

# Annual Report on European SMEs 2017/2018

## Special Background Document on the internationalisation of SMEs

SME Performance Review 2017/2018

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**Annual Report on European SMEs  
2017/2018**

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# 1. Introduction

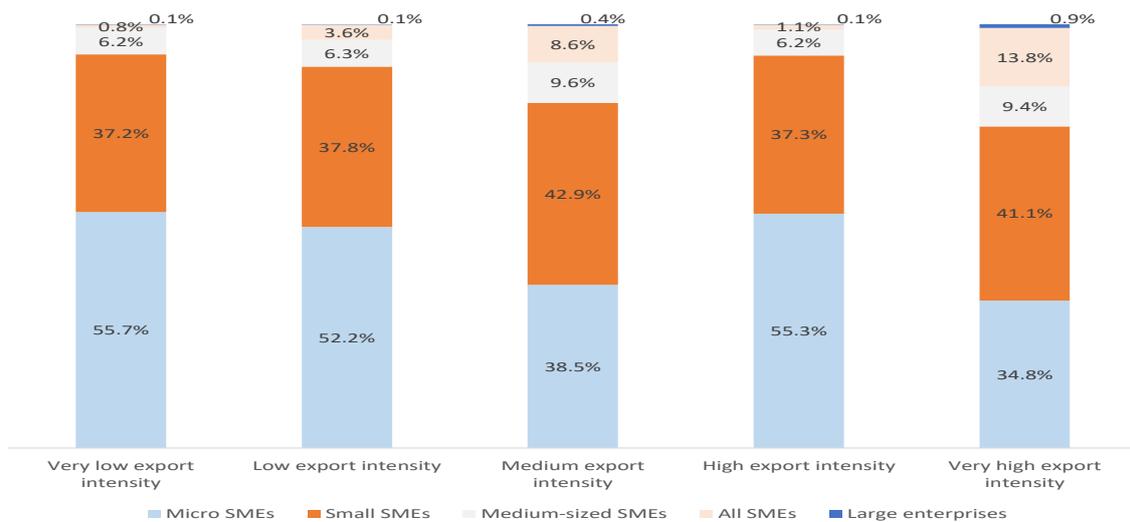
In 2017, there were 24.6 million SMEs in the EU-28 non-financial business sector<sup>1</sup>, of which 22.9 million were micro SMEs, 1.4 million were small SMEs and 0.2 million were medium sized SMEs. In contrast, there were only 47,000 large enterprises.

SMEs can be found in all industrial sectors of the EU-28 economy. However, they tend to operate mainly in industries which export relatively little.

For example, in the EU-28 non-financial business sector in 2017, slightly more than 55% of SMEs were active in industries which export less than 5% of their turnover and slightly more than 37% were operating in industries in which exports account for only 5% to 10% of their sales.<sup>2</sup> Only 7.3% of SMEs were active in industries in which foreign sales accounted for 10% or more of total sales. In contrast, 24.1% of large enterprises were active in such industries.

Within the EU-28 SME population, micro and small SMEs tend to be concentrated in industries with very low or low export intensities, while the distribution of medium-sized SMEs across industries of different export intensities tends to broadly mirror that of large enterprises.

**Figure 1: Distribution of SMEs and large enterprises across industries of different export intensities in 2017 in the EU-28 non-financial business sector**



Source: Eurostat, National Statistical Offices, DIW Econ and LE Europe

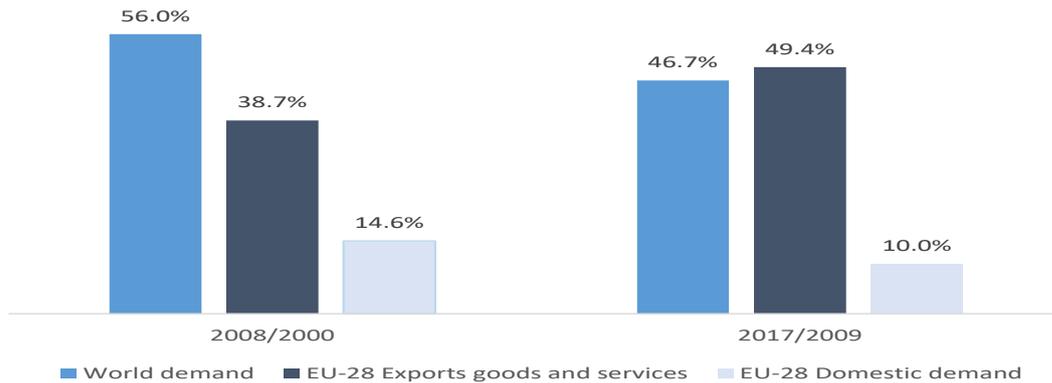
<sup>1</sup> The non-financial business sector covers most of the economy. The following sectors are outside the non-financial business sector: 'agriculture, forestry, and fishing' (NACE section A), 'financial and insurance activities' (NACE section K), 'public administration and defence; compulsory social security' (NACE section O), 'education' (NACE section P), 'human health and social work activities' (NACE section Q), 'arts, entertainment and recreation' (NACE section R), 'other service activities' (NACE section S), 'activities of households as employers; undifferentiated goods- and services-producing activities of households for own use' (NACE section T) and 'activities of extraterritorial organisations and bodies' (NACE section U). NACE is the Eurostat statistical classification of economic activities in the European Union.

<sup>2</sup> The various export intensity categories are defined as follows: very low export intensity = ratio of industry exports to total industry sales of between 0 and less than 5%; low export intensity = ratio of industry exports to total industry sales of 5% to less than 10%; medium export intensity = ratio of industry exports to total industry sales of 10% to less than 20%; high export intensity = ratio of industry exports to total industry sales of 20% to less than 40%; very high export intensity = ratio of industry exports to total industry sales of 40% or more.

As the vast majority of EU-28 SMEs operate in industries which are mainly inward facing, i.e. focused on serving domestic clients, they have not benefited directly<sup>3</sup> from the very strong growth in demand from foreign customers since 2000.

From 2009 to 2017 world demand for foreign goods and services increased by 47% (in volume) and EU-28 exports of goods and services increased by 49% in volume. In contrast, EU-28 domestic demand grew by only 10% over the same period. The pre-2008/09 crisis period is characterised by a similar dichotomy between growth patterns of foreign demand and domestic EU-28 demand.

**Figure 2: Cumulative growth from 2000 to 2008 and 2009 to 2017 in world demand (in volume), EU-28 exports of goods and services (in volume) and EU-28 domestic demand (in volume)**

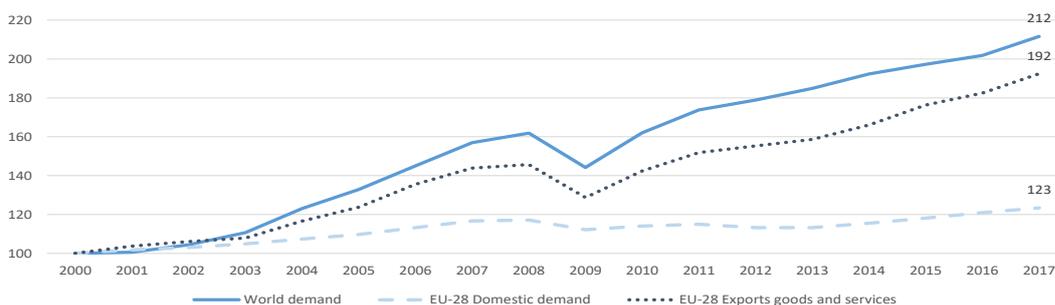


Note: World demand = imports of goods and services (in volume) of all countries, EU-28 domestic demand = EU-28 final consumption expenditure of households and governments + EU-28 gross fixed capital formation by households, governments and businesses. Both are expressed in chain linked volumes (2010).

Source: IMF World Economic Outlook April 2018, Eurostat

Overall, foreign demand (in volume) more than doubled from 2000 to 2017. Over the same period, EU-28 exports of goods and services (in volume) almost doubled, while EU-28 domestic demand (in volume) increased by less than 25% (Figure 3).

**Figure 3: Evolution of world demand (in volume), EU-28 exports of goods and services (in volume) and EU-28 domestic demand (in volume) since 2000 (2000=100)**



Notes: World demand = imports of goods and services (in volume) of all countries, EU-28 domestic demand = EU-28 final consumption expenditure of households and governments + EU-28 gross fixed capital formation by households, governments and businesses. Both are expressed in chain linked volumes (2010)

Source: IMF World Economic Outlook April 2018, Eurostat

Clearly, SMEs as a group could hugely benefit from greater participation in the global economy. Indeed, the tenth Small Business Act principle encourages the internationalisation of SMEs by recommending that Member States should

<sup>3</sup> SMEs may benefit indirectly from an upswing in foreign demand by supplying goods and services to exporting enterprises and/or selling their products and services to the employees of the exporting enterprises.

encourage SMEs to benefit from the growth of global markets and support them in this pursuit.

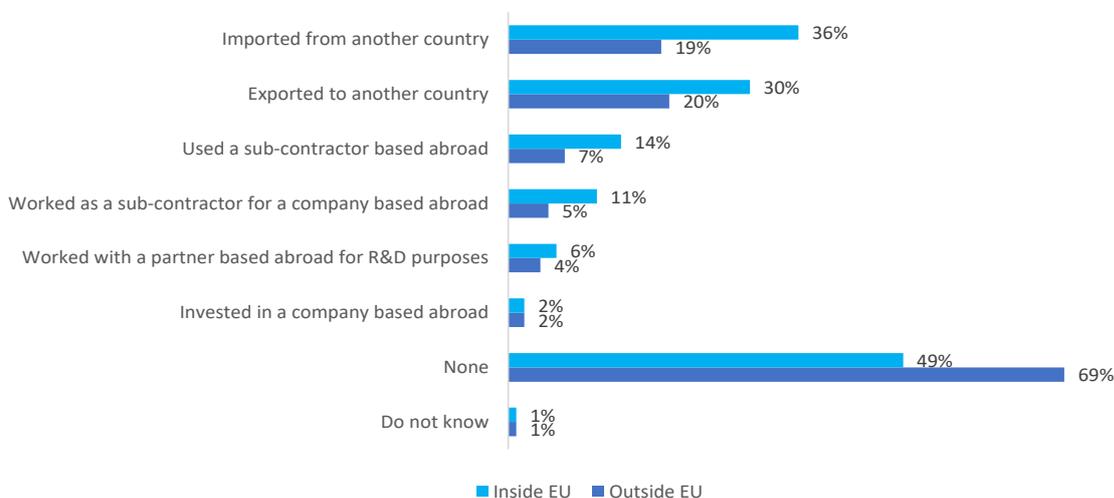
As pointed out in a recent joint report by Bpifrance, BBB, CDP, ICO, KfW<sup>4</sup>, SMEs could benefit in a number of different ways in internationalising, such as:

- they could benefit from economies of scale by producing and selling more
- they could reduce market risk by diversifying their sales across different markets
- going to markets abroad opens new opportunities and incentivises firms to be more innovative and productive
- sourcing globally increases supply choice
- locating a sales and/or production facility abroad brings SMEs closer to their customers and may save on production and/or distribution costs
- they could benefit from the technological know-how of their foreign partners.

The internationalisation of SMEs can take a number of non-mutually exclusive dimensions:

- SMEs may engage in exports or imports of goods and services
- SMEs may be the recipients of foreign direct investment (inward FDI) or may invest abroad (outward FDI)
- while not directly engaged in cross-border activities, SMEs may be part of a national value chain which has an international focus or a global value chain
- SMEs may engage in cross-border R&D and innovation collaboration
- SMEs may licence or franchise their products or services.

**Figure 4: International activities undertaken by EU-28 SMEs within the EU-28 and outside the EU-28**



Source: LE Europe analysis of 2015 Eurobarometer

The present background paper accompanies the 2018 SME Annual Report and provides more information on a number of aspects of the general discussion of the internationalisation of SMEs in the Annual Report.

In particular, this paper:

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<sup>4</sup> Bpifrance, BBB, CDP, ICO, KfW (2018) *France, Germany, Italy, Spain and the United Kingdom – Internationalisation of European SMEs – Taking Stock and Moving Ahead*, March.

- presents a more exhaustive review of the literature on the internationalisation of SMEs
- discusses the findings of statistical analysis of the export pattern and behaviour of SMEs which participated in:
  - the SAFE survey<sup>5</sup>
  - the 2015 Eurobarometer survey on the internationalisation of SMEs
  - the Community Innovation surveythis analysis uses the micro data of the various surveys
- presents the results of an analysis of the export and import patterns of SMEs in Estonia, Finland, Ireland, Greece, Netherlands and Slovakia. This analysis uses micro data from the national statistical organisations
- presents eight case studies of SMEs which export, focusing in particular on the challenges they faced
- presents five case studies on how online platforms can be used by SMEs to overcome some of the barriers to foreign market entry.

Detailed econometric results of the micro statistical analyses are provided in the Annexes to this document.

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<sup>5</sup> Survey on the access to finance of enterprises (SAFE) undertaken jointly by the European Commission and the European Central Bank.

# 2. Key findings from the literature on the internationalisation of SMEs

## 2.1 Benefits vs Costs/Risks of internationalisation

### 2.1.1 Why do (some) firms internationalise? Rationales and Motives

There are clear gains from internationalisation<sup>6</sup>: firms can benefit from international expansion due to market (demand oriented) opportunities as well as resource-seeking and efficiency-seeking (supply oriented) strategies (Dunning, 2009; Johanson and Vahlne, 1977). Among other gains, is the ability to access strategic assets or exploit economies of scale, i.e. reducing costs per unit of output by selling greater amounts to a larger customer base. Moreover, firms can diversify the general risks of adverse demand shocks by spreading sales over markets which follow different business cycles (e.g. Dunning, 2009; Oh and Rugman, 2012, Wagner, 2012). Participation in global value chains or the importation of intermediate inputs can also play a crucial role in allowing for the spillovers of technology or / and generating cost savings, with both such developments resulting in productivity growth for firms (Saliola and Zanfei, 2009; Timmer and de Vries, 2013).

Given the numerous advantages of internationalisation, the question arises as to why so many firms do not engage in any international activity. In fact, firm-level data usually reveals that within industries only a small fraction of firms internationalise (Mayer and Ottaviano, 2007; Helpman, 2011; Melitz, 2003; Bernard and Jensen, 1999; Bernard et al. 1995). To explain this empirical finding, the literature suggests that there is significant heterogeneity across firms within industries in terms of productivity. Most interestingly, firms that internationalise tend to be rather large.

The entry into foreign markets entails transaction costs, fixed costs (Melitz, 2003) as well as potential risks due to the liability of foreignness, i.e. the unfamiliarity with formal and informal institutions in foreign countries (Eden and Miller, 2004; Hymer, 1960). These costs and uncertainties generate substantial barriers that not all firms are (or feel) capable of overcoming. These barriers may also explain why a significant share of the population of European firms do not engage at all in international trade. In 2015, only 30% of European SMEs were involved in export activities (and 36% in import activities) within the Single Market (see Box 1), and only 20% of SMEs exported goods (and 19% imported goods) beyond the Single Market (Eurobarometer 421, 2015), despite the fact that most global growth happens outside the EU.

#### **Box 1 The European Single Market**

The European Single Market is a trade block in which most tariff and (formal) non-tariff trade barriers have been eliminated with mostly common regulation. However, informal barriers such as cultural distance (see Hofstede, 1980, 2011)

<sup>6</sup> Internationalisation in this context comprises both exports and imports as well as foreign direct investment and international R&D cooperation.

still exist within the European Union. Nevertheless, cultural distance among Member States appears small compared to the cultural distance in most non-European countries.

### 2.1.2 *Are SMEs different from large enterprises?*

Due to their small size and related characteristics, SMEs suffer from typical constraints and barriers, which affect their capability (and possibly reduce their motivation) to expand beyond their domestic borders (Laufs and Schwens, 2014; Paul et al., 2017; Hollenstein, 2005; Breckova, 2018).

- Firstly, SMEs encounter resource constraints, e.g. a scarcity of financial and personnel resources, to a greater extent than large enterprises (Nakos and Brouthers, 2002; Brouthers and Nakos, 2004).
- Secondly, SMEs often lack information on foreign regions and countries, cultures and legal institutions at a local level (Hollenstein, 2005; Buckley, 1989; Acs et al., 1997). Consequently, the probability that an SME internationalises is low compared to large firms, which face significantly fewer resource constraints and have a greater capacity to deal with the foreign environment.

When an SME chooses to internationalise, a strategy involving relatively low amounts of (fixed) investments might appear more appealing (Hollenstein, 2005). As a result, whereas large firms may hold equity and assets in the form of foreign affiliates, internationalised SMEs might serve foreign markets only via exporting or long-term collaborative contractual and licensing agreements, entailing lower fixed costs and hence lower risks (Hegge, 2002; Hollenstein, 2005; Berra et al., 1995).

In contrast to large multinational enterprises (MNEs), SMEs are often family-owned and/or owner-managed (Nakos and Brouthers, 2002; Laufs and Schwens, 2014). Due to these characteristics, when internationalising, SMEs might be additionally inclined to choose risk-averse, low-commitment entry modes with little foreign direct investments and assets held abroad.

Furthermore, Fernandez and Nieto (2006) argue that family-owned/owner-managed SMEs are less likely to form joint ventures, as they prefer to keep full control of their businesses abroad (Fernandez and Nieto, 2006). This means that if a firm wants to follow an FDI strategy, the SME might prefer a wholly owned affiliate to a shared affiliate. Nevertheless, as indicated above, sole ventures might increase the risks associated with market entry, since, in contrast, in joint ventures the local partners can provide inside knowledge about local institutions and bear part of the risk (both formally and informally) (Laufs and Schwens, 2014; Paul et al., 2017; Hollenstein, 2005).

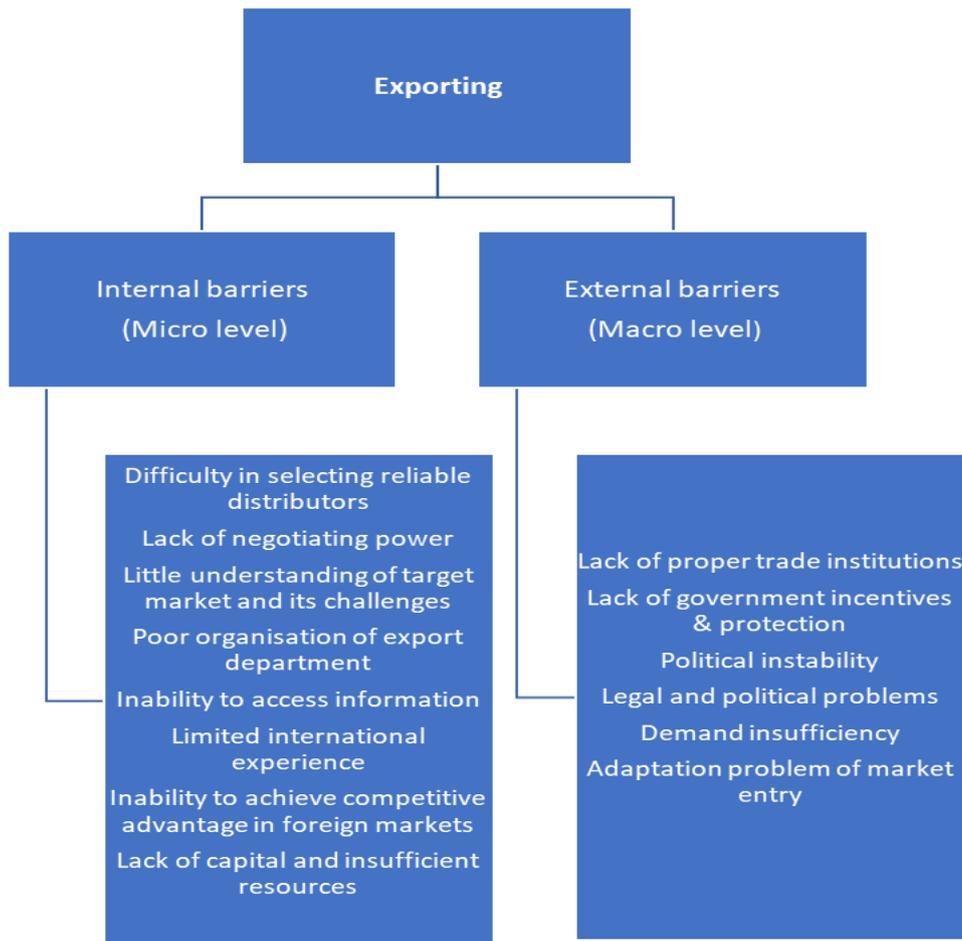
As with joint ventures, non-FDI internationalisation strategies, such as licensing patents to foreign partners, run the risk of unauthorised technology transfers and may possibly result in creating future competitors after sharing the firm's knowledge and competitive advantage.

In general, the aforementioned barriers for internationalisation can be classified as either internal, such as lack of management resources, or external, such as complex and unknown institutional environments (e.g. Buckley, 1989; Paul et al., 2017; Arndt et al., 2012) and currency exchange rate risks (Duarte Alonso et al., 2014).

In Figure 5, Paul et al. (2017) provide a more detailed list of barriers for SME internationalisation. While internal barriers at the micro level are, to some extent, in the control of the firm and do not apply to large firms, external barriers such as technological, political, and institutional market environments are clearly exogenous and similarly apply to large firms. However, availability of funding and management capability helps large firms to overcome these barriers more easily (see also Laufs and Schwens, 2014; Hollenstein, 2005).

Above all, SMEs may overestimate costs and thus be unnecessarily reluctant to move beyond their domestic borders (EIM, 2010).

**Figure 5: Major barriers for SME exporters**



Source: Paul et al. (2017)

## 2.2 Theories of internationalisation at firm level

The academic literature presents many theories explaining a firm's decision to engage in international activity. Although there are no SME-specific theories, firm size can play an important role in internationalisation. This section discusses some of the most relevant theories found in the pertinent literature, encompassing both economics journals and international business and management journals.

### 2.2.1 "New" New Trade Theory: Melitz model

In economics, traditional trade theories discuss the importance of differences in factor endowments (Heckscher and Ohlin, 1933) and technology (Ricardo, 1817) across economies to derive the corresponding concept of comparative advantage. These theories help to explain trade flows and the exchange of products between countries at the national sectoral level. None of these theories, however, allowed economists to study the role of firms and firm behaviour in international trade. Thus, these theoretical frameworks cannot be used to address the question of why only a fraction of firms within one industry may export goods to foreign countries, whereas the majority of firms may operate only domestically. Due to the obvious limitations of traditional trade theory and constantly changing trade patterns caused by ongoing globalisation, in the late 20th and early 21st centuries, the academic focus shifted from sectors and industries to firms, allowing trade theory to account for the complex implications of firm heterogeneity. From then on, trade theory was able to identify both winners and losers of international trade not only across national sectors but also within sectors.

As major contributor to the "New" New Trade Theory, Melitz (2003) developed a model of monopolistic competition with heterogeneous firms. The basic assumption of the model is that firms, by nature, differ in productivity. Moreover,

internationalisation imposes additional costs. First of all, exporters have to bear an additional fixed cost for serving a foreign market, e.g. for setting up a distribution network. Secondly, exporters face additional variable transaction costs, which may arise from insurance fees, freight costs or trade barriers (Melitz, 2003, Helpman, 2011). As a consequence, only the most productive firms, typically those which are large in terms of employment, self-select into becoming exporters, since only these firms can earn a profit by engaging in international trade.

According to their model, causality runs from productivity to export activity, implying that the given exogenous productivity level determines export activity, not the other way around (see also Bernard and Jensen, 1999; Wagner, 2007). In contrast, there is also research arguing that there is a knowledge gain from exporting, meaning that export activity can enhance a firm's productivity level (see, among others, Van Biesebroeck, 2005; De Loecker, 2007). The latter would similarly explain why exporting firms are very productive.

While Melitz (2003) focuses on exports, Helpman et al. (2004) provide an extension of the model incorporating the possibility of foreign direct investment (FDI). In their model, Helpman et al. (2004) look at horizontal FDI (see Markusen, 1984), meaning that a foreign plant engages in the same activities as the parent firm. The authors, therefore, do not account for the possibility of offshoring certain activities, that differ from the activities of the parent firm, to affiliated suppliers abroad which have a comparative advantage in these activities (vertical FDI). Horizontal FDI can reduce variable trade costs: transport and coordination costs decrease and enable tariff jumping.<sup>7</sup>

Based on a proximity-concentration trade-off, a firm has to consider whether the sum of export-related variable trade costs exceeds the fixed costs of buying or building a foreign plant (Brainard, 1997; Yeaple, 2003; Helpman, 2011). In the case of horizontal FDI, the size of the foreign market crucially determines which internationalisation strategy is superior.

In both models (Melitz, 2003; Helpman et al., 2004), the most productive firms internationalise, and productivity is correlated with firm size.

### 2.2.2 OLI Model: Ownership, Location, Internalisation

Dunning's (1977, 1988) eclectic approach, the OLI-Model, analyses the forces that drive firms to form foreign subsidiaries in order to explain FDI patterns (Helpman, 2011). The OLI Model distinguishes three types of advantages to explain internationalisation via FDI:

- Firstly, firm-specific competitive advantages, like the ownership of specific tangible and intangible assets or knowledge, implying a superior production technology, and headquarter services (Helpman, 1984) can result in an ownership-specific advantage, making it worthwhile to expand internationally and allowing the firm to overcome fixed costs of FDI.
- Secondly, there are location-specific advantages determining a firm's decision to set up a subsidiary in a certain country, e.g. due to the abundance of certain production factors, resulting in lower production and wage costs. Moreover, local institutions and the infrastructure situation, as well as transportation savings, play a similarly important role.
- Thirdly, it may be advantageous to retain control and internalise operations abroad, consequently reducing transaction costs such as hold-up<sup>8</sup> and monitoring costs associated with contractual agreements with third parties. Consequently, it may be more efficient for firms to set up an affiliated subsidiary, since in-house coordination of different activities in different countries may incur lower transaction costs than using market mechanisms to serve foreign markets (see also Buckley and Casson, 1985; Williamson,

<sup>7</sup> Avoidance of tariffs by establishing a production facility within the foreign country imposing the tariffs.

<sup>8</sup> Hold-up costs arise due to imperfect contracts between two trade partners in situations when one party has to make a specific investment before a future transaction and the other party has a certain bargaining power. This hold-up problem can lead to underinvestment.

1979, 1981, 1999). The internalisation of market transactions also enables the protection of property rights and firm-specific know-how (internalisation advantages).

Put differently, ownership-specific advantages relate to “new” new trade theory, location-specific advantages relate to classical trade theory, while internalisation advantages refer to a transaction cost approach (Hollenstein, 2005).

### **2.2.3 International Stage Model / Uppsala Model and Born Globals**

The Uppsala School (e.g. Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975; Welch and Wiedersheim-Paul, 1980; Welch and Luostarinen, 1988) has influenced much of the business and management literature in the 1970s and 1980s on how firms internationalise. According to this strand of literature, firms internationalise by taking small and incremental steps into foreign markets. This internationalisation strategy affects both the choice of entry modes, as well as the selection and sequencing of markets to enter.

According to the model, firms first tap into the markets of countries that are close in geographic, cultural, institutional and educational terms. In addition, they first enter foreign countries by using sales agents before opening branches and making direct investments in the case of initial success. Thus, the international expansion of the Uppsala model can be characterised as risk averse and as a “sequential, path-dependent learning process” (Barkema and Drogendijk, 2007, p.1132). Due to this incrementalist strategy, capital investments in foreign entities, and consequently risks associated with internationalisation, increase only gradually. Entering unknown cultural blocs (see Ronen & Shenkar, 1985) entails high costs that would not arise when companies only operate in well-known environments, exploiting their knowledge base (Barkema & Drogendijk, 2007).

Following an incrementalist internationalisation strategy, a solely domestically operating firm can start exporting and eventually end up owning subsidiaries abroad. The model fits the data well and explained internationalisation patterns at the time it was developed (Barkema and Drogendijk, 2007). Nevertheless, the model cannot explain all internationalisation phenomena observed in the era of globalisation. Due to increasing integration of world markets in the past decade and the benefits of becoming a global player, firms were and continue to be motivated to overcome their past risk averse behaviour and internationalise faster than their competitors (Barkema et al., 2002).

To explain the empirical evidence, another strand of literature emerged which focuses on the fact that there are now firms that internationalise more or less directly after establishment (Paul et al., 2017). Such firms are called “born globals” (Eurofund, 2012; Knight and Cavusgil, 2004; Cavusgil and Knight, 2015; Madsen and Servais, 1997; Madsen et al., 2000) or “international new ventures” (INVs) (McDougall et al., 1994; Oviatt and McDougall, 1994). “Born globals” can be found across all sectors. Their product portfolio is typically very innovative and technology-intensive (Eurofund, 2012).

## **2.3 Evidence on SME internationalisation: different entry modes**

### **2.3.1 Empirical Evidence and Firm-Level data**

In 2010, EIM Business & Policy Research published a report, commissioned by the European Commission, assessing the level of internationalisation of European SMEs (EIM, 2010). Using 2009 data, the report provides empirical evidence indicating that there is a direct link between the level of internationalisation and the size of an enterprise (see EIM, 2010), irrespective of mode and type of internationalisation. Moreover, the age of an enterprise also seems to play a role in internationalisation: both importing and exporting activities gradually increase with the age of the firm. On average, SMEs in smaller countries tend to be more internationalised, while the firm's proximity to the national border does not play a role (EIM, 2010; Hollenstein, 2005). European SMEs mostly export to and import from EU Member States. However, imports of intermediate goods from China are also relevant.

According to the findings, a larger share of European SMEs start importing goods and services before engaging in exports (see EIM, 2010). In general, the empirical literature at firm level suggests a positive link between importing and productivity (Wagner, 2012). Bas and Strauss-Kahn (2014) provide empirical evidence of the positive impact of imported inputs on total factor productivity in French manufacturing firms. Similarly, with respect to Italian manufacturing firms, Altomonte et al. (2014) find that import penetration has a positive impact on productivity. Despite the costs of importing (e.g. in the form of monitoring costs to ensure good quality of the goods) as well as sunk costs (e.g. search and information costs incurred as part of understanding contractual terms offered by appropriate foreign suppliers, and contract formulation or negotiation), the use of foreign intermediates may enhance a firm's productivity.

Similar to Melitz (2003), Mayer and Ottaviano (2007) find that internationalised firms are larger, generate higher value added per firm, pay higher wages, employ more capital per worker and are more productive than average. Among the few internationalised firms, only a small share accounts for the bulk of aggregate exports and FDI.

Using a cross-country firm level database containing 5000 firms in developing countries, Berman and Héricourt (2010) show that access to finance crucially affects the decision to enter foreign markets. They show that a lack of finance breaks the link between productivity and international trade. Put differently, given severe financial constraints, even productive firms do not start exporting.

Arndt et al. (2012) analyse the extensive and intensive margins<sup>9</sup> of international activity of German firms. They find that low productivity, labour market frictions as well as financial constraints can impede internationalisation.

If transaction costs are low, joining a value chain can be an internationalisation strategy for less productive firms that are not able to bear the costs of vertical integration. Based on survey data covering the Italian manufacturing and service sectors, Giovannetti et al. (2015) show that supply chain participation helps small firms to overcome some obstacles to competition. Supply chains can support the engagement of small firms in international markets, e.g. by opening new niches and allowing firms to overcome information costs. Thus, their results suggest that specialisation of small domestic firms in well-defined processes has the potential to enhance their integration into global production chains.

### 2.3.2 SME-specific Insights

Hollenstein (2005) econometrically investigates the factors determining the choice of a specific internationalisation strategy. The author applies a multinomial logit model and distinguishes between different internationalisation strategies:

- (1) Domestic sales only (reference strategy)
- (2) Serving foreign markets via exports only
- (3) Exporting and FDI: offshoring as well as duplicating several business functions such as distribution, production, and R&D.

To analyse the motives for internationalisation, the author uses representative data from Swiss firms from 1998, covering most parts of the private sector (manufacturing, construction and services). The large sample, including 2,424 firms, enables the author to estimate the model not only for the whole sample, but also for subsamples by size classes, i.e. 5-49, 50-199 and 200 or more employees. This allows the authors to analyse size-specific patterns and derive SME-specific results.

Hollenstein (2005) finds that Dunning's (1977, 1988) OLI Model can largely explain internationalisation strategies. To test the model empirically, the author uses the following explanatory variables: R&D-related indicators and other firm and industry

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<sup>9</sup> In international trade, the term "extensive margin" refers to the decision by a firm to engage in international trade and/or investments, and therefore increase the number of firms and volume of goods and services involved, whereas the "intensive margin" refers to an increase in exports/imports and foreign investments by firms which are already engaged in foreign trade and/or investment.

characteristics, such as the firm-specific stock of skilled labour and capital stock per employee, to serve as proxies for ownership-specific advantages. Among other factors considered in the empirical analysis, labour costs and labour supply in the host country are used to reflect location-specific advantages. To take into account the impact of internationalisation, the authors look at firm size and the propensity to cooperate internationally as indicators of internationalisation.

The empirical results show that ownership-specific advantages play the most important role. This result is robust irrespective of firm size. Interestingly, location-specific factors play a more important role for small firms' internationalisation endeavours.

The degree of internationalisation in the sample is quite high, since Switzerland is a small country and the limited domestic market as well as high labour costs makes internationalising worthwhile. This is reflected in the fact that 56 percent of the firm sample were engaged in international activity. Even in the size class of 5-49 employees, 45 percent of firms were engaged in international activity. Manufacturing exhibits higher degrees of internationalisation than services. However, particularly knowledge-intensive services such as R&D and IT services also reached a relatively high level of internationalisation.

The type of international activity, however, varies among size classes. While large firms often follow internationalisation approaches that include being on-site and FDI, medium-sized firms prefer exporting and contractual agreements to sell their goods to foreign markets instead of holding assets abroad. However, small and medium-sized firms seem eager to retain full ownership of a foreign affiliate if they are leading players in a knowledge-intensive niche market. Interestingly, the share of small firms that are engaged in foreign R&D is only slightly lower than the respective share for the subsample which contains only large enterprises with more than 200 employees. The author argues that this finding supports the findings of the literature on "born globals".

## 2.4 ICT and online platforms as facilitating factors for internationalisation

The usage of ICTs, such as maintaining a website or selling on e-commerce online platforms, might make it easier for firms to internationalise, as associated costs significantly decrease, consequently increasing the number of firms self-selecting into trading internationally (see Melitz, 2003). For instance, importers' search costs might decline because remote internet-based desk research might be sufficient to find appropriate foreign suppliers of intermediate products. Similarly, by relying on reputable international online platforms, exporters can nowadays enter markets without exhausting groundwork, such as setting up their own local distribution networks, collaborating with local firms or attending trade fairs (Lendle et al., 2016). Lohrke et al. (2006) argue that the internet allows firms to directly interact with consumers, instead of relying on external parties and business partners (Hagsten and Kotnik, 2017; Lohrke et al., 2006).

Direct interactions could accelerate the speed of economic transactions and reduce third party agency costs. As online platforms bring together many market participants and are easily accessible to anyone, they can crucially reduce entry and search costs and increase efficiency for both suppliers and consumers. Due to the network effects<sup>10</sup> accruing from the widespread use of online platforms, the process of matching sellers and buyers becomes more efficient in general (Lendle et al., 2016). In a sense, the economic distance between sellers and buyers situated in different countries declines on online platforms. Based on a similar argument, Lendle et al. (2016) apply a gravity model approach to compare the effect of geographic distance on eBay trade alone to the respective effect on overall international trade flows. They find that the impact of geographic distance on trade via eBay is smaller

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<sup>10</sup> An increase in the number of users increases the platform's value to its users. Large user numbers attract more sellers and more content, as well as more clicks and more visits to the website, and vice versa.

than on total trade flows and argue that online technologies bring down information frictions associated with geographic distance.

There are several examples of how ICT can reduce information frictions. Firstly, ICT enables new and inexpensive marketing and advertising channels, allowing firms to promote their products in as yet untapped markets and raise brand awareness (Hagsten and Kotnik, 2017). Secondly, credible rating systems on global online platforms can increase trust in foreign sellers by reducing information asymmetries at low cost (Lewis, 2011). Thirdly, Yamin and Sinkovics (2006) argue that the internet shortens the psychic distance between countries because firms can gather detailed information about foreign markets and foreign cultures more easily, reducing general risks and uncertainties about market entry.

In this sense, current economics research provides empirical evidence that ICT can significantly facilitate international expansion of SMEs (Hagsten and Kotnik, 2017), as firms can better overcome some hurdles of entering foreign markets.

However, firms whose business models rely heavily on online platforms might end up in a unilaterally dependent relationship, since, due to network effects, online platforms often obtain monopolistic market power, allowing those platforms to extract large shares of the rents generated by the firms using the platforms.

# 3. Drivers of SME exports – analysis of the SAFE survey

## 3.1 Disclaimer

The analysis below uses data from the EC/ECB Survey on the access to finance of enterprises (SAFE). The results and conclusions based on the analysis of that data are those of the researcher only.

## 3.2 Introduction

The objective of the present analysis is to gain insights into the drivers of export behaviour in European SMEs. Here, we refer to export behaviour as two types of decisions:

- The decision of whether or not to supply a foreign market.
- The proportion of one's output to sell abroad.

The SAFE, which is run by the European Commission and the European Central Bank, provides information on both aspects of export behaviour as it contains a question on export intensity or the proportion of a firm's turnover that is made up of exports of goods and services. The analysis which follows focuses on the relationship between export behaviour and the following variables:

- Generic firm characteristics – size, age, sector and turnover;
- Whether firms innovate (e.g. via the introduction of a new product);
- Firms' ambition to grow (i.e. whether they expect to grow over the next two or three years);
- A set of problems faced by the firms (e.g. finding customers, competition, access to finance).

We study both the drivers of a firm's decision to enter a foreign market (a binary decision) and those of export intensity, conditional on exporting. The reason for studying both decisions is that entry into foreign markets entails a number of fixed (or "one-off") costs which are distinct from the drivers of a firm's export intensity conditional on that firm already selling abroad.

## 3.3 Key findings

- European SMEs operating in goods-producing industries are more likely to export and to export a larger share of their output than firms operating in trade, construction or services.
- European SMEs with higher turnover are more likely to export and are more export intensive.
- Innovators who introduce new products to the market or new production processes are more likely to export.
- European SMEs which expect high growth in the next two or three years are more likely to export and to export a larger share of their output.
- European SMEs which consider competition as an important problem are less export intensive.

## 3.4 Data

The analysis draws on a sample of 17,745 SMEs which provided information on their export behaviour in various survey waves over the period 2013 to 2017. Each year, two survey waves were run, one in spring and one in autumn.

Overall, there are 28,102 observations on export behaviour. The survey is a rotating panel: in each wave, a subset of respondents is replaced by new entrants. A given

firm may be observed only once, or several times, in which case it is referred to as a panel. Panels do not necessarily comprise consecutive observations.

Certain questions of interest for the study, such as those relating to innovation and growth expectation, are not asked in what will be referred to as the ECB (European Central Bank) rounds and only feature in the “common” rounds. This leads to a loss of observations when including these variables in the analysis.

The survey changed substantially in 2014H1<sup>11</sup>. In our analysis, certain variables (e.g. turnover) were re-coded so that responses in “new waves” are consistent with those in the older waves.

### 3.4.1 Reference periods

Although questions on export behaviour were asked in seven waves, these only cover four distinct time spans as their reference periods are the same across pairs of consecutive waves (see the blue columns in Table 1). Therefore, for the empirical analysis only one wave is retained in each year, as any variation in the export variable (the dependent variable) within pairs of consecutive waves should be understood as respondents’ reassessment of the firm’s exporting behaviour rather than real changes.

Moreover, the reference periods of the dependent variable, shown in the blue column in Table 1, are prior to those of the independent variables, shown in the pink columns. Therefore, in every year, export behaviour is recoded as follows (as illustrated by the green and orange rows in Table 1):

- For firms which were surveyed in a common round (the dark green row in Table 1), the dependent variable is led by two periods if possible (the dark green cell in the blue column), or by one if not (the light green cell in the blue column). A two-period lead is preferred, because it should contain more up-to-date information. It can be seen that in most cases this allows the reference periods of the dependent variable to match with those of the independent variables.
- For firms which were only surveyed in an ECB round, the dependent variable is led by three periods if possible, or by two if not (see orange rows in Table 1). Common rounds are preferred to ECB rounds because (i) questions related to innovation and growth expectations (columns 6 and 9) are only asked in these waves and (ii) the “last six months” reference period is included within a year and therefore aligns with the reference period of the recoded dependent variable – this is not the case in ECB rounds.

The fact that each data point requires at least two observations of a single firm implies that enterprises which are observed only once (the majority of observations) cannot form part of the analysis. Furthermore, even if a firm is observed more than once, observations should be timed such that the above recoding can take place. For instance, if a firm is observed only in 2013H2 and 2014H1, it cannot form part of the analysis, as in both cases the dependent variable refers to 2013, one year prior to the reference period of the independent variables.

Finally, in the empirical analysis, we control for the fact that survey data were collected in different periods of the year through a binary variable indicating whether the independent variables were collected in a common or ECB round.

In order to illustrate the loss of data and compare the distribution of the recoded dependent variable with the distribution of a variable which replicates the “raw” data as closely as possible (e.g. no lead/lags are required and therefore it includes singletons), we have created a comparator dependent variable for which we choose only one observation per year in order to reflect real variation in export behaviour (as explained above).

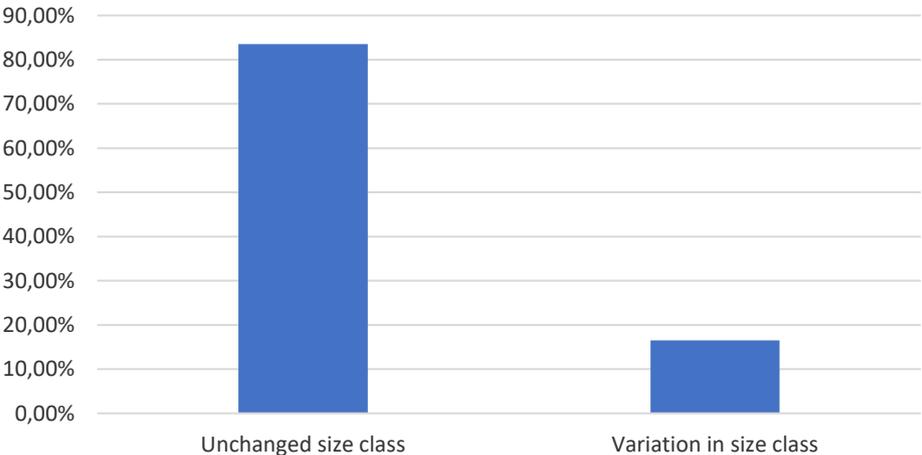
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<sup>11</sup> H1 refers to the first half of a year and H2 to the second half.

The objective is to compare the distribution of the dependent variable used in the analysis (the recoded variable) with that of the full data set (the comparator) across various firm characteristics in order to gain insight into whether or not the recoding has changed the distribution of variables of interest.

One drawback of using this “raw” measure as a comparator is that its reference period does not match that of a firm’s employment size class (if no leads of export behaviour are taken, then it is effectively lagged compared to size class). As there are cases where a firm has changed size classes between two observations (e.g. it may have changed from a medium to a large enterprise), it cannot be guaranteed that the size class recorded for an observation is identical to that of the reference period for the question on export behaviour. Therefore the comparator only approximates the distribution of SME export behaviour in the raw data. The accuracy of this approximation is reliant on slow changing size classes. The figure below shows that around 80% of firms did not change their size class. Therefore the comparator should be a reasonable approximation of export behaviour distribution in SMEs. Figure 6 presents the distribution of the dependent variable used in the empirical analysis and the comparator.

**Figure 6: Percentage of firms changing size class across the SAFE surveys**



Note: this figure is based on the standard deviation of size class within panels (which appear at least twice in the sample) taken across all firms, not just those which reported on export behaviour  
Source: LE Europe analysis of SAFE surveys

**Table 1: Choice of reference period for the analysis**

#	Survey round	Fieldwork period	Round	Reference period – previous 6 months	Reference period – previous 12 months (Q1 - assumed)	Reference period – previous year (questions D4, D7)	Reference period – previous year (questions D4, D7)	Reference period - next 2-3 years (Q17, Q21)	Year (as recorded)	Notes
1	2009H1	17 June 2009-23 July 2009	Common	January-June 2009	June 2008-June 2009	2008	2008	2009-2011	2009	No observations of the dependent variable available for this year
2	2009H2	19 November-18 December 2009	ECB round	July-December 2009		2008	2008			
3	2010H1	27 August-22 September 2010	ECB round	March-September 2010		2009	2009		2010	No observations of the dependent variable available for this year
4	2010H2	21 February-25 March 2011	ECB round	September 2010-February 2011		2010	2010		2011	No observations of the dependent variable available for this year
5	2011H1	22 August-7 October 2011	Common	April-September 2011	September 2010-September 2011	2010	2010	2011-2013		
6	2011H2	29 February-29 March 2012	ECB round	October 2011-March 2012		2011	2011		2012	No observations of the dependent variable available for this year
7	2012H1	3 September-11 October 2012	ECB round	April-September 2012		2011	2011			
8	2012H2	18 February-21 March 2013	ECB round	October 2012-March 2013		2012	2012		2013	1) The sample begins in 2013 2) Note that if the independent variables were chosen from the ECB round, the reference period "previous six months" covers several months in 2012 and several months in 2013
9	2013H1	28 August-4 October 2013 *	Common	April-September 2013	September 2012-September 2013	2012	2012	2014-2016		
10	2013H2	20 February-24 March 2014	ECB round	October 2013-March 2014		2013	2013		2014	Note that if the independent variables were chosen from the ECB round, the reference period "previous six months" covers several months in 2013 and several months in 2014
11	2014H1	1 September-10 October 2014	Common	April-September 2014	September 2013-September 2014	2013	2013	2014-2016		
12	2014H2	16 March-25 April 2015	ECB round	October 2014-March 2015		2014	2014		2015	Note that if the independent variables were chosen from the ECB round, the reference period "previous six months" covers several months in 2014 and several months in 2015
13	2015H1	21 September-26 October 2015	Common	April-September 2015	September 2014-September 2015	2014	2014	2015-2017		
14	2015H2	10 March-21 April 2016	ECB round	October 2015-March 2016		2015	2015		2016	Note that if the independent variables were chosen from the ECB round, the reference period "previous six months" covers several months in 2015 and several months in 2016
15	2016H1	19 September-27 October 2016	Common	April-September 2016	September 2015-September 2016	2015	2015	2016-2018		
16	2016H2	6 March-14 April 2017	ECB round	October 2016-March 2017		2016	2016		2017	There will be no observations for 2017, as the dependent variable is not measured in 2017
17	2017H1	18 September-27 October 2017	Common	April-September 2017	September 2016-September 2017	2016	2016	2017-2019		

\*In Slovakia, the fieldwork was extended one week

reference period for some of the independent variables

: reference period for the dependent variable

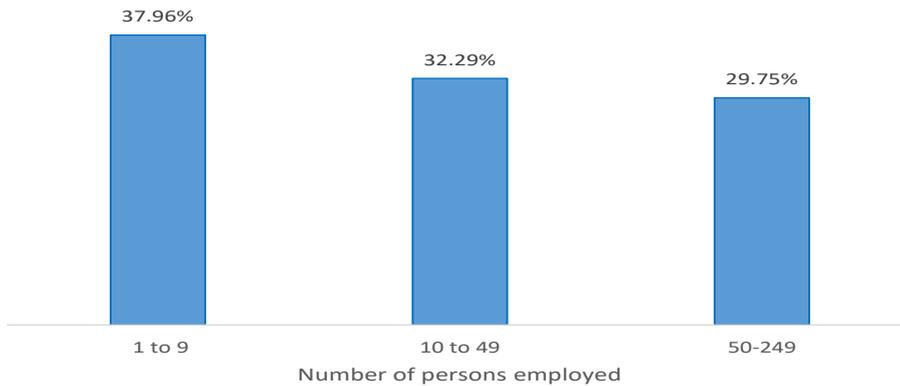
Source: European Central Bank (2017) Annex 3. In: European Central Bank (2017) Survey on the access to finance of enterprises – methodological information on the survey and user guide for the anonymised micro dataset. Several additions were made to the table (e.g. the "Notes" column)

### 3.5 Descriptive analysis

The set of observations included in the regression analysis varies according to the choice of variables. Unless otherwise stated, the figures below were based respectively based on the following sets of observations for which the variable of interest and the binary dependent variable as recoded were available:

The analysis focuses only on the survey responses of SMEs to the SAFE survey. As can be seen from Figure 7, micro SMEs are under-represented relative to the underlying EU-28 SME population and medium-sized SMEs are over-represented.

**Figure 7: Distribution in % of firms by employment based enterprise size class in dataset used in the empirical analysis**



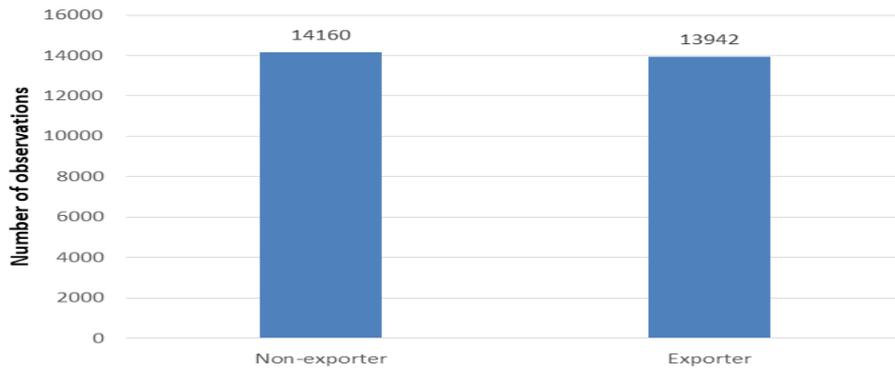
Source: LE Europe analysis of SAFE surveys

The distribution of most variables does not differ markedly depending on the choice of observation set (dataset used in the empirical analysis versus comparator). Noteworthy exceptions concern the distribution of the export behaviour indicator and the distribution across countries. In general, the distributions of the firms covered by the empirical analysis and the comparator set align more closely across variables related to innovation, growth expectations and problems than across firm characteristics.

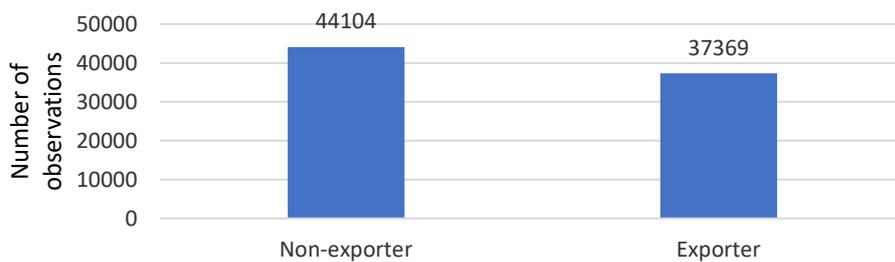
In the data set used in the empirical analysis, 49.6% of firms are exporters, while in the full data set 45.8 % of firms export (Figure 8). Moreover, in the data set used in the empirical analysis, foreign sales account for less than 10% of turnover for 39% of all exporters.

**Figure 8: Number of exporting and non-exporting firms**

**Distribution of firm-year observations in the data set used in the empirical analysis**

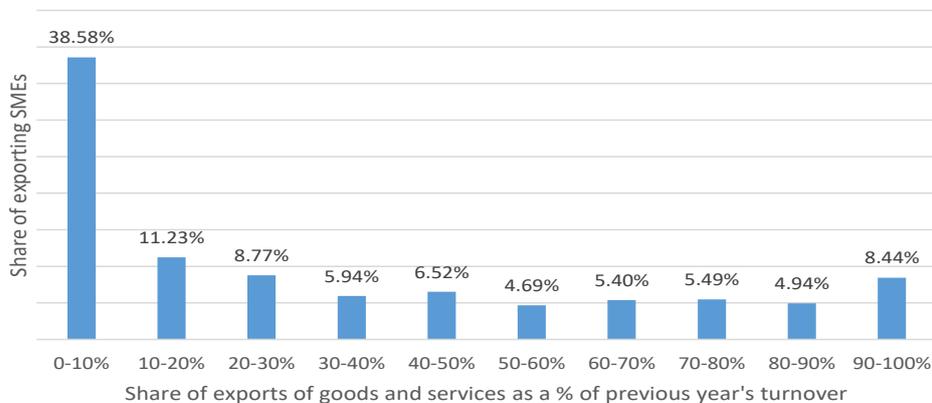


**Distribution of firm-year observations in the full data set**



Source: LE Europe analysis of SAFE surveys

**Figure 9: Distribution of exporting firms in data set used in the empirical analysis by export intensity**



Note: export intensity = exports of goods and services as a % of previous year's turnover

Source: LE Europe analysis of SAFE surveys

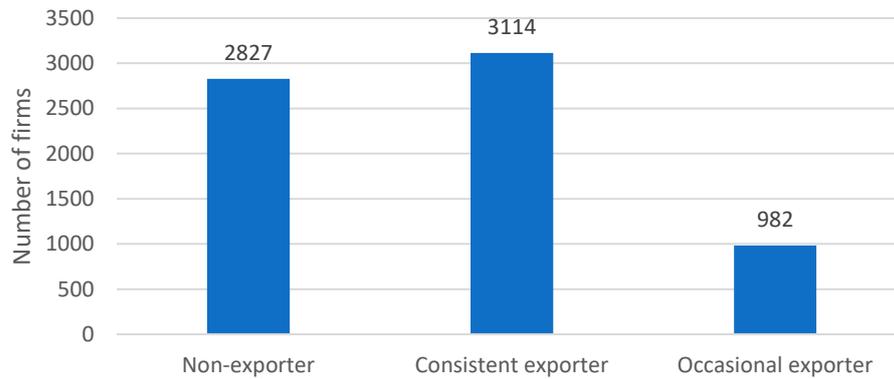
As part of the analysis, we examined the extent to which firms are consistently exporting. For the purpose of this analysis, a firm's exporting pattern is defined, based on the waves in which it was observed, by whether it does not export, exports in some periods (an occasional exporter) or in every period (a consistent exporter).

Of note is the fact that firms which are classified as non-exporters or consistent exporters over the waves in which they were surveyed may not have actually exported or exclusively supplied the domestic market across all survey periods.

The set of observations was restricted to firms whose export behaviour was observed at least twice: otherwise, the concepts of consistent and occasional exporters would be meaningless.

Overall, among the firms which export, 76% are consistent exporters, i.e. report exporting in all surveys waves in which they participated.

**Figure 10: Are firms consistent exporters?**

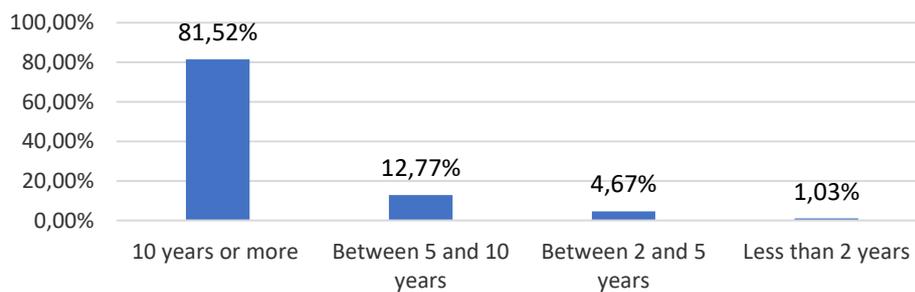


Source: LE Europe analysis of SAFE surveys

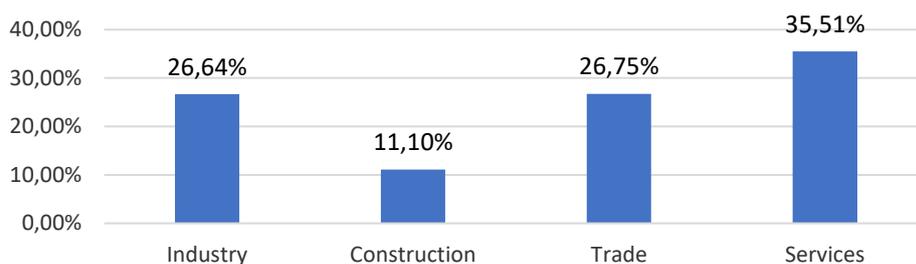
Other key facts to note for the firms in the data set used in the empirical analysis include the following:

- More than 80% of firms are 10 years old or older. Only 1% of firms are less than 2 years old (Figure 11).
- 36% of firms are active in the services sector and 27% in industry. For reasons of confidentiality, we are only able to distinguish between Industry, Construction, Trade and Services (Figure 12).
- 36% of firms have introduced a new or significantly improved product or service to the market, 27% of firms have introduced a new or significantly improved production process or method, 28% of firms have introduced a new organisation of management and 26% of firms have introduced a new way of selling goods or services.
- Only 10% of firms aim to grow their turnover by more than 20% annually, while 26% do not expect any growth and 8% actually expect a decline in turnover (Figure 13).

