent growth has been the object of a large number of studies. It is argued in Section A that most empirical literature rejects Gibrat's Law, according to which a firm's growth is independent of its size (Sutton, 2012). Small firms do tend to grow faster than large firms. Similarly, empirical evidence suggests that young and small SMEs tend to grow faster than their larger and older counterparts (European Commission, 2014). However, the fact that smaller firms tend to grow faster than larger firms does not necessarily imply that the share of smaller firms in the economy is going to grow over time, in particular if SMEs are experiencing a low exporting survival rate. Empirical evidence shows that, although most firms stop exporting after a year, exporting survival rates tend to increase over time (Eaton et al., 2007; Freund and Pierola, 2010; Wagner, 2011; Cebeci, 2014). This explains why internationally oriented firms, both importers and exporters, tend to experience lower failure rates than firms engaged only in the production of goods and services for the domestic market (Bernard and Jensen, 1999; Muuls and Pisu, 2009).

SMEs that decide to engage in internationalization activities often need to allocate substantial investment, in terms of time and of financial and human resources, to identifying new customers, adapting their routines and creating new capabilities. Although these investments, along with higher risk and uncertainty characterizing most international markets, may in the short run decrease an SME's prospects of firm survival, internationalization provides SMEs with new growth opportunities.

However, the internationalization process is likely to have a different impact on SMEs' growth and survival depending on SMEs' age, managerial experience and resource availability (Sapienza et al., 2006). SMEs often require time to accumulate knowledge and experience of overseas market in order to internationalize successfully. Yet, recent empirical evidence suggests that international experience seems to be more important than age itself (Love et al., 2015).¹³ Once SMEs engaged in internationalization have acquired experience and built networks of partners and customers, this experience, in terms of information,

Box C.4**Case study****A Ugandan SME benefits from international trade participation**

This case study provides a concrete example of the direct and indirect benefits experienced by an SME in a developing country as a result of its participation in international trade.

On behalf of the Netherlands' Ministry for Foreign Trade and Development Cooperation, the Centre for the Promotion of Imports from developing countries (CBI) provides trade-related technical support to SME exporters in developing countries. Each year, the CBI's export expertise is delivered to more than 700 SMEs in over 24 sectors and subsectors by delivering company-level support through a value chain approach, strengthening the trade-enabling environment, and providing market intelligence.

In recent years, the CBI has started to monitor more closely the direct, as well as indirect, benefits experienced by exporting SMEs from developing countries participating in CBI programmes. Although quantitative and qualitative assessments of SME experiences are not yet fully available, preliminary results from interviews of managers in SMEs in developing countries highlight the direct benefits of increased sales and growth resulting from SMEs' engagement in international trade. In addition, a number of indirect benefits, resulting from the re-investment (of part) of the export earnings into the firms studied, and the improvement in their overall competitiveness have been highlighted, such as:

- enhanced product quality;
- professionalization of supply chain management, production processes and business operations (including human resources);
- more strategic use of market research and intelligence;
- development of new products and services (based on a better understanding of target markets);
- improved credibility and reputation for potential importers and buyers as well as investors;
- greater investor attention and commitments as result of enhanced credibility;
- enhanced motivation and confidence amongst company staff to expand or enter new markets or introduce new products and services to existing markets.

Ugandan SME's experience in the coffee sector

In this respect, the experience from Uganda's Ankole Coffee Producers Cooperative Limited (ACPCU) is revealing. In 2010, with the support provided by different international agencies, the company decided to change its export model from supplying domestic buyers to exporting Fair Trade-certified high quality washed Arabica coffee via international buyers.

According to the cooperative, the direct benefits resulting from exporting to the international market represent on average about 6.5 per cent of additional earnings. With the firm's improved credibility, stemming from its export activities, investors became more interested in investing in the company than when the firm used to supply to domestic buyers. The participation of a foreign investor, along with savings and support from banks and a non-governmental organization, enabled the firm to build a more efficient processing plant in three years' time. As a result, the firm now exports approximately five to six times more quantities of high quality Arabica washed coffee and was also able to secure contracts for the coming years.