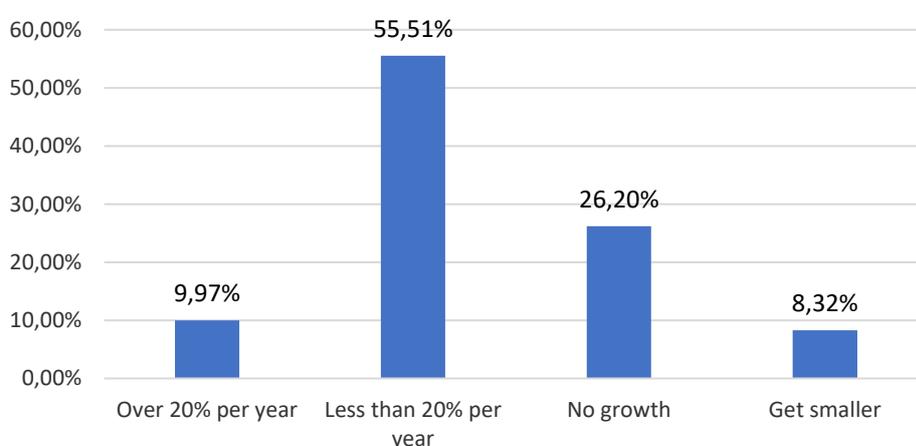
**Figure 11: Age distribution of firms in the data set used in the empirical analysis**



Source: LE Europe analysis of SAFE surveys

**Figure 12: Sectoral distribution of firms in the data set used in the empirical analysis**

Source: LE Europe analysis of SAFE surveys

**Figure 13: Distribution by growth ambition of firms in the data set used in the empirical analysis**

Source: LE Europe analysis of SAFE surveys

### 3.6 Empirical analysis

We make use of two estimation techniques: Probit analysis and pooled OLS. Although the dataset forms an unbalanced panel, the small number of observations per firm would make fixed or random effects estimation unreliable<sup>12</sup>. We therefore do not account for the panel structure of the data beyond the inclusion of year and country dummies in order to control for country-specific time invariant characteristics and time-varying shocks affecting all countries. The analysis is undertaken separately for independent firms and firms which are subsidiaries or branches of other firms (domestic or foreign).

#### 3.6.1 Firm characteristics

##### Models

We first explore the relationship between of firm characteristics and presence in foreign markets. Specifically, the following characteristics are considered:

- *Sector of activity*: industry, construction, trade or services.
- *Age*. On the one hand older firms may be more established and have gained sufficient experience to reach out to new markets. On the other, they may become entrenched in a particular market and less likely to explore new markets.

<sup>12</sup> Although we attempt to control for as many relevant firm characteristics as possible, there remains the risk that some unobserved firm-specific effects may be correlated with export behaviour and some of the regressors. If this is the case, the unobserved heterogeneity could lead to biased coefficients.

- *Turnover.* Firms with greater revenue may be more likely to export for two reasons. Firstly, they are likely to wield larger capital stocks and are therefore best prepared to meet the sunk or fixed costs (i.e. “one-off” costs) associated with exporting. Secondly, exporters are likely to increase their turnover as a result of selling to a foreign market. Although this presents a risk of simultaneity bias, it is not as great as it could have been if the dependent variable was export value which is included in turnover. This would have generated a spurious correlation in the case of larger firms which export a low proportion of their output, but this is not the case when using export intensity, as exports are scaled by turnover.
- *Number of employees.* Similarly, firms with a larger number of employees command more human capital and are therefore better equipped to handle the fixed costs associated with exporting.

#### Independent firms

The empirical model that is estimated is shown in equation 1 below.

$$(1) \text{Probit}(\text{exporter}_{it}) = \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} + \delta'_c \text{Country}_{it} + \delta'_\theta \text{Year}_{it} + \delta_s \text{Round}_{it} + \varepsilon_{it}$$

Apart from “Round<sub>it</sub>” (the indicator specifying whether an observation was compiled during a common or ECB round) all regressors are vectors of binary variables. Even turnover and age are coded as brackets rather than as numerical variables. “Country<sub>it</sub>” and “Year<sub>it</sub>” denote respectively a set of country and time dummies (the time unit is taken to be the wave, i.e. a 6 month period).

A more explicit formulation of the equation to be estimated is given below:

$$(2) \text{Probit}(\text{exporter}_{it}) = \sum_{se\{\text{Sectors}\}} \beta_s \text{Sector}_{sit} + \sum_{\tau\{\text{Turnover brackets}\}} \beta_\tau \text{Turnover}_{\tau it-1} + \sum_{ee\{\text{employee brackets}\}} \beta_e \text{Employees}_{eit} + \sum_{ae\{\text{age groups}\}} \beta_a \text{Age}_{ait} + \sum_{ce\{\text{EU28 countries}\}} \delta_c \text{Country}_{cit} + \sum_{\theta\{\text{waves}\}} \delta_\theta \text{Year}_{\theta it} + \delta_s \text{Round}_{it} + \varepsilon_{it}$$

In addition to studying predictors of whether firms export, this report also considers those of export intensity or the share of turnover made up of exports in goods and services. The latter analysis is restricted to exporters, in order to separate factors which predict whether a firm is present in foreign markets from those which predict the extent of this presence, conditional upon exporting.

$$(3) \text{Export intensity}_{it} = \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} + \delta'_c \text{Country}_{it} + \delta'_\theta \text{Year}_{it} + \delta_s \text{Round}_{it} + \varepsilon_{it}$$

#### Branches and subsidiaries

Next, we consider the predictors of export behaviour in branches and subsidiaries (or non-independent enterprises).

An indicator of whether an enterprise has a foreign parent is added to the specification. As the question on which this variable is based was only added to the survey in wave 11, we also run a model without that variable, in order to maximise the number of observations. In addition, for comparability with the specification that includes the foreign parent control, we also run the model without the foreign parent indicator on firms for which that variable is non-missing.

Therefore, in both the Probit and linear models, three regressions are run on branches and subsidiaries: one which includes all available waves and which does not control for whether an SME is foreign-owned, one which controls for whether an SME has a foreign parent and one which does not control for foreign ownership but is run on the same set of observations (in order to verify whether controlling for foreign ownership changes the coefficients on other firm characteristics).

$$(4) \text{ Probit}(\text{exporter}_{it}) \\ = \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} \\ + \beta'_5 \text{Foreign parent}_{it} + \delta'_c \text{Country}_{it} + \delta'_\theta \text{Year}_{it} + \delta_s \text{Round}_{it} \\ + \varepsilon_{it}$$

$$(5) \text{ Export intensity}_{it} \\ = \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} \\ + \beta'_5 \text{Foreign parent}_{it} + \delta'_c \text{Country}_{it} + \delta'_\theta \text{Year}_{it} + \delta_s \text{Round}_{it} \\ + \varepsilon_{it}$$

We implement the specification for independent firms in all waves, as well as in new waves only, for comparability with the model on branches and subsidiaries which includes the indicator of whether the firm has a foreign parent (only available in new waves).

### 3.6.2 Key findings

The detailed estimation results are provided in Annex 3 and key findings are highlighted below.

The coefficients on categorical variables should be interpreted relative to a baseline category. As specified in the regression output shown in the Annex, the base categories for country, sector, turnover, size class, and time elapsed since registration are respectively: Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade up to €500,000 in turnover (up to €2M when older waves are included); enterprises with less than 10 employees, and less than two years since registration.

#### Key findings – Probit model

The relationship between turnover and propensity to export is as expected, although firms with very high turnover (over €50m) are less likely to export than firms with turnover between €10m and €50m (but are still more likely to export than SMEs with less than €10m in turnover).<sup>13</sup>

Where size class is significant, larger SMEs are more likely to export.<sup>14</sup>

Firms within industry are more likely to export than those active within the trade sector, which in turn are more likely to export than firms in construction and services, both of which encompass the bulk of the "non-tradable" sectors.<sup>15</sup>

Older branches and subsidiaries are more likely to export (most coefficients on age ranges are not significant in the case of independent firms).<sup>16</sup>

Non-independent firms that have a foreign parent are more likely to export. Existing cross-border linkages between the parent firm and its affiliates is a possible explanation. In addition, this relationship may provide branches and subsidiaries with

<sup>13</sup> Wald tests suggest that the coefficients that are statistically significant are also different from one another.

<sup>14</sup> Although the coefficients on the size class variables are both statistically significant (which indicates that small and medium enterprises are more likely to export than micro-enterprises), a Wald test suggests that they are not different from one another.

<sup>15</sup> Wald tests suggest that the coefficients on the sector indicators are different from one another.

<sup>16</sup> Wald tests suggest that the statistically significant coefficients on age categories are not different from one another.

experience in foreign countries, leaving them better equipped to enter new markets. The coefficients on most other firm characteristics change little with the inclusion of the foreign parent control.

#### *Key findings – Linear model*

The relative magnitude of the coefficients on sector indicators is the same as in the Probit model<sup>17</sup>, but all coefficients are positive. This means that although firms in the services and construction sectors are less likely to export than those in trade (see the results of probit estimation), firms in these sectors which do export sell a larger share of their turnover abroad.

In independent firms, export intensity is positively related to turnover. This relationship is monotonic, unlike the results of the Probit specification.<sup>18</sup> In non-independent firms, turnover is non-significant in most cases, although a turnover of €500,000-€1M is associated with a decrease in export intensity of over 10 percentage points relative to firms with under €500,000 in turnover. This suggests that non-independent exporters with very low turnover tend to specialise in foreign markets in comparison to firms in the next turnover bracket.

In most cases, size class is not significant, although among independent firms, small enterprises export a lower share of their turnover than micro-enterprises.

Within branches and subsidiaries, in the final specification, the relationship between age and export intensity is hump-shaped, with firms aged between 2 and 5 years old exporting a larger share of their turnover than very young firms and firms that are 5-10 years old.<sup>19</sup>

Firms which have a foreign parent export a larger share of their output. This finding is consistent with the Probit model. As above, coefficients on most other firm characteristics change little with the inclusion of the foreign parent control.

### 3.7 Innovation and growth ambitions

We now consider whether innovation and ambition to grow are related to export behaviour.<sup>20</sup> As the questions on which these variables are based were only asked every two waves, this considerably reduced the sample size.

#### 3.7.1 Models

As mentioned above, we include separate specifications for autonomous and non-autonomous firms and implement the specification for autonomous firms in all waves, as well as in new waves only, for comparability with the model on branches and subsidiaries, which includes the indicator of whether the firm has a foreign parent (only available in new waves).

#### *Independent firms*

$$\begin{aligned}
 (6) \text{ Probit}(\text{exporter}_{it}) & \\
 &= \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} \\
 &+ \beta'_5 \text{Innovator}_{it} + \beta'_6 \text{Growth expectations}_{it} + \delta'_c \text{Country}_{it} \\
 &+ \delta'_\theta \text{Year}_{it} + \delta'_s \text{Round}_{it} + \varepsilon_{it}
 \end{aligned}$$

<sup>17</sup> Wald tests suggest that the coefficients on the sector indicators are different from one another.

<sup>18</sup> Wald tests suggest that the coefficients that are statistically significant are also different from one another.

<sup>19</sup> However, Wald tests suggest that the statistically significant coefficients on age categories are not different from one another.

<sup>20</sup> Although innovation and ambition to grow are likely to be determinants of export behaviour, it is possible that the latter also influences the former. For instance, several authors have estimated the relationship between innovation and export behaviour through simultaneous equations models. These, however, require instrumental variables for both export and innovation behaviour which were not available in the dataset. Therefore, estimates presented here should be interpreted with some degree of caution. For a study on the relationship between innovation and export behaviour, see for instance: Harris, R., & Moffat, J. (2011). R&D, innovation and exporting. SERC Discussion Paper 73. They find that innovation does impact export behaviour but that the latter does not have a direct impact on innovation. Rather, this effect operates through spending on R&D.

$$\begin{aligned}
 (7) \text{Export intensity}_{it} &= \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} \\
 &+ \beta'_5 \text{Innovator}_{it} + \beta'_6 \text{Growth expectations}_{it} + \delta'_c \text{Country}_{it} \\
 &+ \delta'_\theta \text{Year}_{it} + \delta'_s \text{Round}_{it} + \varepsilon_{it}
 \end{aligned}$$

Where “Innovator<sub>it</sub>” is a vector of four binary variables which respectively indicate whether, during the past 12 months, the exporting firm has introduced:

- “...a new or significantly improved product or service to the market”
- “... a new or significantly improved production process or method”
- “... a new organisation of management”
- “... a new way of selling goods or services”<sup>21</sup>.

Similarly, “Growth expectations<sub>it</sub>” indicates the exporting firm’s turnover growth expectations over the next two or three years. These can fall within the following categories, each coded as an indicator variable:

- Over 20%
- Less than 20%
- No growth
- Decrease

#### *Branches and subsidiaries*

$$\begin{aligned}
 (8) \text{Probit}(\text{exporter}_{it}) &= \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} \\
 &+ \beta'_5 \text{Foreign parent}_{it} + \beta'_5 \text{Innovator}_{it} + \beta'_6 \text{Growth expectations}_{it} \\
 &+ \delta'_c \text{Country}_{it} + \delta'_\theta \text{Year}_{it} + \delta'_s \text{Round}_{it} + \varepsilon_{it}
 \end{aligned}$$

$$\begin{aligned}
 (9) \text{Export intensity}_{it} &= \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} \\
 &+ \beta'_5 \text{Foreign parent}_{it} + \beta'_5 \text{Innovator}_{it} + \beta'_6 \text{Growth expectations}_{it} \\
 &+ \delta'_c \text{Country}_{it} + \delta'_\theta \text{Year}_{it} + \delta'_s \text{Round}_{it} + \varepsilon_{it}
 \end{aligned}$$

### **3.7.2 Key findings**

As above, the coefficients on categorical variables should be interpreted relative to a baseline category. The baseline categories for country, sector, turnover, size class, time elapsed since registration, and growth expectations are respectively: Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade up to €500,000 in turnover (up to €2M when older waves are included); enterprises with less than 10 employees, less than two years since registration, and no growth.

#### *Key findings - Probit*

Firm characteristics are mostly consistent with the baseline model that focuses on firm characteristics.

The introduction of a new or significantly improved product to the market or a new or significantly improved production process are both associated with a higher likelihood of exporting.

Firms which expect to grow more in the next two or three years are more likely to export than firms which expect their turnover to remain constant (the baseline category) which in turn are more likely to export than firms which expect their turnover to decrease.

#### *Key findings - Linear*

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<sup>21</sup> European Central Bank (2017) Survey on the access to finance of enterprises – methodological information on the survey and user guide for the anonymised micro dataset.

Firm characteristics are mostly consistent with the baseline model that focuses on firm characteristics.

While two of the innovation-related variables predicted participation in exports, none seems to predict export intensity with the exception of the introduction of a new way of selling goods or services which is negatively related to export intensity. The coefficient becomes non-significant in the sample of branches and subsidiaries.

Firms with high growth expectations tend to export a larger share of their output than those which do not expect to grow. However, low growth expectations are associated with lower export intensity than no growth expectations in branches and subsidiaries.

### 3.7.3 Problems faced by firms

We now explore different problems faced by SMEs (as identified in the SAFE survey), each of which was assigned a score from 1 (not at all important) to 10 (extremely important). The following problems are covered<sup>22</sup>:

- “Finding customers”
- “Competition”
- “Access to finance”
- “Costs of production or labour”
- “Availability of skilled staff or experienced managers”
- “Regulation, for example European and national laws, industrial regulations”
- “Other”

#### Models

As mentioned above, we include separate specifications for independent and non-independent firms, and implement the specification for independent firms on all waves but also the new waves only (for comparability with the model on branches and subsidiaries). In the specification equations, each problem is represented by a vector of binary variables (each denoting a specific score from 1 to 10).

#### Independent firms

$$\begin{aligned}
 (10) \text{ Probit}(\text{exporter}_{it}) &= \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} \\
 &+ \beta'_4 \text{Age}_{it} + \beta'_5 \text{finding customers}_{it} + \beta'_6 \text{Competition}_{it} \\
 &+ \beta'_7 \text{Access to finance}_{it} + \beta'_8 \text{Produciton costs}_{it} \\
 &+ \beta'_9 \text{Lack of skills}_{it} + \beta'_{10} \text{Regulation}_{it} + \beta'_{11} \text{Other}_{it} \\
 &+ \delta'_c \text{Country}_{it} + \delta'_\theta \text{Year}_{it} + \delta'_s \text{Round}_{it} + \varepsilon_{it}
 \end{aligned}$$

#### Branches and subsidiaries

$$\begin{aligned}
 (11) \text{ Probit}(\text{exporter}_{it}) &= \beta'_1 \text{Sectors}_{it} + \beta'_2 \text{Turnover}_{it-1} + \beta'_3 \text{Employees}_{it} + \beta'_4 \text{Age}_{it} \\
 &+ \beta'_5 \text{Foreign parent}_{it} + \beta'_6 \text{finding customers}_{it} \\
 &+ \beta'_7 \text{Competition}_{it} + \beta'_8 \text{Access to finance}_{it} \\
 &+ \beta'_9 \text{Produciton costs}_{it} + \beta'_{10} \text{Lack of skills}_{it} \\
 &+ \beta'_{11} \text{Regulation}_{it} + \beta'_{12} \text{Other}_{it} + \delta'_c \text{Country}_{it} \\
 &+ \delta'_\theta \text{Year}_{it} + \delta'_s \text{Round}_{it} + \varepsilon_{it}
 \end{aligned}$$

#### Key findings

##### Key findings – Probit

Below we focus on the three problems for which a majority of coefficients was statistically significant (indeed, in many cases, not all of the scores have significant coefficients). In most of these cases, the coefficients on different scores were fairly similar in magnitude. This suggests that the likelihood of exporting does not vary

<sup>22</sup> European Central Bank (2017) Survey on the access to finance of enterprises – methodological information on the survey and user guide for the anonymised micro dataset.

substantially with the level of importance attached to a problem, conditional on that problem being of some importance to a firm (i.e. having a score greater than 1).

The results suggest that SMEs which consider finding customers an important problem are more likely to export. Furthermore, statistical tests on several coefficients suggest that firms which attach high importance to the problem of finding customers may be more likely to export than firms which attach intermediate or low importance to that problem.<sup>23</sup> Although most of the coefficients are also statistically significant in the case of branches and subsidiaries, there seems to be little relationship between the likelihood of exporting and the degree of importance attached to the problem of finding customers (conditional on it having a score of at least 2).<sup>24</sup>

Both independent firms which attach low and high importance to access to finance tend to be more likely to export than firms which attach no or intermediate importance to that problem<sup>25</sup>.

Independent firms that consider regulation to be an important problem are more likely to export. Those which attach very high importance (a score of 10) to regulation are less prone to export than firms which attach intermediate importance to regulation (a score of 5).<sup>26</sup>

#### *Key findings – Linear model*

The only problem for which a majority of coefficients was statistically significant in the case of independent firms is competition. Independent SMEs which consider competition to be a problem of some importance (i.e. assign it a score greater than 1) have, on average, an export intensity of at least eight percentage points less than independent SMEs which do not attach importance to competition.

Branches and subsidies which attach importance to regulation tend to export a lower share of their turnover, although none of the coefficients are significant when the foreign parent indicator is included in the specification.

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<sup>23</sup> Wald tests suggest that the coefficients on the scores of 3 and 5 are different from the coefficient on the score of 6 (at the 10% significance level) and that the coefficient on the score of 5 is different from the coefficient on the score of 10 (at the 1% significance level). However, we fail to reject the null hypothesis that the coefficients on the scores of 3 and 10 are different. These tests are based on independent firms in all available waves.

<sup>24</sup> This is based on the specification that controls for whether firms have a foreign parent. Most coefficients are also positive and significant when this is not controlled for.

<sup>25</sup> The coefficients on the scores of 5, 6 and 8 are not significant but all other coefficients are significant.

<sup>26</sup> A Wald test suggest that the coefficients on the scores of 5 and 10 are different (at the 5% significance level). This test is based on independent firms in all available waves.

# 4. Drivers of SME exports – analysis of the 2015 Eurobarometer survey

## 4.1 Introduction

This chapter provides the results of an extensive empirical analysis of the 2015 Eurobarometer survey. The Flash Eurobarometer 421 survey on “Internationalisation of Small and Medium-sized Enterprises [SMEs]” was conducted in 2015 on a sample of 14,513 SMEs, 13,111 of which are based in the EU-28. Only the latter sub-sample is included in the analysis.

Four forms of analysis are conducted. First, the number of firms that have engaged in the following “international business activities” in the previous three years is reported as a percentage of total respondents:

- exporting to another country
- importing from another country
- working with a partner based abroad for research and development (R&D) purposes
- working as a subcontractor for a company based abroad
- using a subcontractor based abroad
- investing in a company based abroad.

Second, for each type of international business activity, firms are classified according to their growth rate since 2008 and, within different growth ranges, the number of firms that have engaged in each international business activity is reported.

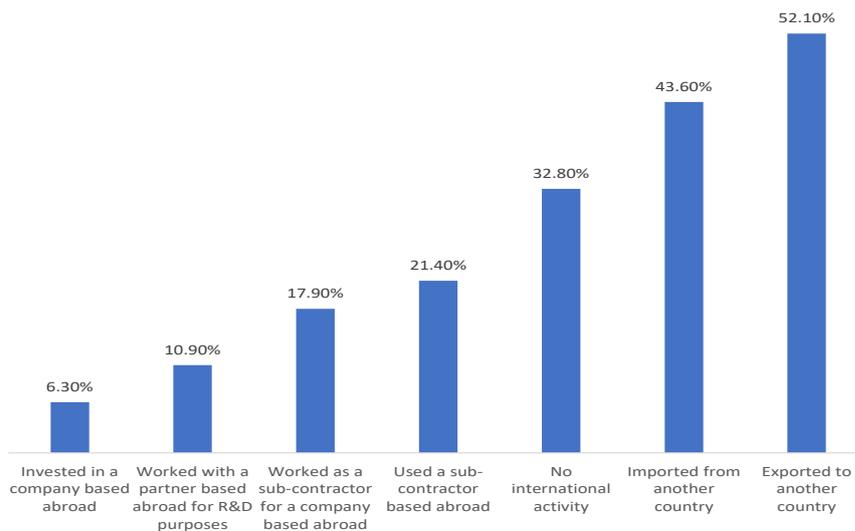
Third, the association between different forms of international business activities is analysed. This is done by computing the number of observations for different pairs of international business activities, and through a correlation analysis. Of particular interest is whether or not importing is correlated with exporting.

Fourth, an econometric analysis was conducted which explored the predictors of export behaviour and measures that firms would find most helpful in terms of engaging in business abroad.

The aggregate picture of the internationalisation of SMEs in the present chapter differs somewhat from that presented in the introduction and in the Eurobarometer documents, as unweighted survey results are used rather than weighted results.

## 4.2 International activities of SMEs

Among all the SMEs which responded to the Eurobarometer survey, almost 44% have exported and 52% have imported. Moreover, 32% have not undertaken any of the international activities covered by the Eurobarometer survey.

**Figure 14: Distribution of SMEs by type of international activity**

Source: LE Europe analysis of 2015 Eurobarometer survey results

In order to examine whether firms which are engaged in internationalisation undertake multiple international activities, the pairwise correlation coefficients between two different activities are reported in Table 2.

The highest correlation coefficients are observed between importing and exporting (0.52), and having worked as a subcontractor for and having subcontracted to a firm based abroad (0.43). These results suggest some form of symmetry in firms' international business activities: SMEs which purchase goods and services from abroad also tend to sell in foreign markets.

The correlation between having worked with a partner abroad for R&D and having subcontracted to a firm based abroad displays a lower intermediate correlation coefficient (0.30).

Having subcontracted to a firm based abroad also displays a lower intermediate correlation coefficient with both importing (0.28) and exporting (0.30).

All other correlation coefficients are fairly low.

**Table 2: Correlation between various forms of participation in the global economy**

	Exported	Imported	Worked with a partner based abroad for R&D	Subcontractor for a company based abroad	Used a subcontractor based abroad	Invested in a company based abroad	None of the listed international business activities
Exported	1	0.52	0.20	0.26	0.30	0.21	-0.63
Imported	0.52	1	0.18	0.17	0.28	0.15	-0.74
Worked with a partner based abroad for R&D	0.20	0.18	1	0.22	0.30	0.24	-0.25
Subcontractor for a company based abroad	0.26	0.17	0.22	1	0.43	0.20	-0.33
Used a subcontractor based abroad	0.30	0.28	0.30	0.43	1	0.28	-0.37
Invested in a company based abroad	0.21	0.15	0.24	0.20	0.28	1	-0.18
None of the listed international business activities	-0.63	-0.74	-0.25	-0.33	-0.37	-0.18	1

Note: The correlations between not conducting any of the listed international business activities and individual international activities are not reported because there are cases in which a given international activity is not conducted but another is, so the observation would not count as not having conducted any of the listed international business activities.

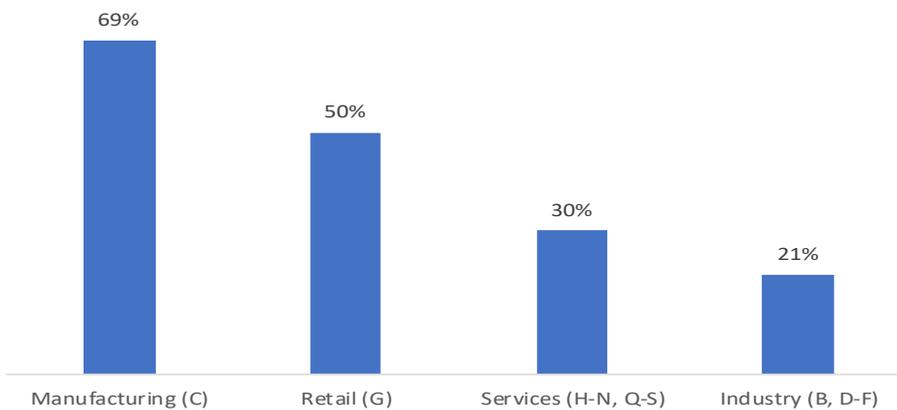
Source: LE Europe analysis of 2015 Eurobarometer

### 4.3 Key facts to note

The main independent variable of interest is an indicator of whether a European SME exported in 2014. There are 12,865 observations, of which 5,517 were exporters. In the following figures, the proportion of exporters as a share of total European SMEs is shown for the main variables of interest in the econometric analysis. Key points to note are the following:

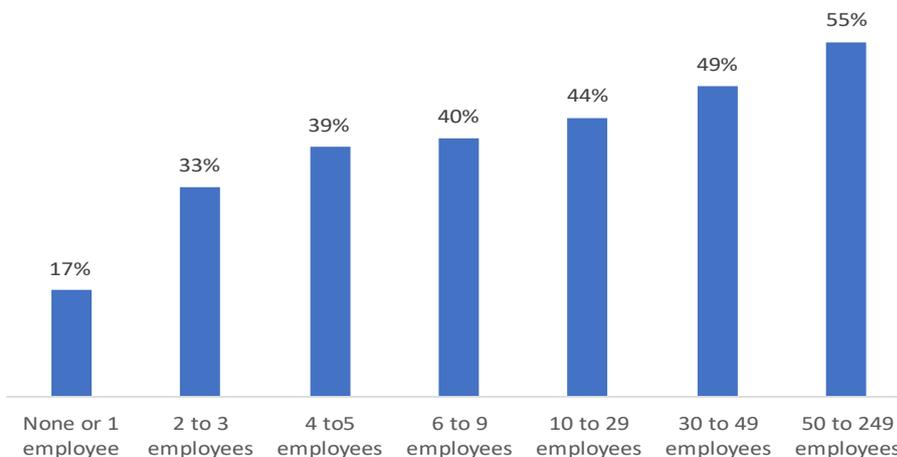
- The proportion of exporting SMEs is highest:
  - in manufacturing (Figure 15)
  - producing goods only (Figure 18)
  - among SMEs engaging only in business-to-business activities (Figure 19).
- The proportion of exporting SMEs:
  - increases with firm size (Figure 16 and Figure 17)
  - increases broadly with age, although there is little difference among firms that are 20 years old or older (Figure 20)
  - increases with the growth performance posted by firms (Figure 21).

**Figure 15: Proportion of exporting SMEs in different sectors**



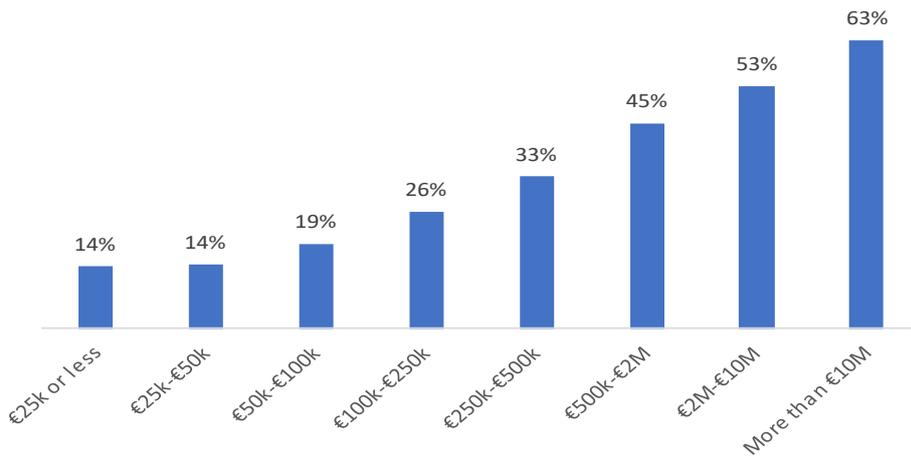
Source: LE Europe analysis of 2015 Eurobarometer survey results

**Figure 16: Proportion of exporting SMEs in different enterprise size classes (employment measure)**



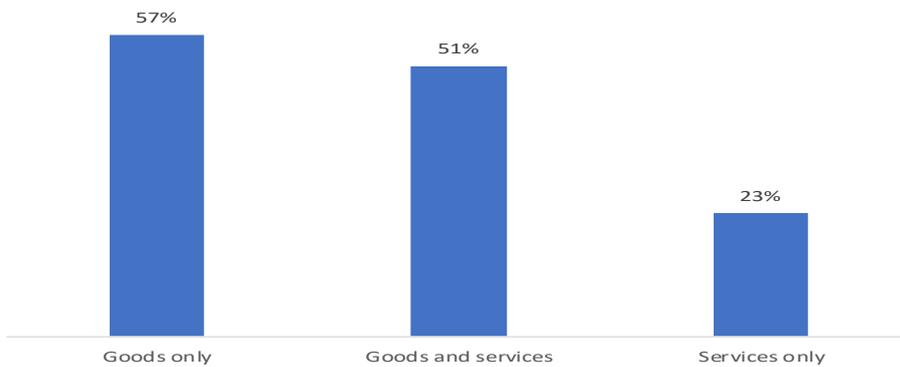
Source: LE Europe analysis of 2015 Eurobarometer survey results

**Figure 17: Proportion of exporting SMEs in different enterprise size classes (turnover measure)**



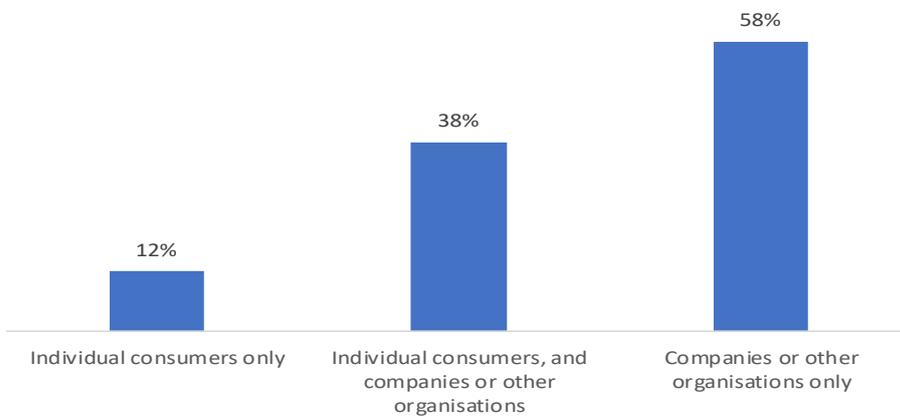
Source: LE Europe analysis of 2015 Eurobarometer survey results

**Figure 18: Proportion of exporting SMEs by type of production**

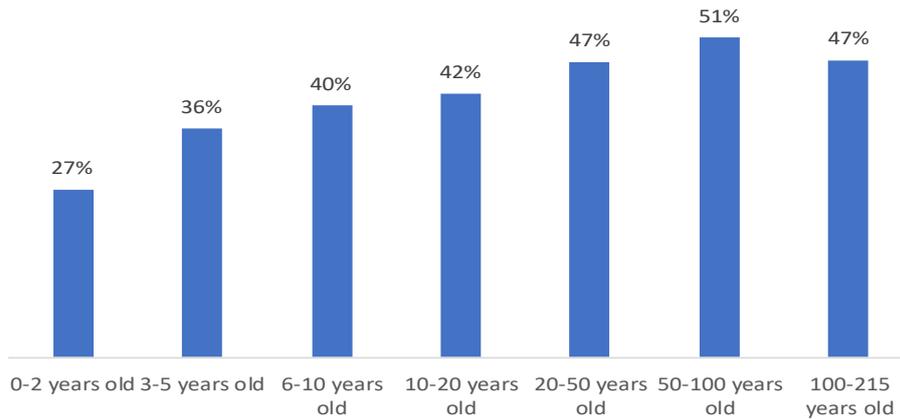


Source: LE Europe analysis of 2015 Eurobarometer survey results

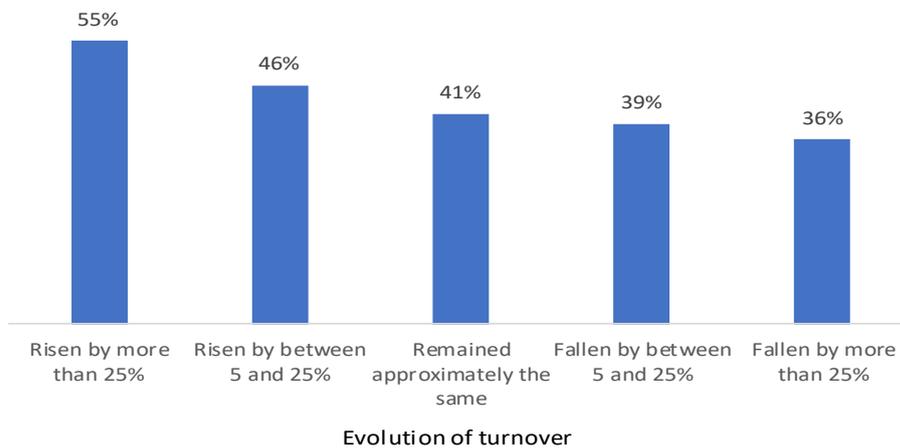
**Figure 19: Proportion of exporting SMEs by type of customer**



Source: LE Europe analysis of 2015 Eurobarometer survey results

**Figure 20: Proportion of exporting SMEs by age**

Source: LE Europe analysis of 2015 Eurobarometer survey results

**Figure 21: Proportion of exporting SMEs by firm growth**

Source: LE Europe analysis of 2015 Eurobarometer survey results

## 4.4 Econometric analysis

### 4.4.1 The drivers of export

The following model is tested in order to explore the link between propensity to export and various firm characteristics.

$$(1) \text{Probit}(EXP_{ic}) = X'_{ic}\beta + C'_{ic}\delta + \varepsilon_{ic}$$

"EXP<sub>ic</sub>" is an indicator of whether firm *i* in country *c* has exported in 2014. C<sub>ic</sub> is a vector of country dummies which are intended to control for country-specific unobserved determinants of cross-border activity which may be correlated with any of the covariates of interest. X<sub>ic</sub> is a vector of hypothesised determinants of EXP<sub>ic</sub>. In order to account for potential serial correlation of the disturbance term ε<sub>ic</sub> within countries, standard errors are clustered at the country level.

All models are estimated separately on independent SMEs and those that are part of a group. In the latter analysis, as regressors are added, the baseline specifications are estimated from the new restricted set of observations and displayed in the same

table in order to illustrate the effect of adding new variables to the model for a given sample.<sup>27</sup>

### *Baseline specification*

In the baseline specification, X\_ic includes a range of firm characteristics and a list of other internationalisation indicators.

#### Firm characteristics

The following firm characteristics were included:

- Sector of activity
- Number of employees
- Age
- Turnover
- Growth since 2008
- Type of output (i.e. goods only, services only, goods and services).
- Firms' types of customers (namely, whether they sell to companies or other organisations only, to individual consumers only or to both types of customers).

This model fits the data reasonably well: the pseudo R-square is over 35%.<sup>28</sup> As shown in the regression results reported in Annex 4, firms in the manufacturing sector are more likely to export than those in the retail sector (baseline category), while firms in industry are less likely to export. The employment size classes are not statistically significant, except for the size classes of 6-9 employees in independent firms and 2-3 employees in firms that are part of a group. Both are associated with a lower propensity to export than firms with 50-249 employees (the baseline).

Overall, independent firms with higher turnover are more likely to export, although firms in the €250k-€500k range are less likely to export than those in the €100k-€250k range, so the relationship does display some non-monotonicities.

The picture is less clear with firms that are part of a group. Firms with €25k-€50k in turnover, the second lowest range, are most likely to export, while the propensity to export increases with turnover in the higher turnover ranges (i.e. from €500k to over €10M).

The estimates on turnover should be interpreted with caution, as export behaviour may causally affect turnover. Very high growth firms are more likely to export than those whose turnover has remained approximately the same as in 2008. Surprisingly, SMEs that are part of a group and whose turnover has decreased by over 25% are more likely to export.

SMEs that produce goods only and goods and services are more likely to export than those which produce only services, which are usually less mobile and therefore less prone to be traded internationally. Firms that supply to individual consumers only, and to individual consumers and companies or other organisations, are less likely to export than those which supply to companies or other organisations only.

#### Other internationalisation indicators

Other internationalisation indicators are whether in the previous three years, firms have:

- Imported from another country
- Worked with a partner based abroad for research and development (R&D) purposes
- Worked as a subcontractor for a company based abroad

<sup>27</sup> Different variables contain different sets of missing observations. Therefore, the addition of regressors to a model requires removing the observations for which the new variable is missing.

<sup>28</sup> See Annex 4 for detailed estimation results.

- Used a subcontractor based abroad
- Invested in a company based abroad.

All coefficients are positive, as suggested in the correlation analysis. Here, however, we were able to control for firm characteristics and different forms of international activity. Moreover, in contrast to the correlation analysis, the indicator of whether a firm exports refers to 2014 rather than to the previous three years.

Therefore, although the risk of simultaneity bias remains (e.g. it is possible that the importing activity in the previous three years to which the respondent referred, occurred after potential exports in 2014), it is reduced.

The coefficient on imports is the largest in all models. The association between exports and having invested abroad is markedly greater for firms that are part of a group.

Whether or not a firm is part of an international group is not a statistically significant predictor of export probability.

#### 4.5 Problems related to exporting

This section examines which export-related problems are most associated with exporting or lack thereof. In addition to the predictors included in the baseline specification,  $X_{ic}$  now includes a set of binary variables indicating whether certain difficulties are considered a major problem (relative to being a minor problem, not a problem or not being applicable):

- “[Respondent’s] company does not know the rules which have to be followed (e.g. labelling)”
- “Payments from other countries are not secure enough”
- “Dealing with foreign taxation is too complicated or too costly”
- “[Respondent’s] company lacks the language skills to deal with foreign countries”
- “[Respondent’s] company’s products and/or services are specific to [their] country’s market”
- “Resolving cross-border complaints and disputes is too expensive”
- “[Respondent’s] company does not have specialised staff to deal with exports”
- “Identifying business partners abroad is too difficult”
- “The administrative procedures are too complicated”
- “The financial investment is too large”.

Indicators of whether given difficulties were a major problem were assigned to both exporters and non-exporters. Firms which had exported in the previous three years, which had exported in the past but have stopped, or which had tried to export and given up were asked which difficulties had been major problems. The rest (firms that are considering exporting in the future, are currently trying to export, or believe they will probably never export) were asked which difficulties would be major problems.

The appropriateness of this indicator rests on the assumption that the latter set of firms respond based on their rational expectation of which export-related difficulties would be major problems. In other words, it is assumed that on average, they correctly predict the difficulties that would be most problematic. It is also assumed that firms that had exported or tried to export in the past would experience the same difficulties that they had in the past if they were to try to export again. Only if those two assumptions are satisfied would the indicator be comparable across exporters and non-exporters.

These indicators are intended to predict selection into exporting and therefore reflect which difficulties are the strongest barriers to export, i.e. which major problems are associated with the lowest probability of export.

Due to missing data, the addition of new variables into the model restricts the pool of observations. In order to distinguish changes in coefficients that are due to the

addition of new variables from those which are caused by reducing the pool set of observations, the baseline model over a restricted set of observations is displayed in Annex 4 alongside the new specification.

These models fit the data reasonably well: the pseudo R-square varies between 35% and 42%. Most of the baseline coefficients remain broadly the same as in the baseline specification over the restricted pool of observations. Notable exceptions are the loss of significance of having 6-9 employees, a turnover of €25k-€50k among independent firms, and the statistical significance of having been subject to a decrease in turnover of over 25% since 2008 among firms that are part of a group.

Most problems carry statistically significant coefficients. Of these, all but one are negative for each ownership status: an intuitive finding, since hindrances to cross-border business are expected to discourage exporting. Among independent firms, the only positive and significant coefficient is associated with not knowing where to find information about the potential market. Among SMEs that are part of groups, difficulties in identifying partners abroad are associated with a higher probability of export.

Among independent firms, lack of specialised staff to deal with exports, and specificity of products to the domestic market are the problems that most reduce the probability of exporting. Along with not knowing the rules that have to be followed, these are also the largest negative coefficients for the variables reflecting problems among SMEs which are part of a group.

Interestingly, the difficulties associated with large negative coefficients pertain to human capital and product design, which are quite costly (due to transaction costs, R&D etc.). On the other hand, acquiring information on potential markets is likely to be less costly and can be achieved at least partially through desk-based research due to the wide availability of information online. This distinction could potentially explain the difference in signs of the coefficients. This logic, however, does not apply to identifying partners abroad, which involves transaction costs (e.g. incomplete contracts and the associated hold-up problem).

## 4.6 Selling on-line

This section explores the link between having a website in which products or services can be purchased and propensity to export. The baseline category for this comparison is having a website through which it is not possible to purchase products.<sup>29</sup> It would be expected that a website from which it is possible to pay for products and/or services would facilitate exports by acting as a low-cost interface between firms and their customers. However, the coefficient on online order and purchase facilities is negative and non-significant. This suggests that, rather than acting as a bridge between markets, websites which allow the purchase of a firm's goods and services are not particularly targeted at (or at least used by) foreign customers.

Interestingly, with the removal of the dummy variables indicating the types of customers to whom firms sell, the coefficient on a website for paying online becomes negative and significant for independent firms.

A correlation analysis reveals that selling through a website is weakly but positively correlated with dummy variables indicating that an SME sells to individual consumers (0.0430) or individual consumers and companies or other organisations (0.1480), while it is weakly but negatively correlated to the dummy variable of selling only to companies or other organisations (-0.1771).

Given that companies and other organisations are centralised entities, as opposed to individual consumers, there may be less of a need for a website in order to

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<sup>29</sup> The survey did not contain an option for not having any website. It is probable that firms which do not have a website are classified under "DK/NA [Don't know]", but these observations were not considered, as it was not possible to distinguish between firms without a website and respondents who were not aware of whether their company had a website.

facilitate transactions, which would explain the sign of the correlation coefficients. Therefore, the negative regression coefficient on the possibility of purchasing a firm's products online may reflect websites which are mostly targeted at individual consumers, who are also less likely to be the direct market base of exporters (as reflected by the negative coefficient on selling to individual customers).

Given that the availability of a website for purchasing products and/or services loses significance when controlling for types of customers, it appears sensible to keep the latter in the analysis and not consider the availability of an online platform for purchasing products and/or services as a determinant of exports.

#### 4.7 Measures that would most help firms engage in business abroad

The final question of the survey asked respondents which of a set of measures would help their company most engage in business abroad. This could potentially be interpreted as an indicator of "demand" for the following measures, up to three of which could be selected:

- Information on rules and regulations
- Opportunities to take part in international trade fairs
- Support for finding business partners and networking
- Advice or training
- Grants, subsidies or low interest loans
- Tax incentives
- Information on market opportunities
- Other
- None.

The current section models the probability of selecting each of these measures as helpful, based on firm characteristics and various problems faced by firms. The following model is tested in order to explore the link between stated usefulness measure  $M$  and various firm characteristics:

$$(2) \text{Probit}(M_{ic}) = X'_{ic}\beta + C'_{ic}\delta + \varepsilon_{ic}$$

$M_{ic}$  is an indicator of whether firm  $i$  in country  $c$  has stated that measure  $M$  would help it engage in business abroad. As in the model of export behaviour,  $C_{ic}$  is a vector of country dummies and  $X_{ic}$  is a vector of hypothesised determinants of  $M_{ic}$ . Standard errors are clustered at the country level.

The models fit the data relatively poorly: the pseudo R-squared is under 10% in all models. Yet certain results remain informative. All models are run on the set of all firms and an indicator for ownership status is included.

##### *Firm characteristics*

SMEs that sell to individual consumers only are less likely than SMEs selling to companies only to consider information on market opportunities and support for networking as useful. This finding is intuitive, as networks are more relevant when dealing with a select group of organisations rather than a large number of consumers. Furthermore, information on business opportunities is less likely to be publicly available when the market is made up of organisations and is more likely to flow through networks.

Firms that are part of a national and international group are less likely than independent firms to find grants, subsidies or low interest loans most helpful. This is not surprising, as they may have easier access to finance through a parent company. SMEs that are part of a national group are more likely to find international trade fairs useful. Firms that are part of an international group are less prone to require support for networking than independent firms. Again, they most likely already have access to a network, namely the international group to which they belong. Finally, firms that are part of an international group are more likely than independent firms to require none of the proposed measures. As they are already engaging in international business, they probably require less support in doing so.

*Problems related to international business*

Table 3 shows the coefficients attached to the indicators of whether various difficulties related to conducting business abroad are major problems for each regression. These give an indication of the association between each potential difficulty faced by firms and measures that would most help them engage in business abroad.<sup>30</sup>

The main diagonal (up to but not including the cell for the coefficient on “Delivery costs are too high” in the regression of “None [of the listed measures]”) comprises the coefficients on problems which are most intuitively related to given measures (e.g. the coefficient on identifying business partners abroad in the regression explaining “demand” for support in finding business partners and networking). As expected, most are positive and statistically significant, meaning that firms experiencing a given problem are likely to identify a measure that is a logical solution to that problem.

As expected, problems relevant to procedures, knowledge of foreign countries and partners tend to be related to measures relevant to information and networking. Likewise, lack of foreign language skills is positively related to identifying advice or training as a helpful measure. Similarly, difficulties related to export costs are positively associated with stating grants, subsidies or low interest loans as being useful.

*Firms' engagement in international business activities*

As shown in the tables below, in several cases, firms tend to demand measures which are related to cross-border activities that they have conducted in the previous three years. For instance, firms that have engaged in R&D with a partner based abroad are more likely to find networking support and grants, subsidies and low interest loans helpful. Similarly, firms that have invested abroad are more likely to find grants, subsidies or low interest loans useful. Firms that have not conducted any international business activity in the previous three years were more likely to state that none of the proposed measures would help them engage in business abroad.

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<sup>30</sup> Note that the results from the regression of “Other [measure]” were not included because the number of times that this option was mentioned is extremely low (245 times in total) compared to other measures. This creates an issue of quasi-complete separation in the sense that certain regressors perfectly predict the dependent variable taking a value of 1. This renders the maximum likelihood estimation of their coefficients impossible and requires these variables or the observations for which complete separation occurs to be omitted. The omission of the relevant variables would reduce comparability with the other models. On complete and quasi-complete separation, see for instance: Heinze, G., & Schemper, M. (2002). A solution to the problem of separation in logistic regression. *Statistics in medicine*, 21(16), 2409-2419.

**Table 3: SMEs' problems and measures that would most help them engage in business abroad (regression coefficients)**

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
Your company's products and/or services are specific to your country's market	-0.03693	-0.03698	0.027382	-0.04211	-0.11482	0.082802	0.068602	0.039449
Identifying business partners abroad is too difficult	0.067755	0.417	0.067412	-0.16332	0.198571	-0.09922	-0.10803	-0.21125
Your company does not have specialised staff to deal with exports	-0.03425	0.002676	0.22125	-0.06786	0.020581	0.059069	0.099372	-0.08247
Dealing with foreign taxation is too complicated or too costly	-0.04509	0.007355	0.048092	0.20701	-0.05607	-0.05788	0.228188	-0.06214
Your company does not know where to find information about the potential market	0.104969	0.21657	0.088881	-0.07487	0.235868	-0.0121	-0.04579	-0.12861
The financial investment is too large	0.056549	0.081934	-0.036	0.150617	0.016636	0.314073	-0.03169	-0.31797
Your company does not know the rules which have to be followed (e.g. labelling)	-0.07592	0.052906	0.056304	-0.00077	0.045474	-0.03085	0.164889	-0.11689
Delivery costs are too high	0.025223	-0.00116	-0.12478	0.107347	0.038813	0.114594	-0.03556	-0.09884
The administrative procedures are too complicated	0.038994	-0.02862	0.005424	0.1248	-0.08491	0.04139	0.23911	-0.21204
Resolving cross-border complaints and disputes is too expensive	0.050748	0.073827	0.146217	0.086261	0.058316	0.006376	0.075699	-0.17599
Your company lacks the language skills to deal with foreign countries	-0.13703	-0.03465	0.158891	-0.08079	-0.01287	0.002527	-0.05006	0.038926
Payments from other countries are not secure enough	-0.03768	-0.11392	0.011587	0.080773	-0.0045	0.079494	-0.0198	0.021541

Note: coefficients in blue cells are statistically significant at 10% or above

Source: LE Europe analysis of 2015 Eurobarometer

**Table 4: Firms' engagement in international business activities over the previous three years and measures that would most help them engage in business abroad (regression coefficients)**

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
Exported to another country	0.176621	0.139499	0.06686	0.120418	0.063846	0.205568	0.009934	-0.30347
Imported from another country	0.099299	-0.07627	0.004792	0.075771	0.150783	0.082125	0.009167	-0.09538
Worked with a partner based abroad for research and development (R&D) purposes	0.02174	0.129621	0.071087	0.051631	0.074683	0.10938	-0.08964	-0.14226
Worked as a subcontractor for a company based abroad	-0.03249	0.049498	0.042471	0.13168	0.052361	0.069699	0.012565	-0.09163
Used a subcontractor based abroad	0.141176	0.081602	-0.02584	0.027027	0.063287	-0.01145	-0.01754	-0.21383
Invested in a company based abroad	0.062232	-0.0176	-0.06068	0.203053	-0.01136	0.151548	0.049805	-0.19264
None	-0.20571	-0.14097	-0.05408	-0.07642	0.092441	-0.0572	-0.09197	0.348099

Note: coefficients in blue cells are statistically significant at 10% or above

Source: LE Europe analysis of 2015 Eurobarometer

## 4.8 Robustness check – the inclusion of young firms

By definition, the inclusion of growth since 2008 as a firm characteristic limits the sample to firms born before 2008. In order to include both old and young firms in the analysis while maintaining comparability in their growth rates, the implied seven-year growth rate of young firms is computed based on their percentage growth since first year of operation (as captured by question D4a). This is intended to be a proxy for growth that is comparable to the seven-year growth (2008-2015) of firms born before 2008 (as captured by question D3a). Of course, the growth rate of young firms may be systematically different to that of older firms, and firms born after 2011 may not have suffered the direct impacts of the Eurozone crisis. Some of these differences should be accounted for by controlling for age.

The implied seven-year growth rate of “young firms” (born after 2008) is computed in two steps. First, their compound annual growth since birth is calculated as follows:

$$(3) g_{young} = \left( e^{\frac{\ln\left(1 + \frac{G_{establishment}}{100}\right)}{age}} - 1 \right) * 100$$

$G_{establishment}$  is percentage growth since the end of the firm’s first year of operation (as captured by question D4a). Firms are then classified into ranges of seven-year growth rate based on the above transformation applied to the cut-offs of growth since 2008 (-25%, -5%, 5%, 25%). Implied seven-year growth is recoded in ranges because there are many more observations of growth since 2008 in categorical form.

The addition of young firms does not markedly change the regression coefficients in the models of export behaviour. One noteworthy exception is that the coefficient on whether a firm is part of an international group (given that it is part of a group, whether national or international) becomes significant in the baseline specification and remains with the addition of problems. This results from both a reduction in the standard error of the coefficient, due at least in part to the increase in observations, and an increase in the point estimate. The latter suggests that there is a stronger association between being part of an international group and probability of exporting among younger firms. Membership in an international group, however, loses significance in the full specification.

In most cases, coefficients from the models on measures that would help engagement in cross-border activity change little after the addition of young firms.

# 5. Drivers of SME exports – Community Innovation Survey (CIS)

## 5.1 Disclaimer

The analysis below is based on data from Eurostat, the Community Innovation Survey, 2014. The responsibility for all conclusions drawn from the data lies entirely with the authors.

## 5.2 Introduction

The following analysis was based on a dataset of 55,555 SMEs from 12 EU countries. This dataset is a subset of the CD-ROM-based scientific use files from the 2014 Community Innovation Survey (CIS) data (excluding Spanish firms) which comprises data on 67,476 small, medium and large enterprises (i.e. over 10 employees) in 14 countries. The following changes were implemented on the baseline dataset:

- Norwegian firms were excluded
- Cypriot firms were excluded because it was not possible to distinguish SMEs from large firms
- Large firms (more than 250 employees) were excluded

## 5.3 Export behaviour

Figure 22 Shows that the majority of SMEs within the sample exported in the three years between 2012 and 2014.

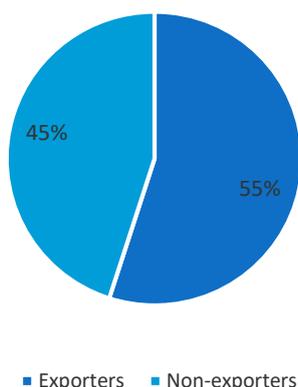
The share of exporters among firms that are part of a group is markedly higher (approximately 70%) than that among independent firms, as illustrated by Figure 23.<sup>31</sup>

Figure 24 indicates that the vast majority of exporters have sold to other EU or associated markets, while roughly half have sold to other foreign markets.

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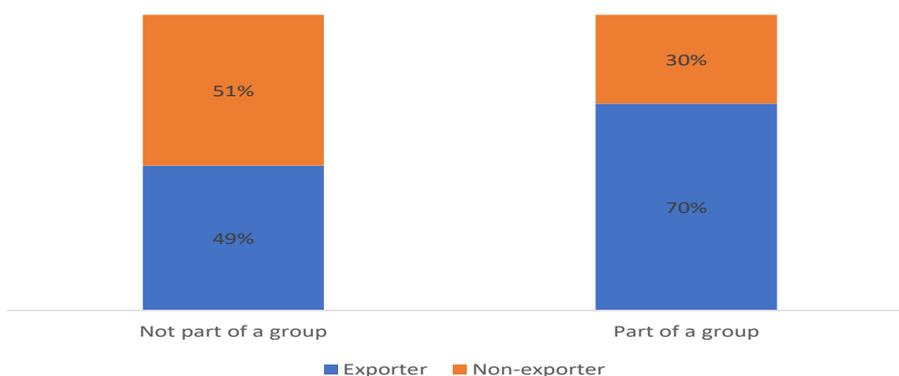
<sup>31</sup> For ease of notation, SMEs that are not part of a group are referred to as “independent”, although it should be noted that, according to the definition in the survey, a head office within a group is also part of the group: “A group consists of two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group.”