Box C.4 (continued)

The re-investment of all the export earnings in the company brought other additional indirect benefits. The cooperative was able to hire eight technical and fifteen non-technical workers to run the new plant. In addition, salaries and wages paid to its workers have been raised by about 15 per cent. The final price paid to the farmer has been increased to almost 89 per cent of the world market prices. Furthermore, the cooperative undertakes a number of training activities in good agronomical practices, leadership skills, resource management, quality control, bookkeeping and financial management. The company is also in the process of diversifying its production by supplying washed Robustas and Arabica coffee to the international market and roasted coffee to the local market.

For ACPCU, sustaining benefits and business success in international markets demands continuous investment, including in staff skills and expertise, product quality and compliance management, as well as marketing. For example, Mr Nuwagaba (General Manager at ACPCU) mentions that direct relations with foreign buyers require a very different approach from those with local buyers, with increased attention given to market research. “We used to be price-takers, accepting mostly offers from buyers that came to our offices. However, nowadays we need to monitor market prices continuously, so as to stand strong in negotiations with potential foreign sourcing partners. The advantages are manifold, especially given that the returns of our export sales are based on transaction value, and not on pre-defined and untransparent prices set by buyers. Above all, we feel proud and have gained a stronger sense of identity as a result of the fact that our exports are successful and benefit our workers and families in the cooperative.”

Source: Schaap and Hekking (2016).

becomes an intangible resource. In this context, the acquisition of new experiences and the improvement of knowledge play an even more important role than experience accumulated over many years (Majocchi et al., 2005).

Exporting constitutes an important step in internationalization by enabling SMEs to accumulate knowledge and experience. This is particularly important as initial and prior international mode choices seem to have a relatively lasting impact on subsequent internationalization strategy. Firms often learn and develop specific internationalization routines based on specific entry modes in international markets that are subsequently used (Oehme and Bort, 2015). SMEs that manage to leverage their capabilities, including through enhanced innovation, can further expand their activities in international markets, while at the same time strengthening their activities in the domestic market. In this context, relevant internationalization strategies adopted by SMEs can drive their long-term growth.

(e) Global value chains and SMEs' performance

Global value chains, in particular backward value-chain links through local sourcing, can stimulate the demand for more and better inputs from local suppliers, including SMEs. The lead firm may also assist local suppliers through knowledge and technology sharing and advance payments. Both demand and assistance effects spurred by the lead firm can facilitate the diffusion of knowledge and technology among local suppliers, including SMEs (OECD and World Bank, 2015).

Yet empirical evidence on the impact on SMEs' performance of participating in global value chains, in particular through indirect exports, remains almost non-existent. Part of the reason for the limited availability of empirical evidence might stem from the difficulty in compiling detailed information on forward and backward linkages between SMEs participating indirectly in global value chains for a relatively long period of time. That being said, a number of relevant empirical findings – reviewed below – could apply to SMEs involved in global value chains. In addition, Box C.5 presents a case study which illustrates the effect of integrating into a value chain for an SME.

Box C.5**Case study****A Moroccan SME engaged in global value chains**

This case study provides a concrete example of what it implies for an African SME to integrate into a global value chain.

From family workshop to multinational enterprise partnership

Tuyauto is a Moroccan SME that has been specializing in automotive equipment since 1960. Originally, this small family-run workshop of spare parts, located in Casablanca, produced exhaust systems (mufflers, connection tubes and collectors) for SOMACA (Société marocaine de constructions automobiles), the local market assembly plant.

Between 1995 and 2005, demand for Tuyauto's products declined dramatically. Exhaust system technology evolved to integrate antipollution functionalities and the use of more robust materials, such as stainless steel and the after-sales market for spare exhaust pipes shrank. This period also coincided with the opening of Morocco's automobile market and the resulting diversification of car imports. Maintaining an updated catalogue of spare parts for all models sold on the Moroccan market became extremely difficult.

In 2005 Tuyauto became the main supplier of exhaust systems to the SOMACA Renault factory in Casablanca – which produced a successful model – and it recovered its financial health. Simultaneously, Tuyauto extended its expertise in the field of stamping (pressing activities) to become, in 2010, Renault's original equipment manufacturer for a set of parts for the French manufacturer's new assembly plant located in the Tangiers Free Zone.