**Figure 22: Share of SMEs that exported between 2012 and 2014 within the sample**



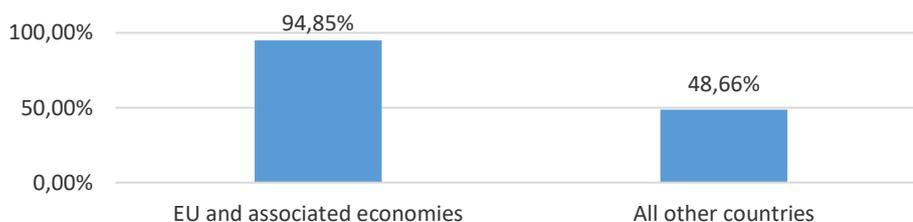
Note: N= 54,053; Country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which have sold to a foreign market during the years 2012 to 2014  
Source: CIS

**Figure 23: Share of SMEs that have exported by independence status**



Note: 11,593 SMEs are part of a group and 37,716 are independent; country coverage: BG, CZ, DE, EE, EL, HR, HU (only for firms that are part of a group), LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014. A group is defined as consisting of “two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group.”  
Source CIS

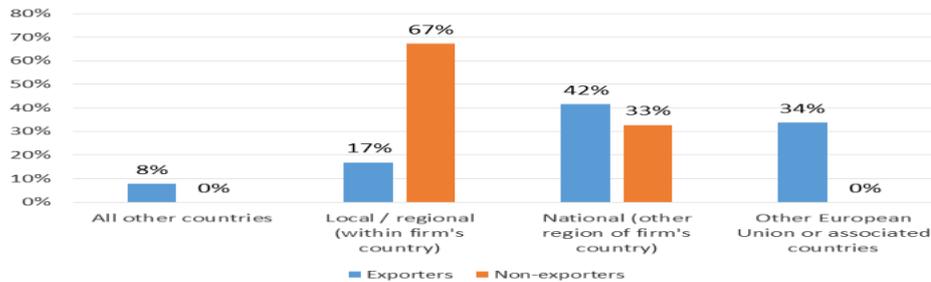
**Figure 24 Share of SME exporters that exported respectively to the EU and associated economies, and to all other countries in the three years from 2012 to 2014**



Note: N= 29,706; Country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as firms which sold to a foreign market during the years from 2012 to 2014  
Source: CIS

SMEs which do not export tend to primarily sell to their local or regional market (67% of non-exporters) (Figure 25). On the other hand, over 75% of exporters sell most of their products either to different regions within their country or to other EU or associated countries. Few exporters have stated the local/regional market (17%) or other foreign countries (8%) as their largest markets. As illustrated in Figure 25 and Figure 26, the distribution of firms by largest market seems to differ by ownership status to a greater extent among non-exporters than among exporters. Exporters that are part of a group are more likely to concentrate on their national market and EU and associated economies than independent SMEs.

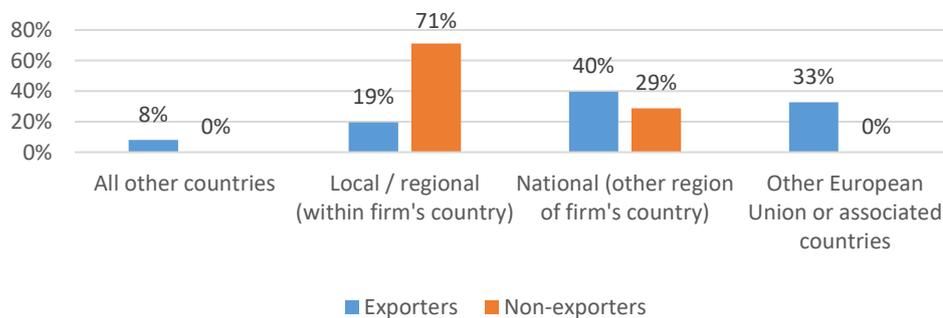
**Figure 25: Distribution of SMEs by largest market (all SMEs)**



Note: The distribution of SMEs by largest market was computed separately for exporters and non-exporters. Number of exporters: 29,590, number of non-exporters: 24,200; country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014; 16 companies which reported that they had not sold to other EU or associated countries, or to any other country, but which stated either of these responses as their largest market were deleted from the analysis due to this inconsistency

Source: CIS

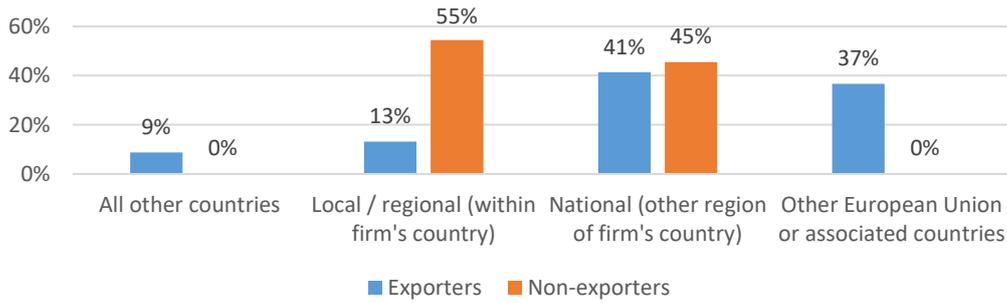
**Figure 26: Distribution of SMEs by largest market (independent SMEs)**



Note: The distribution of SMEs by largest market was computed separately for exporters and non-exporters. Number of exporters: 18,581, number of non-exporters: 18,949; country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as firms which sold to a foreign market during the years 2012 to 2014; 11 SMEs which reported that they had not sold to other EU or associated countries, or any other country, but which stated either of these responses as their largest market were deleted from the analysis due to this inconsistency. EU and associated countries include the following countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, FYR Macedonia, Malta, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Switzerland, Turkey, Spain, Sweden and the United Kingdom. A group is defined as consisting of "two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group."

Source: CIS

**Figure 27: Distribution of SMEs by largest market (SMEs that are part of a group)**

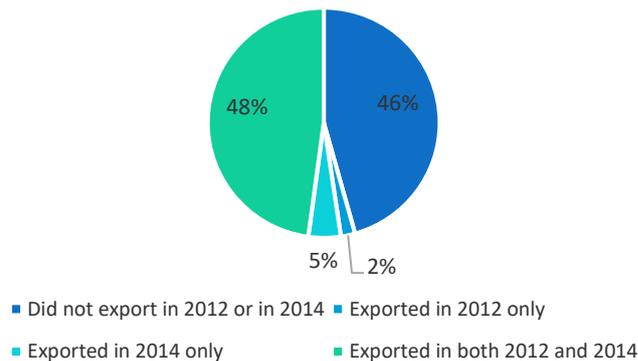


Note: The distribution of SMEs by largest market was computed separately for exporters and non-exporters. Number of exporters: 8,090, number of non-exporters: 3,431; country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014; 5 companies which reported that they had not sold to other EU or associated countries, or any other country, but which stated either of these responses as their largest market were deleted from the analysis due to this inconsistency. EU and associated countries include the following countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, FYR Macedonia, Malta, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Switzerland, Turkey, Spain, Sweden and the United Kingdom. A group is defined as consisting of “two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group.”

Source: CIS

Figure 28 suggests, based on two non-consecutive years, that export behaviour tends to remain stable: over 90% of all SMEs in the sample have either exported in both 2012 and 2014 or exclusively sold to their domestic market in both years, while only 7% of SMEs are occasional exporters.<sup>32</sup> Figure 29 suggests that SMEs that are part of a group tend to export more consistently than independent firms.

**Figure 28: Distribution of SMEs across export patterns**

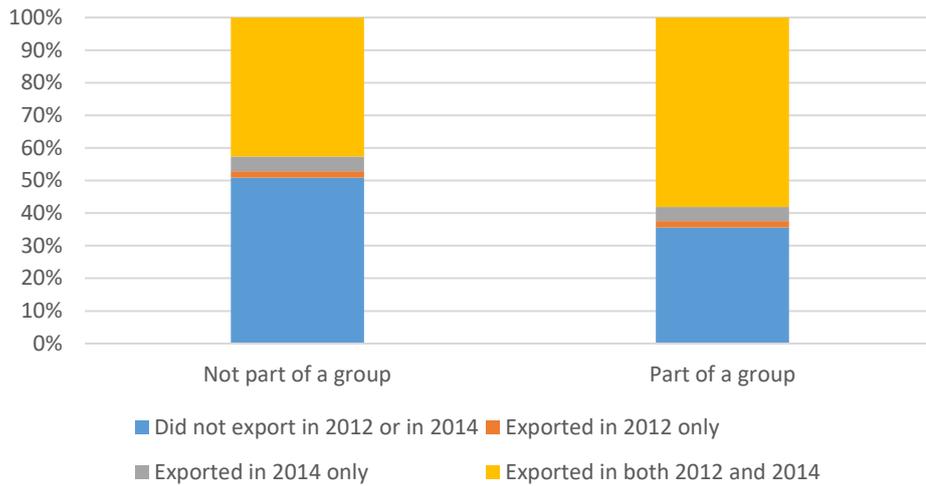


Note: Number of observations: 34,608; country coverage: CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as firms which have sold to clients abroad in a given year

Source: CIS

<sup>32</sup> As stated earlier, there may be a larger share of occasional exporters within the sample and the 2012-2014 timeframe but the survey does not provide enough information to identify whether SMEs exported in 2013.

**Figure 29: Distribution of SMEs across export patterns (by ownership status)**

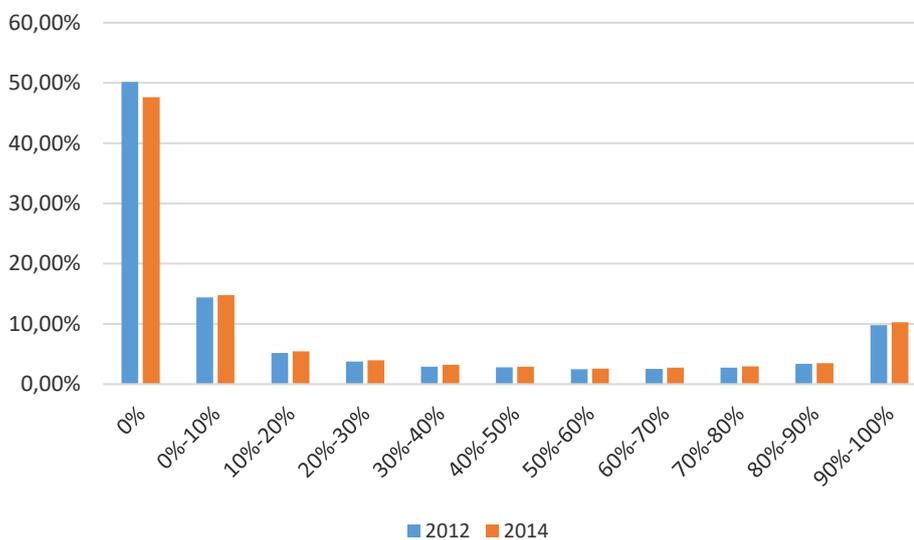


Note: 8,828 SMEs are part of a group and 21,052 are independent; country coverage: CZ, DE, EE, EL, HR, HU (only for SMEs that are part of a group), LT, LV, PT, RO, SK; exporters are defined as SMEs which have sold to clients abroad in a given year. A group is defined as consisting of "two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group"

Source: CIS

Figure 30 and Figure 31 indicate that exporters are polarised with respect to export intensity, with over 45% concentrated within the lowest and highest export intensity brackets. SMEs exporting between 20% and 90% of their turnover are roughly evenly distributed across export intensity brackets.

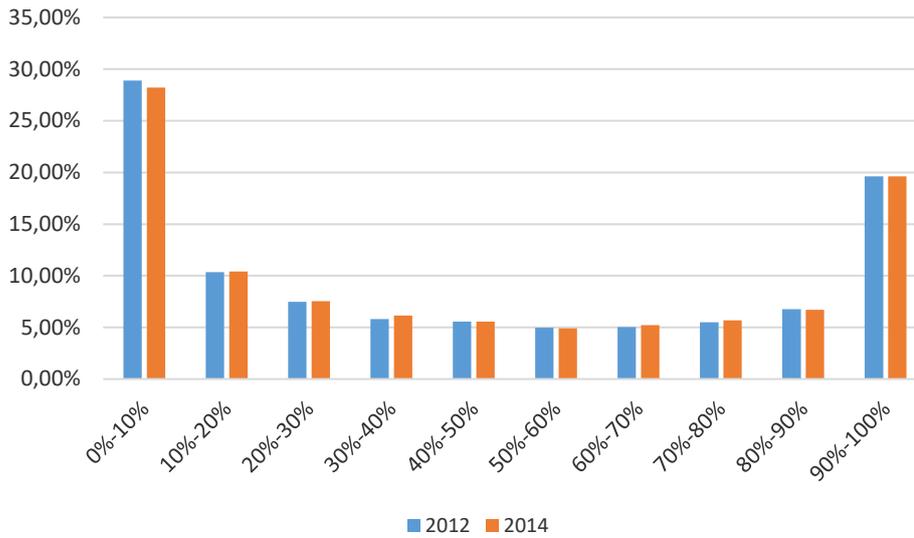
**Figure 30: Distribution of SMEs across export intensity**



Note: Number of observations: 34,608; country coverage: CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK. Export intensity is defined as the "percentage of a SME's total turnover from sales to clients outside [its] country"

Source: CIS

**Figure 31: Distribution of SMEs across export intensity (exporters only)**



Note: Number of exporters (2012): 17,252; number of exporters (2014): 18,123; country coverage: CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK. Export intensity is defined as the "percentage of SME's total turnover from sales to clients outside [its] country". Note that this chart is based on the subsample of firms which had non-missing export intensity in both 2012 and 2014, and did not export in these respective years  
 Source: CIS

Export growth between 2012 and 2014 can be derived as a function of variables available in the dataset, namely, export intensity in both years and turnover growth:

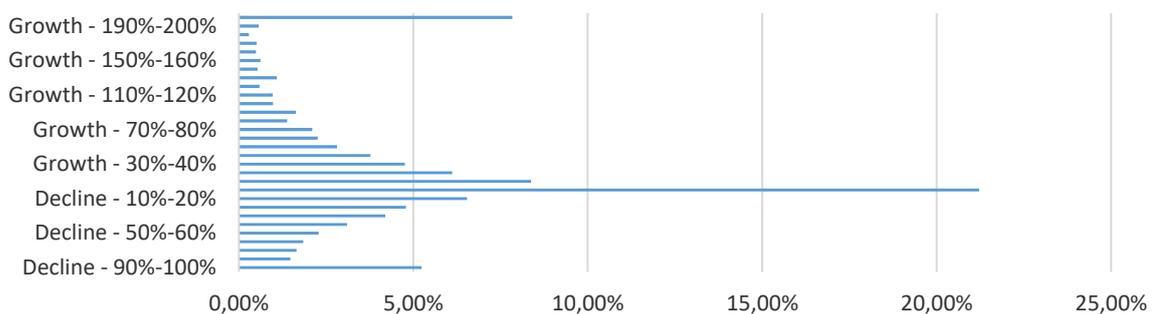
$$g_{exp} = \frac{Export\ value_{2014} - Export\ value_{2012}}{Export\ value_{2012}}$$

$$= \frac{Export\ value_{2014}}{Turnover_{2014}} * \frac{Turnover_{2014}}{Turnover_{2012}} - 1$$

$$= \frac{Export\ value_{2014}}{Export\ intensity_{2014}} * (g_{turnover} + 1) - 1$$

Figure 32 shows that most SMEs which exported in 2012 have increased their exports.

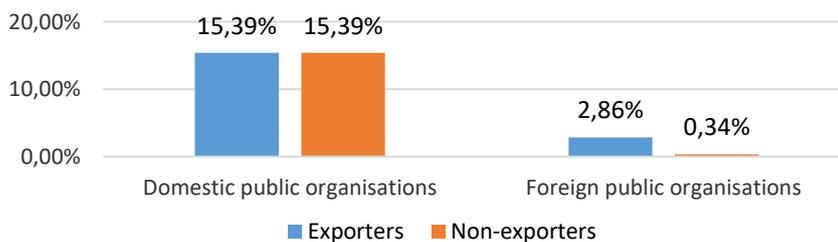
**Figure 32: Distribution of firms across export growth (2012-2014)**



Note: Number of observations: 17,246; country coverage: CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; this analysis excludes SMEs which did not export in 2012, as their growth rate is not defined  
Source: CIS

Figure 33 shows that very similar proportions of exporters and non-exporters have had contracts with domestic public organisations. As expected, a much larger proportion of exporters have had contracts to provide goods and services to foreign public organisations.<sup>33</sup>

**Figure 33: Share of exporters (non-exporters) that had contracts to provide goods or services to public organisations during the years 2012 to 2014**



Note: Each percentage represents firms that had contracts to provide goods or services to domestic (foreign) public organisations as a share of all exporters (non-exporters). Number of exporters: 27613, number of non-exporters: 21,947; country coverage: BG, CZ, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014. The public sector is defined as including "government owned organisations such as local, regional and national

<sup>33</sup> Although it may seem inconsistent that there is a positive number of non-exporters supplying to foreign public sector organisations, it may be that these contracts are conducted with foreign public bodies established domestically (e.g. embassies).

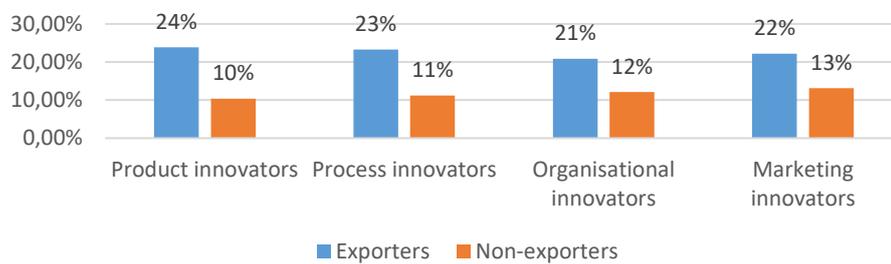
administrations and agencies, schools, hospitals, and government providers of services such as security, transport, housing, energy, etc."

Source: CIS

#### 5.4 Export behaviour and innovation

Figure 34 indicates that innovators are more prevalent among exporters than non-exporters, with the gap being widest for product and process innovations (the shares of product and process innovators are respectively 14 and 12 percentage points higher among exporters than among non-exporters). This holds true both for SMEs that are part of groups and SMEs that are not part of groups, although the gap is much larger among independent SMEs, in which the proportion of innovators is much higher among exporters for every type of innovation.

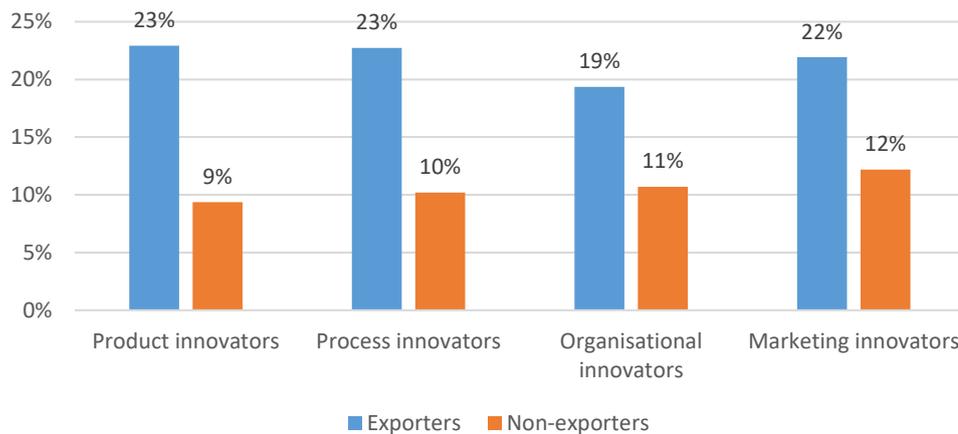
**Figure 34: Share of exporters (non-exporters) that introduced a product innovation, a process innovation, an organisational innovation or a marketing innovation in the three years from 2012 to 2014.)**



Note: Each percentage represents SMEs that introduced a given type of innovation as a share of all exporters (non-exporters). Number of exporters: 29,364, number of non-exporters: 23,957; country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014. The different types of innovations are defined as follows: "A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems. Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market. Product innovations could have been originally developed by your enterprise or by other enterprises or organisations. [...] A process innovation is the implementation of a new or significantly improved production process, distribution method, or supporting activity. Process innovations must be new to your enterprise, but they do not need to be new to your market. The innovation could have been originally developed by your enterprise or by other enterprises or organisations. [...] An organisational innovation is a new organisational method in your enterprise's business practices (including knowledge management), workplace organisation or external relations that has not been previously used by your enterprise. It must be the result of strategic decisions taken by management. Exclude mergers or acquisitions, even if for the first time. [...] A marketing innovation is the implementation of a new marketing concept or strategy that differs significantly from your enterprise's existing marketing methods and which has not been used before. It requires significant changes in product design or packaging, product placement, product promotion or pricing. Exclude seasonal, regular and other routine changes in marketing methods."

Source: CIS

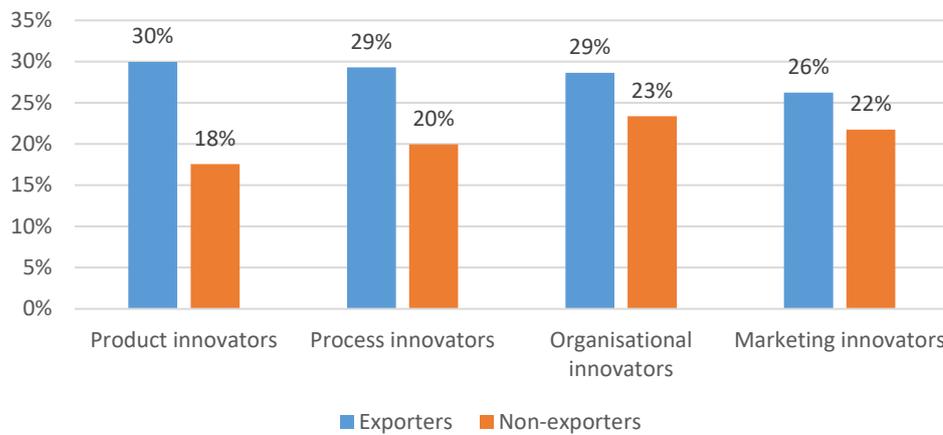
**Figure 35: Share of SMEs that introduced a product innovation, a process innovation, an organisational innovation or a marketing innovation in the three years from 2012 to 2014 (not part of an enterprise group.)**



Note: Each percentage represents SMEs that have introduced a given type of innovation as a share of all exporters (non-exporters). Number of exporters: 18,449, number of non-exporters: 18,750; country coverage: BG, CZ, DE, EE, EL, HR, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014. The different types of innovations are defined as follows: "A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems. Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market. Product innovations could have been originally developed by your enterprise or by other enterprises or organisations. [...] A process innovation is the implementation of a new or significantly improved production process, distribution method, or supporting activity. Process innovations must be new to your enterprise, but they do not need to be new to your market. The innovation could have been originally developed by your enterprise or by other enterprises or organisations. [...] An organisational innovation is a new organisational method in your enterprise's business practices (including knowledge management), workplace organisation or external relations that has not been previously used by your enterprise. It must be the result of strategic decisions taken by management. Exclude mergers or acquisitions, even if for the first time. [...] A marketing innovation is the implementation of a new marketing concept or strategy that differs significantly from your enterprise's existing marketing methods and which has not been used before. It requires significant changes in product design or packaging, product placement, product promotion or pricing. Exclude seasonal, regular and other routine changes in marketing methods."

Source: CIS

**Figure 36: Share of SMEs that introduced a product innovation, a process innovation, an organisational innovation or a marketing innovation in the three years from 2012 to 2014 (part of an enterprise group.)**



Note: Each percentage represents SMEs that have introduced a given type of innovation as a share of all exporters (non-exporters). Number of exporters: 8,002, number of non-exporters: 3,394; country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014. The different types of innovations are defined as follows: "A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems. Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market. Product innovations could have been originally developed by your enterprise or by other enterprises or organisations. [...] A process innovation is the implementation of a new or significantly improved production process, distribution method, or supporting activity. Process innovations must be new to your enterprise, but they do not need to be new to your market. The innovation could have been originally developed by your enterprise or by other enterprises or organisations. [...] An organisational innovation is a new organisational method in your enterprise's business practices (including knowledge management), workplace organisation or external relations that has not been previously used by your enterprise. It must be the result of strategic decisions taken by management. Exclude mergers or acquisitions, even if for the first time. [...] A marketing innovation is the implementation of a new marketing concept or strategy that differs significantly from your enterprise's existing marketing methods and which has not been used before. It requires significant changes in product design or packaging, product placement, product promotion or pricing. Exclude seasonal, regular and other routine changes in marketing methods."

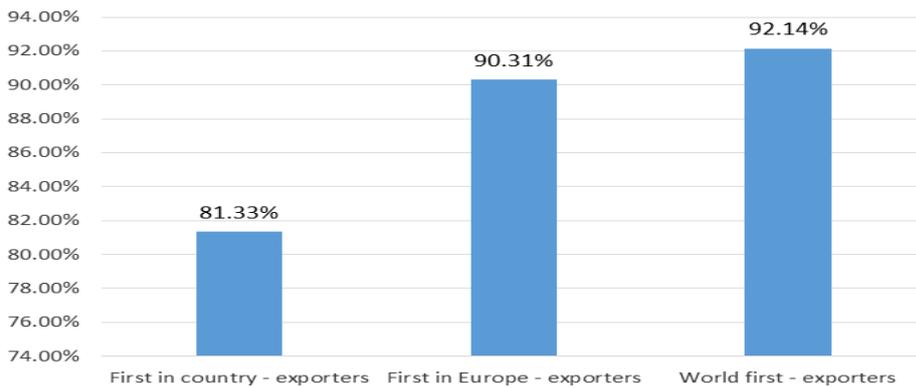
Source: CIS

Figure 37 shows that most of the SMEs that have introduced innovations that were new to their country, Europe or the World were exporters. The share of exporters is roughly 10 percentage points higher in the latter two categories compared to the first.

Figure 37 also shows that "First-in-Europe" innovators are more likely to export to the EU and associated countries than "First-in-country" innovators, and "World first" innovators are more likely than both "First-in-country" and "First-in-Europe" innovators to export to other countries.

Figure 38 suggests that there is a much larger share of "First-in-country" innovators among SMEs that are part of groups (exporters that are part of an enterprise group represent 85% of "First-in-country" innovators, while independent exporters represent only 79% of "First-in-country" innovators). The gap is much smaller when considering "First-in-Europe" and "World first" innovations.

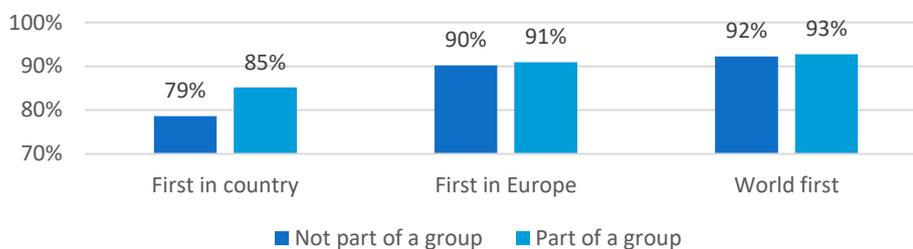
**Figure 37: Exporters as a share of product innovators, by innovation novelty**



Note: Each percentage represents exporters as a share of all SMEs within a given product innovation novelty category. Number of product innovators that have introduced a first within their country: 2,507, a first in Europe: 1,239, a World first: 954; country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years 2012 to 2014; product innovators are defined as enterprises which introduced a product innovation in the three years from 2012 to 2014. A product innovation was defined as follows: "A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems. Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market. Product innovations could have been originally developed by your enterprise or by other enterprises or organisations." "First in Europe" refers to the following set of countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, FYR Macedonia, Malta, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Switzerland, Turkey, Spain, Sweden and the United Kingdom

Source: CIS

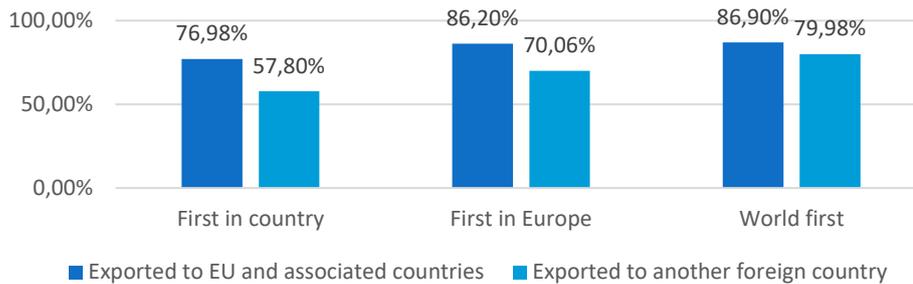
**Figure 38: Exporters as a share of product innovators, by innovation novelty and ownership status**



Note: Each percentage represents exporters as a share of all SMEs within a given product innovation novelty category. Sample sizes by innovation novelty and group status are as follows: first within their country: 1,465 (independent) and 948 (part of a group); a first in Europe: 726 (independent) and 484 (part of a group); a World first: 540 (independent) and 398 (part of a group); country coverage: BG, CZ, DE, EE, EL, HR, LT, LV, PT, RO, SK; exporters are defined as SMEs which sold to a foreign market during the years from 2012 to 2014; product innovators are defined as enterprises which introduced a product innovation in the three years from 2012 to 2014. A product innovation was defined as follows: "A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems. Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market. Product innovations could have been originally developed by your enterprise or by other enterprises or organisations." "First in Europe" refers to the following set of countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, FYR Macedonia, Malta, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Switzerland, Turkey, Spain, Sweden and the United Kingdom. A group is defined as consisting of "two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group."

Source: CIS

**Figure 39: Exporters as a share of product innovators, by export destination and innovation novelty**



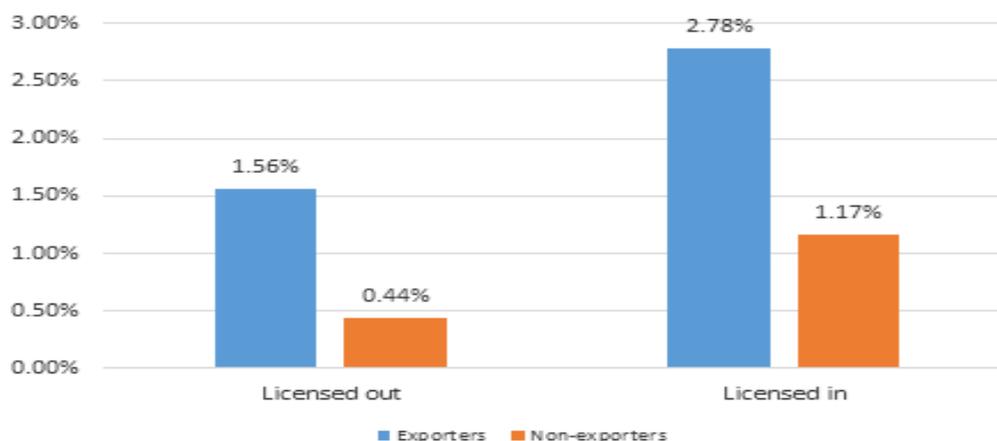
Note: Each percentage represents SMEs exporting to a given destination as a share of all SMEs within a given product innovation novelty category. Number of product innovators that have introduced a first within their country: 2,507; a first in Europe: 1,239; a World first: 954; country coverage: BG, CZ, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as firms which sold to a foreign market during the years 2012 to 2014; product innovators are defined as enterprises which introduced a product innovation in the three years from 2012 to 2014. A product innovation was defined as follows: "A product innovation is the market introduction of a new or significantly improved good or service with respect to its capabilities, user friendliness, components or sub-systems. Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market. Product innovations could have been originally developed by your enterprise or by other enterprises or organisations." EU and associated countries include the following countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, FYR Macedonia, Malta, Montenegro, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Switzerland, Turkey, Spain, Sweden and the United Kingdom. Likewise, "First in Europe" refers to the same set of countries.

Source: CIS

Figure 40 shows that a higher share of exporters than non-exporters has participated in intellectual property rights transactions. Furthermore, a higher share of both exporters and non-exporters has licensed or bought a patent, industrial design right, copyright or trademark: roughly speaking, there are more "innovation buyers" than "innovation sellers". The ratio between innovation buyers and innovation sellers is higher among non-exporters than exporters.

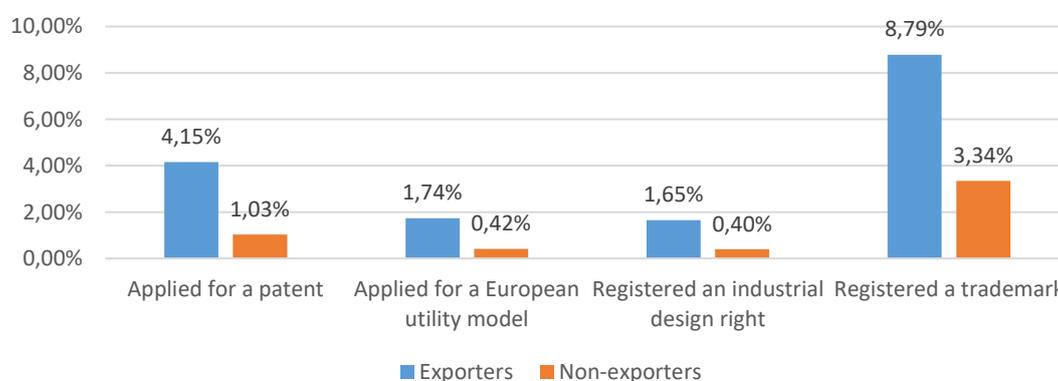
Figure 41 compares the shares of exporters and non-exporters that have taken part in various intellectual property rights protection processes. As in the case of the previous findings, there is a higher proportion of exporters than non-exporters in each category. For both exporters and non-exporters, the share of firms that have registered a trademark is highest.

**Figure 40: Share of exporters (non-exporters) that licensed out/in or sold/bought a patent, industrial design right, copyright or trademark to another enterprise, university or research institute in the three years from 2012 to 2014**



Note: Each percentage represents SMEs that licensed in (out) as a share of all exporters (non-exporters). Note that it is not specified in the survey whether the licensing in (out) occurred within or across borders. Number of exporters: 26,792, number of non-exporters: 22,562; country coverage: BG, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as firms which sold to a foreign market during the years 2012 to 2014  
Source: CIS

**Figure 41: Share of exporters (non-exporters) that that applied for a patent, European utility model, registered an industrial design right or trademark in the three years from 2012 to 2014**



Note: Each percentage represents SMEs that have been involved in a given intellectual property-related process as a share of all exporters (non-exporters). Number of exporters: 26,872, number of non-exporters: 22,694; country coverage: BG, DE, EE, EL, HR, HU, LT, LV, PT, RO, SK; exporters are defined as SMEs which have sold to a foreign market during the years 2012 to 2014  
Source: CIS

## 5.5 Export behaviour and innovation co-operation

The data in Table 5 to Table 12 suggest that most SMEs which participate in innovation co-operation do export (as illustrated by the low percentage of non-exporters and high percentage of exporters, split between the EU/EFTA/CC<sup>34</sup> and other countries).

34 CC refers to candidate and potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey.

Note that cells are not mutually exclusive. SMEs cooperating within their group mainly tend to export to the EU and associated economies, especially if cooperation is domestic or European-based. A large proportion of SMEs which cooperate with suppliers export, mainly to the EU and associated countries, but the share of SMEs exporting to other countries is not too different. Cooperation with government, public or private research institutes tends to be mainly domestic.

**Table 5: Cooperation with other enterprises within the enterprise group**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	6.51%	14.44%	11.50%
EU/EFTA/CC	2.50%	9.71%	6.95%
All other countries	C	2.50%	2.58%

Note: The sample (N=1,122) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter "C" are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

**Table 6: Cooperation with suppliers of equipment, materials, components, or software**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	12.47%	35.12%	28.36%
EU/EFTA/CC	3.51%	22.12%	18.53%
All other countries	1.05%	7.73%	7.02%

Note: The sample (N=1,139) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter "C" are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

**Table 7: Cooperation with suppliers of equipment, materials, components, or software**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	5.96%	23.25%	19.04%
EU/EFTA/CC	C	15.35%	12.98%
All other countries	C	7.19%	7.46%

Note: The sample (N=1,140) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter "C" are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

**Table 8: Cooperation with suppliers of equipment, materials and components, or with software clients or customers from the public sector**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	3.48%	8.11%	7.04%
EU/EFTA/CC	C	2.50%	2.14%
All other countries	C	1.52%	1.52%

Note: The sample (N=1,122) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter "C" are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

**Table 9: Cooperation with competitors or other enterprises in your sector**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	3.28%	12.0%	9.84%
EU/EFTA/CC	C	7.09%	5.41%
All other countries	C	3.19%	2.84%

Note: The sample (N=1128) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter "C" are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

**Table 10: Cooperation with consultants or commercial labs**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	5.26%	16.22%	13.37%
EU/EFTA/CC	C	5.35%	4.99%
All other countries	C	1.60%	1.52%

Note: The sample (N=1,122) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter "C" are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

**Table 11: Cooperation with universities or other higher education institutes**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	6.42%	31.73%	27.45%
EU/EFTA/CC	0.98%	5.97%	5.08%
All other countries	C	1.78%	1.60%

Note: The sample (N=1,122) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidates: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter "C" are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

**Table 12: Cooperation with government, public or private research institutes**

Cooperation\Export destination	Non-exporter	EU/EFTA/CC	All other countries
Domestic	4.01%	15.88%	13.92%
EU/EFTA/CC	C	4.91%	4.01%
All other countries	C	1.07%	0.89%

Note: The sample (N=1,121) comprises all SMEs which stated whether or not they cooperated with partners in each of the proposed regions and whether or not they sold to a foreign market in the three years from 2012 to 2014. CC refers to candidate and potential candidates: Albania, Bosnia and Herzegovina, Kosovo, FYR Macedonia, Montenegro, Serbia and Turkey. Cells marked with a letter “C” are hidden in order to preserve confidentiality. Note that cells are not mutually exclusive

Source: CIS

## 5.6 Correlation between export behaviour and innovation-related expenditure

Table 13 reports the correlation between various measures of export behaviour and engagement in/expenditure on various innovation-related activities (measured as a ratio relative to turnover). Cells containing correlation coefficients that are statistically significant at the 10% level are shaded in blue. Overall, export behaviour is weakly correlated with innovation-related activities.

Whether a SME has exported and export intensity are negatively associated with most innovation-related expenditure except for the fifth category of activities (“all other activities including design, training, marketing and other relevant activities”), in which the correlation coefficient with export intensity (2014) and whether a SME has exported between 2012 and 2014 is positive but very close to zero (and is not statistically significant).

Whether a SME exported between 2012 and 2014 is positively related to an indicator of whether it participated in an innovation-related activity in 2014. The correlation coefficients also have a larger magnitude, although all are smaller than 0.2.

With the caveat that all correlation coefficients are very small in magnitude, the results point to a stronger and positive association between the binary choice of exporting and engaging in innovation than the relationship between export behaviour and the level of spending on innovation-related activities.

**Table 13: Correlation between export behaviour and various innovation-related expenditures in 2014**

	Whether the SME exported between 2012 and 2014 (correlation with innovation expenditure as a share of turnover)	Export intensity in 2014 (correlation with innovation expenditure as a share of turnover)	Whether the SME exported in 2014 (correlation with innovation expenditure as a share of turnover)	Whether the SME exported between 2012 and 2014 (correlation with whether or not an enterprise had spent on innovation)
In-house R&D	-0.01	-0.02	-0.02	0.19
External R&D	0.00	-0.02	-0.02	0.07
Acquisition of machinery, equipment, software & buildings	-0.02	-0.02	-0.02	0.09
Acquisition of existing knowledge from other enterprises or organisations	-0.01	-0.01	-0.01	0.05
All other innovation activities including design, training, marketing, and other relevant activities	0.00	0.01	0.00	0.10
Total of the above innovation activities	-0.02	-0.02	-0.03	0.16
Number of observations	10,596	8,334	8,334	10,596

Note: Innovation-related expenditures include current expenditures (including labour costs, contracted-out activities, and other related costs) as well as capital expenditures on buildings and equipment. Cells containing correlation coefficients that are significant at the 10% level are shaded in blue

Source: CIS

## 5.7 Export growth and turnover growth

In order to illustrate how turnover and exports evolve, the joint distribution of turnover and export growth is shown in Table 14 and the conditional distribution of export growth is given in Table 15. The higher proportion of firms on the diagonal of the tables suggests that turnover and export growth usually go hand in hand.

**Table 14: Change in turnover and export growth between 2012 and 2014 (joint distribution)**

Turnover\Exports	Decline – greater than 10%	Less than 10% change	Growth – greater than 10%
Decline – greater than 10%	15.31%	1.41%	2.62%
Less than 10% change	10.90%	17.74%	13.13%
Growth – greater than 10%	4.91%	2.07%	31.91%

Note: The percentages are expressed as a share of all SMEs with non-missing values for turnover and export growth, namely N=17,246

Source: CIS

**Table 15: Change in turnover and export growth between 2012 and 2014 (conditional distribution)**

Turnover\Exports	Decline – greater than 10%	Less than 10% change	Growth – greater than 10%	Number of firms
Decline – greater than 10%	79.16%	7.29%	13.55%	3335
Less than 10% change	26.10%	42.46%	31.44%	7204
Growth – greater than 10%	12.63%	5.32%	82.05%	6707

Note: The percentages are expressed as a share of all SMEs within a given turnover growth bracket. The total sample is made up of firms with non-missing values for turnover and export growth, namely N=17,246

Source: CIS.

**Table 16: Growth in turnover and exports (joint distribution)**

		Decline									Stable	Growth										
		90-100%	80-90%	70-80%	60-70%	50-60%	40-50%	30-40%	20-30%	10-20%		10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%	>100%	
Decline	90-100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	80-90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	70-80%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	60-70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	50-60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	40-50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	30-40%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	20-30%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	10-20%	0%	0%	0%	0%	0%	0%	0%	1%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Stable	2%	0%	0%	1%	1%	1%	1%	2%	3%	18%	4%	2%	1%	1%	1%	1%	1%	0%	0%	3%	
Growth	10-20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	3%	1%	1%	0%	0%	0%	0%	0%	0%	1%	
	20-30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	0%	0%	0%	0%	0%	0%	1%	
	30-40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	
	40-50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%	
	50-60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	
	60-70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	70-80%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	80-90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	90-100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	> 100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%

Note: N=17246. The distribution across export growth brackets is conditional on turnover growth. The horizontal axis shows export growth and the vertical axis shows turnover growth

Source: CIS

**Table 17: Growth in turnover and exports (conditional distribution of export growth)**

		Decline										Stable	Growth									
		90-100%	80-90%	70-80%	60-70%	50-60%	40-50%	30-40%	20-30%	10-20%	10-20%		20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%	>100%	
Decline	90-100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	80-90%	C	36%	C	0%	C	0%	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	C	
	70-80%	47%	C	23%	C	0%	0%	0%	0%	C	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	C
	60-70%	22%	17%	20%	18%	C	C	C	0%	C	C	0%	0%	C	C	0%	C	0%	0%	0%	0%	C
	50-60%	17%	8%	14%	18%	20%	C	C	C	C	C	0%	C	0%	0%	0%	0%	0%	C	C	C	
	40-50%	13%	5%	9%	10%	14%	22%	7%	4%	C	4%	C	C	C	0%	0%	C	C	C	C	C	
	30-40%	8%	5%	4%	6%	8%	13%	32%	5%	4%	6%	2%	C	C	C	0%	C	C	C	C	4%	
	20-30%	7%	3%	4%	4%	5%	8%	14%	29%	6%	7%	2%	C	3%	C	C	C	C	C	C	5%	
	10-20%	5%	2%	2%	2%	4%	5%	8%	13%	30%	11%	3%	1%	2%	1%	3%	1%	C	C	C	6%	
	Stable	4%	1%	1%	1%	2%	3%	3%	4%	7%	42%	9%	4%	3%	2%	1%	1%	1%	1%	1%	8%	
Growth	10-20%	4%	1%	1%	1%	1%	1%	2%	2%	3%	8%	32%	13%	6%	4%	3%	2%	3%	1%	1%	11%	
	20-30%	3%	C	C	C	1%	1%	2%	2%	2%	6%	5%	31%	12%	5%	4%	3%	3%	2%	2%	15%	
	30-40%	4%	1%	C	C	C	C	C	2%	2%	5%	4%	4%	26%	10%	7%	3%	4%	3%	3%	20%	
	40-50%	2%	C	C	C	C	C	C	2%	C	4%	2%	4%	5%	28%	7%	7%	5%	3%	4%	24%	
	50-60%	4%	C	0%	C	C	C	C	C	C	4%	3%	3%	2%	5%	25%	9%	5%	4%	3%	27%	
	60-70%	6%	C	0%	C	C	C	C	C	C	5%	C	C	C	4%	C	23%	7%	6%	4%	29%	
	70-80%	6%	0%	C	C	0%	C	C	C	C	C	C	C	C	C	C	C	24%	8%	C	35%	
	80-90%	C	0%	0%	C	C	C	C	C	C	C	C	C	C	C	C	C	C	25%	9%	40%	
	90-100%	C	0%	C	0%	C	C	C	0%	C	C	C	C	C	C	C	C	C	C	22%	52%	
	> 100%	4%	C	C	C	C	C	C	C	C	2%	C	C	2%	C	C	C	C	1%	1%	80%	

Note: N=17246. The distribution across export growth brackets is conditional on turnover growth. The horizontal axis shows export growth and the vertical axis shows turnover growth

Source: CIS

# 6. Analysis of national micro data: Estonia, Finland, Ireland, Greece, Netherlands and Slovakia

## 6.1 Estonia

### 6.1.1 Disclaimer

This analysis is based on a panel of data ranging from 1995 to 2017 provided by Statistics Estonia. Results and conclusions based on the analysis of that data are those of the researcher.

### 6.1.2 Introduction

The following key facts emerge from the analysis:

- Most SMEs that have exported are occasional rather than consistent exporters.
- SMEs that export consistently tend to employ more people than occasional exporters.
- SMEs in the manufacturing and retail sectors account for most consistent exporters – 47% of all consistent SME exporters in the case of manufacturing and 40% in the case of retail SMEs.
- SMEs in these two sectors also account for almost 70% of the occasional exporters (20% in the case of manufacturing and 43% in the case of the retail sectors). SMEs in the services sector account for another 25% of occasionally exporting SMEs in each case).
- In contrast, SMEs in the services and retail sector account for 75% of all non-exporting SMEs (49% and 26% respectively).
- More SMEs import than export.
- Older SMEs are more likely to export and tend to export more consistently than younger SMEs.
- Consistent exporters are more export intensive than occasional exporters.

The next section describes the datasets that were used in the analysis and the subsequent section presents the results of the data analysis which focuses on the import and export behaviour of SMEs between 1995 and 2016, the characteristics of consistent and occasional exporters and the SMEs' recent export patterns.

### 6.1.3 Data sources

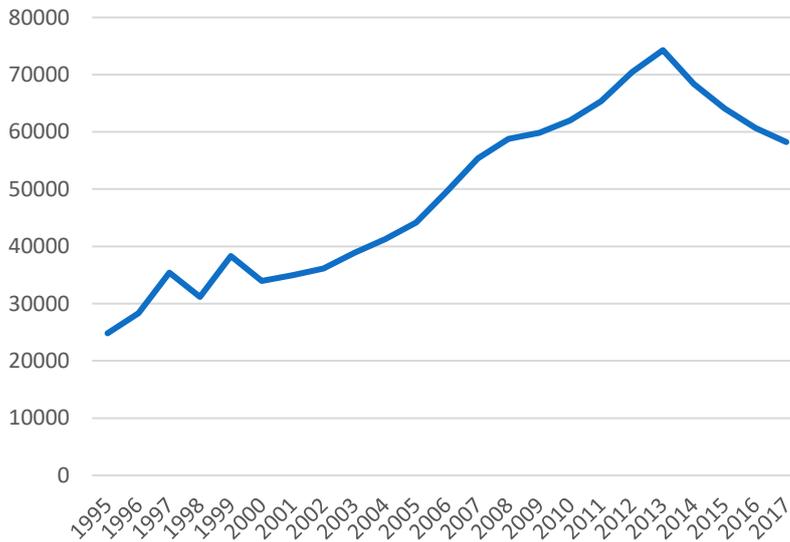
The analysis is based on a subset of firms in the Business Register for Statistical Purposes from 1995 to 2017. The legal forms of the firms include general partnerships, trust companies, private limited companies, limited liability companies, European companies and branches of foreign companies. Firms which were established in but not active during a given year are not included in the data for that year (these data, however, are included in aggregated published figures). Firms for which there is no information on employment for any year of the 1995-2017 period are excluded from the analysis. The resulting dataset includes 1,137,652 observations from 154,343 firms, including 1,134,414 observations from 154,126 SMEs.

From 2014, no information on employment is available. Therefore, the only firms that are considered from 2014 onwards are firms present in the business register

before that period and for which information on employment was available before 2014. Firms born after 2014 are not considered for the analysis as no information on their employment is available.

The number of SMEs increased more or less steadily from 1995 to 2013 in the database (Figure 42). As previously noted, the years from 2014 to 2017 do not include firms born during that period, which is a likely explanation for the decline in the observed SME population during these years.

**Figure 42: Number of SMEs in the database**

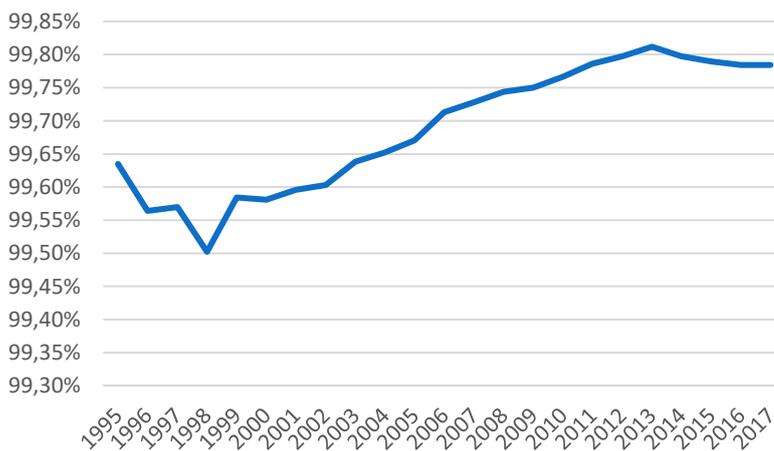


Note: This analysis is based on 1,134,414 observations

Source: Statistics Estonia and LE Europe analysis

The share of SMEs in enterprises of all sizes grew from 1997 to 2013 and declined marginally thereafter (Figure 43).

**Figure 43: Share of SMEs in total enterprise population**



Note: This analysis is based on 113,7652 observations

Source: Statistics Estonia and LE Europe analysis

In order to gain insights into the trading behaviour of SMEs, the foreign trade dataset was linked to the business register. The foreign trade dataset covers trade in goods between 1995 and 2017. The dataset does not include small traders whose trade value was below the Intrastat reporting threshold (respectively EUR 200,000 and EUR 130,000 for imports and exports in 2017 – see Table 18). The value of exports and imports of these SMEs are estimated based on VAT data and are included in aggregated published figures. However, no firm level data are provided for such

SMEs in the current foreign trade dataset, resulting in an under-representation of intra-EU traders.

In addition, the statistical trade coverage underwent an important change following Estonia's accession to the EU. Before joining the EU, most international trade data were recorded from customs declarations in Estonia. In contrast, since 2004, intra-EU trade data have been collected via Intrastat reports which, as previously mentioned, do not cover all traders. Since Estonia joined the EU only in 2004, intra EU trade in the present analysis is defined as trade taking place with EU Member States during the pre-accession period.

This analysis uses the analytical framework of the general trade system, in which the statistical territory includes customs warehouses, free economic zones of all types, the free circulation area, as well as premises for inward processing.<sup>35</sup>

**Table 18: Intrastat reporting thresholds (in Euros)**

Year	Imports	Exports
2004	63 912	63 912
2005	63 912	63 912
2006	127 823	127 823
2007	127 823	127 823
2008	127 823	127 823
2009	127 823	127 823
2010	127 823	108 650
2011	130 000	90 000
2012	140 000	100 000
2013	190 000	120 000
2014	200 000	130 000
2015	200 000	130 000
2016	200 000	130 000
2017	200 000	130 000

Source: Statistics Estonia (2018) Foreign Trade. [Online] Available at: <https://www.stat.ee/55635> [Accessed 30 September 2018]

The table below presents the definition of the key variables and concepts used in the analysis.

**Table 19: Definition of key variables and related concepts**

Variable	Definition	Related concept
Persons employed	"[T]he total number of persons who work in the observation unit, and persons who work outside the unit who belong to it and are paid by it. It includes persons absent for a short period, and also those on strike, but not those absent for an indefinite period. It also includes part-time workers who are regarded as such under the laws of the country concerned and who are on the payroll, as well as seasonal workers, apprentices and home workers on the payroll." <sup>36</sup>	The number of persons employed is used as the basis for determining whether a firm is an SME.

<sup>35</sup> Eurostat (2015). This analysis covers all statistical procedures, including normal imports and exports, and inward and outward processing procedures. Normal imports and exports refer to goods that were imported or "exported definitively, or released into free circulation" (Eurostat, 2015). According to the inward and outward processing procedures, goods can be temporarily imported or exported for processing and the resulting products exported or imported, with partial or total exemptions from levies, duties or checks normally applied (Eurostat, 2015). Eurostat (2015) "User guide on European statistics on international trade in goods".

<sup>36</sup> Statistics Estonia (n.d.) [Business demography] Definitions. [Online] Available at: [http://pub.stat.ee/px-web.2001/1\\_Databas/Economy/06Economic\\_units/01Business\\_demography/RE\\_34.htm](http://pub.stat.ee/px-web.2001/1_Databas/Economy/06Economic_units/01Business_demography/RE_34.htm) [Accessed 28 September 2018].

Variable	Definition	Related concept
Employees	"[T]hose persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. The relationship of employer to employee exists when there is an agreement between an enterprise and a person, whereby the person works for the enterprise in return for remuneration in cash or in kind." <sup>37</sup>	The number of employees is used as a proxy for employment when the number of persons employed is not available.
Export value	Statistical value of exports, namely the FOB value (free-on-board) of the goods, or "the transaction value of the goods and the value of services performed to deliver goods to the border of the exporting country." <sup>38</sup>	Export value is used to determine whether a firm is exporting. It is also used to compute export intensity.
Import value	Statistical value of imports, namely the CIF type value (cost, insurance, freight) or "the transaction value of the goods, the value of services performed to deliver goods to the border of the exporting country and the value of the services performed to deliver the goods from the border of the exporting country to the border of the importing country." <sup>39</sup>	Import value is used to determine whether a firm is importing.
Partner	The trading partners of exporters and importers are respectively assigned on the basis of the countries of destination and consignment. <sup>40</sup>	It is on this basis that intra- and extra-EU trade is classified.
Industry	NACE Rev. 2 codes.	Using this classification, data for five sectors were constructed: Agriculture, forestry and fishing; Industry; Manufacturing; Retail; and Services.
Turnover	Yearly revenue, in Euros.	Turnover is used to compute export intensity.
Date of registration	Date of registration in the Commercial Register.	Cohorts of SMEs were defined with respect to this date.
Group ID and country of the ultimate controlling institution (UCI) of the company	These variables link firms to a group and specify its country of ownership.	The variable is used to identify whether SMEs are part of a group and if so, whether it is a domestically or foreign controlled group. This concept is referred to as "ownership". This terminology is used for concision rather than to denote the actual ownership of a firm, as it is possible for a firm to be

<sup>37</sup> Ibid.

<sup>38</sup> Eurostat (2015) "User guide on European statistics on international trade in goods".

<sup>39</sup> Ibid.

<sup>40</sup> In extra-EU trade, a country of consignment is "[...] the country from which the goods were initially dispatched to the importing Member State, without any halt or legal operation not inherent in their transport having occurred in an intermediate country; if such halts or legal operations have occurred, the final intermediate country shall be regarded as the country of consignment." In intra-EU trade, the Member State of consignment of goods is the last Member State in which "halts or legal operations not inherent in [the goods'] transport" have taken place before the goods arriving at their final destination. Eurostat (n.d.) "Country of consignment". In Eurostat (n.d.) Concepts and Definitions Database. [Online] Available at: [http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP\\_GLOSSARY\\_NOM\\_DTL\\_VIEW&StrNm=CODED2&StrLanguageCode=EN&IntKey=16443585&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter\\_valid=0&IntCurrentPage=1](http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNm=CODED2&StrLanguageCode=EN&IntKey=16443585&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=1) [accessed 27 September 2018]; Eurostat (n.d.) "Member State of consignment". In Eurostat (n.d.) Concepts and Definitions Database. [Online] Available at: [http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP\\_GLOSSARY\\_NOM\\_DTL\\_VIEW&StrNm=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter\\_valid=0&IntCurrentPage=1](http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNm=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=1) [accessed 27 September 2018].