The partnership with Renault created other international contract opportunities and fostered business acquisitions to diversify production capacity. In 2012, Tuyauto bought Ettel Maroc, a company with nearly 20 years' experience in precision mechanics, with the view to capitalizing on the synergies between the two companies and consolidating its expertise in the design and development of cutting and stamping tools. From 2012 to 2014, new orders of stamping parts were received by other Renault factories in Europe, Morocco and India. In the near future, Tuyauto is well positioned to contribute to the assembly lines of the future PSA (Peugeot) group plant currently under construction in the city of Kénitra.

Operational outcome and accession to international markets

Table C.1 presents the main indicators of Tuyauto's activity.

The company saw its workforce shrink from 160 to 120 employees by 2015 as a result, mainly, of the automation of its processes and productivity gains. The rejuvenation of the workforce, combined with a more dynamic management structure and new equipment, resulted in a more than fourfold rise of the turnover-per-employee ratio between 2005 and 2015, which coincides with the period when the company joined the Renault group.

Additionally, the high levels of growth observed during the last two decades in both turnover and the number of vehicles produced reveal the positive impact of the international partnership with Renault for Tuyauto.

Box C.5 (continued)

Table C.1: **Tuyauto main indicators, 1995-2015**

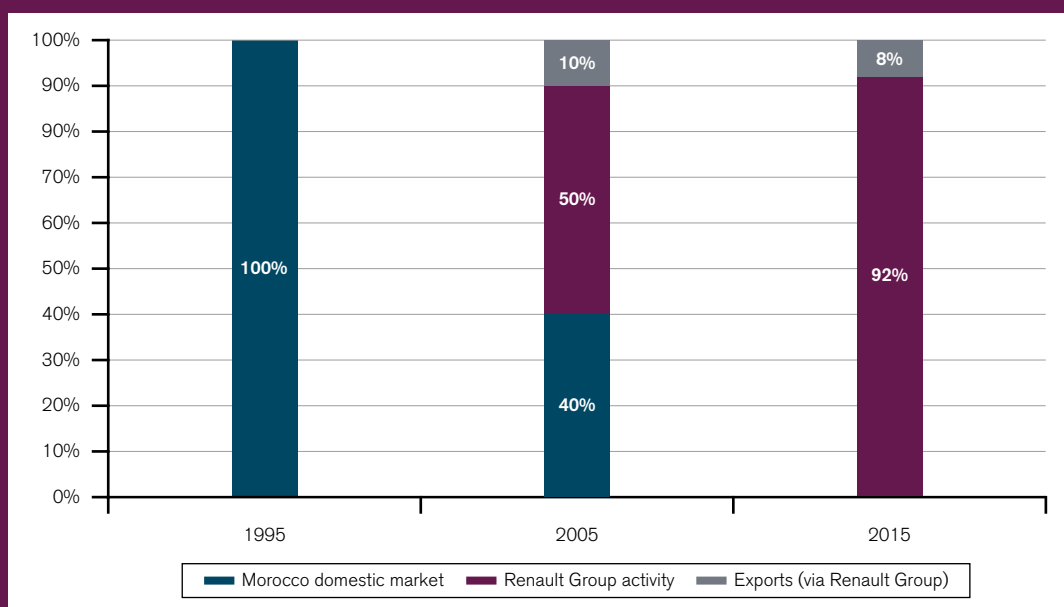
	1995	2005	2015
Employees (number)	160	120	120
Turnover (million €)	2.5	3.0	13.0
Productivity (turnover per employee, million €)	0.02	0.03	0.11
Number of vehicles manufactured in Morocco, with components from Tuyauto (number)	30,000	60,000	220,000

Source: Tuyauto enterprise data.

As shown in Figure C.2, Tuyauto's sources of revenue have changed over time, as it has moved from being oriented toward the local market to progressively becoming one of Renault's key partners in Morocco. In 2015, 92 per cent of Tuyauto's turnover related to its production activities with the Renault group, rising to 100 per cent if the indirect exports of Tuyauto's components via Renault are taken into account.

Overall, Tuyauto acts like an "indirect exporter", as its components are integrated into Renault cars assembled in the Tangier Free Zone and exported globally. Tuyauto also exports some of its parts and components indirectly via Renault, which sends parts for various car models to its overseas subsidiaries and production sites in Asia, Europe, and other regions. The indirect exports of components amounted to 8 per cent of Tuyauto's turnover in 2015.