Variable	Definition	Related concept
		part of a group, yet not be owned by another firm (i.e. if it is a parent company).

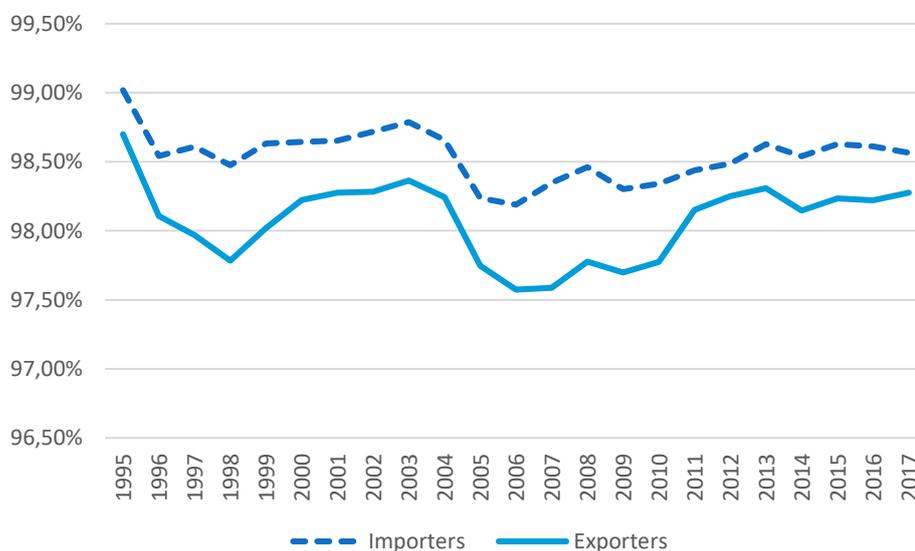
Source: Statistics Estonia (n.d.) [Metadata – Business Register]; Statistics Estonia (n.d.) Andmebaasi Struktuur [ – Väliskaubandus] [Database structure – Foreign Trade]; Statistics Estonia (n.d.) [Business demography] Definitions. [Online] Available at: [http://pub.stat.ee/px-web.2001/I\\_Databas/Economy/06Economic\\_units/01Business\\_demography/RE\\_34.htm](http://pub.stat.ee/px-web.2001/I_Databas/Economy/06Economic_units/01Business_demography/RE_34.htm) [Accessed 28 September 2018]

An SME is defined as an enterprise which employed fewer than 250 persons over the majority of the period during which it was in the business register and information on its employment was available. Accordingly, changes in the SME population are only due to changes in the business demography, as a firm’s status as an SME or a large enterprise does not change over the period covered by the analysis. The rationale for this definition is the preservation of a reasonably long time series for each firm so as to gain better insights into its trading pattern. The choice was made to avoid disregarding an observation if a firm only briefly crossed the “250 persons employed” threshold.

#### 6.1.4 Results of the analysis

The SME share of all importing and exporting enterprises changed very little between 1995 and 2017 (Figure 44). Moreover, the share of importing SMEs among all importing enterprises was slightly higher than that of exporting SMEs. The drop in 2004 and 2005 in both shares occurred when Estonia joined the EU and adopted the Intrastat data collection system. As previously noted, traders whose yearly international transactions did not reach certain thresholds were no longer required to report their trade within the EU’s internal market and information on such traders is not available in the firm-level dataset. From 2006 onwards, both series generally show a very small upward trend.

**Figure 44: SME share in population of all importing and exporting firms**

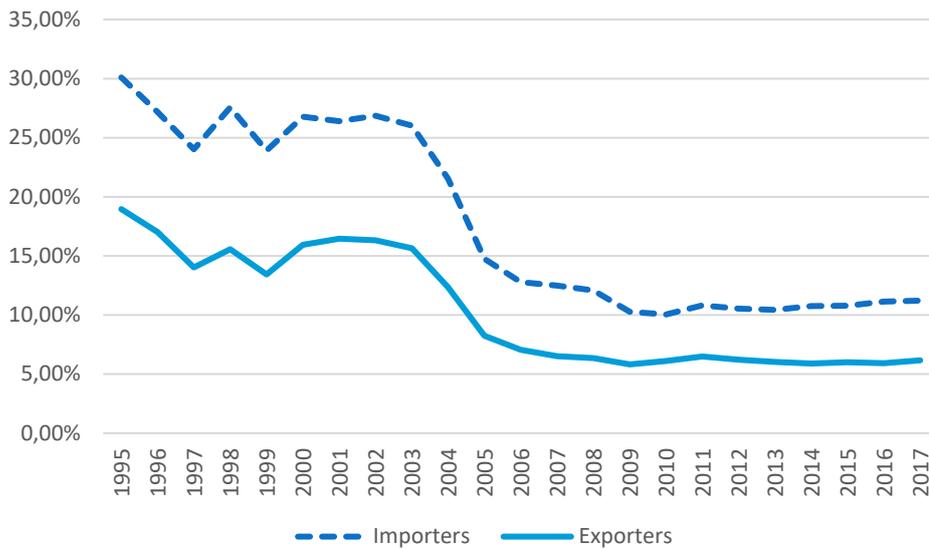


Note: This analysis is based on 180,026 observations (importers) and 104,594 observations (exporters)

Source: Statistics Estonia and LE Europe analysis

The share of importing SMEs in the overall SME population is higher than the share of exporting SMEs (Figure 45). Compared to the late 1990s, the period from 2000 to 2017 saw greater stability in the shares of exporters and importers among SMEs (abstracting from the break in the data series subsequent to Estonia’s accession to the EU, which mainly reflects changes in data collection methodology).

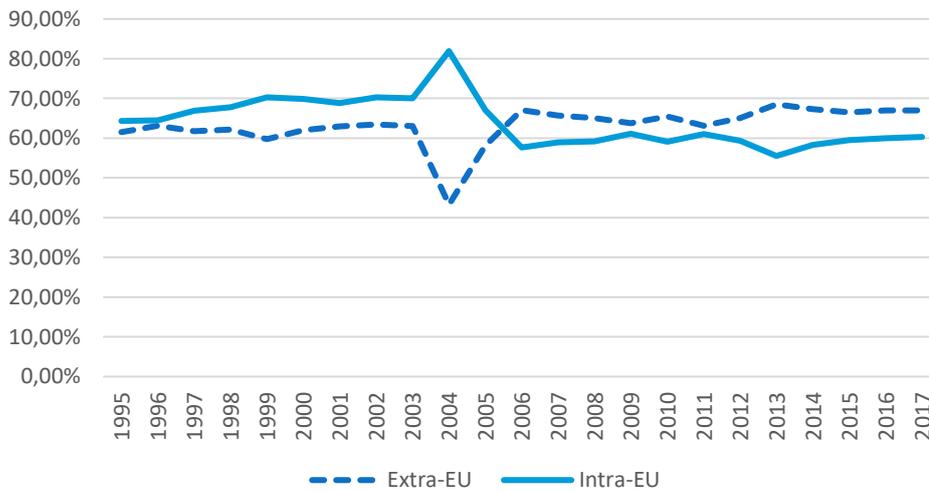
**Figure 45: Share of importing and exporting SMEs in SME population**



Note: This analysis is based on 1,134,414 observations  
 Source: Statistics Estonia and LE Europe analysis

Before Estonia joined the EU, a higher share of exporting SMEs traded with the EU than traded with third countries. This has no longer been the case since 2004, when the Intrastat threshold was introduced (Figure 46).

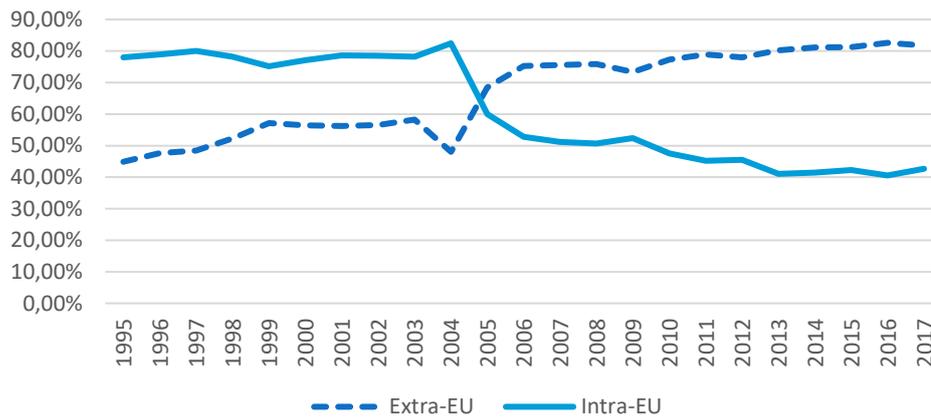
**Figure 46: Shares of SME exporters trading with the EU and third countries**



Notes: This analysis is based on 102,498 observations. This analysis only covers transactions in which the trading partner is known.  
 Source: Statistics Estonia and LE Europe analysis

Overall, the share of extra-EU importers increased relative to the share of intra-EU importers after Estonia's EU accession in 2004 and in 2017, in sharp contrast to the SME export pattern, a markedly large share of SMEs imports from third countries (82%) than to the EU (43%) (Figure 47). Part of the difference between intra-EU and extra-EU imports reflects changes in the import reporting threshold with the implementation of the Intrastat system following accession.

**Figure 47: Shares of SME importers trading with the EU and third countries**

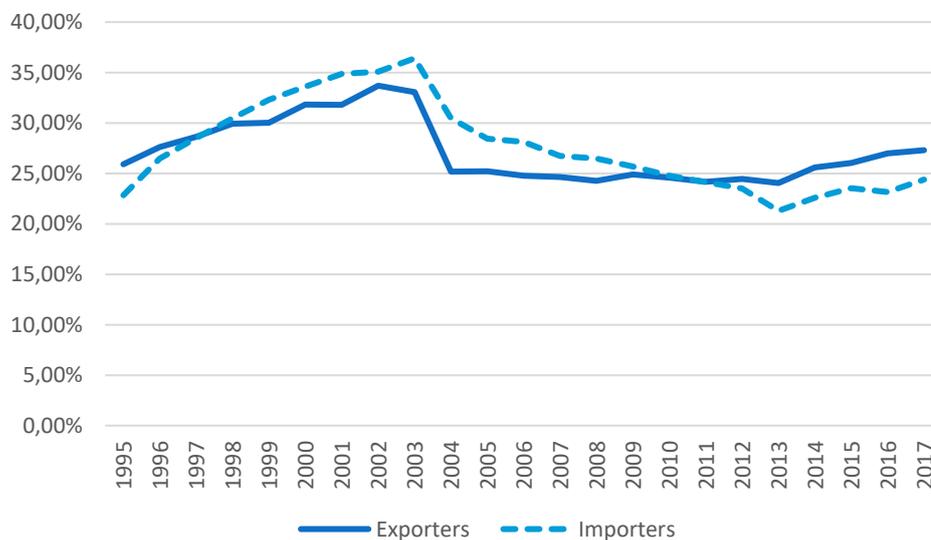


Notes: This analysis is based on 176,993 observations. This analysis only covers transactions in which the trading partner is known

Source: Statistics Estonia and LE Europe analysis

For both importers and exporters, the shares of SMEs trading both within the EU and outside the EU ranged from 20% to 35% and there are very few differences between exporters and importers (Figure 48). Until 2011, importing SMEs were slightly more diversified than exporters in the sense that a higher proportion of SMEs traded with both the EU and third countries.<sup>41</sup> From 2012 onwards, the share of exporters trading with both the EU and third countries overtook the corresponding share of importing SMEs.

**Figure 48: Share of trading SMEs that export to / import from both the EU and third countries**



Note: This analysis is based on 176,993 observations (importers) and 102,498 observations (exporters). This analysis only covers transactions in which the trading partner is known

Source: Statistics Estonia and LE Europe analysis

The section below reviews the export patterns of SMEs across the whole period in which they were present in the business register<sup>42</sup>. SMEs are categorised as one of the following types:

<sup>41</sup> Whether an SME trades with both the EU and third countries is only one proxy for diversity in its trading partners and has its limitations: for instance, it does not account for diversity in trading partners within or outside the EU.

<sup>42</sup> Note that this period may be made up of non-consecutive years (e.g. a death followed by a re-birth).

- Non-exporters: SMEs that were present in the business register for at least two years and which have never exported.
- Occasional exporters: SMEs that were present in the business register for at least two years and which have exported in some, but not all, of those years.
- Consistent exporters: SMEs that were present in the business register for at least two years and which have exported in each of those years.
- One-year non-exporters: SMEs that were present in the business register for only one year and which did not export.
- One-year exporters: SMEs that were present in the business register for only one year and which exported.

Table 20 highlights the fact that the majority of SMEs do not export and that, even among exporters, most are occasional exporters (i.e. they do not export in every year during which they are active).

**Table 20: Export pattern of SMEs (in % of total SME population)**

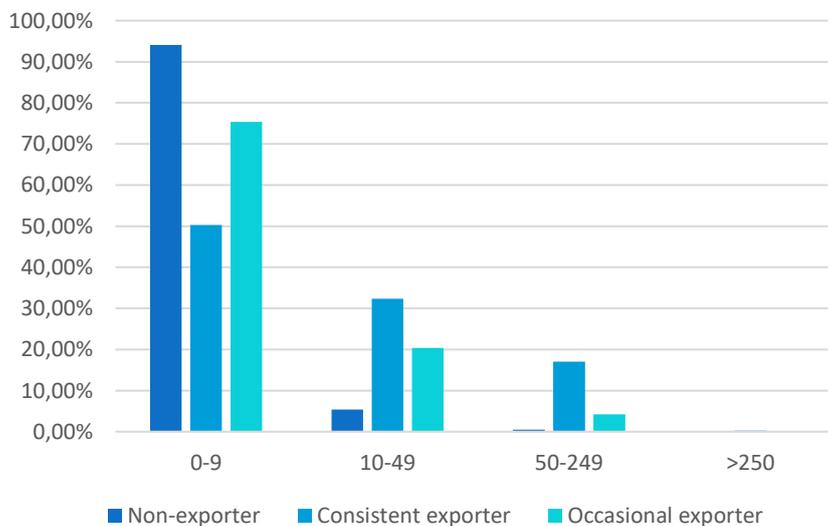
Export pattern	Consistent exporter	Occasional exporter	Non-exporter	One-year exporters	One-year non-exporters	TOTAL
	1.57%	13.63%	72.77%	0.39%	11.65%	100%

Note: The data cover all SMEs (135,580 in total) which were listed in the business register for at least two (not necessarily consecutive) years

Source: Statistics Estonia and LE Europe analysis

Exporters tend to employ more people than non-exporters. Almost half of consistent exporters employ at least 10 people (Figure 49).

**Figure 49: Export pattern by SME size class**

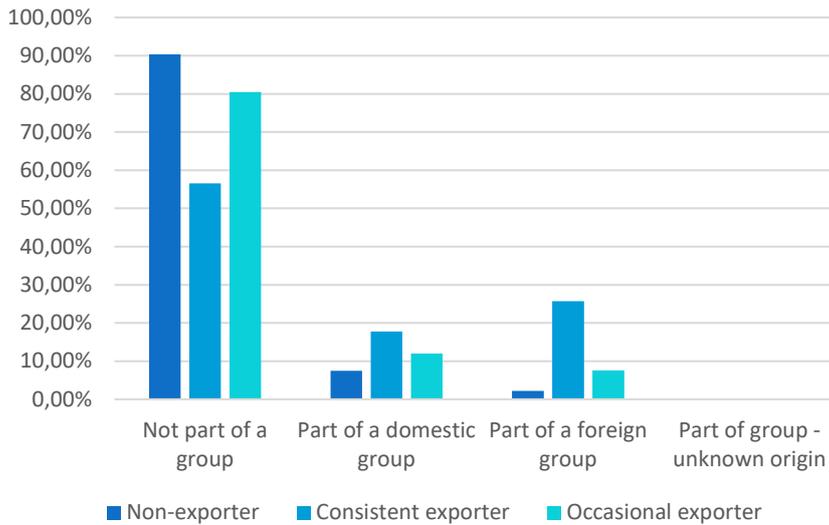


Note: This analysis is based on 135,580 firms present in the business register for at least two years. Note that if a firm's employment distribution across time is skewed, it may be because it employs fewer than 250 employees in most periods but has mean employment greater than 250

Source: Statistics Estonia and LE Europe analysis

Exporting SMEs are more likely to be part of a group (Figure 50). More than a third of consistent exporters are part of a group and a quarter are part of a foreign group. Very few non-exporters are part of a group (less than 10%). Of the non-exporters that are part of a group, more than three quarters are part of a domestically-controlled group.

**Figure 50: Export pattern of SMEs by type of ownership of the SMEs**

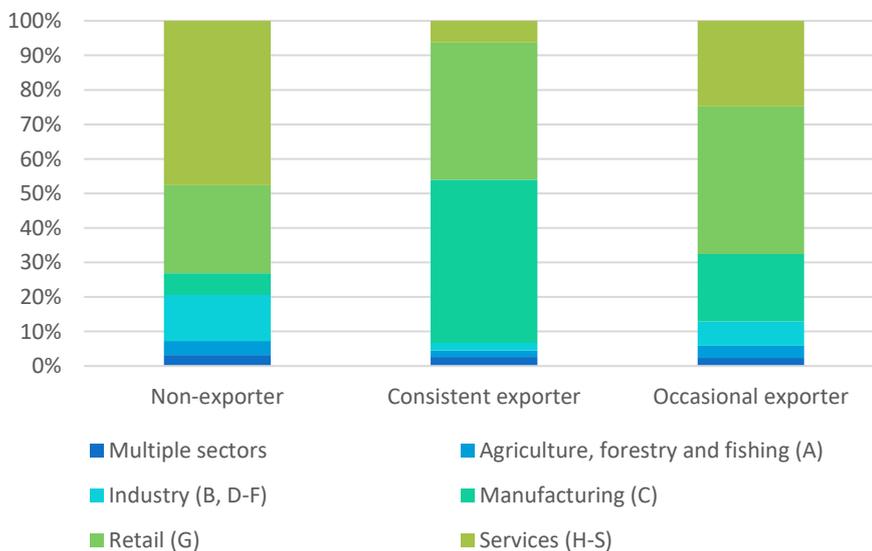


Note: This analysis is based on 537,634 observations from SMEs present in the business register for at least two years

Source: Statistics Estonia and LE Europe analysis

Almost half of non-exporters are in the services sector (Figure 51). The share of manufacturers is markedly higher among exporters, particularly consistent exporters. The share of retailers is also larger among exporters than non-exporters. The service sector makes up a quarter of occasional exporters: a much larger presence than among consistent exporters. The shares of industry, and also agriculture, forestry and fishing are higher among occasional exporters than among consistent exporters.

**Figure 51: Sectoral export pattern of SMEs**



Notes: This analysis is based on 76,858 SMEs present in the business register for at least two years. It does not include NACE Rev. 2 sections T and U (activities of households as employers; undifferentiated goods- and services-producing activities of households for own use, and activities of extraterritorial organisations and bodies) or SMEs which were not classified or whose industry was unknown. NACE Rev. 2 sections are included in brackets. SMEs were assigned a sector based on the modal NACE Rev. 2 section (selecting whichever sector was most frequent across years). SMEs with multiple section modes were assigned the category "Multiple sectors"

Source: Statistics Estonia and LE Europe analysis

More SMEs import than export – in particular, more SMEs import and do not export than export and do not import (Table 21).

**Table 21: Export and import pattern of SMEs**

Export/import pattern	Non-exporters	Consistent exporters	Occasional exporters	One-year exporters	One-year non-exporters
Non-importer	59.29%	0.20%	3.31%		
Consistent importer	1.00%	0.80%	1.51%		
Occasional importer	12.48%	0.56%	8.81%		
One-year importers				0.13%	0.82%
One-year non-importers				0.26%	10.83%

Note: This analysis is based on 154,126 SMEs

Source: Statistics Estonia and LE Europe analysis

Building upon the information provided in Table 21, probabilities of being a consistent exporter or importer were derived (Table 22). These show that, among SMEs that were in the business register in at least two periods:

- Importing SMEs are moderately more likely than exporting SMEs to be consistent;
- An exporting SME is more likely to be a consistent importer than an importing SME a consistent exporter;
- Exporting SMEs are much more likely to import than non-exporting SMEs;
- Exporting SMEs are more likely than non-exporters to be consistent importers (when they import).

**Table 22: Probability of being consistent exporter / importer**

Conditional on being...	...an exporter	...an importer	...a non-exporter
<b>Likelihood of being consistent</b> , conditional on being an exporter/importer <sup>43</sup>	10,30%	13,18%	
<b>Likelihood of being a consistent importer (exporter)</b> , conditional on being a consistent exporter/importer	51,26%	24,19%	
<b>Likelihood of importing</b> conditional on being an exporter/non-exporter	76,91%		18,52%
<b>Likelihood of being a consistent importer</b> , conditional on importing and on being an exporter/non-exporter	19,80%		7,44%

Note: here, "likelihoods" refer to conditional frequencies. The percentages are based on the analysis of frequencies shown in the previous table. This analysis is based on firms that were in the business register for at least two years

Source: Statistics Estonia and LE Europe analysis.

The section below analyses the recent export pattern of SMEs in 2017. The analysis was conducted separately for different cohorts of SMEs. It should be noted that in

<sup>43</sup> Conditional frequencies in this table are calculated using Bayes' rule:

$$Prob(A|B) = \frac{Prob(A, B)}{Prob(B)}$$

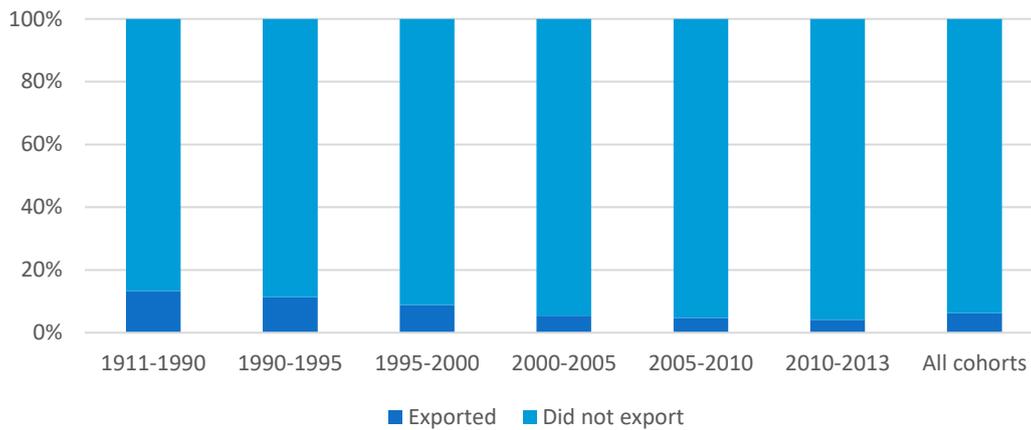
For instance, the probability of being a consistent importer, conditional on being a consistent exporter calculated as follows:

the analysis of the previous three years only SMEs present in the business register for the whole of that period are included so that all SMEs' export patterns were assessed based on a consistent reference period throughout the whole of which they were active.

It also should be noted that the exclusion of SMEs born after 2014 (due to lack of employment information) may affect the analysis of SMEs' export behaviour in the previous year as well as in the previous three years (e.g. if very young SMEs markedly differ from other firms in their export behaviour).

In 2017, younger cohorts of SMEs include fewer exporters than older cohorts (Figure 52).

**Figure 52: Export pattern in 2016 of SMEs in the business register in 2017 by cohorts of SMEs**



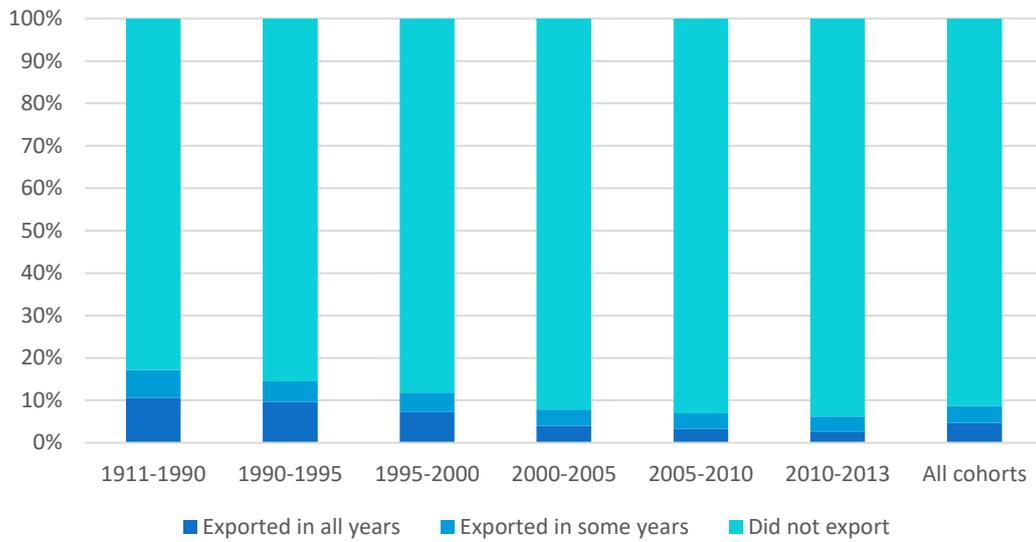
Notes: This analysis is based on 56,604 SMEs. The years shown below the bars are the birth years of the different cohorts of SMEs

Source: Statistics Estonia and LE Europe analysis

Older SMEs were also more likely to export than younger SMEs over the period 2014-2017 (Figure 53). Older SMEs also tend to be more consistent in their recent export behaviour than younger firms in the sense that the share of SMEs that have exported in each of the previous three years is higher in older cohorts.

$$\begin{aligned}
 Prob(Consistent_I | Consistent_E) &= \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E)} \\
 &= \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}
 \end{aligned}$$

**Figure 53: Export pattern in 2014-2016 of SMEs present in the business register in 2014-2017 by cohorts of SMEs**



Notes: This analysis is based on 54,810 firms. Note that the firms included in this analysis were in the business register from 2014 to 2017. Therefore, any firm that had exited and re-entered the business register (e.g. a death followed by a rebirth) would not be included in this analysis. Hence, the patterns observed are those of firms that were consistently active during the 2014-2016 period  
 Source: Statistics Estonia and LE Europe analysis

## 6.2 Finland

### 6.2.1 Disclaimer

The following analysis uses data that was provided by Statistics Finland. Results and conclusions based on the analysis of that data are those of the researcher.

### 6.2.2 Introduction

The following key facts emerge from the analysis of panel data ranging from 1999 to 2016.

- Older SMEs are more likely to export and tend to export more consistently than younger firms.
- Most firms that have exported have done so occasionally rather than consistently.
- Consistent exporters tend to have more employees than occasional exporters.
- SMEs in manufacturing and retail account for 91% of all SMEs exporting consistently (56% for manufacturing and 35% for retail).
- While SMEs in these two sectors account also for 68% of occasionally exporting SMEs (24% in the case of manufacturing and 38% in the case of retail), SMEs in services sector account for another 27% of occasionally exporting SMEs.
- A majority (51%) of non-exporting SME are active in the services sector and another 14% in both the retail sector and in industry.
- More SMEs import than export.

The next section describes the datasets that were used in the analysis and the subsequent section presents the results of the analysis. The latter focuses on the import and export behaviour of SMEs between 1999 and 2016, the characteristics of consistent and occasional exporters and SMEs' recent export pattern.

### 6.2.3 Data

This analysis is based on a subset of firms from the Finnish Business Register. The set of enterprises included in the analysis was restricted to those with pre-2013 legal form codes 11, 14, 21, 22, 31, 32, 35 and post-2013 legal form codes 01, 10, 11, 12, 13, 14, 16, 17, 18. These correspond to natural persons, general partnerships, limited partnerships, shipping companies under joint ownership, limited companies, mutual insurance companies, housing corporations, mutual joint-stock property companies (after 2012), other joint-stock property companies (not mutual) (after 2012), and enterprise groups (after 2012).<sup>44</sup>

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<sup>44</sup> For the period 1999-2012, the set of legal form codes comprises the following: 11 = Natural person, 12 = Decedent's estate, 13 = Corporation subject to taxation, 14 = General partnership, 15 = Bankrupt's estate, 21 = Limited partnership, 22 = Shipping company under joint ownership, 31 = Limited company, 32 = Mutual insurance company, 33 = Savings bank, 34 = Pension foundation or fund, 35 = Housing corporation, 41 = Co-operative society, 51 = Foundation, fund, 52 = Voluntary association, 53 = Mutual indemnity insurance association, 54 = Economic association, 61 = Government authority, 62 = Government enterprise, 63 = Public corporation, 71 = State church, 72 = Other religious body and 90 = other legal form.

For the period 2013-2016, the legal forms are: 01 = Natural person, 10 = General partnership, 11 = Limited partnership, 12 = Limited company, 13 = Housing company, 14 = Shipping company under joint ownership, 16 = Mutual joint-stock property company, 17 = Other joint-stock property company (not mutual), 18 = Enterprise group, 19 = Other enterprise, 20 = Voluntary association, 21 = Association based on separate legislation, 22 = Mutual indemnity insurance association, 23 = Forestry society, 24 = Cooperative bank, 25 = Co-operative society, 26 = Mutual benefit society, 27 = Unemployment fund, 28 = Other economic association, 29 = Other association, 30 = Foundation (according to the Foundations Act), 31 = Savings bank, 32 = Pension foundation (founded by a charter of foundation), 33 = Pension fund, 35 = Mortgage society, 39 = Other foundation, 40 = State and its agencies, 41 = Municipality, 42 = Joint municipal board, 43 = Region of Åland and its agencies, 44 = Evangelical Lutheran Church, 45 = Greek Orthodox Church, 46 = Registered religious community, 47 = Students' union or association, 48 = Governmental institution with separate administration, 49 = Other legal person subject to public law, 50 = Mutual interest bodies (e.g. fishery collectives), 51 = Corporation subject to taxation, 52 = Body jointly and severally liable for tax withholding, 53 = Decedent's estate, 54 = Bankrupt's estate, 55 = Jointly owned forest, 56 = Farm, 57 = Trade association, 59 = Other units subject to taxation, 60 = State-owned company, 61 = Municipally-owned company, 62 = Joint local authority company, 63 = Company owned by the Regional Government of Åland, 70 = Non-resident corporation, 71 = Non-resident corporation or a branch of a non-resident corporation in Finland, 91 - 96, 99 Others (e.g. temporary legal form)

The resulting dataset comprises 5,059,308 observations from 715,229 firms, including 5,050,021 observations from 714,378 SMEs<sup>45</sup>.

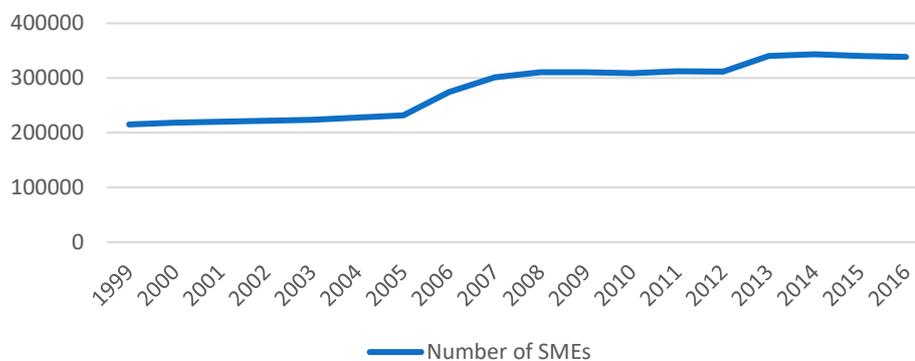
The Business Register for the period 1999 - 2012 is not perfectly comparable to the register for period 2013 - 2016. This is due to the following notable changes in sectoral coverage<sup>46</sup>:

- In 2006, the scope of the register was extended to certain enterprises in the primary production sector (agriculture, forestry and fisheries) and the real estate sector.
- In 2007, the scope of the register within the primary production sector was further extended.
- The criteria for inclusion in the business register changed between 2012 and 2013. In particular, from 2013 onwards, inclusion in the database has also been dependent on a firm's balance sheet exceeding EUR 170,000, in addition to the previous requirements related to turnover, length of activity in a statistical year, and employment<sup>47</sup>.
- Certain variables are not comparable across older and newer data waves. These include the Standard Industrial Classification, firms' status within an enterprise group, as well as turnover and personnel data, which were harmonised in the newer waves. As far as possible, variables from newer waves of the business register were aligned to their closest counterparts in the older waves.

The population of SMEs in the database shows marked increases between 2005 and 2008, and between 2012 and 2013 (Figure 54). These coincide with the changes in enterprise population and methodology described above.

Moreover, the legal form classifications before and after 2013 are different. As enterprises were selected based on their legal form, this may also have influenced the observed change in SME population between 2012 and 2013.

**Figure 54: Number of SMEs in the database**



Note: This analysis is based on 5,050,021 observations

Source: Statistics Finland and LE Europe analysis

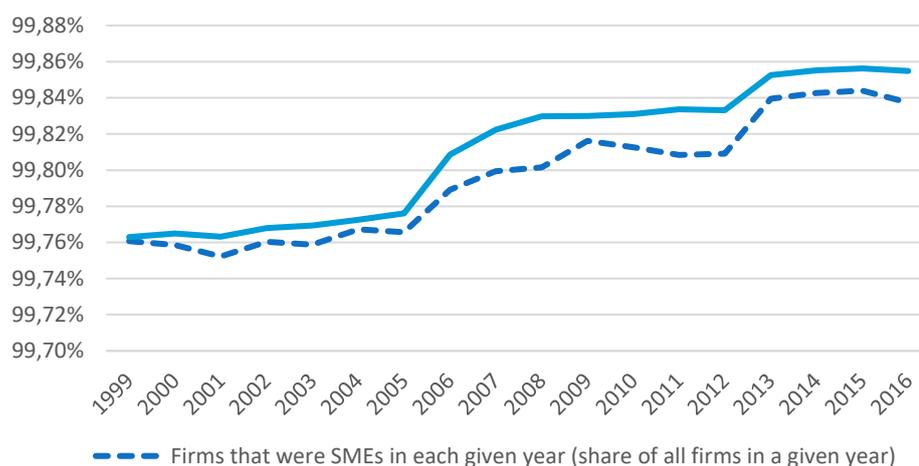
Similar discontinuities can be noticed in the annual share of SMEs in the total enterprise population (Figure 55). This suggests that the changes in population and methodology between 2005 and 2007, and between 2012 and 2013, have disproportionately affected SMEs.

<sup>45</sup> An SME is defined as having fewer than 250 employees over the majority of the period during which it appeared in the business register.

<sup>46</sup> Statistics Finland (2012) "Statistics of the Business Register: Enterprises 2012 (YA221): Content Description"; Statistics Finland (2015) "Enterprise Data Warehouse: Enterprises 2015 (YA221): Content Description".

<sup>47</sup> In both the old and new waves of the business register, statistical units have been active for more than half a year for a given reference year, have employed more than one-half a person and have a turnover that exceeds a given threshold, e.g. the threshold in 2014 was EUR 11,016 (Statistics Finland, 2012; 2015).

Statistics Finland (2012) "Statistics of the Business Register: Enterprises 2012 (YA221): Content Description"; Statistics Finland (2015) "Enterprise Data Warehouse: Enterprises 2015 (YA221): Content Description".

**Figure 55: Share of SMEs in the total enterprise population in the database**

Note: This analysis is based on 5,059,308 observations

Source: Statistics Finland and LE Europe analysis

In order to study the trading behaviour of SMEs, the data from the Business Register were linked to the Tullin ulkomaankauppa yrityksittäin (Customs Foreign Trade by Business) dataset. The latter dataset covers trade in goods between 1999 and 2016.

Note that not all enterprises trading internationally could be linked to the data in the Business Register. This is one of the reasons why the total number of importers and exporters in this analysis (as well as their breakdown by trading partner) does not equal the entire population of enterprises trading internationally.

Another reason is the exclusion from the trade dataset of enterprises whose international trade value was below the Intrastat reporting threshold (respectively EUR 550,000 and EUR 500,000 for imports and exports in 2016). Their trade value is typically estimated based on VAT data and included in published aggregate figures but no enterprise level information is available.<sup>48</sup> The fact that these traders are missing from the dataset leads to an under-representation of intra-EU traders.

The definitions of the key concepts variables used in the analysis are provided in Table 23. The table also highlights differences in definitions between the pre- and post- 2012 periods.

**Table 23: Definition of variables and related concepts**

Variable	Definition (1999-2012)	Definition (2013-2016)	Related concepts
Employment	"The number of employees of the legal unit. [...] The number of employees comprises both employees and self-employed persons. [...] Employees are converted to annual full-time employees (FTEs) so that, for example, an employee working half-time represents one half of a person and two employees working half-time for one year represent one annual full-time employee." <sup>49</sup>	Unchanged	An SME is defined as having less than 250 persons employed during the majority of the period in which it appeared in the business register.
Turnover	"Turnover of the legal unit." <sup>50</sup>	"Total turnover/income from profession."	Along with export value, turnover is used to

<sup>48</sup> Statistics Finland (n.d.) Tullin ulkomaankauppa yrityksittäin (YA226): Content Description [Customs Foreign Trade by Business (YA226): Content Description].

<sup>49</sup> Statistics Finland (2012) "Statistics of the Business Register: Enterprises 2012 (YA221): Content Description".

<sup>50</sup> Ibid.

Variable	Definition (1999-2012)	Definition (2013-2016)	Related concepts
			compute firms' export intensity.
Export value	Statistical value of exports, namely the FOB value (free-on-board) of the goods, or "the transaction value of the goods and the value of services performed to deliver goods to the border of the exporting country." <sup>51</sup>	Unchanged	Export value is used to determine whether a firm exports. Along with turnover, export value is used to compute firms' export intensity.
Import value	Statistical value of imports, namely the CIF type value (cost, insurance, freight) or "the transaction value of the goods, the value of services performed to deliver goods to the border of the exporting country and the value of the services performed to deliver the goods from the border of the exporting country to the border of the importing country." <sup>52</sup>	Unchanged	Import value is used to determine whether a firm imports.
Standard Industrial Classification	1995 Standard Industrial Classification (1995-2000) 2002 Standard Industrial Classification (2001-2007) 2008 Standard Industrial Classification (2007-2012)	2008 Standard Industrial Classification (2013-2016)	From these classifications, five sectors were constructed: Agriculture, forestry and fishing; Industry; Manufacturing; Retail; and Services.
Enterprise group type	Whether the enterprise is a group head, a subsidiary or an intermediate parent.	Whether the enterprise's "group type" is unknown, an all-resident group, a domestically controlled multinational or a foreign-controlled multinational.	This information was used to identify which enterprises were part of an enterprise group and which were not. This concept is referred to as "ownership". This terminology is used to concisely denote whether a firm is part of a group rather than to denote the actual ownership of a firm, as it is possible for a firm to be part of a group, yet not be owned by another firm (i.e. if it is a parent company).
Starting date	"Since 2006 the date is mainly the start of tax control or registration in the trade register or for a natural person the Business ID start date. Prior to 2006, the definition was mainly based on VAT liability, advance tax liability or acting as an employer." <sup>53</sup>	"The date is mainly the start of tax control or registration in the trade register or for a natural person the start date of Business ID." <sup>54</sup>	The creation of cohorts is based on this variable. <sup>55</sup>

Source: Statistics Finland (2012) "Statistics of the Business Register: Enterprises 2012 (YA221): Content Description"; Statistics Finland (2015) "Enterprise Data Warehouse: Enterprises 2015 (YA221): Content Description"; Statistics Finland (n.d.) Tullin ulkomaankauppa yrityksittäin (YA226): Content Description [Customs Foreign Trade by Business (YA226): Content Description]

#### 6.2.4 Analysis

In the database, SMEs represent a growing share of all importers (Figure 56). In contrast, the SME share of exporters followed a non-monotonic pattern and decreased slightly from approximately 96.5% in 1999 to 95.5% in 2009 before increasing to over 96% by 2013.

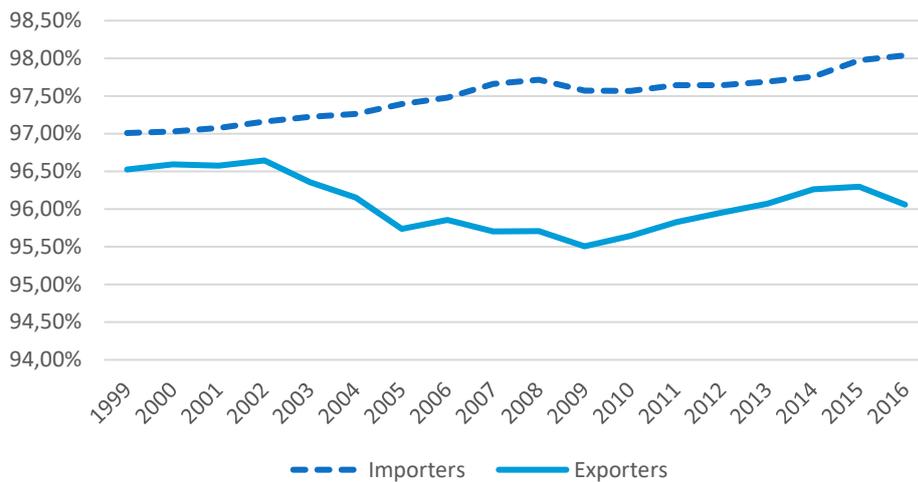
<sup>51</sup> Eurostat (2015) "User guide on European statistics on international trade in goods".

<sup>52</sup> Ibid.

<sup>53</sup> Statistics Finland (2012) "Statistics of the Business Register: Enterprises 2012 (YA221): Content Description".

<sup>54</sup> Statistics Finland (2015) "Enterprise Data Warehouse: Enterprises 2015 (YA221): Content Description".

<sup>55</sup> When no starting date is provided, the "age" variable is used, as it is populated for all firms. Starting date was preferred to the age variable because the former was more precisely defined.

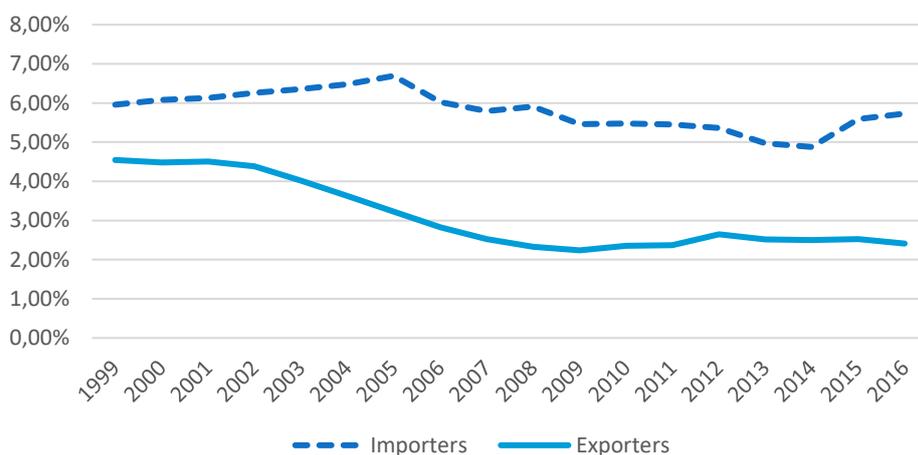
**Figure 56: Share of importing and exporting SMEs as a % of of all importers and exporters**

Note: The two series are based respectively on 297,294 observations (importers) and 156,360 observations (exporters)

Source: Statistics Finland and LE Europe analysis

The share of SME exporters decreased from around 4.5% in 1999 to just over 2% in 2009 before gradually increasing to over 2.5% in 2012, and declining to under 2.5% between 2012 and 2016 (Figure 57). Note that the decline in the share of SME exporters partially coincides with expansion of the Business Register population into the primary production sector (2006-2007). This increase in the population of SMEs has contributed to the decline in the share of exporters.

After growing from 1999 to 2005, the share of SME importers fell by almost two percentage points between 2005 and 2014, before rebounding by almost one percentage point between 2014 and 2016 (Figure 57).

**Figure 57: Share of SME exporters and importers in total SME population**

Note: This analysis is based on 5,050,021 observations

Source: Statistics Finland and LE Europe analysis

Although Figure 58 and Figure 59 show a higher share of extra-EU traders than intra-EU traders in the SME population, it should be noted that intra-EU traders with a trade value below the Intrastat threshold are not included in the dataset<sup>56</sup>. As many of these traders are likely to be SMEs, it is possible that the SME share of intra-EU

<sup>56</sup> An extra-EU importer/exporter was defined as a trader whose total import/export value exceeded its intra-EU trade value. No variable on extra-EU trade was available. The value was estimated.

traders is underestimated. Therefore, the trends in these figures are of more of interest than the levels per se, even though trends have presumably also been affected by increases in the Intrastat reporting threshold which are likely to have reduced the population of intra-EU traders.

**Table 24: Evolution of Intrastat reporting thresholds (in Euros)**

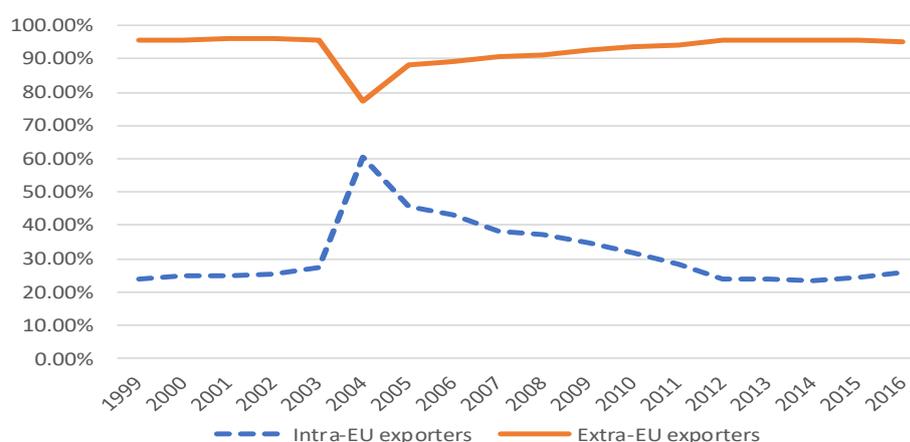
Year	Acquisitions (imports)	Deliveries (exports)
2000	100 913	100 913
2001	100 913	100 913
2002	100 000	100 000
2003	100 000	100 000
2004	100 000	100 000
2005	100 000	100 000
2006	100 000	200 000
2007	100 000	200 000
2008	200 000	300 000
2009	200 000	300 000
2010	200 000	300 000
2011	275 000	500 000
2012	275 000	500 000
2013	275 000	500 000
2014	500 000	500 000
2015	500 000	500 000
2016	550 000	500 000

Source: Statistics Finland (n.d.) *Tullin ulkomaankauppa yrityksittäin (YA226): Content Description [Customs Foreign Trade by Business (YA226): Content Description]*

The share of SME exporters trading outside of the EU has remained relatively stable, at over 90%, except for a sharp decrease in 2004 to under 80% (Figure 58).

The share of SME exporters trading within the EU is much lower and has remained under 40%, except between 2004 and 2006. It increased to 60.5% in 2004 before gradually fallen back again. (Figure 58). The fact that the sharp rise in 2004 in the share of intra-EU exporters mirrors the fall in the share of extra-EU exporters in 2004 may be due to the fifth enlargement of the EU, which affected several neighbouring economies (e.g. Estonia, Latvia, Lithuania, Poland). As many SME exporters may have focused on the Baltic region, they would have been categorised as extra-EU exporters in 2003 and as intra-EU exporters in 2004.

**Figure 58: Share of SME exporters trading with the EU and third countries**



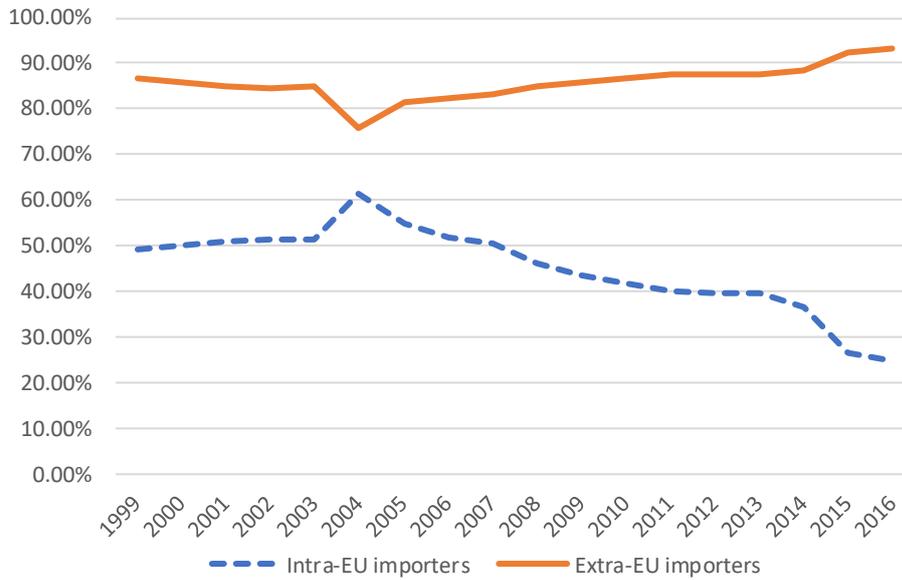
Note: This analysis is based on 156,360 observations

Source: Statistics Finland and LE Europe analysis

The share of SME importers that trade with countries outside the EU (i.e. third countries) has remained fairly stable at between 80% and 95%, except in 2004, when it dropped to approximately 75% (Figure 59). As in the case of exporters, this fall in the share of extra-EU importers was matched by a rise in the share of intra-

EU importers. The share of intra-EU importers, however, markedly decreased across the reference period, from almost 50% in 1999 to less than 25% in 2016.

**Figure 59: Share of SME importers trading with the EU and third countries**



Note: This analysis is based on 297,294 observations

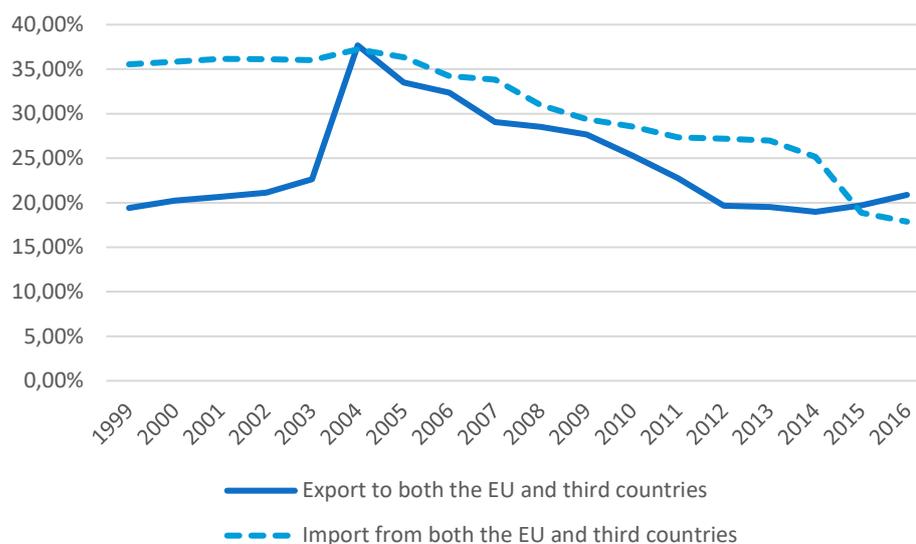
Source: Statistics Finland and LE Europe analysis

Importing SMEs are generally more diversified in their trading partners than exporting SMEs in the sense that a larger proportion of the former traded with both the EU and third countries (Figure 60).<sup>57</sup>

The share of importers trading with both the EU and third countries was over 35% in 1999, before consistently declining to under 20% in 2016.

The share of exporting SMEs trading with both the EU and third countries, initially stable at around 20%, experienced a sharp rise in 2004. The figure subsequently declined to under 20% in 2014, before increasing to overtake the share of intra- and extra-EU importers in 2016 (Figure 60). Again, it should be noted that the share of SMEs trading with both the EU and third countries may be underestimated in Figure 60, given that intra-EU trade below the Intrastat threshold is excluded.

<sup>57</sup> Whether a firm trades with both the EU and third countries is only one proxy for diversity in its trading partners and has its limitations: for instance, it does not account for diversity in trading partners within or outside the EU.

**Figure 60: Share of trading SMEs that export to and import from both the EU and third countries**

Note: The two series are based respectively on 297,294 observations (importers) and 156,360 observations (exporters)

Source: Statistics Finland and LE Europe analysis

The analysis of the extent to which exporting SMEs do so on a regular basis uses the following typology of SME export pattern. The analysis focuses on the export pattern of SMEs across the whole period during which they are in the business register.<sup>58</sup>

- Non-exporters: SMEs that were present in the business register for at least two (not necessarily consecutive) years and which have never exported.
- Occasional exporters: SMEs that were present in the business register for at least two (not necessarily consecutive) years and which have exported in some, but not all, of those years.
- Consistent exporters: SMEs that were present in the business register for at least two (not necessarily consecutive) years and which have exported in each of those years.
- One-year non-exporters: SMEs that were present in the business register for only one year and which did not export.
- One-year exporters: SMEs that were present in the business register for only one year and which did export.

As already reported, the vast majority of SMEs do not export. Moreover, exporting SMEs are mostly occasional exporters, i.e., they do not export in every year in which they are active (Table 25).

**Table 25: Export pattern of SMEs**

Export pattern	Consistent exporter	Occasional exporter	Non-exporter	One-year exporters	One-year non-exporters	TOTAL
Share of SMEs	0.62%	4.05%	78.68%	0.12%	17%	100%

Source: Statistics Finland and LE Europe analysis

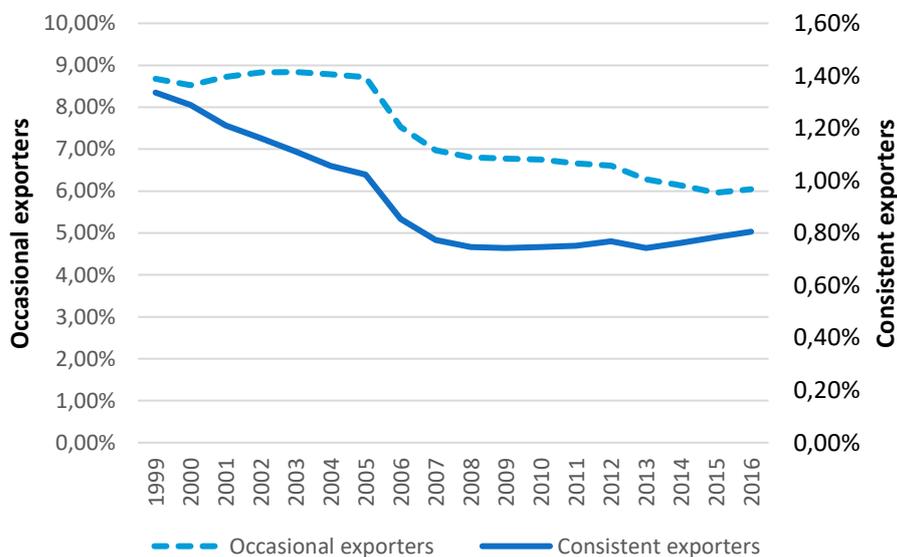
Although a firm's status as an occasional, consistent or non-exporter may not change during its lifetime, the distribution of export patterns within the population of SMEs can vary across years due to entries into, exits from, and re-entries into the business register.

<sup>58</sup> Note that this period may be made up of non-consecutive years (e.g. a death followed by a re-birth).

The share of consistent exporters declined from 1.3% in 1999 to 1% in 2005 before falling more sharply to less than 0.8% between 2005 and 2007 (Figure 61). The share of occasional exporters remained relatively stable, at around 9%, from 1999 to 2005 before sharply declining to 7% from 2005 and 2007 and continuing to decline slowly thereafter. In contrast, the share of consistent exporters has stabilised since 2007.

Note that the decreases in the shares of occasional and consistent exporters between 2005 and 2007 coincided with changes in the population of the Business Register, which included more firms in the primary production sector (agriculture, forestry and fishing). As shown later, the primary production sector constitutes a larger share of non-exporters than consistent and occasional exporters. Therefore, the changes in population in 2006 and 2007 are likely to have contributed to the fall in the share of consistent and occasional exporters during that period.

**Figure 61: Consistent and occasional exporting SMEs as a share of all SMEs (conditional on being in the business register for at least two years)**



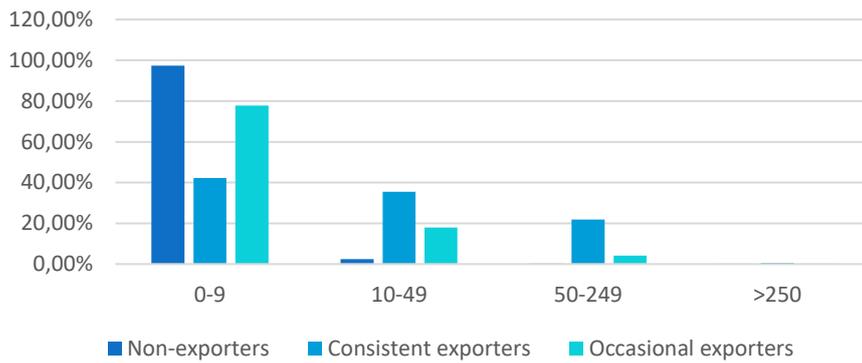
Note: This analysis is based on 4,931,077 observations from SMEs present in the business register for at least two years

Source: Statistics Finland and LE Europe analysis

Consistent exporters tend to employ more people than occasional and non-exporters and exporters tend to employ more people than non-exporters (Figure 62).<sup>59</sup>

<sup>59</sup> A very small number of SMEs show an average employment level greater than 250. This is likely to occur in cases where the distribution of employment across time is skewed and, despite employing fewer than 250 people most years, there are some years when the employment level exceeds 250.

**Figure 62: SME export pattern by average employment size class**

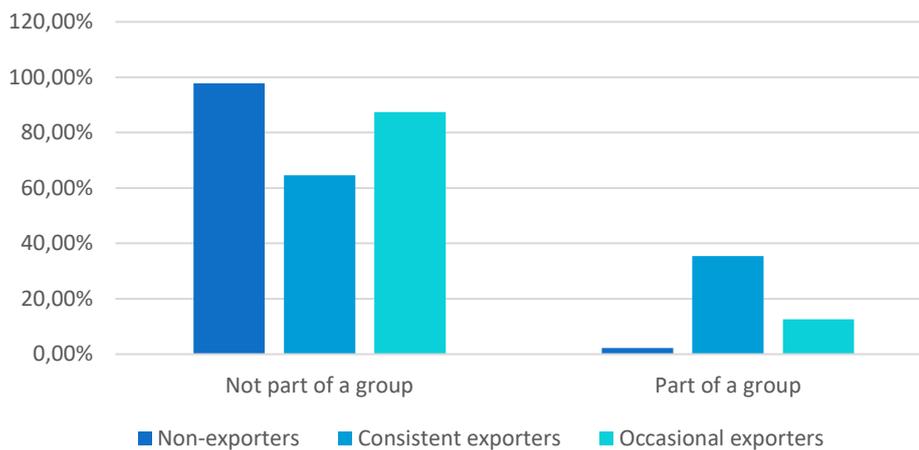


Notes: This analysis is based on 595,434 SMEs present in the business register for at least two years. Each series represents the average employment distribution, conditional on export pattern (e.g. the share of occasional exporters which employed between 10 and 49 people)

Source: Statistics Finland and LE Europe analysis

Moreover, exporting SMEs, consistent exporters in particular, are more likely to be part of a group (Figure 63).

**Figure 63: SME export pattern by ownership**

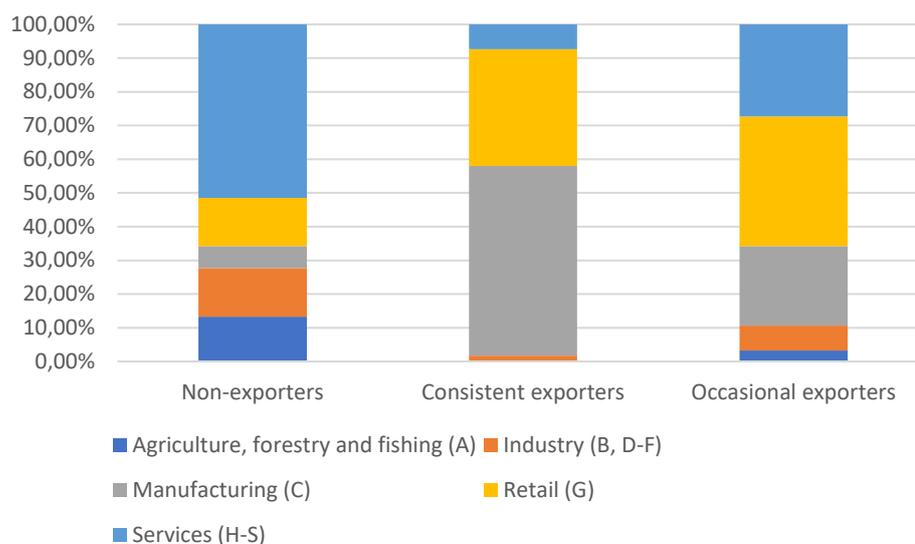


Note: This analysis is based on 4,931,077 observations from SMEs present in the business register for at least two years. Each series represents the ownership distribution, conditional on export pattern (e.g. the share of occasional exporters that were part of a group)

Source: Statistics Finland and LE Europe analysis

Approximately half of the SMEs in the services sector are non-exporters (Figure 64). The shares of non-exporting SMEs in agriculture, forestry and fishing, industry and retail are fairly similar, with manufacturing SMES making up a clear minority among non-exporting SMEs.

The share of manufacturers is markedly higher among SME exporters, consistent SME exporters in particular. The share of retail SMEs is also larger among exporters (especially in the case of occasional exporters) than among non-exporting SMEs. The shares of SMEs in industry and agriculture, forestry and fishing are higher among occasional SME exporters than among consistent SME exporters.

**Figure 64: Sectoral distribution of exporting and non-exporting SMEs**

Note: This analysis is based on 4,930,198 observations from firms listed in the business register for at least two years and does not include SIC 2008 sections T and U (activities of households as employers; undifferentiated goods- and services-producing activities of households for own use, and activities of extraterritorial organisations and bodies) or firms which were not classified or whose industry was unknown. SIC 2008 sections are included in brackets

Source: Statistics Finland and LE Europe analysis

Most SMEs neither export nor import (Table 21). Moreover:

- Importers are more likely than exporters to be consistent.
- A consistent exporter is much more likely to be a consistent importer than a consistent importer a consistent exporter.
- Exporters are much more likely to import than non-exporters.
- Exporters are much more likely than non-exporters to be consistent importers (Table 22).

**Table 26: SME export and import pattern over the period 1999 to 2016**

	Non-exporters	Exporters
Non-importers	89.15%	1.48%
Importers	6.07%	3.31%

Note: This analysis is based on 714,378 SMEs. The percentages are based on the whole population of SMEs

Source: Statistics Finland and LE Europe analysis

Overall, the data show that (Table 27):

- Importing SMEs are more likely than exporting SMEs to be consistent;
- a consistent exporting SME is much more likely to be also a consistent importing SME than a consistent importing SME to be a consistent exporting SME;
- Exporting SMEs are much more likely to import than non-exporters;
- Exporting SMEs are much more likely than non-exporting SME to be consistent importing SMEs.

**Table 27: Probability of an SMEs being a consistent exporter / importer**

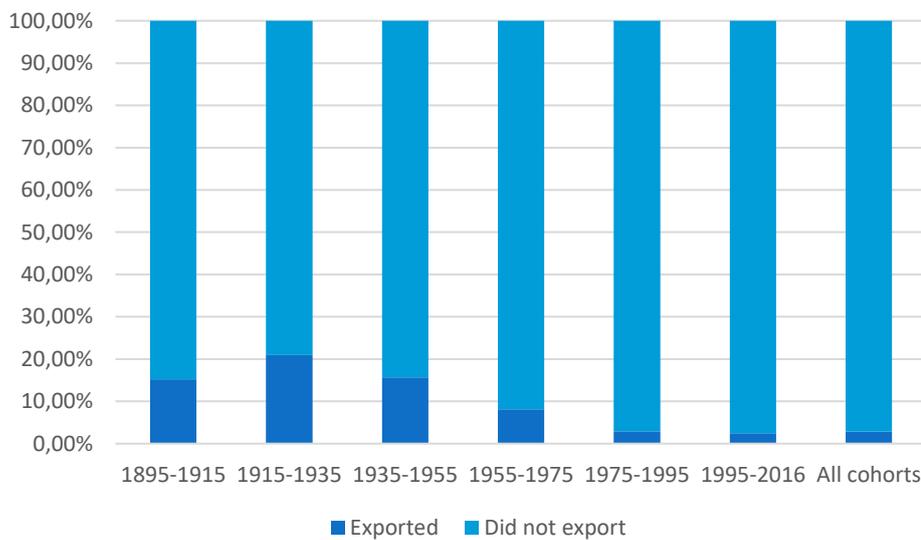
Conditional on being...	...an exporter	...an importer	...a non-exporter
Likelihood of being consistent, conditional on being an exporter/importer <sup>60</sup>	13.35%	15.82%	
Likelihood of being a consistent importer (exporter), conditional on being a consistent exporter/importer	60.10%	26.24%	
Likelihood of importing conditional on being an exporter/non-exporter	69.70%		7.33%
Likelihood of being a consistent importer, conditional on importing and on being an exporter/non-exporter	29.90%		7.87%

Note: here, "likelihoods" refer to conditional frequencies. This analysis is based on SMEs present in the business register for at least two years

Source: Statistics Finland and LE Europe analysis

In 2016, younger cohorts of SMEs comprise fewer exporters than older cohorts (Figure 65).

**Figure 65: Export status of SMEs in 2016 by cohort**



Note: This analysis is based on 293,548 firms

Source: Statistics Finland and LE Europe analysis

<sup>60</sup> Conditional frequencies in this table are calculated using Bayes' rule:

$$Prob(A|B) = \frac{Prob(A, B)}{Prob(B)}$$

For instance, the probability of being a consistent importer, conditional on being a consistent exporter is calculated as follows:

$$\begin{aligned}
 Prob(Consistent_I | Consistent_E) &= \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E)} \\
 &= \frac{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}
 \end{aligned}$$

## 6.3 Greece

### 6.3.1 Disclaimer

The analysis below uses data provided by the Hellenic Statistical Authority. Results and conclusions based on the analysis of that data are those of the researcher.

### 6.3.2 Introduction

The dataset used in the analysis covers SMEs engaged in international trade<sup>61</sup> over the period 2012-2015. It should be emphasised that this analysis differs from that of some of the other countries examined (namely, Estonia, Finland, Ireland and Netherlands) as it does not cover SMEs which do not trade. The following key facts emerge from the analysis:

- Most SMEs that have exported have done so consistently rather than occasionally.<sup>62</sup>
- SMEs that export consistently tend to employ more people than occasional exporters.
- SMEs in manufacturing and retail account for most of the exporting SMEs (36% and 54% respectively in the case of consistent exporters and 20% and 63% respectively in the case of occasional exporters).
- SMEs in retail account for 67% of non-exporting SMEs.
- are concentrated in the retail and manufacturing sectors.
- more SMEs import than export.

Section 6.2.3 describes the dataset that was used, and the subsequent section presents the results of the analysis. The latter reviews the import and export behaviour of SMEs over the period 2012-2015, compares the characteristics of consistent and occasional exporters and finally focuses on SMEs' recent export pattern.

### 6.3.3 Data

The External Trade database provided by ELSTAT covers the period from 2012 to 2015 and includes SMEs engaged in international trade.<sup>63</sup> This dataset is made up of 118,233 observations from 49,437 firms. It does not include firms that have neither imported nor exported.

Table 28 presents the definition of the key variables and concepts used in the analysis.

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<sup>61</sup> An SME is defined as having fewer than 250 employees in a given year.

<sup>62</sup> This analysis makes a distinction between "occasional" exporters, which export in some but not all periods, and "consistent exporters", which export in all periods in which they are present in the dataset. See analysis section for a more detailed definition.

<sup>63</sup> The transactions of traders that fall below the Intrastat reporting threshold are calculated based on Recapitulative Statements of Intra-EU Deliveries and Acquisitions submitted to the Ministry of Finance by all enterprises: see ELSTAT (2018) *Press Release – commercial transactions of Greece: August 2018*. Note that it was not possible to obtain information on the number of employees for some firms trading internationally. Therefore, these traders were not included in this analysis.

**Table 28: Definition of key variables and related concepts**

Variable	Definition	Related concept
Number of employees	"The number of employees refers to the number of those persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. A worker is considered to be a wage or salary earner of a particular unit if he receives a wage or salary from the unit regardless of where the work is done (in or outside the production unit)." <sup>64</sup>	These are provided in size classes.
Export value	Statistical value of exports, namely the FOB value (free-on-board) of the goods, or "the transaction value of the goods and the value of services performed to deliver goods to the border of the exporting country." <sup>65</sup>	Export value is used to determine whether an SME is exporting.
Import value	Statistical value of imports, namely the CIF type value (cost, insurance, freight) or "the transaction value of the goods, the value of services performed to deliver goods to the border of the exporting country and the value of the services performed to deliver the goods from the border of the exporting country to the border of the importing country." <sup>66</sup>	Import value is used to determine whether an SME is importing.
Partner	The trading partners of exporters are based on the country of destination. Imports from the EU and third countries are based respectively on the country of consignment and origin. <sup>67</sup>	This variable is provided at the Intra-EU/Extra-EU level.
Industry	NACE Rev. 2 codes.	From this classification, five sectors were constructed: Agriculture, forestry and fishing; Industry; Manufacturing; Retail; and Services.

Sources: Eurostat (2018) *International trade in goods - trade by enterprise characteristics (TEC)*. [Online] Available at: [https://ec.europa.eu/eurostat/cache/metadata/en/ext\\_tec\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/ext_tec_esms.htm) [Accessed 09 October 2018]. ELSTAT (2018) *Press Release – commercial transactions of Greece: August 2018*

### 6.3.4 Analysis

After moderately declining between 2012 and 2013, the numbers of both importing and exporting SMEs in the database followed an upward trend from 2013 to 2015. The number of importers has remained consistently higher than the number of exporters but the difference between the two has shrunk over this period so that by 2015 the difference was very small (Figure 66).

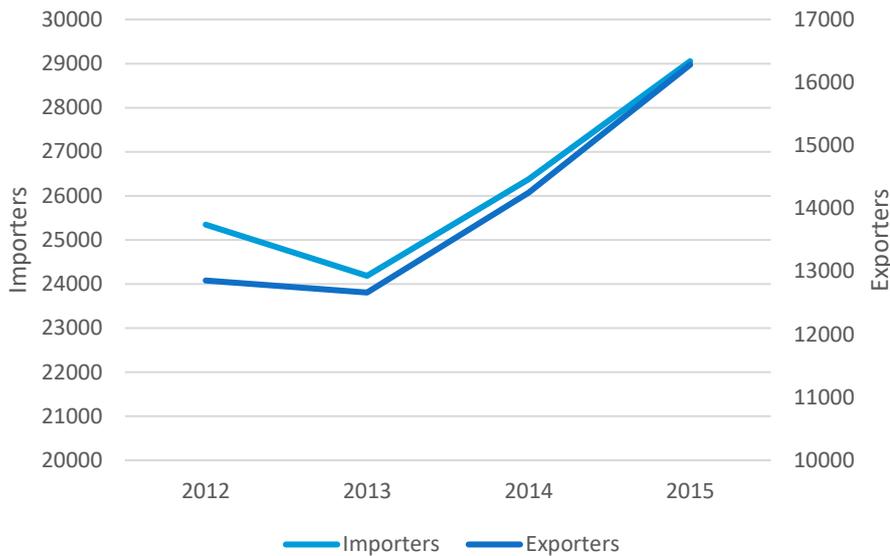
<sup>64</sup> Eurostat (2018) *International trade in goods - trade by enterprise characteristics (TEC)*. [Online] Available at: [https://ec.europa.eu/eurostat/cache/metadata/en/ext\\_tec\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/ext_tec_esms.htm) [Accessed 09 October 2018].

<sup>65</sup> Eurostat (2015) "User guide on European statistics on international trade in goods".

<sup>66</sup> Ibid.

<sup>67</sup> In intra-EU trade, the Member State of consignment of goods is the last Member State in which "halts or legal operations not inherent in [the goods'] transport" have taken place before the goods arrive at their final destination. Eurostat (n.d.) "Member State of consignment". In Eurostat (n.d.) *Concepts and Definitions Database*. [Online] Available at: [http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP\\_GLOSSARY\\_NOM\\_DTL\\_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter\\_valid=0&IntCurrentPage=1](http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=1) [accessed 27 September 2018].

**Figure 66: Numbers of exporting and importing SMEs in the database**



Note: The two series are based on 104,963 observations (importers) and 56,049 observations (exporters)

Source: ELSTAT and LE Europe analysis

More SMEs are engaged in importing than in exporting (Table 29).

**Table 29: Import and export status of SMEs over the period 2012-2015**

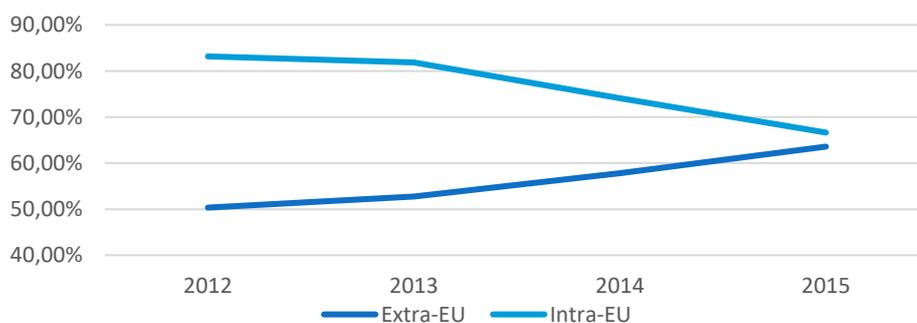
	Non-exporters	Exporters
Non-importers	N/A	11.22%
Importers	52.59%	36.18%

Note: The analysis is based on 118,233 observations

Source: ELSTAT and LE Europe analysis

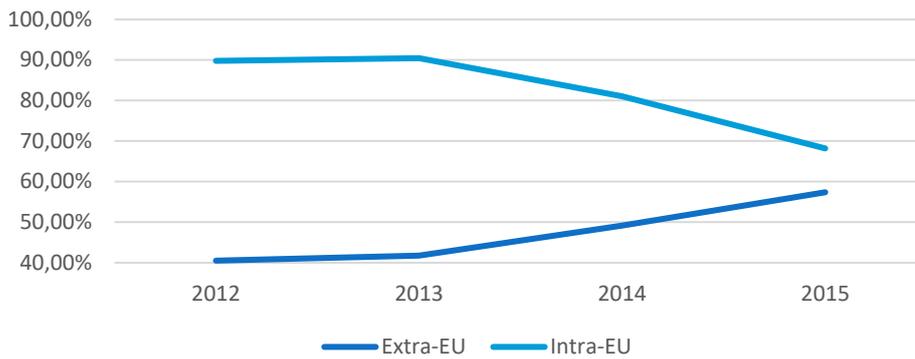
The share of SMEs exporting to third countries has increased by more than 10 percentage points from 2012 to 2015 (Figure 67). A similar development is observable in the case of SME imports (Figure 68). Nevertheless, more SMEs traded with the EU than traded with third countries over the period 2012-2015. The difference between the shares of Intra- and Extra-EU traders is larger among importers than among exporters (for example, in 2012, 90% of importers traded with the EU, compared to 40% with third countries, whereas under 85% of exporters traded with the EU, compared to 50% with third countries). In both cases, the difference in the shares of SMEs trading inside and outside the EU has markedly reduced.

**Figure 67: Share of exporting SMEs trading with the EU and third countries**



Note: This analysis is based on 56,049 observations

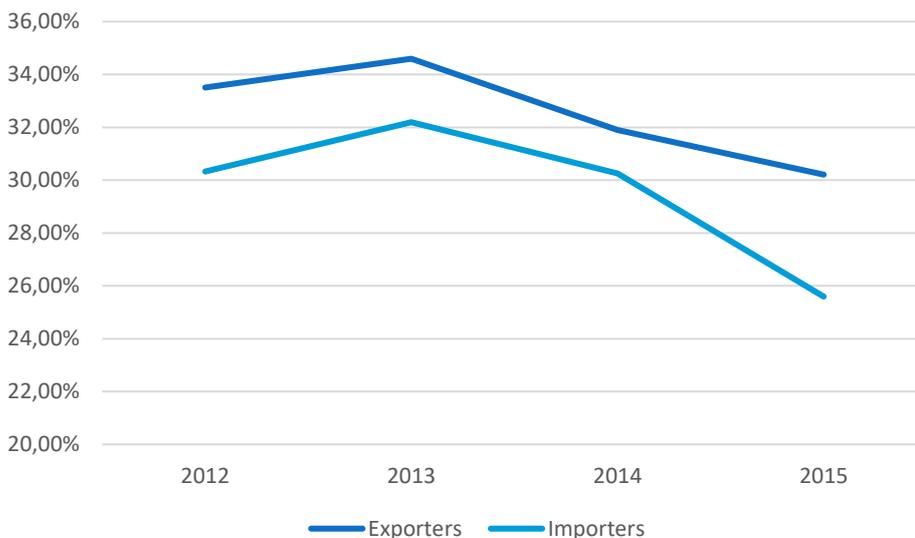
Source: ELSTAT and LE Europe analysis

**Figure 68: Share of importing SMEs trading with the EU and third countries**

Note: This analysis is based on 104,963 observations

Source: ELSTAT and LE Europe analysis

The share of SMEs which trade with both the EU and third countries has fallen in the case of both exports and imports (Figure 69). This suggests that both importers and exporters may have become less diversified.<sup>68</sup> Moreover, over the period 2012-2015, the share of exporting SMEs trading with both Member States and third countries is higher than the share of exporting SMEs importing from both Member States and third countries.

**Figure 69: Share of trading SMEs that export to and import from both the EU and third countries**

Note: The two series are based on 104,963 observations (importers) and 56,049 observations (exporters)

Source: ELSTAT and LE Europe analysis

In order to analyse the export pattern of SMEs across the period during which they are present in the dataset,<sup>69</sup> SMEs are categorised as:

- Occasional exporters: SMEs that were present in the dataset in at least two (not necessarily consecutive) years and which have exported in some, but not all, of these years.

<sup>68</sup> Whether a firm is trading with both the EU and third countries is only one proxy for diversity in its trading partners and has its limitations: for instance, it does not account for diversity in trading partners within or outside the EU.

<sup>69</sup> Note that the categories are defined with respect to SMEs trading internationally. Non-traders are not included in this dataset. Therefore, if an SME is not in the dataset, it is not possible to infer whether the firm is still active but is not trading internationally or whether it is no longer active as an autonomous entity.

- Consistent exporters: SMEs that were present in the dataset in at least two (not necessarily consecutive) years and which have exported in each of these years.
- One-year non-exporters: SMEs that were present in the dataset for only one year and which did not export.
- One-year exporters: SMEs that were present in the dataset for only one year and which exported.

Most exporting SMEs are consistent exporters (Table 30). As previously noted, only SMEs trading internationally are included in the dataset. Therefore, the number of non-exporters includes only non-exporting SMEs which imported between 2012 and 2015 and does not include SMEs which neither imported nor exported. The large share of consistent exporters may be a consequence of the relatively short reference period: if an SME deviates only rarely from an otherwise consistent exporting pattern, this is less likely to be observed over a four-year period than over a 10- or 15-year period.

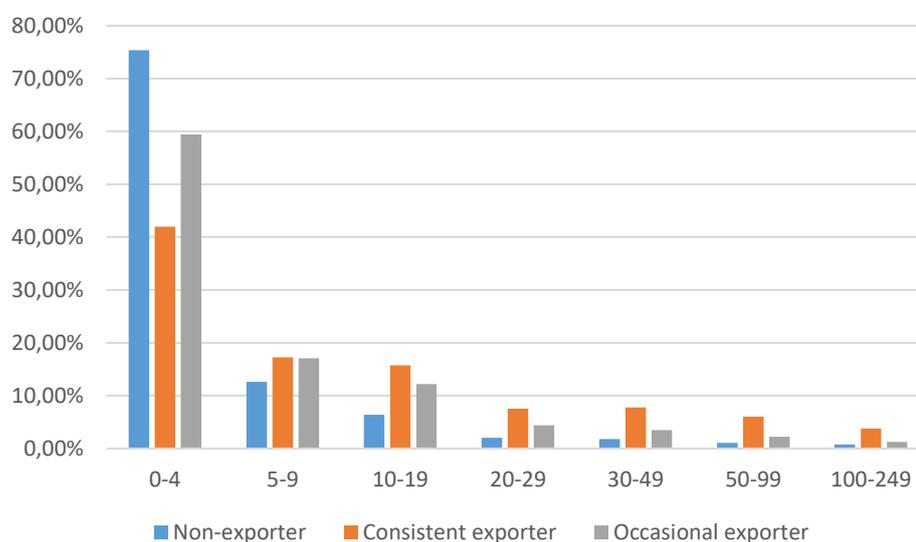
**Table 30: Export pattern of SMEs**

Export pattern	Consistent exporter	Occasional exporter	Non-exporter	One-year exporters	One-year non-exporters	TOTAL
Share of SMEs trading internationally	22.56%	14.80%	25.28%	12.30%	25.06%	100%

Source: ELSTAT and LE Europe analysis

Exporting SMEs tend to employ more people than SMEs which import but do not export (Figure 70).

**Figure 70: SME export pattern by employment size**



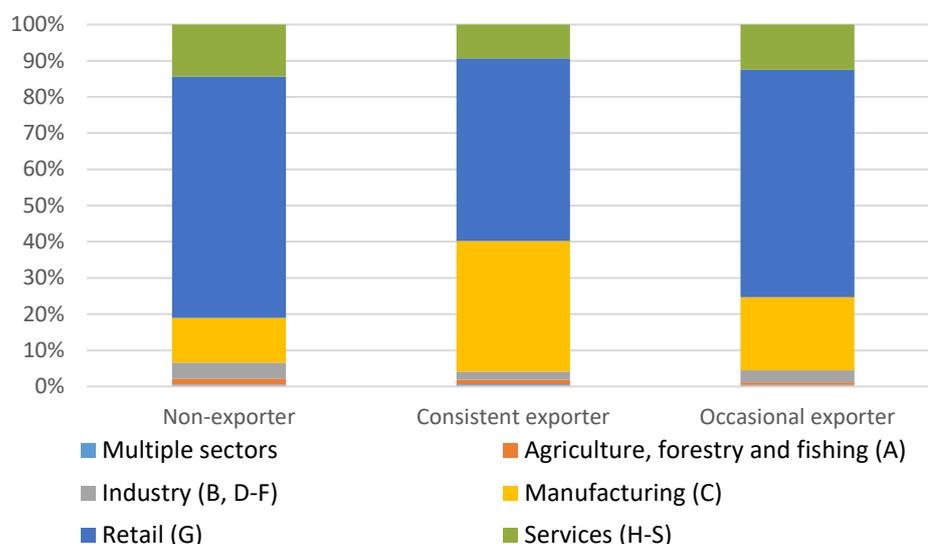
Note: The figures under the bars are the respective employment size classes. The analysis is based on 99,759 observations from SMEs in the dataset for at least two years. Non-exporters only include those SMEs which import but do not export

Source: ELSTAT and LE Europe analysis

By far the largest group of non-exporting SMEs are those active in the retail sector. Such SMEs account for 67% of non-exporting SMEs while SMEs in the manufacturing and services sectors account respectively for about 12% and 14% of non-exporting SMEs (Figure 71).

The largest groups of exporting SMEs are active in the retail and manufacturing: SMEs in these two sectors account respectively for 50% and 36% of consistently exporting SMEs and 63% and 20% of occasionally exporting SMEs.

**Figure 71: Export pattern - by sector**



Note: This analysis is based on 30,949 SMEs in the dataset for at least two years. It does not include NACE Rev. 2 sections T and U (activities of households as employers; undifferentiated goods- and services-producing activities of households for own use, and activities of extraterritorial organisations and bodies) or SMEs which were not classified or whose industry was unknown. NACE Rev. 2 sections are included in brackets. SMEs were assigned a sector based on the modal NACE Rev. 2 section which was the most frequent across years. SMEs with multiple section modes were assigned the category "Multiple sectors"

Source: ELSTAT and LE Europe analysis

More SMEs import than export, in particular, more SMEs import and do not export than export and do not import (Table 31). For example, 25.3% of SMEs are consistent importers but do not export, while only 3.9% of SMEs are consistent exporters and do not import.

**Table 31: SME export and import characteristics**

Export/import pattern	Non-exporters	Consistent exporters	Occasional exporters	One-year exporters	One-year non-exporters
Non-importer		3.88%			
Consistent importer	25.28%	14.72%	12.93%		
Occasional importer		3.96%	1.87%		
One-year importers				4.34%	25.06%
One-year non-importers				7.96%	

Note: This analysis is based on 49,437 SMEs. SMEs which neither export nor import are not included in the dataset

Source: ELSTAT and LE Europe analysis

Building upon on the information provided in Table 31, the data show that in the case of SMEs which are present in the database for at least two years (Table 32):

- Importing SMEs are more likely than exporting SMEs to be consistent;
- An exporting SME is more likely to be a consistent importer than an importing SME a consistent exporter.

**Table 32: Probability of an SME being a consistent exporter/importer**

Conditional on being...	...an exporter	...an importer
<b>Likelihood of being consistent</b> , conditional on being an exporter/importer <sup>70</sup>	60.39%	90.07%
<b>Likelihood of being a consistent importer (exporter)</b> , conditional on being a consistent exporter/importer	65.24%	27.81%

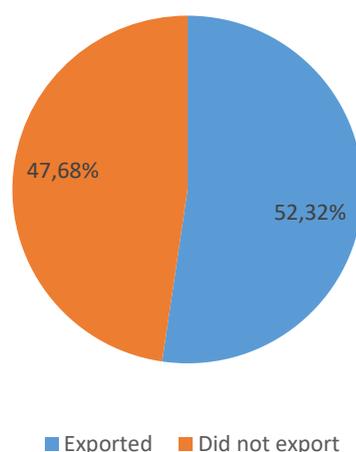
Note: "likelihoods" refer to conditional frequencies. The percentages are based on the analysis of frequencies in 0. This analysis is based on firms that were in the dataset for at least two years

Source: ELSTAT and LE Europe analysis

The analysis below focuses on the recent export pattern in 2014 and 2012-2014 of SMEs which were present in the database in 2015. It should be noted that in the analysis of the export pattern over the period 2012-2014, only SMEs that were present in the dataset for the whole of that period are included.

A majority of the SMEs in the international trade database had exported in 2014 (Figure 72).

Moreover, over two thirds of the SMEs in the database in 2015 and in 2012-2014 had exported between 2012 and 2014 and, among this group, more than two thirds of SMEs exported in all three years. Note that the SMEs included in this analysis were present in the dataset for each of the previous three years (Figure 73).

**Figure 72: 2014 export status of SMEs in the database in 2015.**

Note: This analysis is based on 23,599 SMEs which present in the database in 2014 and 2015

Source: ELSTAT and LE Europe analysis

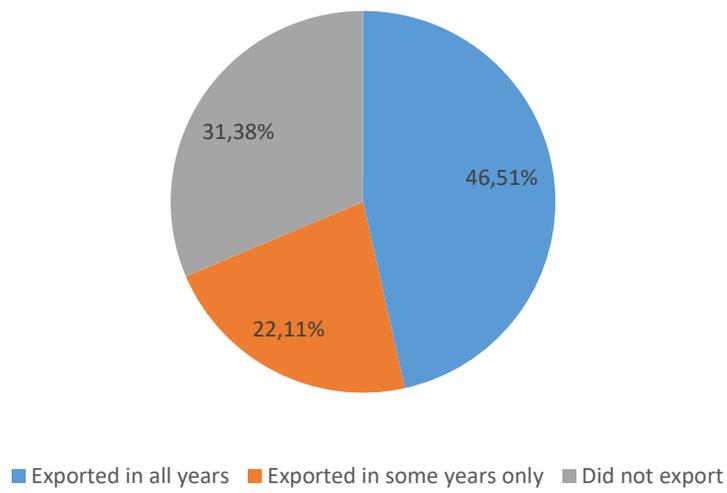
<sup>70</sup> Conditional frequencies in this table are calculated using Bayes' rule:

$$Prob(A|B) = \frac{Prob(A, B)}{Prob(B)}$$

For instance, the probability of being a consistent importer, conditional on being a consistent exporter calculated as follows:

$$\begin{aligned}
 Prob(Consistent_I | Consistent_E) &= \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E)} \\
 &= \frac{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}
 \end{aligned}$$

**Figure 73: 2012-2014 export pattern of SMEs in the database in 2015**



Note: This analysis is based on 16,146 SMEs which were present in the database each year over the period 2012 to 2015

Source: ELSTAT and LE Europe analysis

## 6.4 Ireland

### 6.4.1 Disclaimer

The results presented below are based on an analysis of strictly controlled Research Microdata Files provided by the Central Statistics Office (CSO). The CSO does not take any responsibility for the views expressed or the outputs generated from this research.

### 6.4.2 Introduction

The following key facts emerge from the analysis of a panel of data from 2013 to 2016:

- Most SMEs that have exported have done so occasionally rather than consistently.
- SMEs that export consistently tend to employ more people than SMEs which only occasionally export.
- SMEs in manufacturing and retail account respectively for 42% and 41% of consistently exporting SMEs, and for 21% and 46% of occasionally exporting SMEs. Among the latter group, SMEs in services account for another 25% of such SMEs. A majority (51%) of non-exporting SMEs are active in the service sector and another 19% in agriculture, forestry and fishing.
- More SMEs import than export.

The next section describes the datasets that were used in the analysis, and the subsequent section presents the results of the analysis. It provides information on the import and export behaviour of SMEs between 2013 and 2016, the characteristics of consistent and occasional exporters and recent export patterns of SMEs.

### 6.4.3 Data

The dataset used in this analysis consists of the linked Business Demography and Trade by Enterprise Characteristics (TEC) Research Microdata Files (RMF). The resulting dataset includes 1,560,735 observations from all 515,926 firms in the Business Demography dataset between 2013 and 2016. This includes 1,557,900 observations from 515,173 SMEs.<sup>71,72</sup> Note that not all firms trading internationally could be linked to the Business Demography data from the Business Register. This is one of the reasons why the numbers of importers and exporters (as well as their breakdown by trading partner(s)) cover less than the whole population of firms trading internationally. Another reason is the exclusion from the RMF files of firms with an international trade value below the Intrastat reporting threshold.<sup>73</sup>

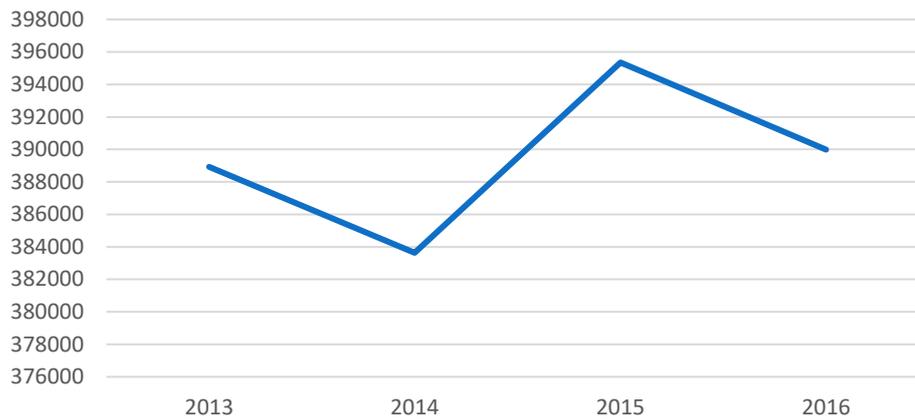
The number of SMEs in the dataset shows a small increase from 2013 to 2016, although during this period the SME population shows a very large increase in 2015 and marked declines in 2014 and 2016 (Figure 74).

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<sup>71</sup> An SME is defined as employing less than 250 persons over the majority of the period in which it was present in the business register.

<sup>72</sup> The difference between this and the Business Demography figure published by the CSO on July 4th (<https://www.cso.ie/en/releasesandpublications/er/bd/businessdemography2016/>) is one of coverage. The CSO Business Demography covers Private Business Economy NACE Sectors B-N, whereas this study covers all sectors, including Agriculture, Public Admin, Health and Education etc., that are not covered in the published CSO release. For further details on the methodology employed in the CSO release, see the background notes at <https://www.cso.ie/en/methods/surveybackgroundnotes/businessdemography/>. See: Central Statistics Office (n.d.) Business Demography. [Online] Available at: <https://www.cso.ie/en/releasesandpublications/er/bd/businessdemography2016/> [Accessed 10 October 2018]; Central Statistics Office (n.d.) and Business Demography: Background Notes. [Online] Available at: <https://www.cso.ie/en/methods/surveybackgroundnotes/businessdemography/> [Accessed 10 October 2018].

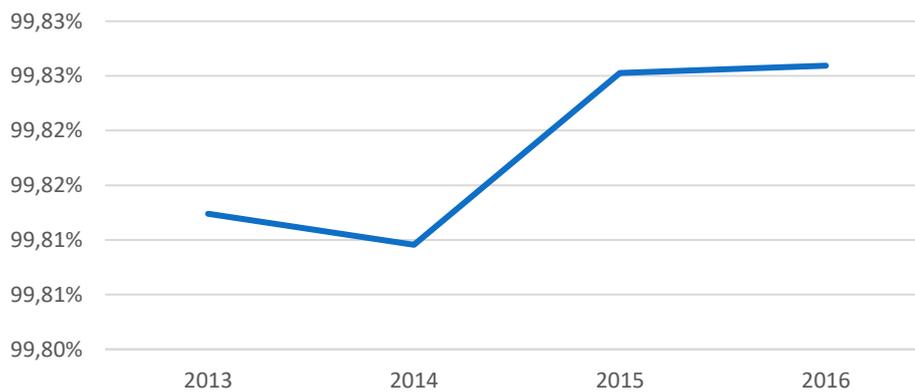
<sup>73</sup> Central Statistics Office (2018) "Trade RMF Information Note".

**Figure 74: Number of SMEs in the dataset**

Note: This analysis is based on 1,557,900 observations

Source: Irish CSO Research Microdata Files and LE Europe analysis

The share of SMEs in the overall enterprise population in the dataset rose marginally from under 99.82% to over 99.83% from 2013 to 2016 (Figure 75).

**Figure 75: Share of SMEs in enterprise population in the dataset**

Note: This analysis is based on 1,560,735 observations

Source: Irish CSO Research Microdata Files and LE Europe analysis

The Trade by Enterprise Characteristics RMF covers trade in goods between 2013 and 2016. It does not include information on Intra-EU traders whose annual Intra-EU transaction value was below the Intrastat reporting threshold (currently EUR 500,000 for imports and EUR 635,000 for exports). The value of the international trade of such firms is estimated based on VAT data and included in the published aggregate trade value figures, but no firm level information is provided.<sup>74</sup> The fact that these traders are missing in the micro-dataset leads to an under-representation of intra-EU traders.

In addition, changes in the Intrastat reporting threshold may cause variations in the number of intra-EU traders in the dataset, which do not reflect actual changes in the trading pattern of such firms. For instance, the importer time series shows a sharp decrease in the number of importers from 2015 to 2016 especially in the case of Intra-EU importers. This decrease coincides with an increase in the Intrastat reporting threshold from EUR 191,000 to EUR 500,000 and is likely to have reduced the number of importing firms in the database.<sup>75</sup>

<sup>74</sup> Central Statistics Office (2018) "Trade RMF Information Note"; Central Statistical Office (n.d.) Goods Exports and Imports. [Online] Available at: <https://www.cso.ie/en/methods/surveybackgroundnotes/goodsexportsandimports/> [Accessed 03 October 2018].

<sup>75</sup> Central Statistics Office (2018) "Trade RMF Information Note".

The key concepts and variable definitions used in the analysis are presented in Table 33.

**Table 33: Definition of variables and related concepts**

Variable	Definition	Related concepts
Persons engaged	"Persons engaged include employees, proprietors and family members. Persons engaged are the sum of Employees plus Working Proprietors." <sup>76</sup>	An SME is defined as having less than 250 persons engaged over the majority of the period in which it was in the business register.
Industry	NACE Rev. 2 codes.	From this classification, five sectors were constructed: Agriculture, forestry and fishing; Industry; Manufacturing; Retail; and Services.
Export value	Statistical value of exports, namely the FOB value (free-on-board) of the goods, or "the transaction value of the goods and the value of services performed to deliver goods to the border of the exporting country." <sup>77</sup>	Export value is used to determine whether a firm is exporting.
Import value	Statistical value of imports, namely the CIF type value (cost, insurance, freight) or "the transaction value of the goods, the value of services performed to deliver goods to the border of the exporting country and the value of the services performed to deliver the goods from the border of the exporting country to the border of the importing country." <sup>78</sup>	Import value is used to determine whether a firm is importing.
Trading partner	"The data in the RMF matches the data that is sent to Eurostat and is on a country of consignment basis." <sup>79</sup>	On this basis, trade was classified as intra-EU or Extra-EU trade. <sup>80</sup>

Source: Central Statistics Office (2018.) "Glossary of Business Demography RMF Variables"; Central Statistics Office (2018) "Trade RMF Information Note"; Central Statistics Office (2013) "Business Demography: Background Notes". [Online] Available at: <https://www.cso.ie/en/methods/surveybackgroundnotes/businessdemography/> [Accessed 27 September 2018]

An SME is defined as an enterprise with less than 250 persons employed over the majority of the period during which it was in the business register from 2013 to 2016 and information on its employment was available. Accordingly, changes in the SME population are due only to the evolution of the enterprise population, since a firm's status as an SME or a large enterprise does not change. The rationale for this definition is the preservation of a reasonably long time-series for each SME so as to gain better insights into its trading pattern.

#### 6.4.4 Analysis

Importing SMEs account for about 91% to 93% of all firms that import while exporting SMEs account for only 33% to 34% of all exporting firms (Figure 76) The

<sup>76</sup> Employees are defined as: "[...] persons who are paid a fixed wage or salary [...]" and working proprietors are defined as: "[...] those proprietors, partners, etc. and members of their families who work regularly in the firm and are not paid a definite wage or salary. Working Proprietors is not a full count of self-employed individuals as some self-employed receive a wage and information on these individuals is included in the annual employment returns and such individuals are included in the Employees calculation." Central Statistics Office (n.d.) "Business Demography: Background Notes". [Online] Available at: <https://www.cso.ie/en/methods/surveybackgroundnotes/businessdemography/> [Accessed 27 September 2018].

<sup>77</sup> Eurostat (2015) "User guide on European statistics on international trade in goods".

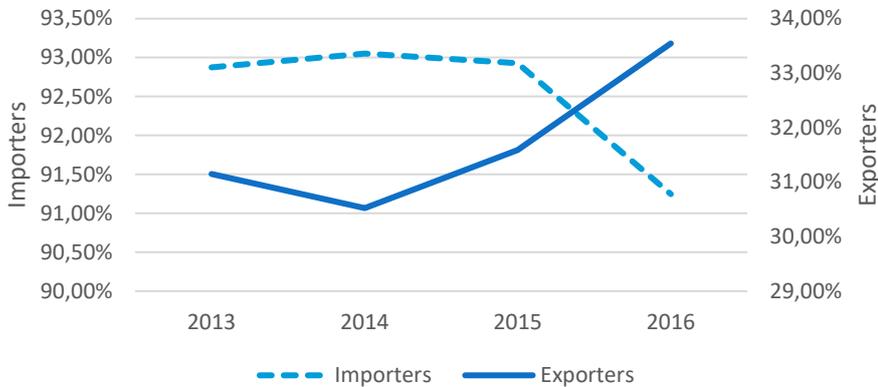
<sup>78</sup> Ibid.

<sup>79</sup> Central Statistics Office (2018.) "Glossary of Business Demography RMF Variables". In extra-EU trade, a country of consignment is "[...] the country from which the goods were initially dispatched to the importing Member State, without any halt or legal operation not inherent in their transport having occurred in an intermediate country; if such halts or legal operations have occurred, the final intermediate country shall be regarded as the country of consignment." In intra-EU trade, the Member State of consignment of goods is the last Member State in which "halts or legal operations not inherent in [the goods'] transport" have taken place before the goods arriving at their final destination. Eurostat (n.d.) "Country of consignment". In Eurostat (n.d.) Concepts and Definitions Database. [Online] Available at: [http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP\\_GLOSSARY\\_NOM\\_DTL\\_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16443585&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter\\_valid=0&IntCurrentPage=1](http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16443585&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=1) [accessed 27 September 2018]; Eurostat (n.d.) "Member State of consignment". In Eurostat (n.d.) Concepts and Definitions Database. [Online] Available at: [http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP\\_GLOSSARY\\_NOM\\_DTL\\_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter\\_valid=0&IntCurrentPage=1](http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNom=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=1) [accessed 27 September 2018].

<sup>80</sup> Trade with partners located outside territorial waters (e.g. on oil platforms, wind farms etc.) were included in Extra-EU trade. For an explanation of country codes referring to high seas, see Eurostat (2017) "Geonomenclature applicable to European statistics on international trade in goods".

share of importing SMEs has decreased slightly while the share of exporters increased slightly.

**Figure 76: Share of exporting and importing SMEs in total population of exporting and importing firms**



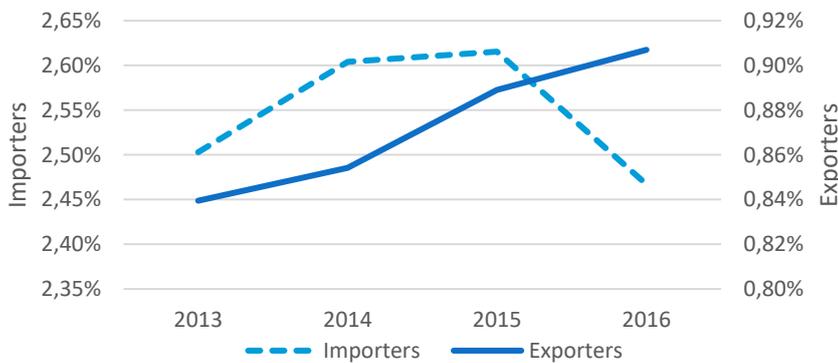
Note: This analysis is based on 42,889 observations. In this analysis, a trader is defined as a firm that either exports or imports

Source: Irish CSO Research Microdata Files and LE Europe analysis

The share of exporters among SMEs is very small but increased marginally from 2013 to 2016, rising from 0.84% to over 0.90% (Figure 77). Until 2015, the share of importers also increased but fell sharply in 2016, which may have been a result of the Intrastat reporting threshold (regarding imports) increasing more than twofold (Figure 77).<sup>81</sup>

Overall, only 2.76% of SMEs trade internationally (Table 34) and, in 2016, slightly less than ¼ of these SMEs export and import (Figure 78).

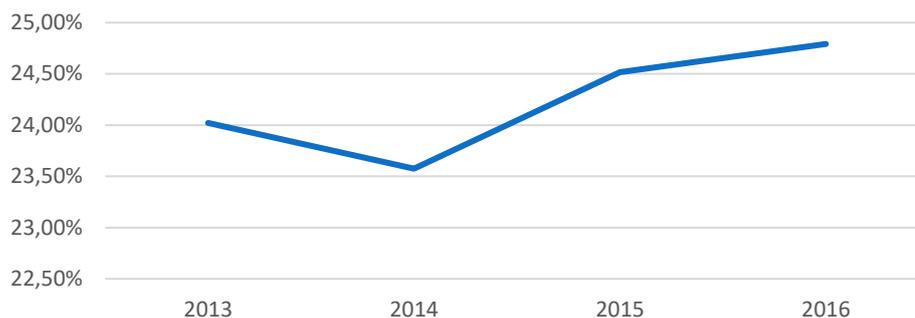
**Figure 77: Share of exporters and importers in SME population**



Note: This analysis is based on 1,557,900 observations

Source: Irish CSO Research Microdata Files and LE Europe analysis

<sup>81</sup> Central Statistics Office (2018) "Trade RMF Information Note".

**Figure 78: Share of SMEs that export and import in population of all SMEs trading internationally**

Note: This analysis is based on 42,889 observations. In this analysis, a trader is defined as a firm that either exports or imports

Source: Irish CSO Research Microdata Files and LE Europe analysis

**Table 34: Import and export status of SMEs in the database**

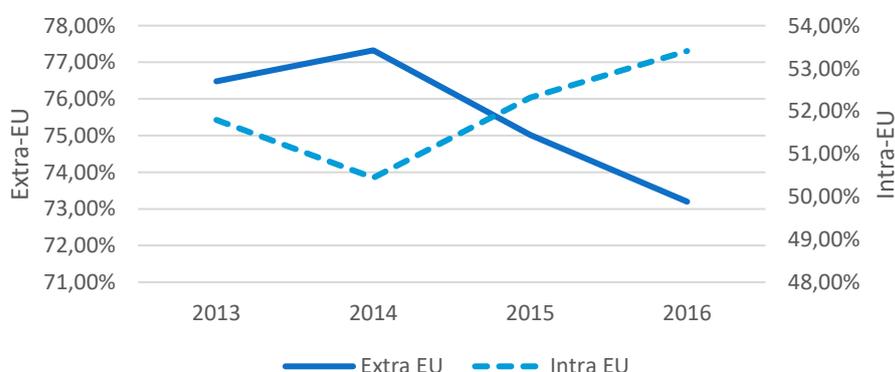
	Non-exporters	Exporters
Non-importers	97.25%	0.21%
Importers	1.88%	0.67%

Note: The analysis is based on 1,557,900 observations

Source: Irish CSO Research Microdata Files and LE Europe analysis

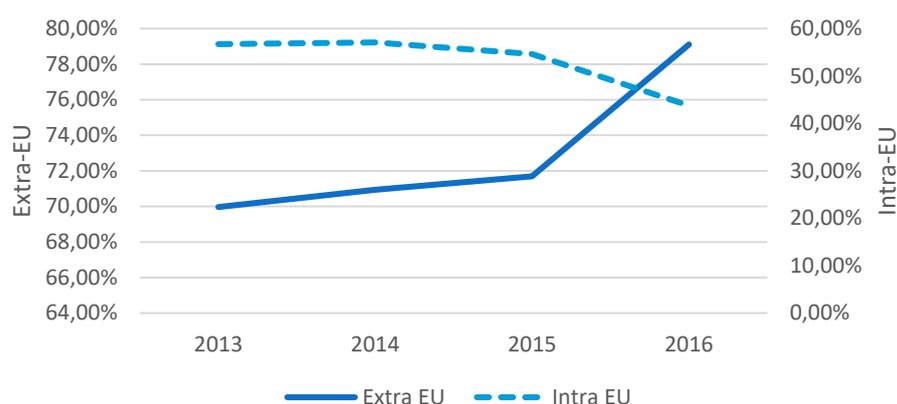
Over the period 2013-2016, the share of exporting SMEs that export to third countries declined slightly, from over 76% of all exporters in 2013 to just over 73%, while the share of SMEs exporting to the EU shows the opposite change (Figure 79). Note that the Intrastat reporting threshold for exports was EUR 635,000 throughout the 2013-2016 period. Consequently, any observed changes in the shares reflect real changes.

In contrast, the share of SMEs importing from the EU fell by over 10 percentage points (Figure 80), mostly between 2015 and 2016. This drop is most likely due to the change in the Intrastat reporting threshold for intra-EU imports.

**Figure 79: Share of SMEs exporting to the EU and third countries in total population of exporting SMEs**

Note: This analysis is based on 39,686 observations

Source: Irish CSO Research Microdata Files and LE Europe analysis

**Figure 80: Share of SMEs importing from the EU and third countries in total population of importing SMEs**

Note: This analysis is based on 39,686 observations

Source: Irish CSO Research Microdata Files and LE Europe analysis

The analysis of the export pattern of SMEs across the whole period during which they are in the business register from 2013 to 2016 is based on the following typology:<sup>82</sup>

- Non-exporters: SMEs that were present in the business register for at least two years and which have never exported.
- Occasional exporters: SMEs that were present in the business register for at least two years and which have exported in some, but not all, of these years.
- Consistent exporters: SMEs that were present in the business register for at least two years and which have exported in every one of these years.
- One-year non-exporters: SMEs that were present in the business register for only one year and which did not export.
- One-year exporters: SMEs that were present in the business register for only one year and which did export.

As already noted, the vast majority of SMEs do not export (Table 35).

Moreover, among exporting SMEs, most are occasional exporters, although the shares of occasional and consistent exporters are fairly close (Table 35). This result may be due to the fact that the period covered by the analysis is relatively short. For example, the ratio of the shares of consistent exporters to occasional exporters is much lower in the case of Finland. This finding for Finland may be due to the fact that the analysis covers a much longer period (1999-2016). If a firm only exports occasionally, this is more likely to be observed over a 17-year period than over a 4-year period.

**Table 35: Export pattern of SMEs**

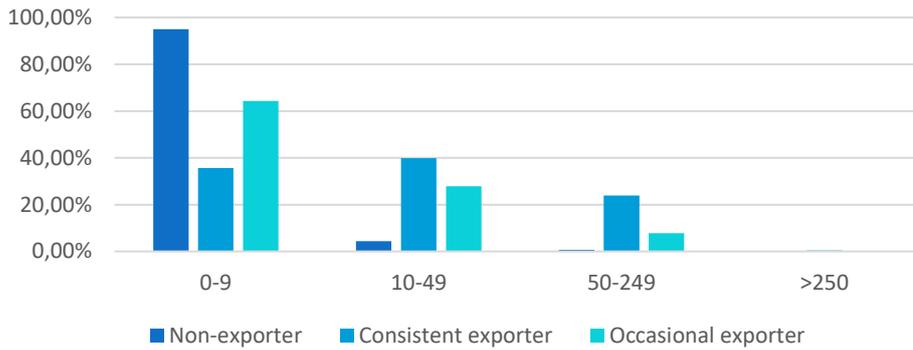
Export pattern	Consistent exporters	Occasional exporters	Non-exporters	One-year exporters	One-year non-exporters	TOTAL
	0.43%	0.57%	81.44%	0.05%	17.50%	100%

Source: Irish CSO Research Microdata Files and LE Europe analysis

Consistent exporters tend to employ more people than occasional and non-exporters, and, more generally, exporters tend to employ more people than non-exporters (Figure 81).

<sup>82</sup> Note that this period may be made up of non-consecutive years (e.g. a death followed by a re-birth).

**Figure 81: SME export pattern by employment size class**



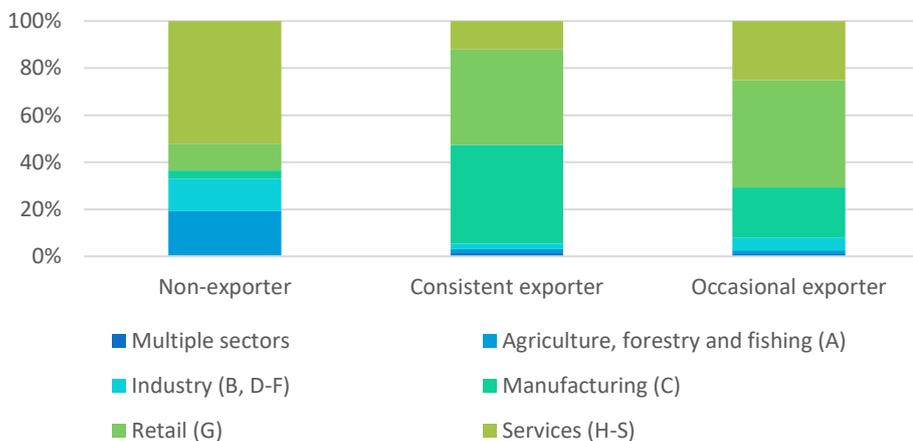
This analysis is based on 424,728 firms which were in the business register for at least two years  
 Source: Irish CSO Research Microdata Files and LE Europe analysis

More than half of the non-exporting SMEs are active in the services sector (Figure 82). Non-exporting SMEs in agriculture, forestry and fishing account for approximately 20% of all non-exporting SMEs, while non-exporting SMEs in retail and industry account for between 10% and 15% respectively of all non-exporting SMEs. The share of non-exporting SMEs active in the manufacturing sector is very small.