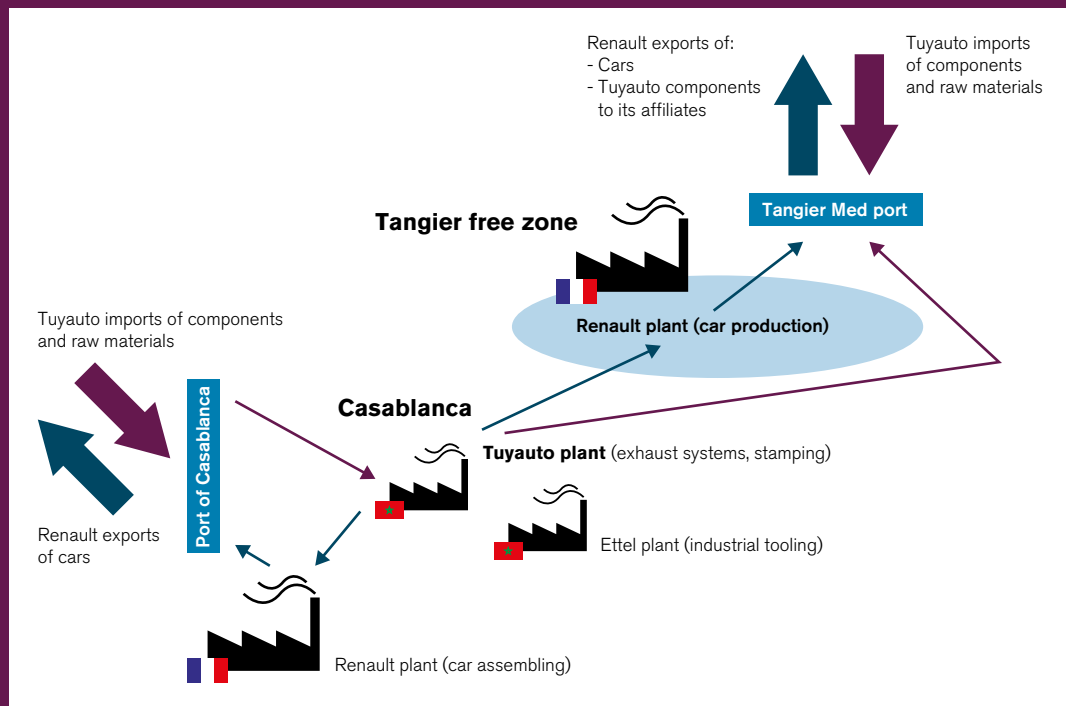
Figure C.2: **Distribution of Tuyauto turnover by main source of revenue, 1995-2015 (percentage of total turnover)**



Source: Tuyauto enterprise data.

Box C.5 (continued)

Figure C.3: **Schematic presentation of Tuyauto's production chain**



Source: WTO, based on Tuyauto enterprise information.

On the supply side, Tuyauto imports components and raw materials from Spain. Figure C.3 illustrates the various transport and trade flows involved as well as the roles and positions of Tuyauto and its industrial partners in the automotive production chain of Renault in Morocco.

Key elements to joining and remaining in international production chains

Over the years, Tuyauto has taken decisive steps to expand its business and become an active member of an international production chain. By adopting a strategy focused on quality industrial performance and customer service, Tuyauto was able to establish a sustainable partnership with the Renault Group and accompany the French automaker in pursuing its strategy and expansion to Morocco.

For an SME in a developing country, joining a global value chain requires that the SME meet the technical and managerial requirements of the parent industrial group. In 1997, Tuyauto commenced a set of certifications by obtaining the ISO 9002 standard that endorses the manufacturing process of SMEs engaged in subcontracting activity. This certification was accompanied in 1999 by a literacy plan for its workers in order to initiate a culture of quality internally. In 2006, Tuyauto obtained the ISO 16949 standard for quality in the automotive industry, and in 2015, it received certification under ISO 14001 relating to environmental management standards. These standards and the related standardization of its industrial processes have greatly facilitated the selection and integration of Tuyauto within the Renault group production chains.

Beyond the scope of the production phase, the company has developed its ability to integrate large-scale international projects. Thus, in 2015 Tuyauto adopted an R&D plan, with the aim of doubling the number of its engineers and technicians by 2019 in order to intensify its innovation capacity and its ability to develop products and industrial processes.

Box C.5 (continued)

In 2010-11, Tuyauto launched an investment phase to cover the costs associated with its integration into the Renault Group production chain. Three sources of funding were deemed necessary, starting with investments in capital equipment (€ 1 million), funded by private capital and supplemented by a classic loan type line of credit. The financing of the working capital mainly relied, not without issues (see next section), on the banking partners of the SME. The third source of funding was a capital investment received from the Renault Group (€ 1.5 million) for specific equipment necessary for vehicle production, primarily stamping tools and assembling apparatus. In 2015, Tuyauto also benefited from the “IMTIAZ-CROISSANCE” programme, launched by the Government of Morocco to support the development of Moroccan SMEs, particularly with regard to productive investment.

First, a number of studies have uncovered positive links between importing and firm productivity. Importing firms tend to display higher productivity than firms that do not engage in import activities. Importing intermediate goods enables firms to specialize in and mobilize their resources for tasks in which they have particular advantages. Imports of high quality intermediaries and capital goods can also constitute a channel for knowledge and technology transfer, by enabling firms to improve their productivity (Wagner, 2012). In addition, importing can extend international contact networks with operators involved in the importing chain, which has been found to lead in some cases to export inquiries or unexpected orders (Korhonen et al., 1996). Although not a requisite for international expansion, import activities can therefore act as springboard for exporting by enhancing SMEs' attitudes towards internationalization and knowledge of international markets.

Second, studies analysing the impact of foreign multinational enterprises on domestic firms' export activity suggest that domestic firms' likelihood of exporting can increase thanks to commercial linkages with customers and suppliers, including foreign suppliers, as well as training and increased competition (Hessels and Terjesen, 2010). However, spillover benefits from internationalization can only materialize if the absorptive capacity of domestic firms is sufficient to enable them to internalize these spillovers. In addition, the potential for export spillovers is likely to be more limited when SMEs participate in low-technology or labour-intensive tasks within global value chains, or when supply contracts are not formalized and long-term (OECD and World Bank, 2015).

4. Conclusions

The reasons underpinning SMEs' decisions to pursue specific internationalization strategies – such as indirect exports, direct exports, international subcontracting (licensing, outsourcing) or investment – remain highly heterogeneous. In some cases, the internationalization process of SMEs is gradual, starting with sporadic exports. In other cases, certain SMEs, often referred to as being “born global”, are engaged in overseas markets since or soon after their creation. Other SMEs are able to integrate global value chains by exporting directly or indirectly through large exporting firms.

The participation of SMEs in international trade remains, however, limited. Among exporting firms, SMEs are usually strongly represented in terms of numbers, but account for only a small share of a country's overall exports and often export only a few products to a narrow range of destinations. To a large extent, this observation is explained by the relationship between productivity, size and export experience, where the most productive firms are not only larger, but also find it easier to access foreign markets and grow even further through exporting. Many trade barriers, notably those giving rise to fixed costs, are particularly burdensome for SMEs, which commonly have limited financial, human and technological resources. This is why several studies have highlighted that SMEs would benefit most from further trade opening and policy coordination, including on non-tariff measures. When given the opportunity to enter new markets, SMEs tend to respond more swiftly and flexibly than large firms, and they can therefore play a key role in the creation of new exports.

Internationalization, and in particular exporting, is often considered to be an important strategic option to enable SMEs to expand. Yet empirical evidence of the impact of internationalization on SMEs' performance is limited, since its effects tend to be firm-specific. On the one hand, the probability that SMEs may decide to start exporting tends to increase with the level of productivity and innovation. On the other hand, SMEs engaged in export activities can experience higher growth and employment through economies of scale and enhance their productivity and innovation through learning effects. The prospect of larger revenues from

exporting can also incentivize SMEs to invest more in innovation beforehand. Although many SMEs start exporting sporadically, over time, SMEs that manage to remain exporters experience higher survival rates than non-exporting firms. In this context – in addition to the importance of improving the framework conditions enabling SMEs to acquire firm-specific advantages, such as innovation and productivity – trade opening and facilitation may have particularly important policy objectives of supporting SMEs that have the potential to become successful exporters.