Conversely, among exporting SMEs, the share of SMEs active in manufacturing is markedly higher, especially among consistent exporters. The share of retail SMEs is also larger among exporters, in particular among occasional exporters (Figure 82).

Moreover, the share of SMEs active in the services sector is markedly higher among occasionally exporting SMEs than among consistently exporting SMEs (Figure 82).

**Figure 82: Sectoral export pattern of SMEs**



Note: This analysis is based on 505,560 firms which were in the business register for at least two years. It does not include NACE Rev. 2 sections T and U (activities of households as employers; undifferentiated goods- and services-producing activities of households for own use, and activities of extraterritorial organisations and bodies) or firms which were not classified or whose industry was unknown. NACE Rev. 2 sections are included in brackets. Firms were assigned a sector based on the modal NACE Rev. 2 section which was most frequent across years. Firms with multiple section modes were assigned the category “Multiple sectors”

Source: Irish CSO Research Microdata Files and LE Europe analysis

As already noted, only a small share of SMEs engage in international trade and the share of importing SMEs is slightly higher than the share of exporting SMEs (Table 36). Moreover, the share of consistent exporters which also import is slightly lower than the share of consistent importers which also export.

**Table 36: Export and import pattern of SMEs**

Export/import pattern	Non-exporters	Consistent exporters	Occasional exporters	One-year exporters	One-year non-exporters
Non-importers	79.43%	0.05%	0.16%		
Consistent importers	0.74%	0.33%	0.23%		
Occasional importers	1.27%	0.05%	0.19%		
One-year importers				0.02%	0.11%
One-year non-importers				0.04%	17.39%

Note: The analysis is based on 515,173 SMEs. The percentages are based on the whole population of SMEs

Source: Irish CSO Research Microdata Files and LE Europe analysis

Building upon on the information shown in Table 36, various exporting and importing probabilities were derived. These are reported in Table 37 which shows, among other facts, that<sup>83</sup>:

- Importers are more likely than exporters to be consistent;
- An exporter is much more likely to be a consistent importer than an importer a consistent exporter;
- Exporters are much more likely to import than non-exporters;
- Exporters are much more likely than non-exporters to be consistent importers when they import.

**Table 37: SME exporting and importing probabilities**

Conditional on being...	...an exporter	...an importer	...a non-exporter
<b>Likelihood of being consistent</b> , conditional on being an exporter/importer <sup>84</sup>	42.83%	46.41%	
<b>Likelihood of being a consistent importer (exporter)</b> , conditional on being a consistent exporter/importer	77.18%	25.39%	
<b>Likelihood of importing</b> conditional on being an exporter/non-exporter	79.46%		2.47%
<b>Likelihood of being a consistent importer</b> , conditional on importing and on being an exporter/non-exporter	70.30%		36.97%

Note: "likelihoods" refer to conditional frequencies. The percentages are based on the analysis of frequencies in the previous table. This analysis is based on firms that were in the business register for at least two years

Source: Irish CSO Research Microdata Files and LE Europe analysis

A more granular analysis of the recent export pattern of SMEs was undertaken by dividing the group of occasional exporters into SMEs which a) started to export in

<sup>83</sup> This probability analysis covers only SMEs which were in the business register for at least two years.

<sup>84</sup> Conditional frequencies in this table are calculated using Bayes' rule:

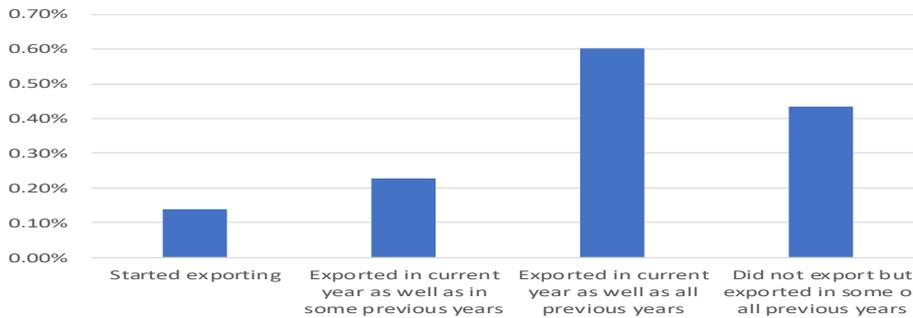
$$Prob(A|B) = \frac{Prob(A, B)}{Prob(B)}$$

For instance, the probability of being a consistent importer, conditional on being a consistent exporter is calculated as follows:

2016, b) exported in 2016 as well as in some of the previous years and c) did not export in 2016 but exported in at least some of the previous years.

Of all the SMEs which exported during at least one year of the 2013-2016 period, most exported in 2016, as shown by the sum of the first three bars relative to the fourth in (Figure 83).

**Figure 83: 2016 export pattern of SMEs (in % of all SMEs)**



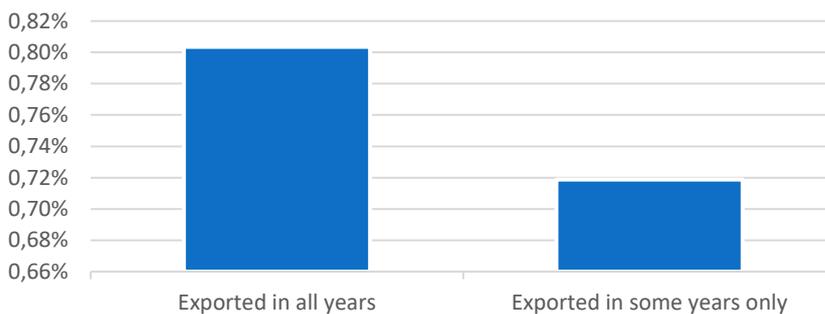
Note: Current year refers to 2016. The analysis is based on 350,006 observations from firms that were active in 2016 and in at least one previous year. The share of SMEs which have never exported (98.60%) is not shown in the figure

Source: Irish CSO Research Microdata Files and LE Europe analysis

The vast majority of SMEs included in this analysis (which focuses on SMEs which were in the business register for each of the years under examination) did not export between 2013 and 2015, since the shares of firms that exported in both all or in some of these years are under 1%. There are approximately 10% more firms that exported in all years than firms that exported in some years only some years.<sup>85</sup>(Figure 84).

This contrasts with the overall shares of consistent and occasional exporters (the latter being higher than the former) which also include firms that were in the business register for less than four years. This suggests that exporters which are continuously active over a relatively long period (in the sense that they are in the business register) are more likely to be consistent in their export behaviour.

**Figure 84: Export pattern of SMEs over the period 2013 to 2015**



Note: This analysis is based on 269,061 firms that were present in the business register in 2016 as well as in the previous three years. The figures are expressed as percentages of all SMEs present in the Business Register in 2016. The share of firms which have never exported (98.48%) is not shown in the figure

Source: Irish CSO Research Microdata Files and LE Europe analysis

$$\begin{aligned}
 Prob(Consistent_I | Consistent_E) &= \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E)} \\
 &= \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)} \\
 &\stackrel{85}{\approx} \frac{0.8 - 0.72}{0.72} \approx 10\%
 \end{aligned}$$

## 6.5 Netherlands

### 6.5.1 Disclaimer

The results presented below are based fully on calculations by LE Europe using non-published microdata from Statistics Netherlands (CBS)<sup>86</sup> concerning the General Business Register (ABR) and the statistics of international trade in goods (IHG), both covering the years 2009-2016. The results and conclusions based on the analysis of that data are those of the researcher.

### 6.5.2 Introduction

The analysis is based on a panel of data from 2009 to 2016 provided by Statistics Netherlands. The following key facts emerge from the analysis:

- Most SMEs that have exported have done so occasionally rather than consistently.
- SMEs that export consistently tend to employ more people than occasional exporters.
- Most consistent SME exporters are in the retail sector, whereas the majority of occasional SME exporters are in the services sector.
- More SMEs import than export.

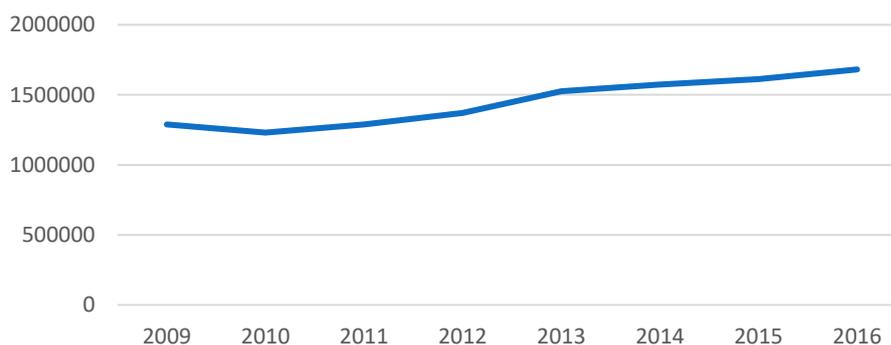
The next section describes the datasets used in the analysis. The subsequent section presents the results of the analysis, focusing on the import and export behaviour of SMEs from 2009 to 2016, the characteristics of consistent and occasional exporters, and the recent export pattern of SMEs.

### 6.5.3 Data

The analysis focuses on all enterprises in the General Business Register (ABR) except for foundations, non-profit organisations, associations and European Economic Interest Groupings. The resulting dataset comprises 11,584,240 observations from 2,730,770 firms, including 11,571,214 observations from 2,728,471 SMEs.

The SME population in the ABR followed an upward trend across most of the 2009-2016 period, increasing from approximately 1.3m in 2009 to 1.7m in 2016 (Figure 85). A similar trend can be observed in the share of SMEs among all enterprises. This share increased from 99.87% to 99.91% (Figure 86).

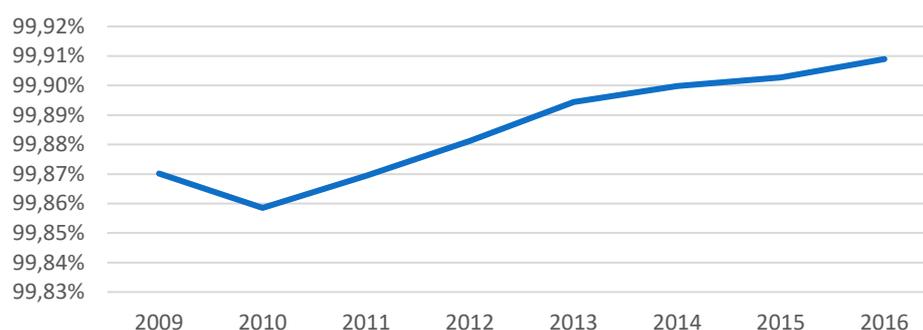
**Figure 85: Number of SMEs in the ABR**



Note: This analysis is based on 11571214 observations

Source: Statistics Netherlands and LE Europe analysis

<sup>86</sup> Centraal Bureau voor de Statistiek

**Figure 86: Share of SMEs in enterprise population in the ABR**

Note: This analysis is based on 11,584,240 observations

Source: Statistics Netherlands and LE Europe analysis

In order to gain insights into the international trading behaviour of SMEs, the ABR was linked to the International trade in Goods (IHG) micro-dataset. Note that some trade transactions could not be linked to firms in the ABR. This situation arose in the case of foreign firms that have no Dutch VAT number, firms with unknown reporting agents, firms which are “small, occasional traders”, or firms with unknown VAT numbers.<sup>87</sup>

In addition, the metadata indicate that the linking between the IHG and ABR datasets has improved after 2009.<sup>88</sup> This means that traders are underrepresented in 2009 compared to subsequent years. Therefore, most of the analysis focuses on the 2010–2016 period.<sup>89</sup>

The international trade data are based on the following sources and processes<sup>90</sup> :

- Information provided to customs and transmitted to CBS in the case of extra-EU trade.
- Intrastat declarations in the case of firms importing from or exporting to EU countries and whose annual import or export value exceeds the Intrastat reporting threshold (EUR 1m for imports and EUR 1.2m for exports in 2016).<sup>91</sup>
- Imputations based on past information, when CBS has not received any data from a firm in a given year.
- Estimates, often based in VAT data. Trade value is estimated if a firm did not submit any data and if no information on recent international trade transactions is available, or if the value of a firm’s transactions were below the Intrastat reporting threshold.

While data on transactions collected by customs or the Intrastat system, as well as imputations are disaggregated by partner country, this is not the case with estimated data. After 2014, information is provided in the trade statistics on the estimated data related to intra- or extra-EU trade. This information is not provided before 2014. Given that, after 2014, the vast majority of estimated data comprises intra-EU

<sup>87</sup> CBS (2014) Documentatierapport Internationale Handel in Goederen (IHG) [International Trade in Goods (IHG) Documentation Report].

<sup>88</sup> Ibid.

<sup>89</sup> The reason for excluding the year 2009 in the analysis described in the subsequent pages is that this analysis relies on a classification of firms’ export pattern across the whole reference period. Specifically, a distinction is made between firms that export in every period (consistent exporters) and firms that export in some periods only (occasional exporters). The concern is that many firms which exported in all years, including in 2009 may be classified as occasional exporters because their 2009 trade could not be linked to the business register. This, of course, poses a risk in all years, but it is mitigated from 2010 onwards by improvements in the linking between the ABR and IHG.

<sup>90</sup> CBS (2014) Documentatierapport Internationale Handel in Goederen (IHG) [International Trade in Goods (IHG) Documentation Report].

<sup>91</sup> See also: CBS (n.d.) Statistiek internationale handel in goederen [International trade in Goods Statistics]. [Online] Available at: <https://www.cbs.nl/nl-nl/onze-diensten/methoden/onderzoeksomschrijvingen/korte-onderzoeksbeschrijvingen/statistiek-internationale-handel-in-goederen> [Accessed 08/10/2018].

transactions (most likely reflecting the activities of firms trading internationally that were exempt from submitting Intrastat declarations), it is assumed that this is also the case before 2014. Therefore, pre-2004 international trade transactions for which there is no information on trading partner(s) are treated as Intra-EU trade.<sup>92</sup>

The key concepts and variable definitions are presented in the table below.

**Table 38: Definition of key variables and related concepts**

Variable	Definition	Related concept
Structural business statistics (SBS) size class	"[Size] of enterprise on the basis of the number of working persons (employees on the payroll plus any active owners, partners and family members) calculated in accordance with the SBS Regulation from 2002." <sup>93</sup>	It is on the basis of this variable that SME status is determined.
Working persons in the enterprise	"[Employees] on the payroll plus any active owners, partners and family members" <sup>94</sup>	It is on the basis of this (continuous) variable that the average (mean) employment of a firm is calculated. <sup>95</sup>
Partner country	Country of origin (imports) and country of destination (exports).	It is on the basis of this variable that trade flows are categorised as intra- or extra-EU.
Export value	This includes freight and insurance costs up to the Dutch border.	Export value, together with re-export value, is used to determine whether a firm is exporting.
Re-export value	"The goods that are transported via the Netherlands and thereby become (temporarily) owned by a resident, without significant industrial processing." <sup>96</sup>	Re-export value, together with export value, is used to determine whether a firm is exporting.
Import value	For intra-EU imports, this includes the costs of freight and insurance up to the Dutch border, whereas for extra-EU imports, this includes the costs of freight and insurance up to the external border of the European Union.	Import value is used to determine whether a firm is importing.
Industry	SBI 2008 (Dutch Standard Industrial Classification). SBI 2008 and NACE Rev. 2 classifications are equivalent up to the four-digit level.	From this classification, aggregate data for five sectors were constructed: Agriculture, forestry and fishing; Industry; Manufacturing; Retail; and Services.

Source: CBS (2014) *Documentatierapport Internationale Handel in Goederen (IHG) [International Trade in Goods (IHG) Documentation Report]*; CBS (2014) *Documentatierapport Algemeen Bedrijven Register (ABR) 2014V1 [Documentation report – General Business Register (GBR) 2014V1]*

An SME is defined as an enterprise with less than 250 employees over the majority of the period during which it was in the dataset and information on the number of employees was available. Accordingly, changes in the SME population are due only to changes in the business demography, since a firm's status as an SME or a large enterprise does not change. This definition is used to ensure that a reasonably long data series exists for each SME so as to gain better insights into its trading pattern.

<sup>92</sup> Note that a distinction is made between transactions for which the partner country is marked as unspecified and transactions for which there is no information (i.e. blanks). Only the latter are treated as Intra-EU transactions.

<sup>93</sup> CBS (2014) *Documentatierapport Algemeen Bedrijven Register (ABR) 2014V1 [Documentation report – General Business Register (GBR) 2014V1]*.

<sup>94</sup> Ibid.

<sup>95</sup> This variable is not always consistent with the Structural Business Statistics enterprise size class. This may be because the two variables do not refer to employment at the same point in time within a year.

<sup>96</sup> CBS (2014) *Documentatierapport Internationale Handel in Goederen (IHG) [International Trade in Goods (IHG) Documentation Report]*.

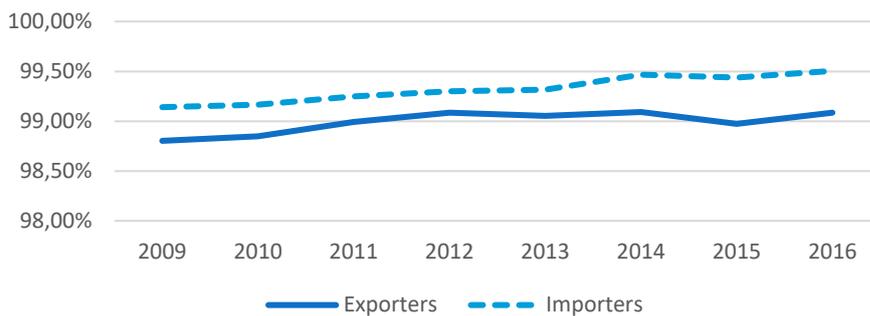
#### 6.5.4 Analysis

The share of SMEs in importing firms increased marginally between 2009 and 2016, from under 99.2% in 2009 to 99.5% in 2016 (Figure 87).

The share of SMEs in exporting firms also increased from 2009 to 2016, but the increase was not a steady one. The share increased until 2012, before stabilising and changing little until 2014. The following year, it fell slightly before reversing this decrease in 2016 (Figure 87).

Overall, the share of importing SMEs in total importing firms was higher than that of exporting SMEs total exporting firms.

**Figure 87: Share of exporting / importing SMEs in total exporting / importing firms**



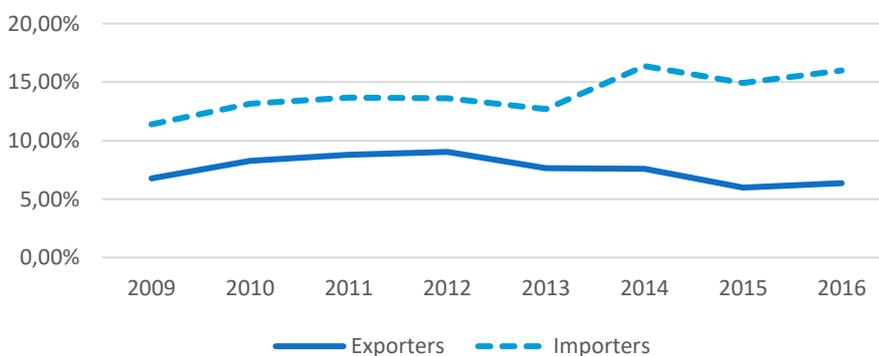
The two series are based on 1,642,526 observations (importers) and 874,163 observations (exporters)

Source: Statistics Netherlands and LE Europe analysis

The share of importing SMEs in all SMEs increased somewhat from 2009 to 2016 (Figure 88). The increase occurred mostly from 2013 onwards. In contrast, the share of exporting SMEs in all SMEs declined slightly, starting in 2013 following a few years of trending upwards (Figure 88).

It is not clear whether the increase in 2010 in the share of both exporting and importing SMEs reflects an actual increase in the number of SMEs trading internationally or merely reflects improvements in linking the business register and IHG datasets.

**Figure 88: Share of importing and exporting SMEs in total SME population**



Note: This analysis is based on 11,571,214 observations

Source: Statistics Netherlands and LE Europe analysis

More SMEs import than export and more SMEs import without exporting than export without importing (Table 39).

**Table 39: Import and export status of SMEs**

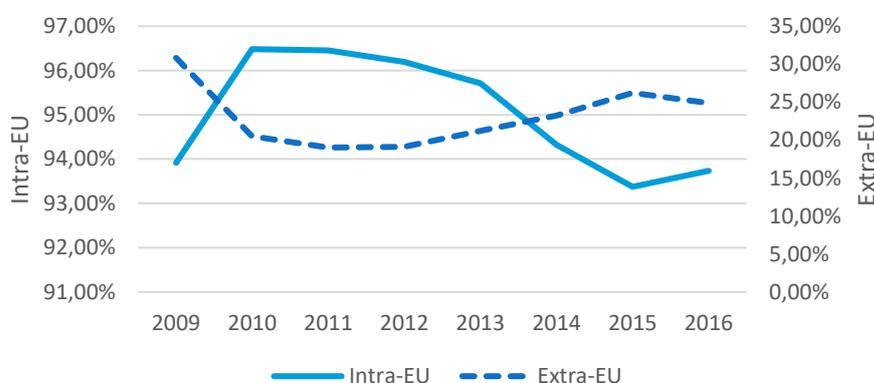
	Non-exporters	Exporters
Non-importers	83.54%	2.35%
Importers	8.98%	5.12%

The analysis is based on 11,571,214 observations

Source: Statistics Netherlands and LE Europe analysis

More than nine out of 10 exporting SMEs trade with the EU (Figure 89). After sharply rising from 2009 to 2010, the share of SMEs exporting within the EU consistently declined by approximately three percentage points between 2010 and 2015 and then rebounded marginally by 0.4 percentage point in 2016.

After an initial decline of over 10 percentage points between 2009 and 2011, the share of SMEs exporting to third countries gradually increased until 2015, increasing by five percentage points compared to 2011. However, the share declined again in 2016 by approximately 1.4 percentage points.

**Figure 89: Share of SME exporters trading with the EU and third countries**

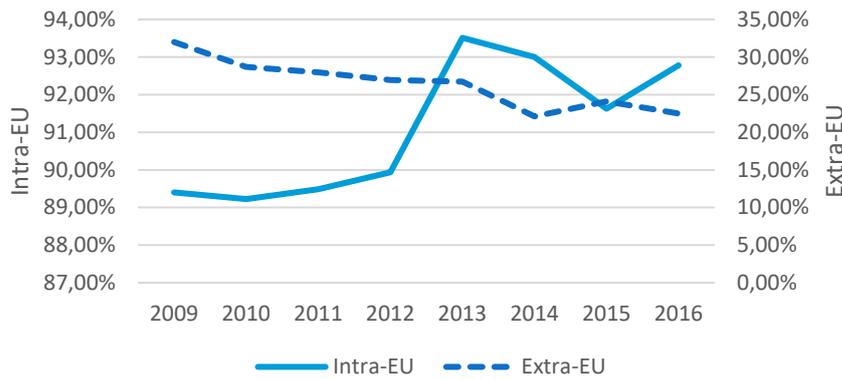
Note: This analysis is based on 865,426 observations

Source: Statistics Netherlands and LE Europe analysis

Overall, the share of SMEs importing from third countries declined from 2009 to 2016 (Figure 90). After gradually declining between 2009 and 2013, the share of SMEs importing from third countries fell more sharply, by more than four percentage points in 2014. Subsequently, after rising by two percentage points in 2015, the share dropped back close to its 2014 level in 2016.

In contrast, the share of SMEs importing from the EU increased from 2009 to 2016 (Figure 90). Between 2009 and 2013, this share increased by four percentage points, reaching a peak of 93.5%. Thereafter, the share fell to 91.5% in 2015 before increasing to approximately 93% in 2016.

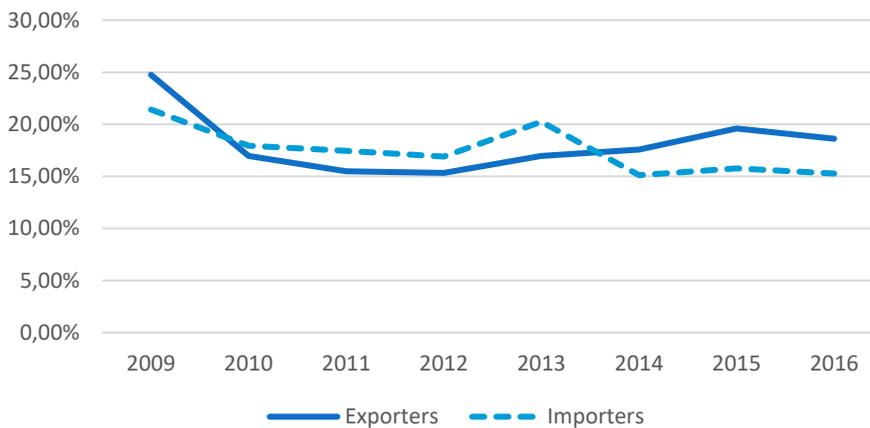
**Figure 90: Share of importing SMEs trading with the EU and third countries**



Note: This analysis is based on 1,631,831 observations  
 Source: Statistics Netherlands and LE Europe analysis

From 2010 onwards, the share of SMEs either exporting to or importing from both the EU and third countries generally remained in a range of 15% to 20% (Figure 91).

**Figure 91: Share of SMEs that export to or import from both the EU and third countries**



Note: The two series are based on 1,631,831 observations (importers) and 865,426 observations (exporters)  
 Source: Statistics Netherlands and LE Europe analysis

The analysis of the export pattern of SMEs covers the whole period during which they were in the business register.<sup>97</sup> Note that this analysis was undertaken for the period 2010-2016, as the linking between the IHG and the ABR substantially improved in 2010.

The reason for excluding the year 2009 from the analysis is that the analysis relies on classifying the export pattern of SMEs across the whole reference period. Specifically, a distinction is made between SMEs that export in every period (consistent exporters) and SMEs that export in some periods only (occasional exporters).

The issue is that SMEs which exported in each of the years of the period of interest, including in 2009, could be classified as occasional exporters simply because their 2009 trade data could not be linked to their business register data. This situation, of

<sup>97</sup> Note that this period may be made up of non-consecutive years (e.g. a death followed by a re-birth).

course, may occur in any year, but this risk is mitigated from 2010 onwards by improvements in the linking between the ABR and IHG.

SMEs are categorised as<sup>98</sup>:

- Non-exporters: SMEs present in the business register for at least two years and which have never exported.
- Occasional exporters: SMEs present in the business register for at least two years and which have exported in some, but not all, of these years.
- Consistent exporters: SMEs present in the business register for at least two years and which have exported in every one of these years.
- One-year non-exporters: SMEs present in the business register for only one year and which did not export.
- One-year exporters: SMEs present in the business register for only one year and which did export.

The vast majority of SMEs do not export, and of those SMEs which do export, most are occasional exporters (there are three times as many occasional exporters as there are consistent exporters) (Table 40).

**Table 40: Export pattern of SMEs 2010-2016**

Export pattern	Consistent exporters	Occasional exporters	Non-exporters	One-year exporters	One-year non-exporters	TOTAL
Share of all SMEs	2.47%	7.52%	72.70%	0.59%	16.73%	100%

Note: This analysis is based on the 2,059,584 firms that were in the business register for at least two years  
Source: Statistics Netherlands and LE Europe analysis

Although an SME's status as an occasional, consistent or non-exporter does not change over the period 2010-2016, the distribution of export patterns within the population of SMEs can vary across years due to entries into, exits from and re-entries of SMEs into the business register (Figure 92).

**Figure 92: Consistent and occasional exporting as a share of all SMEs in the business register for at least two years**



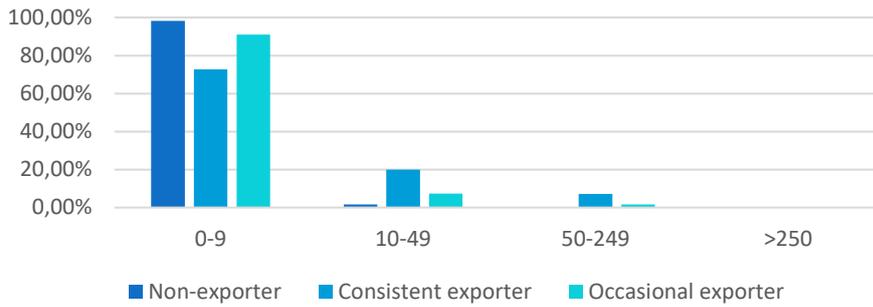
Note: This analysis is based on 9,850,400 observations from firms in the business register for at least two years

Source: Statistics Netherlands and LE Europe analysis

Exporting SMEs tend to employ more people than non-exporters (Figure 93). Slightly more than a quarter of consistent exporters employed at least 10 people on average.

<sup>98</sup> A firm's export pattern was classified based on the period 2010-2016 but its status as an SME or large enterprise was still based on its employment level between 2009 and 2016 (see definitions).

**Figure 93: Export pattern of different SME employment size class – 2010 - 2016**



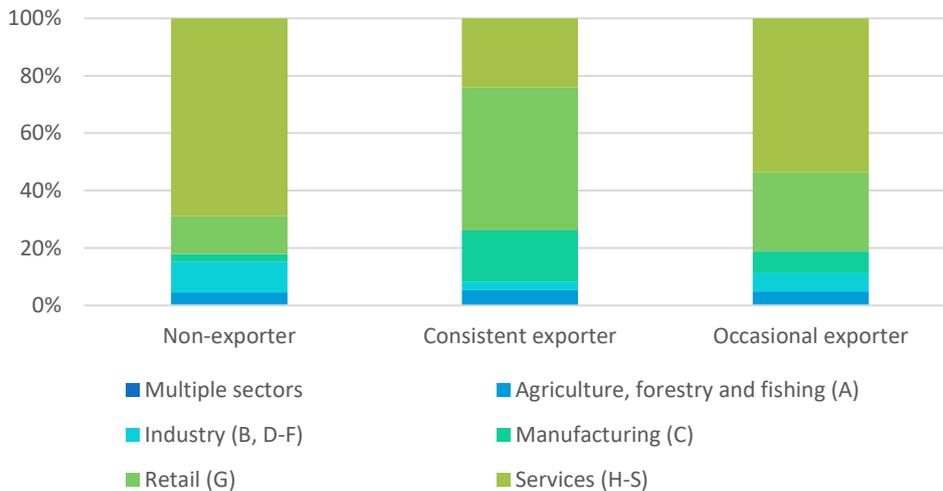
Note: This analysis is based on 2,059,584 firms which were in the business register for at least two years

Source: Statistics Netherlands and LE Europe analysis

Two thirds of non-exporting SMEs are in the services sector. The share of SMEs in the retail sector among non-exporters is marginally higher than that of SMEs in industry. SMEs in manufacturing and agriculture, forestry and fishing each account for less than five percent of non-exporting SMEs (Figure 94).

The share of manufacturing SMEs is markedly higher among exporters, particularly consistent exporters. The share of retail SMEs is also higher among exporters, especially consistent exporters. SMEs in the service sector account for more than half of occasional exporters, a much larger share than among consistent exporters. (Figure 94).

**Figure 94: Sectoral export pattern of SMEs**



Note: This analysis is based on 2,059,459 firms which were in the business register for at least two years. It does not include SBI sections corresponding to NACE Rev. 2 sections T and U (activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; and activities of extraterritorial organizations and bodies) or firms which were not classified or whose industry was unknown. Corresponding NACE Rev. 2 sections are included in brackets (indeed, the NACE Rev. 2 and SBI classifications are equivalent up to the four-digit level and NACE Rev. 2 sections are defined at the two-digit level). Firms were assigned a sector based on the modal NACE Rev. 2 section which was most frequent across years. Firms with multiple section modes were assigned the category "Multiple sectors"

Source: Statistics Netherlands and LE Europe analysis

A larger share of importing SMEs (consistent and occasional importers) are non-exporters than exporting SMEs (consistent and occasional exporters) are non-importers (Table 41).

**Table 41: Export and import pattern of SMEs**

Export/import pattern	Non-exporters	Consistent exporters	Occasional exporters	One-year exporters	One-year non-exporters
Non-importers	60.39%	0.24%	2.50%		
Consistent importers	2.06%	1.74%	1.47%		
Occasional importers	10.24%	0.49%	3.54%		
One-year importers				0.35%	1.09%
One-year non-importers				0.24%	15.64%

Note: This analysis is based on 2,491,031 firms

Source: Statistics Netherlands and LE Europe analysis

Building upon on the information provided in Table 41, the information in Table 42 shows that among SMEs that were in the business register in at least two years:

- Importers are moderately more likely than exporters to be consistent importers;
- An exporter is more likely to be a consistent importer than an importer a consistent exporter;
- Exporters are much more likely to import than non-exporters;
- Exporters are more likely than non-exporters to be consistent importers, conditional on importing.

**Table 42: Probabilities of exporting and importing**

Conditional on being...	...an exporter	...an importer	...a non-exporter
Likelihood of being consistent, conditional on being an exporter/importer <sup>99</sup>	24.72%	26.98%	
Likelihood of being a consistent importer (exporter), conditional on being a consistent exporter/importer	70.39%	32.93%	
Likelihood of importing conditional on being an exporter/non-exporter	72.54%		16.93%
Likelihood of being a consistent importer, conditional on importing and on being an exporter/non-exporter	44.32%		16.78%

Note: here, "likelihoods" refer to conditional frequencies. The percentages are based on the analysis of frequencies in the previous table. This analysis is based on firms that were in the business register for at least two years

Source: Statistics Netherlands and LE Europe analysis

The analysis below presents the recent export pattern of SMEs in 2016. It should be noted that only SMEs that were in the business register for the whole of the period are included, so that all SMEs' export patterns are assessed based on a consistent reference period and throughout the whole of the period in which they were active.

The vast majority of SMEs that were in the ABR in 2016 did not export in 2015 (Figure 95).

<sup>99</sup> Conditional frequencies in this table are calculated using Bayes' rule:

$$Prob(A|B) = \frac{Prob(A, B)}{Prob(B)}$$

For instance, the probability of being a consistent importer, conditional on being a consistent exporter calculated as follows:

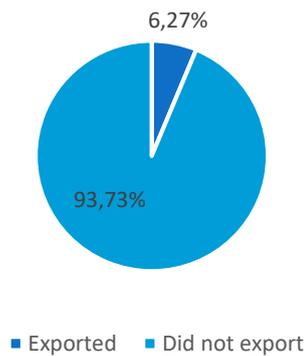
$$Prob(Consistent_I | Consistent_E) = \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E)}$$

$$= \frac{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}{Prob(Consistent_E)}$$

Moreover, most exporting SMEs exported during only some of the years of the 2012-2015 period. In fact, there are approximately 50% more SMEs that exported in only some of these years than SMEs which exported in all three years (Figure 96).

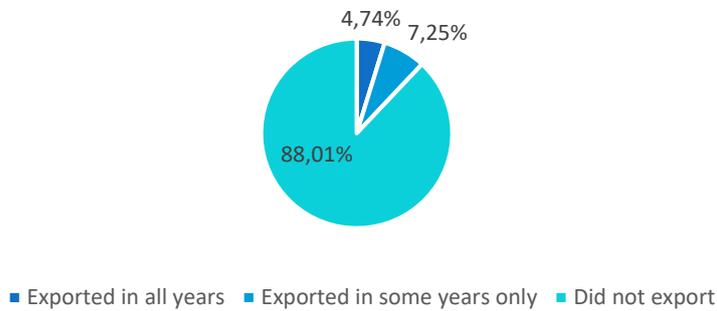
Note that the firms included in this analysis were in the business register for each of the previous three years. Therefore, any firm that exited and re-entered the business register (e.g. a death followed by a rebirth) would not be included in this analysis. Hence, the patterns observed are those of firms that were consistently active during the previous three years.

**Figure 95: Export pattern in 2015 of SMEs which were in the database in 2016**



Note: This analysis is based on 1,478,783 firms  
 Source: Statistics Netherlands and LE Europe analysis

**Figure 96: Export pattern over the period 2012-2015 of SMEs which were in the database in 2016**



This analysis is based on 1,144,574 firms  
 Source: Statistics Netherlands and LE Europe analysis

## 6.6 Slovakia

### 6.6.1 Disclaimer

The analysis below relied on a dataset made up of the external trade statistics and business register information which was provided by the Statistical Office of the Slovak Republic. The results and conclusions based on the analysis of that data are those of the researcher.

### 6.6.2 Introduction

The analysis in this chapter draws on a dataset provided by the Statistical Office of the Slovak Republic (SO SR) covering SMEs<sup>100</sup> trading internationally over the years 2008-2017. It should be emphasised that the analysis is similar to that undertaken for Greece and differs from that undertaken for Estonia, Finland, Ireland and Netherlands as it only covers SMEs which trade internationally.

The following key facts emerge from the analysis:

- Most SMEs that have exported have done so occasionally rather than consistently.<sup>101</sup>
- SMEs that export consistently tend to employ more people than occasional exporters.
- SMEs in the retail sector form the largest group of exporting SMEs, and SMEs operating in the service sector are the largest group of non-exporting SMEs. The share of manufacturing SMEs is the largest among consistent exporters (25%). This share is less than 10% in the case of non-exporting SMEs.
- More SMEs import than export.
- Older SMEs are more likely to export and to do so more consistently.

The next section describes the dataset used in the analysis. The subsequent section presents the results of the analysis, focusing on the import and export behaviour of SMEs from 2008 to 2017; the characteristics of consistent and occasional exporters; and the recent export pattern of SMEs.

### 6.6.3 Data

The analysis below uses a microdata database of external trade statistics linked to economic characteristics from the business register provided by the SO SR. The dataset covers all firms trading internationally between 2008 and 2017, excluding the year 2010. This exclusion is due to a break in the data series caused by technical issues in estimating the import and export value of individual traders whose annual transaction value was below the Intrastat reporting threshold. These “small traders” would therefore have been underrepresented in 2010.

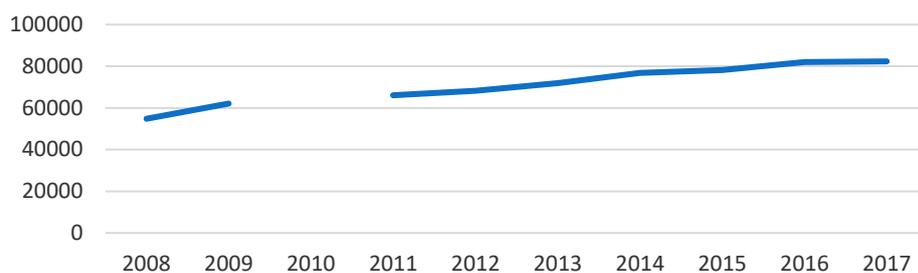
The resulting dataset is made up of 648,256 observations from 152,904 firms, including 642,616 observations from 152,091 SMEs. It does not include firms that have neither imported nor exported.

The number of SMEs and the share of SMEs in the dataset have consistently increased across the 2008-2017 period. (Figure 97 and Figure 98).

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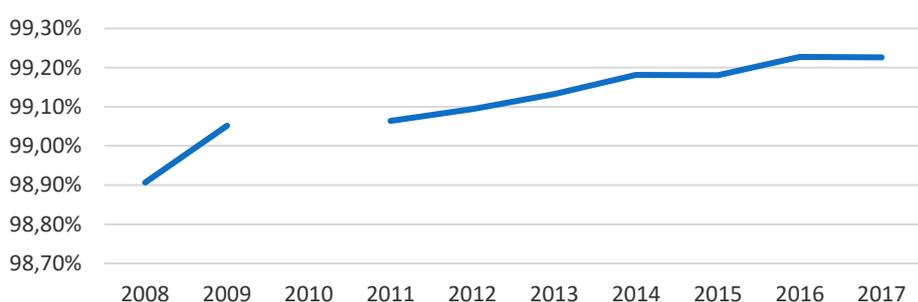
<sup>100</sup> An SME is defined as employing less than 250 persons over the majority of the period in which it was in the dataset.

<sup>101</sup> This analysis makes a distinction between “occasional” exporters, which export in some but not all periods, and “consistent exporters”, which export in all periods in which they are in the dataset.

**Figure 97: Number of SMEs trading internationally in the dataset used in the analysis**

Note: This analysis is based on 642,616 observations

Source: Statistical Office of the Slovak Republic and LE Europe analysis

**Figure 98: Share of SMEs trading internationally in the dataset used in the analysis**

Note: This analysis is based on 648,256 observations

Source: Statistical Office of the Slovak Republic and LE Europe analysis

The key concepts and variable definitions are presented in Table 43.

**Table 43: Definition of key variables and related concepts**

Variable	Definition/comment	Related concept/further comments
Number of employees	"The number of employees refers to the number of those persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. A worker is considered to be a wage or salary earner of a particular unit if he receives a wage or salary from the unit regardless of where the work is done (in or outside the production unit)." <sup>102</sup>	These are provided in size classes.
Export value	Statistical value of exports, namely the FOB value (free-on-board) of the goods, or "the transaction value of the goods and the value of services performed to deliver goods to the border of the exporting country." <sup>103</sup>	Export value is used to determine whether a firm is exporting.
Import value	Statistical value of imports, namely the CIF type value (cost, insurance, freight) or "the transaction value of	Import value is used to determine whether a firm is importing.

<sup>102</sup> Eurostat (2018) International trade in goods - trade by enterprise characteristics (TEC). [Online] Available at: [https://ec.europa.eu/eurostat/cache/metadata/en/ext\\_tec\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/ext_tec_esms.htm) [Accessed 09 October 2018].

<sup>103</sup> Eurostat (2015) "User guide on European statistics on international trade in goods".

	the goods, the value of services performed to deliver goods to the border of the exporting country and the value of the services performed to deliver the goods from the border of the exporting country to the border of the importing country. <sup>104</sup>	
Partner	The trading partners of exporters are based on the country of destination. Imports from the EU and third countries are based respectively on the country of consignment and origin. <sup>105</sup>	This variable is provided at the intra-EU/extra-EU level.
Age	Age ranges are used.	It is on this basis that cohorts were defined (in 2017).
Industry	NACE Rev. 2 codes.	From this classification, five sectors were constructed: Agriculture, forestry and fishing; Industry; Manufacturing; Retail; and Services.

Sources: Eurostat (2018) *International trade in goods - trade by enterprise characteristics (TEC)*. [Online] Available at: [https://ec.europa.eu/eurostat/cache/metadata/en/ext\\_tec\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/ext_tec_esms.htm) [Accessed 09 October 2018]

An SME is defined as an enterprise which had less than 250 employees throughout the majority of the period during which it was in the dataset and information on the number of employees was available. Accordingly, any changes in the SME population are due only to changes in the business demography, as a firm's status as an SME or a large enterprise does not change. This definition is used to ensure that a reasonably long data series exists for each SME so as to gain better insights into its trading pattern.

#### 6.6.4 Results of the analysis

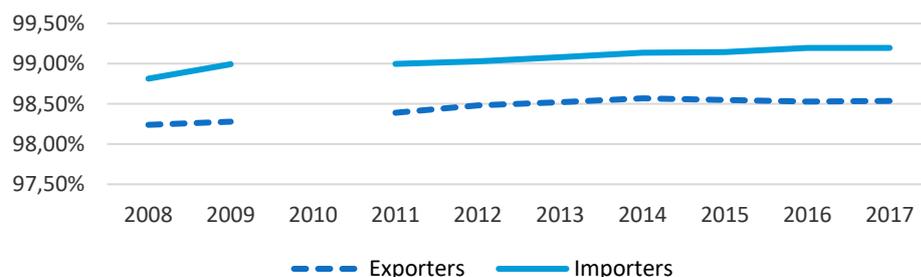
The share of importing SMEs in the total population of importing firms is slightly higher than the share of exporting SMEs in all exporting firms, although the difference is small (Figure 99).

Moreover, the share of importing SMEs in all SMEs trading internationally is higher than the share of exporting SMEs (Figure 100).

Finally, more SMEs import and do not export than export and do not import (Table 44).

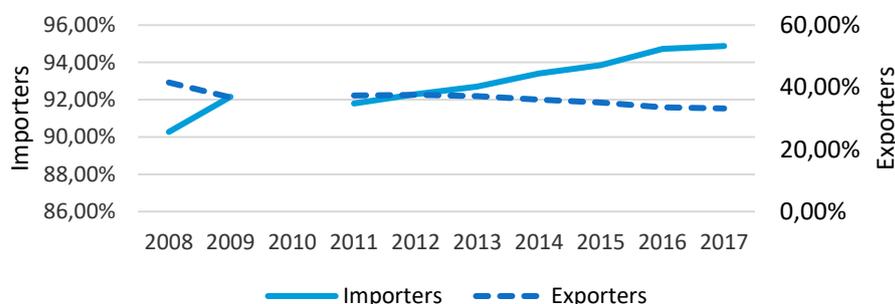
<sup>104</sup> Ibid.

<sup>105</sup> In intra-EU trade, the Member State of consignment of goods is the last Member State in which "halts or legal operations not inherent in [the goods'] transport" have taken place before the goods arriving at their final destination. Eurostat (n.d.) "Member State of consignment". In Eurostat (n.d.) Concepts and Definitions Database. [Online] Available at: [http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP\\_GLOSSARY\\_NOM\\_DTL\\_VIEW&StrNm=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter\\_valid=0&IntCurrentPage=1](http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=DSP_GLOSSARY_NOM_DTL_VIEW&StrNm=CODED2&StrLanguageCode=EN&IntKey=16521285&RdoSearch=&TxtSearch=&CboTheme=&IsTer=&ter_valid=0&IntCurrentPage=1) [accessed 27 September 2018]

**Figure 99: Share of SMEs in exporting and importing firms**

Note: The two series are based on 603,619 observations (importers) and 236,225 observations (exporters)

Source: Statistical Office of the Slovak Republic and LE Europe analysis

**Figure 100: Share of exporting and importing SMEs in population of SMEs trading internationally**

Note: This analysis is based on 642,616 observations

Source: Statistical Office of the Slovak Republic and LE Europe analysis

**Table 44: SME export and import status of SMEs**

	Non-exporters	Exporters
Non-importers	N/A	6.93%
Importers	63.81%	29.96%

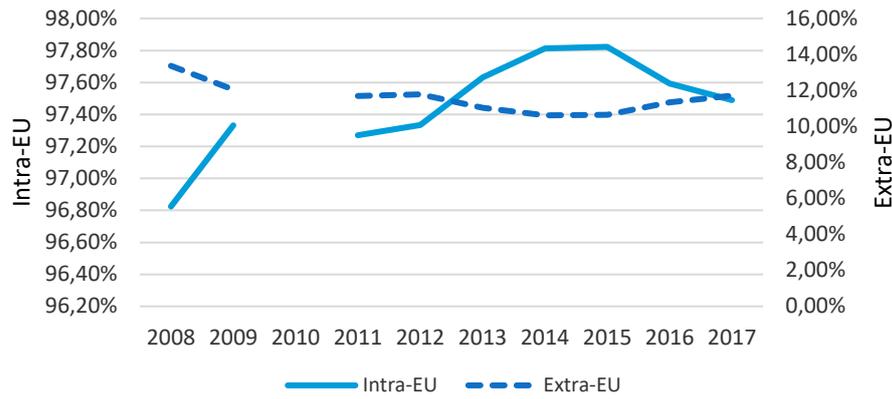
Note: The analysis is based on 642,616 observations

Source: Statistical Office of the Slovak Republic and LE Europe analysis

Both importing and exporting SMEs trade mainly with other Member States (Figure 101 and Figure 102).

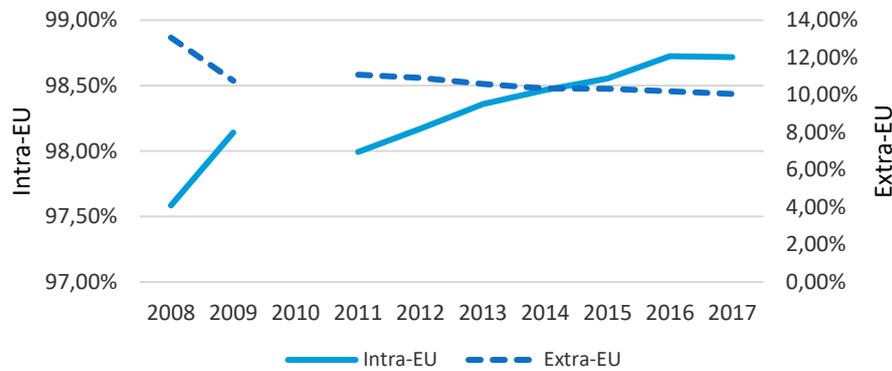
The shares of importing and exporting SMEs which trade with both the EU and third countries is close to 10% (Figure 103). This share is close to the share of SMEs trading with third countries for both importing and exporting SMEs, indicating that most SMEs that trade with third countries also trade with EU Member States. Across the reference period, the shares of intra-EU importers and exporters increased relative to the shares of extra-EU importers and exporters.

**Figure 101: Share of exporting SMEs trading with the EU and third countries**



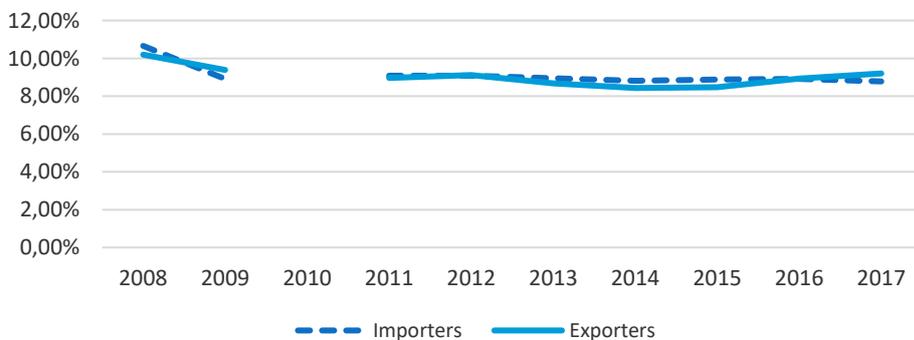
Note: This analysis is based on 232,594 observations  
 Source: Statistical Office of the Slovak Republic and LE Europe analysis

**Figure 102: Share of importing SMEs trading with the EU and third countries**



Note: This analysis is based on 598,070 observations  
 Source: Statistical Office of the Slovak Republic and LE Europe analysis

**Figure 103: Share of SMEs trading internationally that export to and import from both the EU and third countries**



Note: The two series are based on 598,070 observations (importers) and 232,594 observations (exporters)  
 Source: Statistical Office of the Slovak Republic and LE Europe analysis

In order to analyse the export pattern of SMEs over the period during which they were in the dataset,<sup>106</sup> SMEs were categorised as follows:

- Non-exporters: SMEs present in the dataset for at least two (not necessarily consecutive) years and which have never exported. These are SMEs which are importing but not exporting.
- Occasional exporters: SMEs present in the dataset for at least two (not necessarily consecutive) years and which have exported in some, but not all, of these years.
- Consistent exporters: SMEs present in the dataset for at least two (not necessarily consecutive) years and which have exported in every one of these years.
- One-year non-exporters: SMEs present in the dataset for only one year and which did not export.
- One-year exporters: SMEs present in the dataset for only one year and which did export.

Less than 50% of SMEs trading internationally have exported, and of these exporting SMEs, most are occasional exporters (Table 45).

As already noted, only SMEs trading internationally are included in the dataset. Therefore, the group of non-exporters does not include all non-exporting SMEs. It includes only non-exporting SMEs which imported between 2008 and 2017.

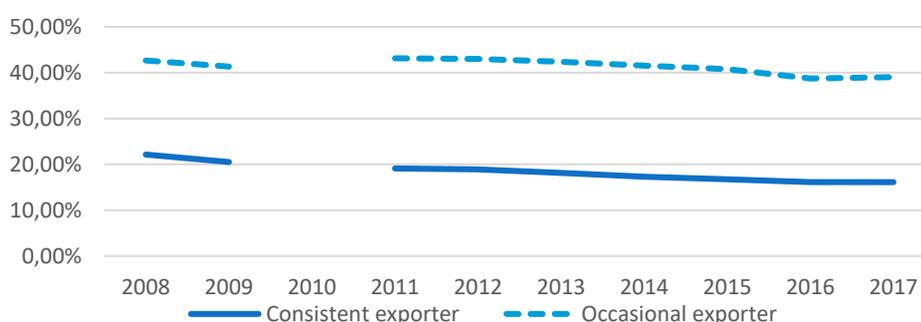
**Table 45: Export pattern of SMEs**

Export pattern	Consistent exporters	Occasional exporters	Non-exporters	One-year exporters	One-year non-exporters	TOTAL
Shares of SMEs trading internationally	13.03%	28.09%	39.18%	3.84%	15.87%	100%

Source: Statistical Office of the Slovak Republic and LE Europe analysis

Although a firm's status as an occasional, consistent or non-exporter does not change during its lifetime, the distribution of export patterns within the population of SMEs can vary across years due to entries into, exits from and re-entries of SMEs into the dataset. The data show that the share of occasional and consistent SME exporters in the total of all SMEs in the database declined from 2008 to 2017 (Figure 104).

**Figure 104: Consistent and occasional SME exporters as a share of all SMEs trading internationally**



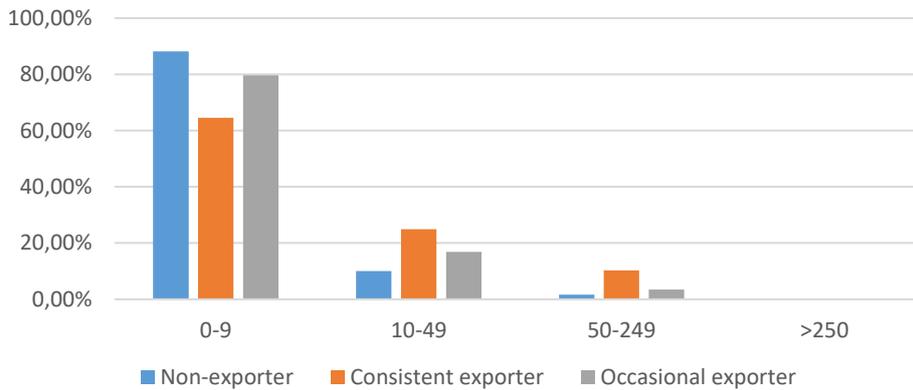
Note: This analysis is based on 612,645 observations from firms that were in the dataset for at least two years

Source: Statistical Office of the Slovak Republic and LE Europe analysis

<sup>106</sup> Note that only SMEs trading internationally are included in the dataset. Therefore, if a firm is not in the dataset, it is not possible to infer whether the firm is still active but not trading or whether it is no longer active as an autonomous entity. Note also that firm's export behaviour in 2010 was not used to classify a firm's export pattern.

Exporting SMEs tend to employ more people than non-exporters. More than one third of consistent exporters employ at least 10 people (Figure 105).

**Figure 105: Export pattern of SMEs by SME employment size class**

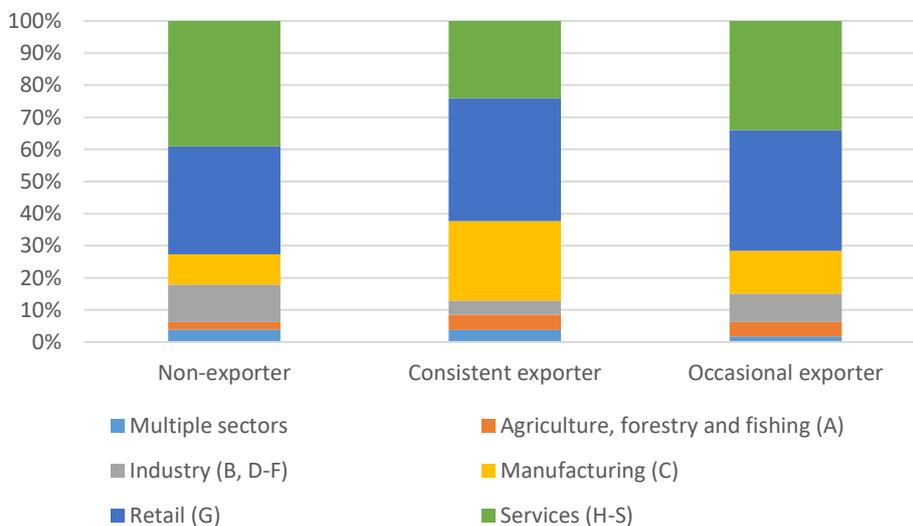


Note: This analysis is based on 551,072 observations from firms which were in the dataset for at least two years

Source: Statistical Office of the Slovak Republic and LE Europe analysis

Retailers form the largest group of exporting SMEs, and SMEs operating in the service sector are the largest group of non-exporting SMEs (Figure 106). The share of manufacturing SMEs is largest among consistent exporters (25%) and is less than 10% in the case of non-exporters. SMEs in agriculture, forestry and fishing account for a larger share of exporters than of non-exporters. SMEs in the industry sector account for a slightly larger share of exporters than of non-exporters.

**Figure 106: SME export patterns in different sectors**



Note: This analysis is based on 120,279 firms which were in the dataset for at least two years and for which a NACE Rev. 2 section was available for at least one year. It does not include NACE Rev. 2 sections T and U (activities of households as employers; undifferentiated goods- and services-producing activities of households for own use, and activities of extraterritorial organisations and bodies) or firms which were not classified or whose industry was unknown. NACE Rev. 2 sections are included in brackets. Firms were assigned a sector based on the modal NACE Rev. 2 section which was the most frequent across years. Firms with multiple section modes were assigned the category "Multiple sectors"

Source: Statistical Office of the Slovak Republic and LE Europe analysis

More SMEs import than export, and in particular, more SMEs import and do not export than export and do not import (Table 46).

**Table 46: SME export and import patterns over the period 2008-2017**

Export/import pattern	Non-exporters	Consistent exporters	Occasional exporters	One-year exporters	One-year non-exporters
Non-importers		2.06%			
Consistent importers	39.18%	7.55%	19.73%		
Occasional importers		3.41%	8.36%		
One-year importers				1.22%	15.87%
One-year non-importers				2.62%	

Note: This analysis is based on 152,091 firms. Note that firms which neither export nor import are not included in the dataset. For this reason, if a firm never exports (imports)

Source: Statistical Office of the Slovak Republic and LE Europe analysis

Building upon on the data presented in Table 46, the information provided in Table 47 shows that among firms present in the dataset in at least two periods:

- Importers are more likely than exporters to be consistent;
- An exporter is more likely to be a consistent importer than an importer a consistent exporter.

**Table 47: SME exporting and importing probabilities**

Conditional on being...	...an exporter	...an importer
<b>Likelihood of being consistent</b> , conditional on being an exporter/importer <sup>107</sup>	31.68%	84.96%
<b>Likelihood of being a consistent importer (exporter)</b> , conditional on being a consistent exporter/importer	57.99%	11.37%

Note: "likelihoods" refer to conditional frequencies. The percentages are based on the analysis of frequencies in the previous table. This analysis is based on firms that were in the dataset for at least two years

Source: Statistical Office of the Slovak Republic and LE Europe analysis

In order to assess the impact of age of an SME on the exporting behaviour of SMEs, the analysis below focuses on the export pattern of seven SME cohorts in 2016 (Figure 107) and over the period 2014 to 2016 (Figure 108).

It should be noted that in the analysis of the export pattern over 2014 to 2016, only SMEs that were in the dataset for the whole of that period are included. This is to ensure that the SMEs' three-year export patterns are assessed on a consistent basis (i.e. using the same population in each year).

The key fact to note is that younger cohorts of SMEs comprise fewer exporters than older cohorts (Figure 107).

Moreover, older SMEs (over 6 years old) are more consistent in their recent export behaviour than younger SMEs in the sense that the share of SMEs that exported each year over the period 2014 - 2016 is larger among older SMEs (Figure 108).

<sup>107</sup> Conditional frequencies in this table are calculated using Bayes' rule:

$$Prob(A|B) = \frac{Prob(A, B)}{Prob(B)}$$

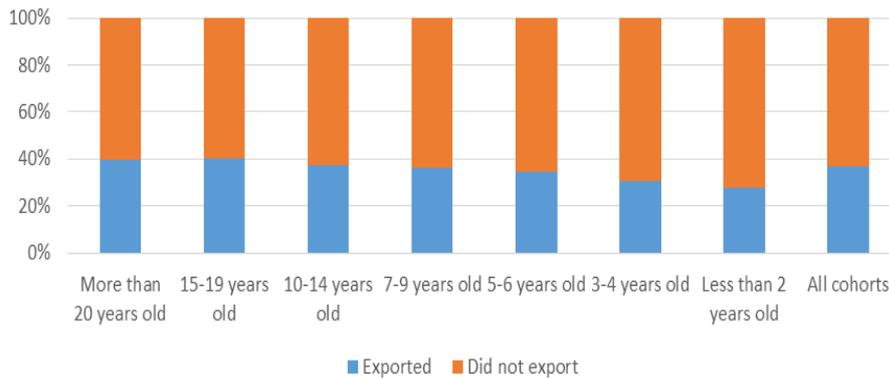
For instance, the probability of being a consistent importer, conditional on being a consistent exporter calculated as follows:

$$\begin{aligned}
 Prob(Consistent_I | Consistent_E) &= \frac{Prob(Consistent_I, Consistent_E)}{Prob(Consistent_E)} \\
 &= \frac{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}{Prob(Consistent_E, Consistent_I) + Prob(Consistent_E, Occasional_I) + Prob(Consistent_E, Non - importer_I)}
 \end{aligned}$$

However, among younger firms, the combined share of consistent and occasional exporters is not markedly lower than in older firms: the lower share of consistent exporters among these younger enterprises is offset by a larger share of occasional exporters.

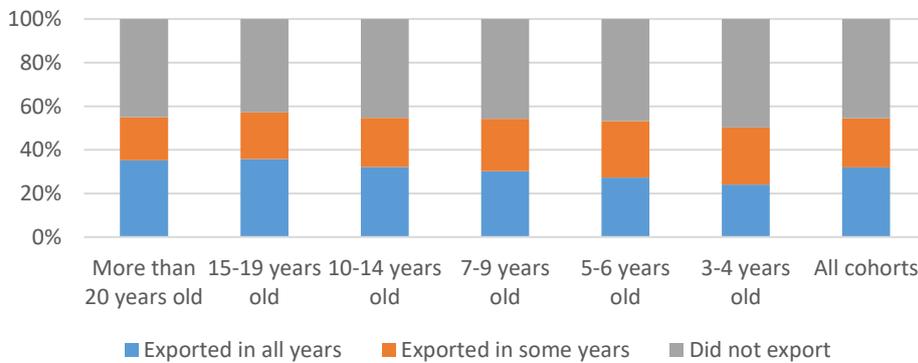
Note that this analysis of the three-year pattern of SME exporting behaviour covers only SMEs which were in the dataset in each year of the 2014 to 2016 period. Consequently, any firm that exited and re-entered the dataset (e.g. a death followed by a rebirth) would not be included in this analysis. Hence, the observed patterns are those of SMEs that were consistently active during the previous three years.

**Figure 107: Export pattern in 2016 of SMEs which were in the database in 2017**



Note: This analysis is based on 67,813 firms  
 Source: Statistical Office of the Slovak Republic and LE Europe analysis

**Figure 108: Export pattern over the period 2014-2016 of SMEs which were in the database in 2017**



Note: This analysis is based on 48,413 firms. The pool of observations of “all cohorts” also includes firms whose age is unknown  
 Source: Statistical Office of the Slovak Republic and LE Europe analysis

# 7. Case studies of issues and challenges faced by exporting SMEs

## 7.1 Case study 1: ENERTIME interview with Gilles DAVID, CEO

Gilles' story, as described below, illustrates how his export strategy was refined, despite the limited support available for energy industries.

Gilles David founded Enertime with Fabien Michel ten years ago in Courbevoie, a satellite city of Paris. As an engineer who has worked for Alstom Philippines and Areva, Gilles selectively recruited 30 employees with specific engineering skillsets. Enertime is engaged in energy transition activities and the construction of turbo machines, organic ranking cycle (ORC) turbines, and heat pumps.

### 7.1.1 Export activities

The first country Enertime entered was China, followed by Ukraine and Thailand. Gilles also went to Eastern Europe and is now targeting Mexico. When asked why he was not entering EU countries first, the CEO indicated that, according to him, the low price of electricity limits the attractiveness of these markets. In Europe, industry is not charged the same prices for electricity consumption as households. Industrial consumers do not receive incentives (e.g. government subsidies) to embrace energy efficiency actions either. Gilles feels that the strong growth of renewable energy capacity in recent years has pushed market prices down too far and that the market itself has suffered as a result.

Recently, China restricted the use of charcoal, demonstrating its continued interest in the energy efficiency of its industrial base. Gilles sees this as an opportunity to conduct most of his export activities there. He was not deterred by the prospect of going outside the EU and entering the Chinese market. This was partially because he had hired Chinese students based in France to make contact with prospective customers in the local language on his behalf. Enertime gained visibility through their website, collaborating with universities and participating in seminars. Twice a year Gilles takes part in a technology convention, where he networks with local parties interested in his products.

Gilles feels lucky that he has not encountered any major legislative issues. He chose his clients wisely, avoiding those located in areas with political instability. His second strategy is to withdraw from immature markets, such as Japan or India, where he considers that awareness and motivation are not yet sufficient; "Demonstrating your technology represents a cost and is time consuming, especially if these countries are not aware yet of your activity."

### 7.1.2 Support

Gilles has thoroughly explored several kinds of subsidy, offered by both public and private organisations, spanning companies like TOTAL through to public institutions such as the National Research Agency.

At the European level, Enertime did not succeed in its Horizon 2020 bid, but managed to secure a grant of EUR 200 000. With regard to the EU Gateway programme, Gilles found it helpful in terms of knowledge resources, allowing him to be aware of the trends in other countries.

At the national level, he acknowledges the existing financing opportunities from the COFACE (Compagnie Française d'Assurance pour le Commerce Extérieur), which

grants loans to be reimbursed once profit is earned. However, the need to provide a financial guarantee for the loan prevented him from proceeding further with the process. Overall, Gilles regretted the lack of general support for his business.

### **7.1.3 Challenges**

Gilles is disappointed by the lack of French programmes supporting international expansion. The only supporting actions were invitations to seminars by the Ministry of Foreign Affairs and embassies. "Furthermore, he felt the Banque Public d'Investissement is mainly focusing on equity financing in the start-up/development phase rather than supporting exports during a scale-up phase. Business France, the organisation in charge of promoting the internationalisation of French companies, organises meetings between ministers and industrial stakeholders, which do not involve any clients.

According to Gilles, being a French company active in energy transition means being alone. He advises entrepreneurs facing similar challenges to join or form a European community to survive: "You are better off belonging to a European framework than being the only French company in the market." Finally, Gilles feels that clean tech is also a sector struggling to find investors at the international level, with the reluctance of investors to bet on clean tech constituting a market failure.

### **7.1.4 Policy recommendations**

As a French entrepreneur, Gilles was eager to highlight several recommendations. Gilles does not feel that SMEs are consulted enough on big decisions. He feels his business has been sidelined by European representatives and the CGPME (Confederation des petites et moyennes entreprises – Confederation of SMEs). Gilles noted that, in his country, he feels that the outcomes of meetings of such confederations are decided in advance. He has found that large groups and multinationals are listened to but at the expense of smaller enterprises who struggle to express themselves.

Gilles also advised that innovation programmes should be made more transparent and understandable. SMEs are invited to apply for the Horizon2020 programme, which may potentially award them funding but many are not successful because consortiums seem to be favoured over SMEs, which can be frustrating for SMEs. Gilles explained that, in the past, Enertime has been rejected at the last minute because the decision-makers felt there was too much similarity between Enertime's products and those of other companies, a view Gilles does not share.

## 7.2 Case study 2: LOKALA DESIGN interview with Bjorke Koche, FOUNDER

Bjorke's story, as described below, highlights the importance of SMEs going out and proactively looking for the information they need to support the achievement of their international goals.

Bjorke founded Lokala Design in 2002 in a small town on Sweden's west coast with the goal of mixing old traditions with new technology to create high quality furniture with a strong identity and timeless design. The company uses locally grown wood as the main material in their furniture, which is manufactured in Sweden by a seasonal workforce of between five and ten people. Lokala Design is a family company, with an ethos of minimising their environmental impact in terms of material usage, manufacturing processes and the finished furniture products themselves.

### 7.2.1 *Internationalisation activities*

Lokala Design started selling their products outside of their home market of Sweden in 2003. Norway was initially targeted due to its proximity, similar language and affluence of its consumers, who are generally able to meet some of the extra costs involved in exporting to a high-cost country. Following this, Bjorke met a Japanese company at a furniture fair in Stockholm which, alongside a long held personal interest in Japan, led to Japan becoming their second export market in 2004. Bjorke visited Japan several times over the following five years with 'Swedish Style', an initiative organised by the Swedish embassy in Tokyo, as well as participating in trade missions facilitated by the European Commission's EU Gateways programme.

While Lokala Design now exports to 10-15 countries in total, its biggest focus is on the US market, with strong sales also generated in Japan, Singapore, Germany, the UK and France. Exports generate around 40 % of revenue, with extra-EU exports accounting for about 33% of that. Bjorke reflected that in hindsight, they perhaps began exporting to Japan (the second market) too early, given the significant cultural differences, distance and cost, but that in the long term it was a valuable learning experience. Lokala Design generally sells on a B2C basis, with customers purchasing directly online and Lokala Design shipping the products out to them.

### 7.2.2 *Internationalisation support*

Bjorke's view is that the support available to SMEs in Sweden for moving into foreign markets is generally quite good. It is mostly administered by the organisation Business Sweden, a government and industry backed organisation whose purpose is to help Swedish companies increase their presence on foreign markets, as well as to facilitate international investment in Sweden. Lokala Design benefited from a Business Opportunity Programme grant in 2004/2005 which made possible a mission to Japan, and has generally found the free advice and publications from Business Sweden to be thorough and effective. Despite this, much of the support available through the organisation is only available on a paid basis, and is quite expensive for small companies. Business Sweden could improve their offering by doing some proactive follow-up with the companies to whom they provide assistance.

Bjorke feels strongly however that the support provided by the regional business advisory board Almi was very useful, as were the roaming tours that Business Sweden does around Sweden's larger towns. Local business centres in regional areas also assist SMEs and are well regarded, providing more affordable forms of support than Business Sweden itself.

Lokala Design also participated in the European Commission's EU Gateways programme, visiting Japan three times, and Singapore, Vietnam and Indonesia once each. Bjorke found this to be a valuable experience, allowing the company to find additional Japanese customers in particular, and to grow their network on a more general level.

### 7.2.3 *Challenges*

Bjorke found the main challenge in internationalising to be finding the time and resources to proactively locate and generate business in foreign countries. Due to the small size of his company, it is difficult for him to be both instrumental in its day-to-day operations and to be abroad identifying new opportunities at the same time. In this sense, sponsored trade missions have been helpful and worthwhile, though more measures that help Swedish companies actually find intermediaries who speak the local languages of the countries being visited would increase the overall value proposition of such missions.

#### **7.2.4 Policy recommendations**

In terms of advice for fellow SMEs who might be looking to branch out into international markets, Bjorke had three main points:

- Take the time to properly research the kinds of support that are available; many firms fail to do this and consequently miss out on resources that may be available if only they would look for them: “The information is there, just go out and grab it!”
- Look for markets where Scandinavian products are in high demand; the perception, especially in Far East markets, that Scandinavian design is very much in fashion, has been a real driver of Lokala’s continued exports to these markets.
- Focus on developing relationships with suppliers and customers, rather than simply engaging in transactions. Creating ongoing value takes effort, but is worthwhile.

### 7.3 Case study 3: OWOW interview with Robin DOHMEN, CO-FOUNDER

Robin's story, as described below, illustrates the importance of alternative funding sources for start-ups in internationalising. In Robin's case, the well-known crowdfunding platform 'Kickstarter' was used as the initial means of internationalisation, and allowed the company – the Omnipresent World of Wizkids (OWOW) – to grow into its current form.

Robin and his close friend Pieter founded OWOW in Eindhoven, the Netherlands, with a vision to inject human passion and intuition into the creation of digital music. They began developing their product line in 2013 before launching their successful Kickstarter campaign in 2015. The company is now comprised of two sections – one that designs and builds small MIDI music controllers, and a creative agency that tackles large international branding and marketing projects for clients, with a focus on digital platforms and apps.

#### 7.3.1 Internationalisation through crowdfunding – a Kickstarter story

OWOW works internationally from both the product and creative agency sides of the business. The product line was initially internationalised through a successful Kickstarter campaign that raised EUR 51 326 from 452 individual backers over 30 days. Kickstarter provides some useful tools for those raising funds for their ideas on the site, including a list of service providers that addresses all phases of product fulfilment, from manufacturing to packaging to shipping and logistics.

While Kickstarter and the payment provider collectively charge a fee of between 5-8 %, the platform allows individuals and small companies to raise funds and take the next steps without having to invest in the infrastructure required for their own online store, and provides fundraising capabilities unavailable on marketplaces like eBay or Amazon. For Robin and OWOW, Kickstarter simplified the export process, to the point that now only one of the company's sixteen employees is engaged on the physical product side of the business.

OWOW's music products are the result of a love of top notch design and electronic music; they are highly innovative MIDI controllers that allow users to create electronic music using physical gestures, rather than just a regular keyboard and mouse setup. The company's range is comprised of five products in two configurations, which are shipped worldwide. OWOW's primary target market looking forward is the United States, due to the country's strong electronic music culture and large numbers of affluent consumers, particularly in California, where the company has anecdotal evidence of firms selling similar products deriving up to 80 % of their revenues.

While they have no business partners in the US yet (customers purchase online directly from the company), the long-term goal is to partner with a distributor as this is considered the best way to scale-up from the existing strategy that mainly revolves around targeted online marketing. It would also facilitate an expansion of production that can lower the unit price, given that a distributor would be purchasing far larger quantities of product than a lone consumer shopping online.

OWOW's creative agency has different roots, originating from a referral from another company to participate in a project in China. OWOW ended up completing the project themselves, and have gradually developed a small network in China alongside a number of projects in Scandinavia and a couple scattered elsewhere throughout Europe. Robin has found word-of-mouth advertising to be highly effective, now employing fifteen people on the creative agency side of the business despite having done no direct marketing. This is particularly so in China where referrals from satisfied customers generate a steady stream of business, and help address typical challenges associated with entering the Chinese market such as identifying and reaching out to potential customers, and overcoming issues of trust.

In both cases, OWOW's internationalisation has been organic and customer-driven, with the US and EU ending up as the company's largest markets thus far, more by chance than intention. More recently, as the company has consolidated its initial

successes, they have started direct marketing efforts aimed at promoting more structured growth in the future.

### **7.3.2 Internationalisation support**

OWOW received a small grant of EUR 49 000 from a government-backed organisation, the Netherlands Enterprise Agency (RVO), whose mission is to promote the growth of start-ups within regional areas of the Netherlands, in recognition of the fact that many start-ups tend to cluster around the larger cities of Rotterdam and Amsterdam. They were also beneficiaries of the WBSO research and development tax credit, an initiative of the Dutch Ministry of Economic Affairs and Climate Policy intended to incentivise SME R&D activity.

This initiative allows companies to offset wages and other costs associated with R&D by deducting a portion of the cost during the tax return process, as well as paying reduced wage taxes and lower national insurance contributions. The company initially planned to start up in Antwerp, across the border in Belgium, but they found that there was almost no support available and decided to go to Eindhoven instead.

### **7.3.3 Challenges & policy recommendations**

As is common among start-ups, keeping an enthusiastic, dedicated team paid each month was the biggest challenge in the company's early days. Striking the balance between investment in employees and in product/business development is crucial, and Robin found that just keeping the business going took up an enormous amount of time. In this context, he noted that the process of applying for government support for internationalisation could be streamlined, to be less time-consuming (OWOW actually hired an agency to complete the application process on their behalf, given the significant administrative requirements).

This would really improve its impact because other than the application process, Robin found the administration of the support itself quite efficient. He did note, however, a lack of transparency regarding taxation treatment of business being conducted in Asia, where some larger-than-expected tax bills were received. Further support could be provided by the government to enable a clearer understanding among small firms of their tax obligations in these circumstances.

For other SMEs considering expanding their businesses internationally, Robin really recommends the use of established platforms that already have large user bases (like Kickstarter), because they help take a lot of the work out of the process and to do it all on your own as a start-up is really tough. Seeking partnerships with established firms could also be a way to go.

## 7.4 Case study 4: WAVETECH, interview with Paul Aalto

Paul's story, as described below, illustrates how Wavetech is preparing to export overseas from 2019 onwards, thanks to the support of a northern European government.

Paul is an engineer who has been working for 25 years across several positions in the marine industry. He currently holds the position of Chief Operating Officer at Wavetech. Wavetech employs 18 employees in total, across an office in Finland, a manufacturing site in Estonia and operational sites in Scotland.

### 7.4.1 A strategic establishment

Wavetech produces wave energy converters that have a minimal impact on the environment, while providing real economic opportunities to communities, especially in remote areas. Although manufacturing is based in Estonia, Paul strategically chose Scotland for the establishment of an operational testing site in 2016 as the European Maritime Energy Centre is based there and was ready and willing to provide test infrastructure.

Coincidentally, the 'Clean Energy from Ocean Waves' project was also moved there, from its previous location at the WaveHub at Cornwall. The site also allows for the wave energy converters being tested to be exposed to some of the harshest ocean conditions on the planet. For now, the company is applying for tenders with the goal of being selected as a supplying partner in larger projects.

### 7.4.2 Preparation for internationalisation

While Wavetech has already deployed its technology outside of its home market of Finland, this has mainly been on a testing and development basis. Despite the technology still being in the development/refinement phase, projects in both China and Malaysia in 2019 are being considered, which would take place alongside existing operations in the UK. Paul makes no secret of the difficulty in finding good partners with regard to both the commercial deployment and further development of Wavetech's wave energy converter technology. Paul also noted that the level of readiness of the host country often represents an issue, as some require the energy produced to be readily available, and don't yet accept that the technology is still developing or that the product is still novel.

### 7.4.3 Support

Paul believes strongly in the concept underpinning his product, and works closely with local companies and other partners (such as universities) in prospective project locations abroad. The Finnish government, through the Ministry of Energy and its network of foreign embassies contributes to the advancement of Wavetech's projects where possible, though Wavetech has not thus far received any financial assistance for internationalisation. This is mainly because most government programmes operate by means of match funding, whereby the programme 'matches' the funding put forward by an SME towards a project (usually up to 50 %); given that Paul is not engaged in any commercial projects generating funds to be matched, this mechanism is not generally considered by Paul to be a workable financing solution.

Despite this, Paul found quite a lot of support overall, especially from public bodies and banks, who can open doors to meet potential customers and suppliers. As Wavetech is still predominantly focused on the development and testing of its technologies rather than actually exporting or deploying them, it does not yet benefit from subsidies or loans aimed at promoting SME internationalisation. Paul has however benefited from EU funding related to research and development, with both of Wavetech's ongoing projects funded by the European Commission's Horizon2020 programme, the efficient administration of which Wavetech commended.

He noted though that the funding mechanism's provision of only one advance payment, while very helpful overall, makes cash flow management challenging at times. That said, Wavetech appreciated the clarity of roles that is allowed by the structure of the programme, with the project being granted a high level of autonomy

after the award of funding, and little in the way of interference or onerous reporting requirements.

#### **7.4.4 Trade missions**

Thanks to EU Gateway, Wavetech has visited Korea, Japan and soon, Singapore. The programme was widely regarded as a positive experience, enabling Wavetech to make contacts and be aware of customers in these potential future markets. Overall, Paul felt the programme offered good exposure for the company, and expects that the targeted countries will become more mature regarding wave technologies in the future.

#### **7.4.5 A strategic turn and opportunities for the wave energy sector**

For Paul, digitalisation is inevitable. He is conscious that energy management solutions will be almost exclusively digital in the near future and has considered the possibility that another company operating in this area could one day allow Wavetech to offer an ongoing service instead of only a one-off product. Despite this, he observed that there is not currently a market-ready concept for how operations, maintenance and customer service functions, among others, should be structured digitally, although he acknowledged that once the product itself reaches a certain level of maturity, the digitalisation of supporting functions would be prioritised.

Paul is pragmatic and aware of the potential for Wavetech's technology to improve the lives of people around the world. Hence, Paul is anticipating the needs of people living in rural, remote and isolated locations and looking for opportunities to deploy wave energy converter technology there. On a broader level, Wavetech is on the lookout for project developers and funding partners, particularly from the Far East, in order to reach customers all around the world.

#### **7.4.6 Policy recommendations**

Paul emphasised that no single piece of advice can be applicable to everyone, as he believes each business is different. The main issue he stressed is that most SMEs struggle with access to finance. In that sense, he has a strong message to address to the EU: "The game has changed over the last one and a half years. Most of the projects in this field are initiated in the Pacific area but definitely not in the EU. I would like to see more risk-taking from the EU, to fund companies with unproven technologies". While Paul supports Europe's heavy focus on mature wind and solar technologies, he stressed it should not be at the expense of high-potential technologies simply because they are as yet 'unproven'. In this sense, an innovative company such as Wavetech, which is taking risks, should get a better chance to stand out from the crowd. Paul also noted the highly active strategy that China is currently pursuing with regard to significant investments in promising SMEs throughout central and Eastern Europe, and that it would be a shame to see the EU lose companies like this because of its focus on or preference for certain technologies.

## 7.5 Case study 5: XLAB d.o.o interview with Jure POMPE – Co-Founder & Managing Director

Jure's story, as described below, illustrates how international expansion was key to the survival of XLAB d.o.o following the significant market downturn after the September 11 attacks in the United States in 2001. Jure co-founded XLAB with Gregor Pipan in 2001 in Slovenia, as a software development company focusing on cloud computing, big data, the internet of things (IoT) and cybersecurity. The company is spread across three product divisions and has been selling internationally almost since its inception, with its products now available in over 100 countries around the world. Jure is a managing director, focused on the company's main product division, with his co-founder leading the research department and a third, fairly small but growing department providing image optimisation software for use in medical and dental imaging.

### 7.5.1 *An SME that adapts to changes*

XLAB's internationalisation started with Switzerland, as a result of an existing business relationship with a Swiss firm from a previous business venture. Shortly after the firm's inception, the 9/11 attacks occurred and the market collapsed, with Jure's firm struggling to find projects and surviving for a period thanks to the stable relationship with the Swiss customer. In the following years, the company slowly bounced back, gradually capturing new customers at first in Slovenia and Switzerland, but eventually throughout the EU. The company's flagship product, an online remote desktop support solution, was the primary reason for its successful entry into foreign markets, with the recognition that remote customer support was appealing to all kinds of companies across most industries. 2003 was the most important breakthrough, with the establishment of an online shop and a small degree of product localisation (i.e. offering software in different languages).

While the products were initially sold on the basis of a traditional on-premises server licensed model, XLAB caught the hype around cloud computing early on, and made their product available as a cloud solution in 2005, facilitating ease of delivery to customers all over the world. The same year, XLAB entered the Japanese market, with Jure and his team joining a trade mission organised by the EU Gateway programme which helped them find a Japanese distributor based in Tokyo. Jure's bet on the Asian market turned out to be a good decision, with a switch in 2007 to a direct sales model helping Japan to become the largest market for XLAB's flagship product. While the USA was also targeted, Jure noted that there was much stronger competition there, and as such pivoted toward Asia instead.

### 7.5.2 *The EU single market: a supportive framework*

Jure found that the framework of the EU's Single Market significantly eased administrative procedures on multiple fronts. The harmonisation of certifications and standards is very beneficial, and especially noticeable when dealing with markets that have different certification requirements. Another issue was the double taxation with Japan that was particularly challenging.

While Jure found support from the Slovenian tax authorities, the Slovenian Chamber of Commerce, and NGOs, this is another area where the benefits of regulatory alignment within the EU were apparent. Jure also noted different business cultures, currencies, and time zones were all generally easier to deal with inside the EU, giving the example of issues he has had with data centre service providers in South America, where the cost of bandwidth is much higher and the process more difficult, given the lack of compliance with security standards in some countries.

### 7.5.3 *A strategic subsidiary in the UK*

XLAB established a UK subsidiary in 2008 for strategic reasons, including utilising an existing bilateral trade agreement between the UK and Japan that allowed them to sell licenses directly to Japan (prior to the EU-Japan free trade agreement). The decision also allowed the company to receive advice from the UK Trade & Investment government department, as well as to be involved in UK-related trade events. The country also worked as a strategic base from which English-speaking markets could be serviced by native English speaking staff, and lent the company a

business recognition and credibility it found difficult to achieve in its native Slovenia: “When you come from a very small country, you are not always recognised by international companies. Selling from the UK, which is a well-known territory, turned out to be an easier solution for us.” The Brexit situation and resulting uncertainty is concerning, although it has not yet significantly affected XLAB’s UK operations.

#### **7.5.4 Internationalisation support**

“The Slovenian government is aware that companies need to internationalise because of the tiny internal market...” Jure stated. Overall, he felt the support for SME internationalisation in Slovenia was good, with a variety of different mechanisms available and recognition of SME development as a priority area for the government; for example, XLAB was sponsored to attend the largest IT trade show in Germany. XLAB also received support from the UK government’s UK Trade & Investment organisation due to the presence of its UK subsidiary. Jure feels lucky that his company has been able to receive support from UK embassies around the world and that he has been able to join UK delegations on international missions. This was a smart approach given that, in Jure’s words, “the UK ambassador has the keys to many doors in the US”.

#### **7.5.5 Policy recommendations**

Jure’s main recommendation for policy makers is to focus on measures that help small companies to overcome complex national issues like certification/standardisation. For other SMEs, he strongly recommends thoroughly checking all the options for support available from the Slovenian government, and starting out in neighbouring countries only. The EU Gateways programme was also very valuable to his company in terms of helping SMEs meet local companies in overseas markets, which is extremely useful given that SMEs often lack the connections and means to make such introductions themselves.

## 7.6 Case study 6: EXAMVISION - interview with Tasmin FABRICIUS, CCO Sales & Marketing Manager

Tasmin's story, as described below, illustrates how ExamVision is dealing with internationalisation from an isolated location, and how they became leaders in their industry thanks to their distributors' network.

ExamVision was established in 2001 on the tiny Danish island of Samsø . The company exports medical and dental equipment, and is a specialist in loupe glasses. In 2002, the two founders, Kim Jensen (optometrist) and Joern Ronvig (dental instruments business) started exporting, leveraging their previous international business experience and attending dental exhibitions outside of Denmark to quickly build up a strong dealer network. Today, the company employs 28 people in the production of loupes that are designed and manufactured using the finest materials, with the greatest precision, by people who care.

### 7.6.1 Distributor-driven internationalisation

Perhaps unsurprisingly for a company based on a small island in Denmark, 95% of ExamVision's business is exports. The firm has a wide network of carefully selected distributors across 35 countries, which has allowed them to avoid the need to establish local subsidiaries in overseas markets thus far. Dealers are well known in the industry and often gather at trade shows and exhibitions, which is where Tasmin's initial contact with many of them was established. As all of ExamVision's products are bespoke, their dealers visit medical and dentistry practices in person, taking measurements themselves and sending them back to Denmark, where the loupes are manufactured to the exact customer specification over 6-8 weeks in order to offer the perfect solution to each professional.

ExamVision's first export markets were Sweden, the Netherlands and the United Kingdom, though nowadays their biggest markets include Canada, Russia and Spain, with the Netherlands continuing to perform well. The company sees great potential in the US market but is yet to move strongly in this direction because this is the home market of some of their biggest competitors, and to compete properly Tasmin feels ExamVision would need to establish both a local service centre and likely some manufacturing facilities (though this is on the long-term roadmap). Great potential is also seen in Far East markets, especially due to the growing middle classes and prevalence of prescription optical products, though again this market is very competitive, with a strong presence from many companies producing lower quality products for a much lower price.

### 7.6.2 Challenges

ExamVision has faced challenges with regard to developing and managing their extensive dealer network; the complexity of the product and high service standards required make it hard to find suitable dealers, and when it is necessary for a dealer to handle multiple territories (e.g. a single dealer managing France, Portugal and Italy) the company must beware of becoming too dependent on this dealer.

Trade barriers have also been a significant obstacle to internationalisation at ExamVision; this has been the case particularly in Brazil, where huge import tariffs of up to 86 % (that apply also to shipping costs) can push landed prices well beyond what customers will pay. In Russia, different standards for certification also complicate sales efforts when compared to markets inside the EU, though Tasmin also noted that dealings in Norway (inside the EEA) and Israel (entirely outside the EU) were relatively straightforward. ExamVision also consider the local currency when examining a prospective market, noting that trade and sales are dependent on the strength of local currencies and can vary a lot as they fluctuate.

### 7.6.3 Internationalisation support and success factors

ExamVision have not received any support specifically for internationalisation in Denmark, aside from minor assistance to become part of a Danish products stand at a trade show in Madrid. They have however participated in the EU Gateways programme to Korea and China, which they found to be efficiently administered and helpful in terms of getting to know the markets, and their respective regulations, potential pitfalls and cultures. Tasmin said they did not manage to find an

appropriate dealer as was their goal, but now have a much clearer picture of the business climate in the region. She noted particularly from these experiences that there is generally strong interest in the Danish brand, which other Danish companies are starting to notice, and that she can only see an upward trend in terms of internationalisation in the country.

Tasmin is adamant that the key success factor for ExamVision's international business has been their choice of dealers. As specialist distributors of the company's products, the dealers are the main interface between the end customers and ExamVision. Consequently the firm has invested significantly in developing its relationships with them.

#### **7.6.4 Policy recommendations**

Tasmin had several recommendations for policymakers:

- More should be done to foster local networking between SMEs in Denmark, to facilitate the natural sharing of knowledge and experience at a fraction of the cost of establishing business support centres.
- Free trade agreements (FTA) should be pursued; the recently signed deal between the EU and Japan has made it significantly easier to do business there, and a similar deal with Brazil, for example, which lowered import tariffs, would help them and their distributors grow their business enormously there.
- A toolkit or similar of measures and advice addressing currency fluctuations, and strategies for dealing with them (such as hedging) would be very helpful for SMEs from a small country like Denmark.

## 7.7 Case study 7: CROFT FILTERS - interview with Neil BURNS – Co-founder & Director

Neil's story, as described below, illustrates how Croft Filters has continued to prosper in a niche market over the last 31 years, developing and delivering high quality filtration solutions for a range of industries in the UK and around the world.

### 7.7.1 Preparation

Croft Filters first began exporting almost by accident, shortly after the company's formation in 1986, when filters that were manufactured for a power plant belonging to a French multinational in the UK were sent onward to the company's head office in Switzerland, who realised that the quality level was very high and quickly contacted Neil to place further orders. The company then sold through distributors for about six years, before deciding to build its own customer base and move into new markets itself. While countries within the EU were the initial targets, the business soon grew beyond this, and today customers can order online from anywhere in the world.

Croft Filters originally advertised in public trade directories such as the Yellow Pages which was a great way for them to connect with customers in the times preceding the internet, especially given the company's investment in expensive front-page advertisements. Neil noted that the invention of the fax machine was a big change that enabled, for the first time, drawings and specifications to be communicated between the company and prospective customers: very important given the made-to-order, highly customised nature of the product.

This connection with the customer was further enhanced with the introduction of the internet, and Croft Filters was a very early adopter of online marketing to this end. It was considered especially important given the specialised nature of the product and exclusively business-to-business sales channel, so the company has maintained the same marketing budget despite the falling cost of online advertising. While online marketing efforts initially focused on trade directories, similar to the physical ones used at the time, it gradually grew to become much more targeted, and oriented toward a 'pay-per-click' structure. The company also uses geographically targeted online marketing from time to time to raise its profile in a country to potential customers prior to a trade mission there.

### 7.7.2 Support

Neil regretted that there was very little support available to SMEs specifically geared toward internationalisation in the late 1980s when his firm started to send their products overseas, noting that it was particularly absent at the times it was really needed. His impression nowadays is that there are still very few SMEs from the UK actively receiving or involved with internationalisation support measures provided by either the UK or the EU. He felt that the measures he knew of, which mostly involve market research and other forms of assistance from UK embassies abroad, were probably quite effective but generally quite expensive, especially for SMEs. Awareness of available support measures is also an issue, with Neil not aware of any support measures to help companies that provide components for a broader value chain.

Croft Filters did however participate in the EU Gateways programme for a number of years, reaching Japan, Singapore, Korea and Vietnam and coming away with a very positive impression. Neil also considered the EU-Japan Centre for Industrial Cooperation to be an excellent initiative, which has provided his company with very helpful, manufacturing-centric experience and advice.

Even with such advice, Neil's experience was that the Japanese market overall remains quite averse to importing components that are manufactured outside of the country, even if (as he was advised by one client with facilities in both the UK and Japan) they are of considerably higher quality. It was in this vein that he expressed his disappointment at being unable to continue accessing support from this facility, as well as other EU-based mechanisms, after the UK's departure from the European Union.

### **7.7.3 Policy recommendations**

Neil recommended that policy makers in general think more deeply about the goals and actual outcomes of internationalisation support measures.

Neil also strongly recommended that the UK government step up in the coming years to fill the gap left by EU-based SME funding programmes upon the UK's departure from the EU. He noted that the prevailing uncertainty about the UK's future trade status vis-à-vis the EU is already harming SMEs, and that a drop in the overall support available to SMEs, should the UK government not 'match' or replace existing programmes, would only do further harm in the future.

## 7.8 Case study 8: ROOBAR - interview with Kalin Klasanov, CEO

Kalin's story, as described below, illustrates how Roobar successfully exported within the EU despite what were called "long administrative procedures". Driven by an entrepreneurial mindset, fearless of going beyond borders, Kalin believes in his people and product.

### 7.8.1 *Kalin's desire for expansion*

In 2006, Kalin Klasanov and his wife Anita opened their organic food store in Bulgaria. With a strong willingness to expand, they joined forces with a third partner, Yani Dragov, to take a strategic turn. Aiming to grow their business of raw bars to a larger scale, they founded together the biggest organic food distributor in Bulgaria, leading to the creation of Roobar in 2012. About a year later, in February 2013, the company participated in one of the leading trade fairs for organic food in Nuremberg: Biofach. There, the networking opportunities allowed them to reach European markets. "Our product was launched at the right time," Kalin stated.

### 7.8.2 *Kalin's export strategy*

Kalin first chose to target German-speaking countries as well as Spain, Portugal and Scandinavian countries. Later, Roobar expanded beyond Europe and entered markets in Canada, Chile, South Africa, and Japan. Kalin acknowledged that entering the Chinese market was challenging, as the mentalities of consumers there are very different to those in Europe. Kalin is proud that Roobar has a presence in 50 countries worldwide, including the Middle East. Roobar's success in the Scandinavian market is particularly instructive; although the markets were very mature with several competitors already in place, Kalin and Roobar were not afraid to compete. According to Kalin, the key to success there was twofold: to build on a playful, colourful and appealing packaging, and to deliver great taste combinations. Within Europe, red tape, though still existing, is relatively limited thanks to the Single Market; meanwhile in the US and Canada, Kalin faced many local issues. He relied heavily on local distributors to develop the brand, as they have knowledge of their local market.

### 7.8.3 *A strategic investment*

Kalin stated that rapidly-growing salaries in Bulgaria represent the main fixed cost for the firm. Marketing and the cost of raw materials (from Bulgarian local farmers to producers in non-EU countries) both represent important investments for the SME. However, these are also differentiating factors that create the unique selling proposition of the company.

### 7.8.4 *Government support and challenges*

Roobar has received substantial media attention, fuelled by the numerous awards won for their products (Innovative Enterprise 2014, Veggie Bite Award 2015, FreeFrom Food Awards 2016 to name a few). The company participated in a modernisation of production facilities programme as well. Kalin explained that when applying to this funding programme, the approval took longer than expected. As the business was developing rapidly, more flexibility in amending the application form to reflect the evolving business circumstances would have been an improvement.

While Kalin expected to receive the funding within 6 months, the whole procedure from start to approval took between 1 and a half to 2 years. The grant, which represented 30 % of the machine costs, was highly appreciated. To smooth the process, Kalin recommended quicker responses and a lighter procedure with less checks required.

Kalin also shared his enthusiasm for the EU Gateway programme. Roobar was selected to participate for two years in the programme focusing on the Korean market and also participated in similar programmes organised at the national level by the Bulgarian government. Kalin underlines that the Bulgarian embassy in the US, as well as diplomatic representatives in Germany, were helpful for providing information on exhibitions. Kalin mentioned he felt recognised for his work when the former Bulgarian president mentioned Roobar as one of their success stories during an interview with a German consulting firm. As a result, Roobar gained popularity and credibility among German distributors.

### 7.8.5 Policy recommendations

Kalin put forward several recommendations to help SMEs internationalise.

Kalin indicated that the EU should act to promote certification alignment, in order to make access to the Chinese market easier. Roobar has EU organic certifications (Certified Organic Product BG-Bio-02, Vegan Society Certified) that are recognised in the USA (USDA Organic), and Australia (Australian Certified Organic), though EU organic food is currently not recognised in Chinese legislation and Kalin has consequently struggled in this regard. Nevertheless, China represents a big opportunity for European products even though they are sold as conventional products on the Chinese market. The recipe for success according to Kalin is to deliver customer value, providing high quality products in aesthetically pleasing visual packaging. "You should meet the highest standards if you want to export". He also recommended that SMEs attend many exhibitions to promote their products.

Overall, Kalin is quite satisfied by government support even though room for improvement remains.

# 8. Case studies of how platforms can facilitate access to international markets for SMEs

## 8.1 Case study 1 Bonnie & Buttermilk

Bonnie & Buttermilk are a Berlin-based company producing and selling fabrics as well as handmade retro-style fashion for women and children. The company was founded in 2009 by Eike Braunsdorf and Katrin Oettrich. The two owners design vintage-inspired patterned fabrics for further processing and also manufacture clothing from these fabrics which they sell direct to customers. Bonnie & Buttermilk have their fabrics printed exclusively in Germany and emphasise the importance of ethical production. Currently the company employs ten people and serves customers all over the world.

According to the owners, the online platform DaWanda played a major role in enabling Bonnie & Buttermilk to sell products and establish their brand in the first place. In order to establish additional sales channels, Bonnie & Buttermilk also opened a shop on the online platform Etsy in 2013. In the light of DaWanda's closure in August 2018, Etsy's significance for Bonnie & Buttermilk is likely to increase. In addition to their presence on online platforms, Bonnie & Buttermilk have recently introduced their own online shop on their company website and they also run a flagship store in Prenzlauer Berg in Berlin.

In general, e-commerce platforms offer valuable opportunities for sellers like Bonnie & Buttermilk to increase their customer base, both domestically and abroad, since search and transaction costs fall. In this respect, Bonnie & Buttermilk see the reputation systems on DaWanda and Etsy as a major advantage. The opportunity for satisfied customers to share and rate their experiences and opinions with the platform's community affects the rating of online shops, reducing information asymmetries and attracting further demand from new customers. Bonnie & Buttermilk also appreciate that platforms provide increased security for buyers since the platform operators are able to mediate between buyers and sellers in the case of disputes, ultimately improving trust and thus sales volumes, as the risks of fraud are reduced. Moreover, Bonnie & Buttermilk state that it is not only quick and straightforward to offer products, but also easy to get into touch with buyers who want to ask individual questions.

DaWanda proved to be a stepping stone to wider customer outreach, not just domestically, but across and beyond Europe. Etsy (which is used widely worldwide) opened up even more opportunities for Bonnie & Buttermilk to gain visibility abroad and consequently to expand into international markets.

Via DaWanda, Bonnie & Buttermilk have sold products to Australia, Austria, Belgium, Croatia, Denmark, Finland, France, Germany, Hungary, Italy, Japan, Liechtenstein, Luxembourg, Netherlands, Norway, Poland, Sweden, Switzerland, Slovenia, Spain, USA and the United Kingdom. Through their Etsy shop, Bonnie & Buttermilk have not only served numerous markets in Europe (Austria, Belgium, Bulgaria, Croatia, Denmark, Germany, Finland, France, Ireland, Italy, Netherlands, Norway, Russia,

Sweden, Switzerland, Slovenia, Spain and the United Kingdom) but also outside Europe (Australia, Brazil, Israel, Japan, Mexico, New Zealand, Singapore and the USA). Bonnie & Buttermilk believe that their international visibility clearly increased on these platforms but stress that their Etsy shop offers more potential in this respect.

For the German-based Bonnie & Buttermilk, the bulk of sales on the US platform Etsy are exports. About 87 percent of recent revenues generated on the Etsy shop were from export sales, while only 13 percent related to domestic sales. Approximately 48 percent of export revenues via Etsy were generated from non-EU exports, indicating the significant outreach of this platform. Their experience with DaWanda was different: in recent years, only 12 percent of revenues were due to exports. Exports to EU member states were more than double non-EU exports.

In absolute numbers, however, the picture looks different. Despite a lower export share of revenues on DaWanda, export volumes were much higher than on Etsy. Over the past three years, DaWanda accounted for 76 percent of Bonnie & Buttermilk's export sales, whereas only 24 percent went through Etsy. However, in the same period, export sales on DaWanda declined. This decline went hand in hand with the fall of Bonnie & Buttermilk's total sales on DaWanda. In contrast, the revenues and export shares on Etsy have remained constant in recent years.

As can be seen with the shutdown of DaWanda in August 2018, there are substantial risks involved if entire business models are based on specific online platforms. For example, as previously noted, Bonnie & Buttermilk generated a significant share of the company's revenues on their DaWanda shop. This share of business is expected to be lost the short term. On online platforms in general, shop owners risk entering dependent relationships, although Bonnie & Buttermilk do not feel this has been a major problem for them. However, when DaWanda doubled sales fees in 2017, although Bonnie & Buttermilk were unhappy about it, they felt the sales channel was too important to leave. They also believe that changes to the DaWanda's search algorithms led to diminished visibility of their shop and products which would explain their declining revenues in recent years.

All in all, online platforms can be facilitators of internationalisation for SMEs such as Bonnie & Buttermilk, providing an invaluable opportunity to access a wide customer base. However, online platforms can easily gain a position of power, allowing the platform owners to capture significant shares of rents generated on their platform. More importantly, when an e-commerce platform, such as DaWanda suddenly closes down, sellers can be hit hard and may struggle to survive.

## 8.2 Case study 2 Etsy

Etsy is a US-based online platform providing individual producers, SMEs and consumers with an easily accessible platform for e-commerce. The platform is specifically designed for selling and buying handmade, individualised, refurbished or refined products. In the majority of cases, the platform connects producers and customers directly without going through any wholesale intermediary. The platform's user-friendly interface significantly reduces several types of costs associated with starting a business and accessing a large pool of customers. SMEs in particular make use of the platform.<sup>108</sup>

### 8.2.1 History and current situation

Etsy was founded in 2005 by Rob Kalin, Chris Maguire, and Haim Schoppik in New York.<sup>109</sup> In 2007, when Etsy already had nearly 450,000 sellers generating US\$ 26 million in sales, the company took in more than US\$ 3 million in venture capital funding. In 2008, the owners hired their first professional CEO to run the company.

Etsy currently has 1.9 million active sellers and 33.4 million active buyers, with items worth about US\$ 50 million for sale.<sup>110</sup> The company employs more than 700 people.<sup>111</sup> Etsy claims to operate in nearly every country of the world and the platform is available in 10 languages. The six core geographic markets are the United States, United Kingdom, Canada, Australia, France and Germany.<sup>112</sup>

### 8.2.2 Business model

The company generates revenues from three income streams. First, there is a listing fee of US\$ 0.2 per item. Each listing remains on the platform for about four months or until it is sold out. Additionally, there is a fee of 5% of sales value which has to be paid if an item is successfully sold.<sup>113</sup> Etsy has also started to provide extra services such as promoted listings and payment processing. Recently, this third stream of income has become increasingly important,<sup>114</sup> with 15% of revenues in 2017 generated through promoted listings and 30% through shipping labels.<sup>115</sup>

In its initial public offering in 2015, Etsy received proceeds of around US\$ 194.4 million. In 2015 and 2016 it had net losses of US\$ 54.1 million and US\$ 29.9 million, respectively. Only in 2017 did the company become profitable, when it generated US\$ 3.3 billion gross merchandise sales and a net income of US\$ 81.8 million. Nevertheless, in December 2017 the company had accumulated a deficit of US\$ 96.3 million.<sup>116</sup>

In 2017, 33% of all sales involved either the seller, buyer or both being outside of the US.<sup>117</sup> Etsy has taken a number of measures to facilitate international transactions. Listings, conversations and reviews are translated into different languages by machine translation. Sellers have the opportunity to list shipping prices for different countries. There are also guides on the platform for sellers on how to become visible to buyers in other countries.

Etsy facilitates the internationalisation of SMEs in a number of ways. First, it aids marketing, sales and distribution in other countries at relatively low costs, making market access in general much easier. It enables SMEs to take the first step towards internationalisation (i.e. serving foreign markets via exports), as fixed and search costs are substantially reduced. However, the platform does not necessarily enable

<sup>108</sup> Etsy. (2017) *2017 Annual Report*. Retrieved from: <https://investors.etsy.com/~media/Files/E/Etsy-IR/annual-report-proxy-materials/etsy-ar2017.pdf>

<sup>109</sup> <https://venturebeat.com/2015/03/05/a-brief-history-of-etsy-from-2005-brooklyn-launch-to-2015-ipo/>

<sup>110</sup> <https://www.etsy.com/about?ref=fttr>

<sup>111</sup> <https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=28492682>

<sup>112</sup> Etsy. (2017) *2017 Annual Report*. Retrieved from: <https://investors.etsy.com/~media/Files/E/Etsy-IR/annual-report-proxy-materials/etsy-ar2017.pdf>

<sup>113</sup> <https://www.etsy.com/legal/fees?ref=list>

<sup>114</sup> Etsy. (2017) *2017 Annual Report*. Retrieved from: <https://investors.etsy.com/~media/Files/E/Etsy-IR/annual-report-proxy-materials/etsy-ar2017.pdf>

<sup>115</sup> <https://help.etsy.com/hc/en-us/articles/115014258908-Using-USPS-Shipping-Labels-on-Etsy>

<sup>116</sup> *Ibid.*

<sup>117</sup> *Ibid.*

SMEs to overcome specific obstacles to pursuing more advanced internationalisation strategies, such as offshoring production and building up foreign subsidiaries.

As internationalisation via Etsy requires almost no prior investment, the platform provides SMEs with the opportunity to internationalise without the usual risks involved. As buyers from across the world can access all Etsy shops and see the entire product range, sellers do not need to decide to enter certain geographic regions and new markets proactively. However, as the number of shops rises, the risk of being overlooked increases.

Before Etsy entered the European market, Etsy's most recent competitor, DaWanda, from Germany, held sway across Europe. In June 2018, however, DaWanda announced it would close by the end of August 2018, due to increasing competition with Etsy's steadily increasing network. Although sellers can transfer their DaWanda shops to Etsy, scepticism among DaWanda-focused sellers remains high. Established shops with good solid customer bases fear revenues will drop, as the number of competing sellers on Etsy is much higher than on DaWanda. This will inevitably decrease visibility and sellers might simply get lost in the changeover. Gaining attention and increasing one's customer base might become much more difficult.

### 8.3 Case study 3 Kickstarter

Kickstarter is a global crowdfunding platform which mainly targets the creative industry. It matches two different groups: creatives who need funding for projects and people who are willing to finance such projects. Generally speaking, the concept of crowdfunding is to outsource the early stage financing to the public. Small amounts of money are raised from a large number of people: the crowd. Kickstarter differs from classic crowdfunding platforms such as Indiegogo<sup>118</sup> in the sense that investors (“backers”) on Kickstarter usually do not want to invest in companies for the sake of returns on invested capital, but rather to support projects in return for rewards. On Kickstarter, project creators present their ideas and indicate a minimum funding goal as well as a deadline for this goal. If the funding goal is met within the deadline, the collected money is paid out to the project. The rewards backers get are usually products resulting from the project in question. If the funding goal is not met before the deadline, the money is not paid out. Kickstarter generates revenues by applying a 5 percent fee to projects which are successfully completed.

Kickstarter was launched in 2009 by Perry Chen, Charles Adler and Yancey Strickler in the United States.<sup>119</sup> It started as a web-based mechanism to support the creative arts. Today, it constitutes a funding mechanism for a much broader array of products. So far, 15 million people have backed a project and have pledged US\$ 3.7 billion. As a result, around 145,000 out of 400,000 projects have been successful.<sup>120</sup> By now, Kickstarter has around 70 employees which makes it an SME itself. In 2012, it opened to projects based in the United Kingdom, and in 2013 it expanded into Canada, Australia and New Zealand, with other countries following. In 2015, it was converted into a Public Benefit Corporation (PBC). A PBC is a for-profit organisation which commits to considering the public good when taking decisions and has to report on its social and ecological impact on a regular basis.

A study by the University of Pennsylvania<sup>121</sup> estimated the impact of Kickstarter on the creative economy. According to the study, as of 2015, the economic activities Kickstarter enabled created 5,135 full time jobs besides those of the creators and led to the hiring of 160,425 temporary workers. According to the same study, every dollar pledged resulted in US\$ 2.46 in additional revenue for the creator and led to an estimated US\$ 3.5 billion in additional economic activity. Even though Kickstarter campaigns have to be framed as one-time projects, many creators using the platform want to establish or sustain organisations. In particular, product-oriented categories (such as design & technology) are dominant in terms of organisation building. As of May 2015, nearly 5,000 new formal organisations (companies or partnerships) were created for Kickstarter projects. Amongst them are companies such as Oculus.<sup>122</sup>

In 2011, it was estimated that Kickstarter provided the equivalent of 10 percent of all angel funding for that year in the US.<sup>123</sup> Additionally, Kickstarter campaigns have increasingly been used as proof of concept for business plans when approaching venture capital from other sources. As difficulties in raising capital rank among the most common reasons for the failure of small businesses<sup>124</sup>, this might have a significant impact on the development of small businesses.

Kickstarter constitutes a typical platform in the sense that it is a market which brings together two different groups: those who need financing and those who want to finance. Direct and indirect network effects lead to a situation in which both parties profit from an increase of users on either side of the platform. Creators profit directly from more backers, because the supply of funds increases. In addition, they profit

<sup>118</sup> <https://www.indiegogo.com/>, last access 29.06.2018.

<sup>119</sup> <https://www.crunchbase.com/organization/kickstarter>, last access 29.06.2018.

<sup>120</sup> <https://www.kickstarter.com/help/stats>, last access 29.06.2018.

<sup>121</sup> Mollick, E. R. (2016). Containing multitudes: the many impacts of Kickstarter funding. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2808000](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2808000).

<sup>122</sup> Oculus produces VR glasses and was acquired by Facebook in 2014.

<sup>123</sup> Greenwald, T. (2012). 10 Emerging Technologies.

<http://www.technologyreview.com/article/427675/crowdfunding/>, last access 29.06.2018.

<sup>124</sup> Yallapragada, R. R., & Bhuiyan, M. (2011). Small business entrepreneurship in the United States. *Journal of Applied Business Research*, 27(6), 117.

indirectly from an increased number of creators, because the platform as a whole becomes more attractive for backers. This in turn increases the probability of finding backers who are interested in one particular project. Matching becomes easier. This is particularly true for niche (“long tail”) projects.

Platforms such as Kickstarter can facilitate the development and internationalisation of SMEs in a number of ways. First of all, they provide a way of acquiring capital in situations in which this is not possible through traditional intermediaries such as banks. In Europe, where the supply of venture capital is very scarce in most places, they can be an alternative way of obtaining early stage financing. Furthermore, with Kickstarter being a global platform, it opens up an international market with many more potential resources. In addition, Kickstarter provides an opportunity to internationalise sales.

In many cases, backers get rewards in return for their pledge. Even if the rewards are products which are not officially for sale, from an economic point of view, these are pre-sales and a means to market entry. Above all, a successful Kickstarter campaign is a way of getting international attention and can be a very efficient marketing tool. As in the case of other platforms, internationalisation through Kickstarter does not require large prior investments dedicated exclusively to this internationalisation process. Furthermore, it is not necessary to target specific geographic regions, even though in some cases it can still be helpful.

## 8.4 Case study 4 King Art

King Art is an independent German video game developer. Jan Theysen and Marc König founded the firm in 2000 and King Art established itself as a developer of downloadable and browser-based games. Initially they undertook contract work for companies such as RTL/Sport1, ProSieben and Daimler-Benz. In 2007, the team started working on its first boxed game “Black Mirror 2”. Since then, they have produced a number of successful independent games, focusing in particular on adventure and strategy games. To date, they have produced over 40 video games.<sup>125</sup>

Based on past experience, the firm aims at international markets, because the market size of Germany (or other German speaking countries) is too small compared to the budgets that are required to develop high-quality games. Four of King Art’s projects were partly financed via Kickstarter.