Endnotes

- 1 Gabrielson et al. (2008); Kalinic and Forza (2012).
- 2 Firm size is a firm characteristic that has received considerable attention in the literature. Different units of measure can be used to measure firm size, such as the number of employees, sales volume, sales employees' ratio, the level of assets, or the level of investment in research and development (R&D). The next subsection discusses in greater detail the role of firm size in internationalization dynamics.
- 3 See among others Bernard and Jensen (1999), Brambilla et al. (2014), Cebeci et al. (2012), Cebeci (2014), Falk and Hagsten (2015), Greenaway and Kneller (2008), Tybout (2004) and Wagner (2015). The link between firm productivity and size emerges in much empirical work, but does not always hold. In this section it is assumed that large firms are on average more productive than small firms.
- 4 See also Amador and Opromolla (2008), Arkolakis and Muendler (2010), Bernard et al. (2011a), and Van Beveren and Vandenbussche (2010).
- 5 However, Bernard et al. (2014) find that the negative relationship between firm growth and firm size is biased upwards due to partial year effects. Firms seldom start exporting precisely at the beginning of the year, meaning that annual growth rates are overstated when comparing it to the second full year of exporting.
- 6 As Krugman's model (Krugman, 1979; 1980) has become known as the "new trade theory", Melitz (2003) provided the foundations for the so-called "new new trade theory". For a very accessible and intuitive introduction to the latter, see Baldwin (2005).
- 7 For papers empirically testing the predictions from the Melitz model see, for instance, Wagner (2007), Aw et al. (2009), Manez-Castillejo et al. (2010), Alfaro and Chen (2012), and Brambilla et al. (2014).
- 8 A key result of the Melitz model is of course the welfare-improving nature of trade opening, which, on top of other established benefits of trade, also increases overall industry productivity (and potentially even firm productivity, as demonstrated, for instance, by Bustos (2011)). Mayer et al. (2011) and Bernard et al. (2006) further elaborate on these effects, pointing out that when competition increases due to trade opening, the surviving firms have smaller average mark-ups, leading to lower prices and higher welfare, with multi-product firms also concentrating their exports on the best performing products and most profitable destinations.
- 9 See Rubini (2011), Arkolakis et al. (2011), Feenstra et al. (2014), and Imbs and Mejean (2015). Measuring the responsiveness to trade volumes at an elevated level of aggregation has been criticized by an increasing number of papers (Bas and Strauss-Kahn, 2012; Head et al., 2014; Melitz and Redding, 2015).
- 10 Another potential reason for the higher responsiveness of certain firms to trade opening relates to quality differences in product varieties. Low-quality product varieties have been found to be more price-sensitive than high-quality items, as the latter may be more exclusive, diversified and harder to replace, making consumers less sensitive to price changes (Lashkaripour, 2013). However, it is not clear whether smaller firms, on average, produce higher or lower quality products.
- 11 Analysing firms' performance is challenging in terms of defining uniform and valid performance measures. Firm's performance can be measured using quantitative indicators, such as profits or sales, but also (subjective) qualitative indicators, such as the manager's satisfaction or success in achieving firms' objectives (e.g. higher market share) (Pangarkar, 2008).
- 12 Although empirical evidence on "learning by importing" remains limited and inconclusive, a number of studies have also uncovered a positive link between importing and firm productivity. It could then be the case that importing firms, which managed to improve their productivity through high quality intermediaries and capital goods imports, would ultimately self-select into exporting. This process could explain, at least partially, why firms that both import and export simultaneously tend to be the most productive, followed by importing firms, and then exporting firms (Wagner, 2012).
- 13 Similar to other issues discussed in this section, empirical evidence on the relationship between firm age and exporting likelihood or performance is nuanced. Some studies conclude that size, and not age, has an impact on SMEs' exporting likelihood and performance (Williams, 2011). Conversely, other studies suggest that older small firms experience a higher likelihood of being successful in export markets (Brouthers and Nakos, 2005). Other studies further consider international experience to be more relevant than age itself (Love et al., 2015).