King Art was founded as, and still is, an independent company. It started off as a micro enterprise, growing gradually over the years. Today, King Art has around 40 employees and collaborates with just as many external developers. The work done by King Art is project-based and is therefore highly dependent on the success of previous projects. However, it can also rely on its back catalogue, which contains the games it has developed in the past and which still sell. In 2013, King Art started its first Kickstarter campaign. The aim was to increase the budget for the development of “Battle Worlds: Kronos”. In total, 7,564 backers supported the project and King Art raised US\$ 260,235.<sup>126</sup> Since then, it has carried out three more Kickstarter campaigns. During the campaign for the game “Iron Harvest”, it was able to mobilise 16,607 backers for the project and raised US\$ 1,298,726.<sup>127</sup> In each case, King Art already had an initial budget, but was able to increase it substantially through its Kickstarter campaigns. Furthermore, the campaigns generated major attention inside and outside of Germany and worked as successful international pre-sales.

The case of King Art highlights a number of factors which must be taken into account when evaluating how digital platforms can support SMEs in their general business strategy and process of internationalisation. King Art uses an entire system of platforms as part of their business model, including Facebook, Kickstarter, Steam and GOG. Steam and GOG are specialised platforms distributing video games and software. The strategic use of each of these platforms can increase project performance on the other platforms. King Art uses Facebook for advertising, especially in the US, Australia and Asia. This way, the firm has managed to define its target group precisely and establish a dedicated fan base.

Nowadays, King Art has 100,000 followers on Facebook, most of them actual or potential customers. Only after establishing this type of community was King Art able to start successful Kickstarter campaigns. “You should have a community with at least twice as many fans as you need backers.”<sup>128</sup> King Art mobilised its Facebook-based fanbase to support their Kickstarter campaign and increased international attention further. The Kickstarter campaign also worked as a market test for the product and made it possible to get early feedback from potential customers.

Platforms such as Kickstarter and Steam have the potential to lower market entry barriers because they facilitate aspects such as finance and market access. As market entry barriers are high in foreign markets and for SMEs in particular, SMEs benefit in particular from this reduction in entry barriers. The successful King Art campaigns on Kickstarter are an example of this.

Nonetheless, making use of such digital platforms can also have disadvantages for SMEs. In addition to other industry competitors, there are a huge number of semi-professional and non-professional suppliers on many platforms. Even though the

<sup>125</sup> <https://kingart-games.com/page/1-unternehmen>, last access 29.06.2018.

<sup>126</sup> <https://www.kickstarter.com/projects/kingartgames/battle-worlds-kronos-turn-based-strategy-revisited>, last access 29.06.2018.

<sup>127</sup> <https://www.kickstarter.com/projects/kingartgames/iron-harvest/community?lang=en>, last access 29.06.2018.

<sup>128</sup> <https://www.gameswirtschaft.de/marketing-pr/king-art-kickstarter>, last access 29.06.2018.

last

quality of their products may be low, they increase transaction costs, by drawing away attention and funding or demand from potential customers and impeding distribution. The behaviour of non-professional suppliers also influences the dynamics of the platforms and their communities. On Kickstarter, it has become very difficult to implement successful campaigns, because of creators who did not deliver the promised rewards.

“Without a very good reputation it is almost impossible to have a successful campaign any more.” On Steam, it has become more and more difficult to gain attention, too. Generally speaking, this hampers the activities of SMEs, increasing the importance of publicity and reputation. Gaining and maintaining reputation is much easier for bigger and better-known companies.

The importance of digital platforms has increased enormously for King Art. For market access and distribution in particular, they replace the functions which publishing companies used to fulfil. However, King Art still partly relies on publishers. On the one hand, physical retail is still important and difficult to organise without publishers, on the other, publishers can help SMEs such as King Art to reduce market power imbalances in relation to large platforms.

Because of network effects, digital platforms tend to gain market power. In addition, making use of digital platforms can result in lock-in effects, a situation in which users of platforms cannot switch to other platforms, because they cannot transfer the reputation built on one platform to the other. The lock-in effect further increases the market power of platforms. In the case of crowdfunding, however, this problem might not be a major one. There are still a large number of platforms competing with each other. In addition, users mostly come from other platforms<sup>129</sup> and communities are not necessarily built on Kickstarter, but rather on platforms such as Facebook.

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<sup>129</sup> <https://www.forbes.com/sites/suwcharmananderson/2012/03/28/where-do-kickstarter-supporters-come-from/#61e8c5e20296>, last access 29.06.2018.

## 8.5 Case study 5 Scout24 Group

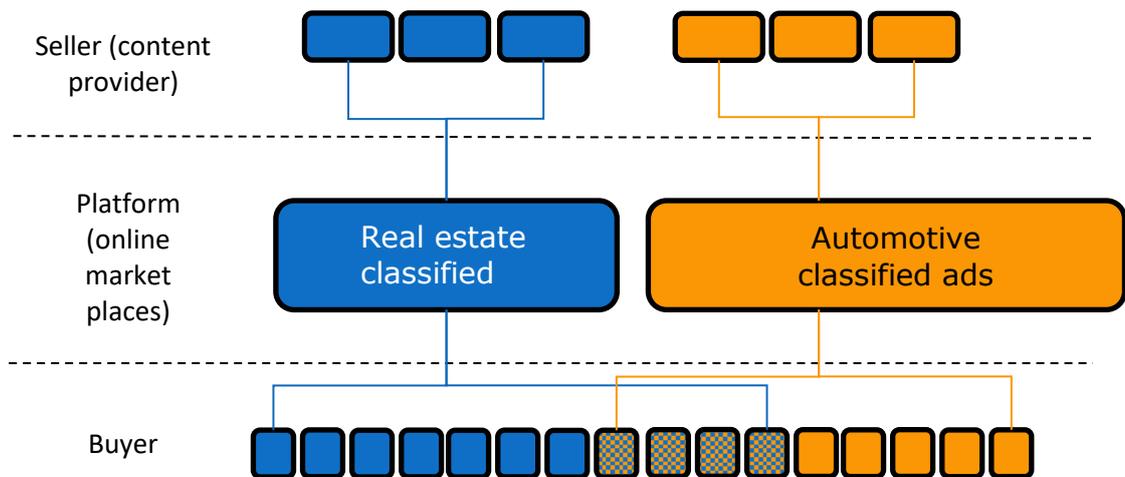
### 8.5.1 Scout24 – Two three sided digital platforms under one roof

Scout24 is an operator of digital marketplaces specialising in the real estate and automotive sectors in Germany and other European countries. The company operates two well-known online platforms under the brands known as ImmobilienScout24 and AutoScout24.

The enterprise was founded in 1998 and disrupted the traditional classified ads market for automotive (cars) and real estate in Germany by shifting the main source of information from print to online advertising. On their platforms, Scout24 connects customers with both private sellers and professional sellers (real estate agents and car retailers), who post an offer (also called a “listing”) aimed at customers looking to rent or buy real estate or cars. In addition to the (real estate or automotive) listings, the platform offers further information and services to help customers search a given market, helping customers as well as sellers to make informed decisions.

Figure 109 shows a stylised version of the 2 two-sided platforms of Scout24. However, Figure 109 neglects a third side on both platforms: online advertisers, who typically want to advertise third party products directly to users on either or both Scout24 platforms (websites) or want to show a specific Scout24 customer group an online ad on websites other than Scout24 websites (so-called ‘retargeting’). A unique audience can be identified by Scout24: customers who are searching for real estate and vehicles at the same time. Both purchase decisions might be among the biggest financial decisions of someone’s life. This makes them a valuable target group for third parties.

**Figure 109: Stylised platform description of Scout24**



Source: DIW Econ

In its early days, Scout24 pursued a classic platform strategy based on (indirect) network effects: the first step was to convince as many sellers as possible to place their real estate or automotive ads (listings) on the relevant platform. In the second step, the increase in listings led to more online traffic, because more people were searching for real estate or motor vehicles on the websites. This led to a further increase in the platform’s attractiveness to sellers, resulting in even more listings and therefore further increasing demand until finally ImmobilienScout24 became the market leader. Initially, Scout24 did not charge sellers for posting listings. However, eventually they started charging a fee to agents for putting their ad on the platform. This is done through three different listing models: a membership model (comparable with the flat rate model used in the mobile telecommunications industry), a listing package model, and a pay-per-listing model.

**Figure 110: Historical business development strategy of Scout24**

Source: DIW Econ

The described strategy is grounded in the following economic rationale: becoming a market leader in terms of content attracts more potential buyers (demand). As this fact becomes common knowledge, more suppliers are attracted. These suppliers provide even more content, which attracts even more demand and so on. This network externality is mainly driven by reduced search and transaction costs for the supply-side as well as the demand-side. The pricing strategy follows the classic textbook strategy for online platforms. In the initial period, listings were free of charge in order to gain the previously described market position. After the introduction of a fee, the monetisation strategy focused on the inelastic platform side. Usually, as in this case, this is the supply side, while the service to the more price elastic demand side is still free of charge.

Except for a few larger companies, the majority of suppliers are small and medium-sized enterprises (SMEs). The shares of SMEs dealing in real estate activities and sales of motor vehicles are about 99.95 percent and 99.6 percent, respectively (see Box 1).

The development of German SMEs with respect to sale of motor vehicles is slightly positive from 2008 onwards. Two effects might explain the observed drop in the number of real estate SMEs in 2015.

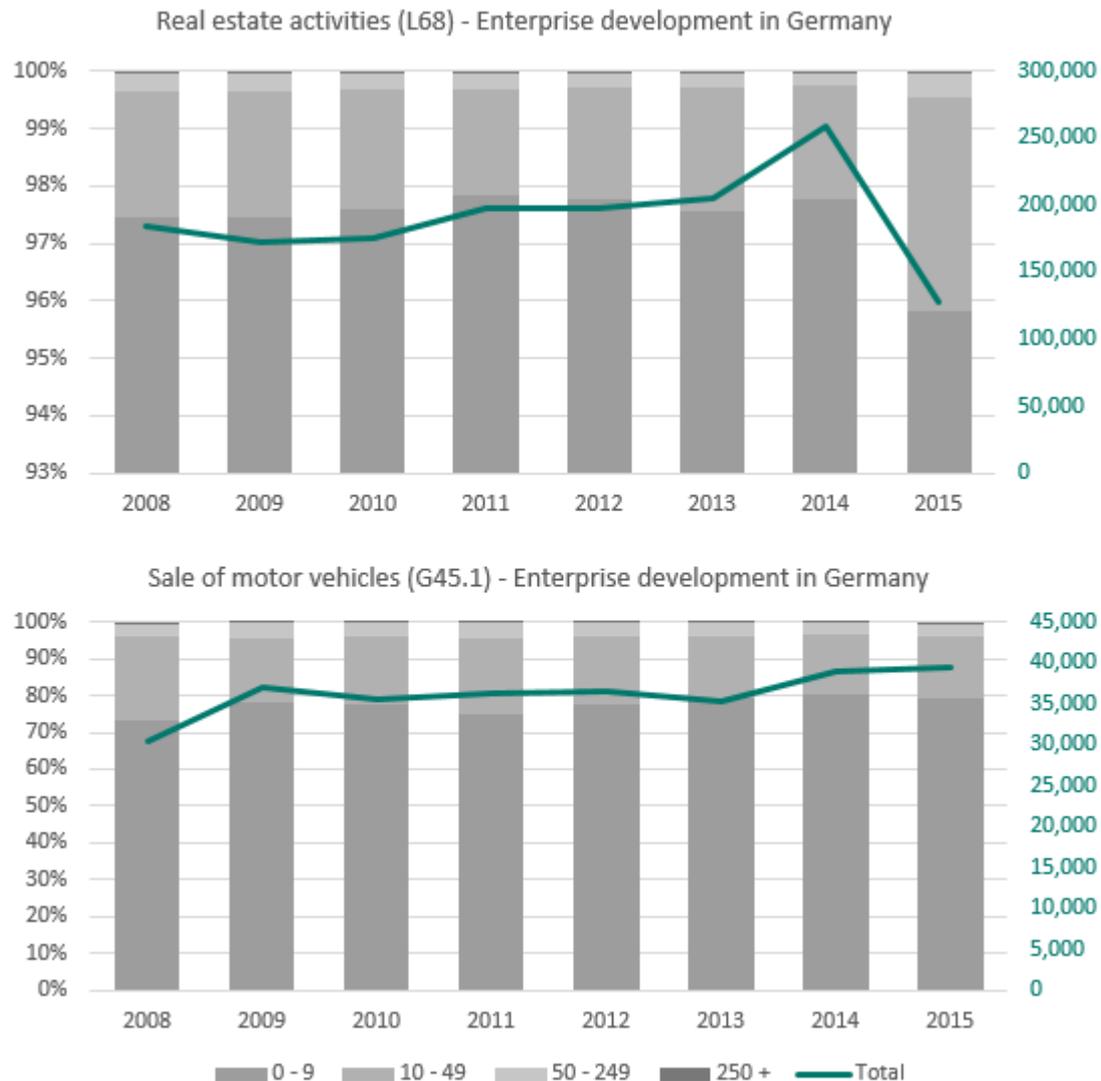
Firstly, in 2015 the “Bestellerprinzip” was introduced. Under this legislation, whoever appoints the letting agent (e.g. the landlord) is responsible for paying the letting agent’s commission. The intention was to shift the financial burden from tenants to landlords. One side-effect was that many real estate microenterprises, sometimes referred to as kitchen table brokers (“Küchentisch-Makler”), were brought under severe cost-pressure by landlords and many (especially part-time) operators went out of business.

Secondly, adjustments to the methodological approach of the German statistical office (Destatis) resulted in a strong decline in SME figures from 2014 to 2015, as private landlords are no longer counted in the SBS statistics. This must be considered a purely statistical artifact.

### Box 2: Development of SME real estate and motor vehicle sales agents in Germany from 2008 to 2015.

The classified ads platforms of Scout24 mainly host (apart from private sellers) small and medium-sized enterprises. According to the European Classification of Economic Activities system (NACE Rev.2) the real estate and automotive classified markets are summarised under the following section or group:

- Section L68 (“Real estate activities”)
- Group G45.1 (“Sale of motor vehicles”) under Section G (“Wholesale and retail trade; repair of motor vehicles and motorcycles”)



#### 8.5.2 Scout24's positive effect on the internationalisation of SMEs - in theory

How can the platform help in terms of the internationalisation strategies of SMEs? Even though real estate is a textbook example of an immobile good, the platform can help SMEs via three channels. On the supply-side: (a) national agents can offer foreign real estate/cars to a wider national audience or (b) foreign agents can offer foreign real estate/cars to a wider national audience. With respect to the demand-side, suppliers benefit from increasing numbers of international customers searching on national platforms for a match, and therefore (c) national agents can offer national real estate/cars to a broader foreign customer group. However, the positive effects are mainly driven by the network effect which depends on how much the platform reduces customer search (transaction) costs and increases the probability of a successful transaction (positive match).

### 8.5.3 *Scout24's positive effect on the internationalisation of SMEs - in practice*

An agent selling foreign real estate might consider several reasons for using digital platforms such as ImmobilienScout24 in order to meet their internationalisation strategy. Take the example of a German agent selling real estate in Spain. Given that there is a German demand for Spanish real estate, placing an ad on ImmobilienScout24 might imply several positive effects. There are three degrees of interaction and benefits:

- Firstly, a digital platform can increase potential demand through higher visibility. Agents need to be present in the market to be noticed by potential customers. In many cases, ImmobilienScout24 serves as a first step to raising awareness before the potential customer is directed to the agent's own website. Here, the primary goal is to simply get foreign real estate to German-speaking customers (without targeting specific customer groups).
- Secondly, placing an ad on ImmobilienScout24 can trigger more leads and more contacts such as information requests about real estate of interest that are directly received through the platform.
- Thirdly, the number of successful transactions might finally increase through these leads.

In the context of foreign real estate, ImmobilienScout24 is not the only platform available to increase German demand. A crucial strategy remains the use of analogue ads in local newspapers. Digital ads are becoming increasingly important, but the use of other platforms with similar audiences (so-called 'multihoming') remains limited in scope. The agent's decision to place ads on additional platforms depends on the target groups of these additional platforms, i.e. whether or not placing the ad on a second platform reaches new customer groups, and the costs of using additional platforms.

For instance, for an agent who sells premium real estate, placing an ad on ImmobilienScout24 might increase visibility on this broad platform. Placing an ad on another platform will not, however, significantly add to the visibility, which is why a premium real estate agent will refrain from doing so.

The decision to extend to several digital platforms thus strongly depends on the additional target groups that the agent wishes to reach. In this vein, the broad platform ImmobilienScout24 helps real estate agents to be in the consciousness of a wide international target group.

# References

- Acs, Z. J., Morck, R., Shaver, J. M., & Yeung, B. (1997). The internationalisation of small and medium-sized enterprises: A policy perspective. *Small Business Economics*, 9(1), 7-20.
- Altomonte, C., Barattieri, A., & Rungi, A. (2014). Import penetration, intermediate inputs and productivity: Evidence from Italian firms. *Rivista italiana degli economisti*, 19(1), 45-66.
- Arndt, C., Buch, C. M., & Mattes, A. (2012). Disentangling barriers to internationalisation. *Canadian Journal of Economics/Revue canadienne d'économique*, 45(1), 41-63.
- Bas, M., & Strauss-Kahn, V. (2014). Does importing more inputs raise exports? Firm-level evidence from France. *Review of World Economics*, 150(2), 241-275.
- Berman, N., & Héricourt, J. (2010). Financial factors and the margins of trade: Evidence from cross-country firm-level data. *Journal of Development Economics*, 93(2), 206-217.
- Bernard, A. B., & Jensen, J. B. (1999). Exceptional exporter performance: cause, effect, or both? *Journal of International Economics*, 47, 1-25.
- Bernard, A. B., Jensen, J. B., & Lawrence, R. Z. (1995). Exporters, jobs, and wages in US manufacturing: 1976-1987; Comments and discussion. *Brookings Papers on Economic Activity*, 67.
- Bernard, A. B., Jensen, J. B., Redding, S. J., & Schott, P. K. (2007). Firms in international trade. *Journal of Economic Perspectives*, 21(3), 105-130.
- Berra, L., Piatti, L., & Vitali, G. (1995). The internationalisation process in the small and medium sized firms: A case study on the Italian clothing industry. *Small Business Economics*, 7(1), 67-75.
- Brainard, S. L. (1997). An empirical assessment of the proximity-concentration trade-off between multinational sales and trade. *The American Economic Review*, 87(4), 520-544.
- Breckova, P. (2018). Export Patterns of Small and Medium Sized Enterprises. *European Research Studies Journal*, 21(1), 43-51.
- Brouthers, K. D., & Nakos, G. (2004). SME entry mode choice and performance: A transaction cost perspective. *Entrepreneurship Theory and Practice*, 28(3), 229-247.
- Buckley, P. J. (1976). Casson, M. 1976. The future of the multinational enterprise, 1.
- Buckley, P. J. (1989). Foreign direct investment by small-and medium-sized enterprises: the theoretical background. In "The Multinational Enterprise" (pp. 24-45). Palgrave Macmillan, London.
- Buckley, P. J., & Casson, M. (1985). The economic theory of the multinational enterprise. Springer.
- Cavusgil, S. T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalisation. *Journal of International Business Studies*, 46(1), 3-16.
- Coviello, N. (2015). Re-thinking research on born globals. *Journal of International Business Studies*, 46(1), 17-26.
- Dunning, J. H. (1977). Trade, location of economic activity and the MNE: A search for an eclectic approach. In "The international allocation of economic activity" (pp. 395-418). Palgrave Macmillan, London.

- Dunning, J. H. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies*, 19(1), 1-31.
- Dunning, J. H. (2009). Location and the multinational enterprise: John Dunning's thoughts on receiving the Journal of International Business Studies 2008 Decade Award. *Journal of International Business Studies*, 40(1), 20-34.
- Dunning, J. H., & Lundan, S. M. (2008). *Multinational enterprises and the global economy*. Edward Elgar Publishing.
- Eden, L., & Miller, S. R. (2004). Distance matters: Liability of foreignness, institutional distance and ownership strategy. In "Theories of the Multinational Enterprise: Diversity, Complexity and Relevance" (pp. 187-221). Emerald Group Publishing Limited.
- EIM Business & Policy Research (EIM) (2010). *Internationalisation of European SMEs. Final report*. European Commission, Directorate-General for Enterprise and Industry. Brussels. Belgium.
- Eurofound (2012). *Born global: The potential of job creation in new international businesses*. Publications Office of the European Union, Luxembourg.
- Giovannetti, G., Marvasi, E., & Sanfilippo, M. (2015). Supply chains and the internationalisation of small firms. *Small Business Economics*, 44(4), 845-865.
- Hagsten, E., & Kotnik, P. (2017). ICT as facilitator of internationalisation in small-and medium-sized firms. *Small Business Economics*, 48(2), 431-446.
- Heckscher, E., and B. Ohlin (1933). *International and Interregional Trade*. Harvard Economic Studies, Cambridge, MA.
- Helpman, E. (1984). A simple theory of international trade with multinational corporations. *Journal of Political Economy*, 92(3), 451-471.
- Helpman, E. (2011). *Understanding global trade*. Harvard University Press.
- Helpman, E., Melitz, M. J., & Yeaple, S. R. (2004). Export versus FDI with heterogeneous firms. *American Economic Review*, 94(1), 300-316.
- Hofstede, G. (1980). Culture and organizations. *International Studies of Management & Organization*, 10(4), 15-41.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, 2(1), 8.
- Hollenstein, H. (2005). Determinants of international activities: are SMEs different? *Small Business Economics*, 24(5), 431-450.
- Hymer, S. (1960). *On multinational corporations and foreign direct investment. The Theory of Transnational Corporations*. London: Routledge for the United Nations.
- Johanson, J., & Vahlne, J. E. (1977). The Internationalisation Process of the Firm-A Model of Knowledge Development and Increasing Foreign Market Commitments. *Journal of International Business Studies*, 8(1), 23-32.
- Johanson, J., & Wiedersheim-Paul, F. (1975). The Internationalisation of the Firm - Four Swedish Cases. *Journal of Management Studies*, 12 (October), 305-322.
- Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(4), 334-334.
- Laufs, K., & Schwens, C. (2014). Foreign market entry mode choice of small and medium-sized enterprises: A systematic review and future research agenda. *International Business Review*, 23(6), 1109-1126.
- Lendle, A., Olarreaga, M., Schropp, S., & Vézina, P. L. (2016). There goes gravity: eBay and the death of distance. *The Economic Journal*, 126(591), 406-441.
- Lewis, G. (2011). Asymmetric information, adverse selection and online disclosure: The case of eBay motors. *American Economic Review*, 101(4), 1535-46.
- Lohrke, F. T., Franklin, G. M., & Frownfelter-Lohrke, C. (2006). The Internet as an information conduit: A transaction cost analysis model of US SME Internet use. *International Small Business Journal*, 24(2), 159-178.

- Madsen, T. K., & Servais, P. (1997). The internationalisation of Born Globals: An evolutionary process? *International Business Review*, 6(6), 561-583.
- Madsen, T. K., Rasmussen, E., & Servais, P. (2000). Differences and Similarities Between Born Globals and Other Types of Exporters. *Advances in International Marketing*, 10, 247-265.
- Markusen, J. R. (1984). Multinationals, multi-plant economies, and the gains from trade. *Journal of International Economics*, 16(3-4), 205-226.
- Mayer, T., & Ottaviano, G. I. (2007). The Happy Few: The internationalisation of European firms. New facts based on firm-level evidence. Bruegel blueprint series, Volume 3, 2007.
- McDougall, P. P., Shane, S., & Oviatt, B. M. (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of Business Venturing*, 9(6), 469-487.
- Melitz, M. J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. *Econometrica*, 71(6), 1695-1725.
- Nakos, G., & Brouthers, K. D. (2002). Entry mode choice of SMEs in Central and Eastern Europe. *Entrepreneurship Theory and Practice*, 27(1), 47-63.
- Nguyen, T. D., & Barrett, N. J. (2006). The adoption of the internet by export firms in transitional markets. *Asia Pacific Journal of Marketing and Logistics*, 18(1), 29-42.
- Paul, J., Parthasarathy, S., & Gupta, P. (2017). Exporting challenges of SMEs: A review and future research agenda. *Journal of World Business*, 52(3), 327-342.
- Ricardo, D. (1817). *On the Principles of Political Economy and Taxation*. Bohn's Economic Library (London: G. Bell & Sons, 1891), passim.
- Ronen, S., & Shenkar, O. (1985). Clustering countries on attitudinal dimensions: A review and synthesis. *Academy of Management Review*, 435-454.
- Saliola, F., & Zanfei, A. (2009). Multinational firms, global value chains and the organization of knowledge transfer. *Research Policy*, 38(2), 369-381.
- Timmer, M. P., and G. J. de Vries (2013). *Productivity and Convergence in Developing Countries: The Role of Imported Inputs*, Unpublished Working Paper, presented at ETSG 2013 Birmingham.
- TNS Political & Social (TNS) (2015). *Internationalisation of Small and Medium-Sized Enterprises. Summary. Flash Eurobarometer 421*. Commissioned by the European Commission (DG GROW). Brussels.
- Wagner, J. (2007). Exports and productivity: A survey of the evidence from firm-level data. *The World Economy*, 30(1), 60-82.
- Wagner, J. (2012). International trade and firm performance: a survey of empirical studies since 2006. *Review of World Economics*, 148(2), 235-267.
- Welch, L. S., & Luostarinen, R. (1988). Internationalisation: Evolution of a concept. *Journal of General Management*, 14(2), 34-55.
- Welch, L. S., & Wiedersheim-Paul, F. (1980). Initial exports - a marketing failure? *Journal of Management Studies*, 17(3), 333-344.
- Williamson, O. E. (1979). Transaction-cost economics: the governance of contractual relations. *The Journal of Law and Economics*, 22(2), 233-261.
- Williamson, O. E. (1981). The economics of organization: The transaction cost approach. *American Journal of Sociology*, 87(3), 548-577.
- Williamson, O., & Masten, S. (1999). *The economics of transaction costs*. Edward Elgar Publishing.
- Yamin, M., & Sinkovics, R. R. (2006). Online internationalisation, psychic distance reduction and the virtuality trap. *International Business Review*, 15(4), 339-360.
- Yeaple, S. R. (2003). The role of skill endowments in the structure of US outward foreign direct investment. *Review of Economics and Statistics*, 85(3), 726-734.



## ANNEX 1 DEFINITION OF SMES

The official EC definition of SMEs takes account of three different factors (level of employment, level of turnover, and size of the balance sheet (Table 48).

However, the data used in the present study and the SME Annual Report are based only on the employment definition, since this is the definition used by the Structural Business Statistics (SBS) database maintained by Eurostat, the main data source for the report.

**Table 48: Definition of SMEs**

Company Category	Employees	Turnover	Balance sheet total
Micro	< 10	< €2 million	< €2 million
Small	< 50	< €10 million	< €10 million
Medium-sized	< 250	< €50 million	< €43 million
Larger enterprise	250+	€50 million+	€43 million+

Source: Commission Recommendation of 6 May 2003 concerning the definition of micro, small, and medium-sized enterprises. (2003/361/EC), Official Journal of the European Union, L 124/36, 20 May 2003

## ANNEX 2 DEFINITION OF EXPORT INTENSITIES OF VARIOUS INDUSTRIES AND INDUSTRY GROUPINGS BY EXPORT INTENSITY

The classification of export intensity levels is determined using the EU-28 Input-Output tables published by Eurostat. Export intensity is defined as the share of exports over total sales and was calculated for each industry. The export intensity scale is defined in the table below.

**Table 49: Definition of export intensity**

Sector identifier	Definition of sector
1	Very low (exports over total sales between 0 and 5%)
2	Low (exports over total sales between 5 and 10%)
3	Medium (exports over total sales between 10 and 20%)
4	High (exports over total sales between 20 and 40%)
5	Very high (exports over total sales above 40%)

The table below shows the specific export intensity of each sector.

**Table 50: Sector specific export intensity levels**

Industry	Sector intensity
Mining	2
Manuf. of food products; Manuf. of beverages; Manuf. of tobacco products	2
Manuf. of textiles; Manuf. of wearing apparel; Manuf. of leather & related products	3
Manuf. wood & cork, exc. furniture; straw & plaiting	2
Manuf. of paper & paper products	3
Printing & reproduction of recorded media	1
Manuf. of coke & refined petroleum products	3
Manuf. of chemicals & chemical products	4
Manuf. of basic pharmaceutical products & preparations	4
Manuf. of rubber & plastic products	3
Manuf. of other non-metallic mineral products	2
Manuf. of basic metals	3
Manuf. of fabricated metal products, exc. machinery & equip.	2
Manuf. of computer, electronic & optical products	4
Manuf. of electrical equipment	4
Manuf. of machinery & equipment n.e.c.	4
Manuf. of motor vehicles, trailers & semitrailers	4
Manuf. of other transport equipment	5
Manuf. of furniture; Other manufacturing	3
Repair & installation of machinery & equipment	1
Electricity, gas, steam & air conditioning supply	1
Water collection, treatment & supply	1
Sewerage; Waste collection, treatment & disposal; Remediation activities & other waste management	2
Construction	1
Wholesale/retail trade & repair of vehicles	1

Industry	Sector intensity
Wholesale trade, exc. motor vehicles & motorcycles	2
Retail trade, exc. motor vehicles & motorcycles	1
Land transport & transport via pipelines	1
Water transport	4
Air transport	4
Warehousing & support activities for transportation	2
Postal & courier activities	1
Accommodation and food services	1
Publishing activities	1
Motion picture, video & TV programme production, recording & music publishing; Programming & broadcasting activities	1
Telecommunications	1
Computer programming, consultancy & related activities; Information service activities	2
Real estate activities	1
Legal & accounting; Activities of head offices; consultancy	2
Architectural & engineering; tech testing & analysis	2
Scientific research & development	3
Advertising & market research	2
Other professional, scientific & tech activities; Veterinary activities	3
Rental & leasing activities	2
Employment activities	1
Travel agency, tour operator & reservations	1
Security & investigation activities; Services to buildings & landscape activities; Office administrative, office support & other business support	2

Source: London Economics based on Eurostat EU27 input-output table

## ANNEX 3 ESTIMATION RESULTS OF THE ANALYSIS OF THE SAFE SURVEY

**Table 51: Firm characteristics – Probit**

VARIABLES	(1) Autonomous	(2) Autonomous (new waves only)	(3) Branches and subsidiaries	(4) Branches and subsidiaries (new waves only)	(5) Branches and subsidiaries - foreign parent (new waves only)
common_ECB	0.0653*** (0.0214)	0.0448* (0.0260)	0.0373 (0.0617)	0.00514 (0.0738)	0.0202 (0.0753)
Year = 2014	-0.0949*** (0.0319)		-0.0408 (0.0951)		
Year = 2015	-0.0669** (0.0318)	0.0156 (0.0247)	-0.0237 (0.0929)	0.00155 (0.0703)	0.0175 (0.0718)
Year = 2016	-0.0706** (0.0317)	0.0119 (0.0248)	-0.0453 (0.0932)	-0.0179 (0.0710)	0.0113 (0.0724)
Country = 1, AT	0.487*** (0.0475)	0.459*** (0.0525)	0.208 (0.134)	0.210 (0.147)	0.0683 (0.149)
Country = 2, BE	0.280*** (0.0498)	0.260*** (0.0557)	0.229* (0.135)	0.124 (0.149)	0.00635 (0.152)
Country = 3, BG	0.0378 (0.0782)	0.104 (0.0797)	0.578* (0.320)	0.560* (0.325)	0.447 (0.334)
Country = 4, CY	0.268 (0.204)	0.271 (0.206)	-0.547 (0.404)	-0.816* (0.437)	-0.821* (0.424)
Country = 5, CZ	0.578*** (0.0928)	0.597*** (0.0941)	0.455** (0.207)	0.457** (0.212)	0.249 (0.214)
Country = 6, DE	0.00920 (0.0364)	-0.00491 (0.0399)	-0.237* (0.123)	-0.259* (0.135)	-0.232* (0.137)
Country = 7, DK	0.134 (0.0834)	0.0869 (0.0839)	0.141 (0.168)	0.145 (0.174)	0.171 (0.177)
Country = 8, EE	0.0240 (0.226)	0.0753 (0.226)	1.235** (0.584)	1.235** (0.593)	1.091* (0.570)
Country = 9, ES	0.0424 (0.0345)	0.0527 (0.0385)	-0.140 (0.122)	-0.143 (0.138)	-0.214 (0.141)
Country = 10, FI	-0.0936* (0.0512)	-0.109* (0.0573)	-0.263* (0.145)	-0.238 (0.158)	-0.344** (0.161)
Country = 11, FR	-0.249*** (0.0362)	-0.257*** (0.0399)	-0.306*** (0.115)	-0.315** (0.127)	-0.281** (0.130)
Country = 12, EL	0.342*** (0.0433)	0.370*** (0.0485)	-0.279 (0.236)	-0.370 (0.318)	-0.611* (0.321)

VARIABLES	(1) Autonomous	(2) Autonomous (new waves only)	(3) Branches and subsidiaries	(4) Branches and subsidiaries (new waves only)	(5) Branches and subsidiaries - foreign parent (new waves only)
Country = 13, HR	0.156 (0.112)	0.198* (0.113)	1.369*** (0.504)	1.177** (0.546)	1.019* (0.563)
Country = 14, HU	0.302*** (0.0778)	0.365*** (0.0790)	0.864*** (0.316)	0.801** (0.323)	0.500 (0.325)
Country = 15, IE	0.0123 (0.0481)	-0.0449 (0.0551)	-0.190 (0.154)	-0.0649 (0.185)	-0.149 (0.191)
Country = 17, LT	0.203* (0.106)	0.255** (0.107)	0.704** (0.358)	0.682* (0.364)	0.558 (0.379)
Country = 18, LU	0.622*** (0.184)	0.576*** (0.184)	0.452 (0.356)	0.483 (0.360)	0.220 (0.351)
Country = 19, LV	0.109 (0.134)	0.140 (0.135)	-0.463 (0.332)	-0.614* (0.349)	-0.984*** (0.359)
Country = 20, MT	-0.186 (0.182)	-0.193 (0.183)	-0.0806 (0.323)	-0.0821 (0.326)	0.0478 (0.333)
Country = 21, NL	0.0615 (0.0448)	0.0553 (0.0494)	-0.102 (0.115)	-0.0738 (0.127)	-0.0777 (0.129)
Country = 22, PL	0.0755 (0.0487)	0.109** (0.0500)	-0.0647 (0.166)	-0.0520 (0.173)	-0.162 (0.177)
Country = 23, PT	0.309*** (0.0445)	0.309*** (0.0498)	0.0994 (0.174)	0.527** (0.254)	0.362 (0.257)
Country = 24, RO	-0.249*** (0.0769)	-0.180** (0.0784)	0.252 (0.335)	0.131 (0.358)	-0.151 (0.370)
Country = 25, SE	0.0900 (0.0887)	0.0519 (0.0894)	0.229 (0.156)	0.189 (0.163)	0.226 (0.164)
Country = 26, SI	0.759*** (0.139)	0.774*** (0.141)	0.308 (0.286)	0.302 (0.289)	0.155 (0.295)
Country = 27, SK	0.332*** (0.0612)	0.378*** (0.0627)	0.356** (0.174)	0.400** (0.186)	0.122 (0.192)
Country = 28, UK	-0.0348 (0.0551)	-0.0361 (0.0561)	-0.320** (0.139)	-0.281* (0.147)	-0.330** (0.150)
Sector = 1, Industry	0.823*** (0.0255)	0.858*** (0.0281)	0.842*** (0.0681)	0.835*** (0.0746)	0.886*** (0.0761)
Sector = 2, Construction	-0.464*** (0.0312)	-0.437*** (0.0338)	-0.480*** (0.0934)	-0.555*** (0.102)	-0.416*** (0.105)
Sector = 4, Services	-0.0539** (0.0223)	-0.00306 (0.0244)	-0.114* (0.0638)	-0.169** (0.0699)	-0.0991 (0.0714)
Turnover (new coding) = 3, more than €500,000 and up to €1 million		0.256*** (0.0309)		-0.0729 (0.157)	-0.0619 (0.160)
Turnover (new coding) = 4, more than €1 million and up to €2 million		0.387*** (0.0341)		-0.0510 (0.145)	-0.0616 (0.148)
Turnover (new coding) = 5, more than €2 million and up to €10 million		0.671*** (0.0349)		0.376*** (0.128)	0.302** (0.131)

VARIABLES	(1) Autonomous	(2) Autonomous (new waves only)	(3) Branches and subsidiaries	(4) Branches and subsidiaries (new waves only)	(5) Branches and subsidiaries - foreign parent (new waves only)
Turnover (new coding) = 6, more than €10 million and up to €50 million		1.041*** (0.0464)		0.532*** (0.136)	0.386*** (0.140)
Turnover (new coding) = 7, more than €50 million		0.972*** (0.0779)		0.553*** (0.153)	0.368** (0.157)
Size class = 2, 10-49	0.130*** (0.0232)	0.00164 (0.0278)	0.0689 (0.0859)	0.114 (0.0980)	0.117 (0.0993)
Size class = 3, 50-249	0.166*** (0.0335)	0.0349 (0.0384)	0.112 (0.0935)	0.214** (0.105)	0.249** (0.107)
Years elapsed since firm first registered = 1, 10 years or more	0.151 (0.0948)	0.0620 (0.103)	0.556** (0.238)	0.799*** (0.261)	0.851*** (0.269)
Years elapsed since firm first registered = 2, 5 years or more, but less than 10 years	0.139 (0.0972)	0.0809 (0.106)	0.485** (0.246)	0.700*** (0.270)	0.742*** (0.278)
Years elapsed since firm first registered = 3, 2 years or more, but less than 5 years	0.202** (0.102)	0.167 (0.111)	0.465* (0.263)	0.684** (0.289)	0.683** (0.298)
Turnover (old coding) = 5, more than €2 million and up to €10 million	0.410*** (0.0251)		0.474*** (0.0794)		
Turnover (old coding) = 6, more than €10 million and up to €50 million	0.769*** (0.0366)		0.691*** (0.0887)		
Turnover (old coding) = 7, more than €50 million	0.662*** (0.0675)		0.697*** (0.110)		
Foreign parent					0.636*** (0.0588)
Constant	-0.719*** (0.103)	-0.871*** (0.111)	-0.807*** (0.278)	-0.977*** (0.309)	-1.224*** (0.319)
Observations	23,930	20,366	3,460	2,941	2,941
Pseudo R-squared	0.150	0.156	0.165	0.171	0.203

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The base categories for country, sector, turnover, size class, and time elapsed since registration are respectively Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade, up to €500,000 in turnover (up to €2m when older waves are included); enterprises with less than 10 employees, and less than two years since registration.

Source: LE Europe analysis of SAFE surveys

**Table 52: Firm Characteristics - Linear**

VARIABLES	(1) Autonomous exporters	(2) Autonomous exporters (new waves only)	(3) Exporting branches and subsidiaries	(4) Exporting branches and subsidiaries (new waves only)	(5) Exporting branches and subsidiaries - foreign parent
common_ECB	-0.419 (0.736)	-0.551 (0.902)	-1.017 (1.795)	0.0577 (2.085)	0.458 (2.071)
Year = 2014	0.117 (1.040)		5.815** (2.716)		
Year = 2015	-0.0686 (1.035)	0.132 (0.847)	4.851* (2.653)	1.145 (1.955)	1.265 (1.940)
Year = 2016	-1.252 (1.037)	-1.072 (0.851)	4.667* (2.645)	0.282 (1.949)	0.894 (1.938)
Country = 1, AT	0.342 (1.463)	0.242 (1.635)	3.445 (3.404)	3.373 (3.679)	2.794 (3.653)
Country = 2, BE	0.295 (1.618)	-1.139 (1.830)	5.683* (3.350)	3.301 (3.733)	1.615 (3.718)
Country = 3, BG	20.76*** (2.941)	21.56*** (2.977)	-6.790 (7.574)	-6.283 (7.654)	-7.912 (7.602)
Country = 4, CY	11.94 (8.002)	11.98 (8.022)	-32.34** (14.49)	-33.68** (16.07)	-30.14* (15.96)
Country = 5, CZ	3.359 (2.613)	3.650 (2.642)	-0.558 (4.890)	-1.704 (4.958)	-3.710 (4.934)
Country = 6, DE	-7.809*** (1.201)	-7.622*** (1.329)	-11.72*** (3.394)	-14.10*** (3.686)	-13.12*** (3.662)
Country = 7, DK	-0.325 (2.817)	-0.426 (2.845)	1.375 (4.480)	0.0363 (4.551)	0.368 (4.517)
Country = 8, EE	4.745 (8.266)	5.452 (8.290)	11.51 (9.209)	10.28 (9.196)	9.586 (9.127)
Country = 9, ES	-1.080 (1.166)	-1.197 (1.317)	-6.609** (3.352)	-9.802*** (3.726)	-11.58*** (3.712)
Country = 10, FI	-3.829** (1.783)	-3.441* (1.977)	-9.819** (4.189)	-12.04*** (4.446)	-12.67*** (4.414)
Country = 11, FR	-11.36*** (1.282)	-11.55*** (1.431)	-9.652*** (3.073)	-12.80*** (3.330)	-12.88*** (3.305)
Country = 12, EL	-3.758*** (1.447)	-4.020** (1.622)	4.413 (8.143)	-11.64 (11.00)	-13.27 (10.92)
Country = 13, HR	-0.605 (4.101)	-0.151 (4.124)	-15.86* (8.157)	-20.11** (9.574)	-21.72** (9.506)
Country = 14, HU	14.16*** (2.701)	14.59*** (2.735)	13.47** (5.922)	11.42* (6.108)	8.553 (6.084)

VARIABLES	(1) Autonomous exporters	(2) Autonomous exporters (new waves only)	(3) Exporting branches and subsidiaries	(4) Exporting branches and subsidiaries (new waves only)	(5) Exporting branches and subsidiaries - foreign parent
Country = 15, IE	-4.229** (1.716)	-5.013** (2.018)	4.947 (4.368)	-0.0326 (4.937)	-1.978 (4.912)
Country = 17, LT	14.11*** (3.892)	14.62*** (3.919)	10.71 (7.940)	8.910 (7.948)	7.197 (7.894)
Country = 18, LU	9.923* (5.202)	9.860* (5.221)	-0.674 (8.343)	-2.191 (8.337)	-3.592 (8.277)
Country = 19, LV	-0.699 (5.081)	-0.323 (5.104)	11.88 (12.35)	14.68 (13.24)	9.755 (13.17)
Country = 20, MT	15.98** (7.305)	15.91** (7.322)	-0.242 (10.94)	-1.259 (10.91)	-0.678 (10.83)
Country = 21, NL	-2.531* (1.537)	-2.521 (1.699)	4.122 (3.138)	3.551 (3.427)	3.768 (3.401)
Country = 22, PL	0.207 (1.798)	0.580 (1.845)	3.241 (5.370)	2.035 (5.438)	0.671 (5.403)
Country = 23, PT	4.407*** (1.447)	5.696*** (1.633)	3.204 (5.025)	-0.632 (6.060)	-1.864 (6.018)
Country = 24, RO	4.732 (3.090)	5.353* (3.127)	8.044 (9.700)	10.33 (10.65)	6.709 (10.59)
Country = 25, SE	-6.180** (2.977)	-6.170** (3.003)	-5.162 (4.095)	-7.753* (4.264)	-6.131 (4.242)
Country = 26, SI	9.377** (3.725)	9.576** (3.748)	8.004 (6.954)	6.445 (6.969)	4.936 (6.922)
Country = 27, SK	4.139** (1.991)	4.477** (2.032)	-3.997 (4.082)	-3.290 (4.318)	-6.923 (4.337)
Country = 28, UK	-10.34*** (1.990)	-10.11*** (2.026)	2.667 (3.988)	1.091 (4.118)	0.325 (4.089)
Sector = 1, Industry	15.67*** (0.811)	15.61*** (0.894)	29.96*** (1.847)	30.99*** (1.985)	31.35*** (1.971)
Sector = 2, Construction	2.761** (1.330)	3.278** (1.440)	5.263 (3.465)	3.351 (3.815)	4.407 (3.791)
Sector = 4, Services	12.39*** (0.847)	12.69*** (0.931)	16.91*** (2.102)	16.10*** (2.270)	16.44*** (2.254)
Turnover (new coding) = 3, more than €500,000 and up to €1 million		1.389 (1.255)		-14.24** (5.736)	-13.33** (5.695)
Turnover (new coding) = 4, more than €1 million and up to €2 million		1.232 (1.304)		0.402 (5.208)	1.656 (5.173)
Turnover (new coding) = 5, more than €2 million and up to €10 million		6.589*** (1.276)		-4.971 (4.342)	-4.692 (4.310)
Turnover (new coding) = 6, more than €10 million and up to €50 million		10.97*** (1.548)		-1.593 (4.464)	-2.256 (4.432)

VARIABLES	(1) Autonomous exporters	(2) Autonomous exporters (new waves only)	(3) Exporting branches and subsidiaries	(4) Exporting branches and subsidiaries (new waves only)	(5) Exporting branches and subsidiaries - foreign parent
Turnover (new coding) = 7, more than €50 million		18.61*** (2.344)		0.215 (4.845)	-0.739 (4.811)
Size class = 2, 10-49	-3.402*** (0.876)	-4.528*** (1.023)	-4.534 (2.964)	-4.554 (3.318)	-5.169 (3.295)
Size class = 3, 50-249	-1.694 (1.159)	-2.983** (1.317)	-4.164 (3.099)	-4.229 (3.431)	-4.566 (3.406)
Years elapsed since firm first registered = 1, 10 years or more	2.921 (3.903)	3.538 (4.224)	-1.555 (8.048)	9.705 (9.629)	11.37 (9.561)
Years elapsed since firm first registered = 2, 5 years or more, but less than 10 years	7.646* (3.986)	8.125* (4.311)	5.052 (8.265)	15.68 (9.850)	17.03* (9.779)
Years elapsed since firm first registered = 3, 2 years or more, but less than 5 years	4.686 (4.147)	4.789 (4.481)	8.423 (8.773)	19.34* (10.36)	19.42* (10.28)
Turnover (old coding) = 5, more than €2 million and up to €10 million	4.698*** (0.867)		-0.954 (2.690)		
Turnover (old coding) = 6, more than €10 million and up to €50 million	9.391*** (1.146)		2.464 (2.862)		
Turnover (old coding) = 7, more than €50 million	15.87*** (1.966)		4.414 (3.330)		
Foreign parent					8.346*** (1.534)
Constant	19.77*** (4.119)	18.41*** (4.477)	23.91*** (9.196)	21.51* (11.08)	15.83 (11.04)
Observations	10,793	9,040	2,234	1,910	1,910
R-squared	0.086	0.088	0.165	0.184	0.197

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The base categories for country, sector, turnover, size class, and time elapsed since registration are respectively Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade, up to €500,000 in turnover (up to €2m when older waves are included); enterprises with less than 10 employees, and less than two years since registration.

Source: LE Europe analysis of SAFE surveys

**Table 53: Innovation and ambition to grow - Probit**

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (new waves only)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
common_ECB = 0,	-	-	-	-	-	-	-	-
Year = 2014	-0.0939** (0.0371)	-0.112*** (0.0376)			-0.0468 (0.110)	-0.0430 (0.111)		
Year = 2015	-0.0770** (0.0381)	-0.117*** (0.0386)	0.0129 (0.0268)	-0.00988 (0.0272)	-0.0387 (0.110)	-0.0589 (0.111)	0.0382 (0.0769)	0.0201 (0.0774)
Year = 2016	-0.0765** (0.0381)	-0.106*** (0.0386)	0.0146 (0.0269)	0.00200 (0.0272)	-0.0422 (0.111)	-0.0539 (0.112)	0.0408 (0.0779)	0.0299 (0.0784)
Country = 1, AT	0.466*** (0.0603)	0.492*** (0.0611)	0.465*** (0.0653)	0.501*** (0.0660)	0.317* (0.166)	0.325* (0.168)	0.120 (0.180)	0.125 (0.182)
Country = 2, BE	0.308*** (0.0636)	0.331*** (0.0643)	0.279*** (0.0700)	0.302*** (0.0708)	0.214 (0.169)	0.240 (0.170)	0.0371 (0.187)	0.0689 (0.188)
Country = 3, BG	0.0261 (0.0872)	0.0272 (0.0878)	0.0952 (0.0885)	0.0951 (0.0891)	0.598* (0.349)	0.584* (0.350)	0.407 (0.364)	0.395 (0.364)
Country = 4, CY	0.361 (0.227)	0.276 (0.227)	0.361 (0.228)	0.275 (0.228)	-0.443 (0.509)	-0.510 (0.513)	-0.809 (0.546)	-0.909* (0.550)
Country = 5, CZ	0.594*** (0.102)	0.536*** (0.103)	0.615*** (0.104)	0.558*** (0.105)	0.432** (0.220)	0.434* (0.222)	0.238 (0.228)	0.241 (0.230)
Country = 6, DE	-0.0306 (0.0438)	0.00444 (0.0444)	-0.0375 (0.0465)	-0.000303 (0.0471)	-0.289** (0.146)	-0.251* (0.148)	-0.271* (0.158)	-0.234 (0.160)
Country = 7, DK	0.114 (0.0875)	0.109 (0.0884)	0.0667 (0.0880)	0.0624 (0.0889)	0.214 (0.184)	0.239 (0.186)	0.231 (0.192)	0.259 (0.194)
Country = 8, EE	0.00248 (0.247)	0.0562 (0.249)	0.0722 (0.246)	0.122 (0.248)	0.993 (0.631)	1.093* (0.650)	0.727 (0.618)	0.789 (0.631)
Country = 9, ES	-0.00199 (0.0415)	-0.000305 (0.0420)	-0.00547 (0.0451)	-0.0115 (0.0457)	-0.0381 (0.150)	-0.0102 (0.151)	-0.118 (0.168)	-0.0978 (0.169)
Country = 10, FI	-0.128** (0.0617)	-0.182*** (0.0632)	-0.157** (0.0668)	-0.207*** (0.0685)	-0.233 (0.173)	-0.271 (0.175)	-0.221 (0.188)	-0.263 (0.190)
Country = 11, FR	-0.241*** (0.0427)	-0.197*** (0.0433)	-0.244*** (0.0460)	-0.199*** (0.0466)	-0.251* (0.137)	-0.187 (0.139)	-0.262* (0.150)	-0.205 (0.152)
Country = 12, EL	0.382*** (0.0571)	0.373*** (0.0579)	0.409*** (0.0620)	0.387*** (0.0629)	-0.472 (0.293)	-0.479 (0.298)	-1.043*** (0.404)	-1.047** (0.410)
Country = 13, HR	0.179 (0.123)	0.144 (0.125)	0.223* (0.124)	0.190 (0.126)				

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (new waves only)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
Country = 14, HU	0.263*** (0.0818)	0.285*** (0.0827)	0.327*** (0.0830)	0.349*** (0.0840)	0.845*** (0.324)	0.827** (0.325)	0.476 (0.333)	0.472 (0.334)
Country = 15, IE	0.0250 (0.0589)	0.00180 (0.0599)	0.0106 (0.0639)	-0.00685 (0.0649)	-0.132 (0.181)	-0.140 (0.183)	-0.128 (0.214)	-0.135 (0.216)
Country = 17, LT	0.0972 (0.118)	0.0689 (0.119)	0.150 (0.119)	0.123 (0.121)	0.699* (0.363)	0.638* (0.364)	0.546 (0.383)	0.498 (0.384)
Country = 18, LU	0.591*** (0.187)	0.594*** (0.189)	0.542*** (0.187)	0.542*** (0.189)	0.430 (0.360)	0.359 (0.360)	0.199 (0.356)	0.143 (0.355)
Country = 19, LV	-0.0324 (0.147)	-0.0249 (0.149)	0.00105 (0.149)	0.00689 (0.150)	-0.135 (0.376)	-0.180 (0.385)	-0.658 (0.404)	-0.716* (0.414)
Country = 20, MT	-0.232 (0.203)	-0.274 (0.205)	-0.228 (0.203)	-0.273 (0.205)	-0.143 (0.359)	-0.135 (0.360)	-0.0657 (0.370)	-0.0737 (0.370)
Country = 21, NL	0.0860 (0.0538)	0.0921* (0.0545)	0.0947 (0.0582)	0.102* (0.0590)	-0.131 (0.137)	-0.131 (0.139)	-0.156 (0.150)	-0.158 (0.152)
Country = 22, PL	0.105** (0.0535)	0.102* (0.0543)	0.141*** (0.0547)	0.138** (0.0555)	-0.0834 (0.194)	-0.0826 (0.197)	-0.139 (0.206)	-0.129 (0.209)
Country = 23, PT	0.280*** (0.0584)	0.245*** (0.0589)	0.262*** (0.0636)	0.225*** (0.0641)	0.0575 (0.249)	0.0816 (0.251)	0.252 (0.323)	0.279 (0.325)
Country = 24, RO	-0.269*** (0.0831)	-0.330*** (0.0840)	-0.198** (0.0845)	-0.259*** (0.0855)	0.167 (0.370)	0.151 (0.374)	-0.392 (0.411)	-0.392 (0.414)
Country = 25, SE	0.0605 (0.0939)	0.0312 (0.0946)	0.0187 (0.0946)	-0.0118 (0.0954)	0.248 (0.171)	0.235 (0.172)	0.260 (0.179)	0.251 (0.180)
Country = 26, SI	0.794*** (0.146)	0.757*** (0.149)	0.803*** (0.148)	0.763*** (0.150)	0.280 (0.295)	0.273 (0.298)	0.129 (0.303)	0.115 (0.306)
Country = 27, SK	0.352*** (0.0742)	0.342*** (0.0749)	0.400*** (0.0755)	0.392*** (0.0763)	0.285 (0.199)	0.268 (0.201)	0.0438 (0.219)	0.0301 (0.221)
Country = 28, UK	-0.0449 (0.0583)	-0.0554 (0.0592)	-0.0463 (0.0592)	-0.0575 (0.0602)	-0.223 (0.155)	-0.234 (0.156)	-0.243 (0.165)	-0.247 (0.167)
Sector = 1, Industry	0.806*** (0.0303)	0.765*** (0.0310)	0.848*** (0.0324)	0.803*** (0.0331)	0.834*** (0.0807)	0.816*** (0.0821)	0.872*** (0.0877)	0.861*** (0.0891)
Sector = 2, Construction	-0.489*** (0.0372)	-0.443*** (0.0379)	-0.447*** (0.0394)	-0.408*** (0.0401)	-0.471*** (0.110)	-0.424*** (0.111)	-0.385*** (0.121)	-0.346*** (0.122)
Sector = 4, Services	-0.0797*** (0.0270)	-0.0821*** (0.0274)	-0.0175 (0.0290)	-0.0232 (0.0294)	-0.0624 (0.0771)	-0.0461 (0.0779)	-0.0306 (0.0844)	-0.0172 (0.0852)
Turnover (old coding) = 5, more than €2 million and up to €10 million	0.410*** (0.0301)	0.423*** (0.0304)			0.489*** (0.0973)	0.459*** (0.0983)		

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (new waves only)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
Turnover (old coding) = 6, more than €10 million and up to €50 million	0.737*** (0.0439)	0.739*** (0.0444)			0.707*** (0.108)	0.677*** (0.110)		
Turnover (old coding) = 7, more than €50 million	0.613*** (0.0809)	0.623*** (0.0816)			0.672*** (0.131)	0.660*** (0.132)		
Size class = 2, 10-49	0.158*** (0.0278)	0.131*** (0.0282)	0.0345 (0.0326)	0.00758 (0.0330)	-0.000738 (0.106)	-0.00546 (0.107)	0.136 (0.120)	0.141 (0.121)
Size class = 3, 50-249	0.193*** (0.0400)	0.163*** (0.0405)	0.0544 (0.0448)	0.0230 (0.0453)	0.0398 (0.116)	0.0358 (0.117)	0.279** (0.129)	0.274** (0.131)
Years elapsed since firm first registered = 1, 10 years or more	0.140 (0.105)	0.204* (0.105)	0.0872 (0.113)	0.165 (0.113)	0.496* (0.278)	0.470* (0.278)	0.754** (0.312)	0.718** (0.313)
Years elapsed since firm first registered = 2, 5 years or more, but less than 10 years	0.163 (0.108)	0.178 (0.108)	0.125 (0.116)	0.149 (0.116)	0.370 (0.287)	0.344 (0.288)	0.622* (0.322)	0.592* (0.323)
Years elapsed since firm first registered = 3, 2 years or more, but less than 5 years	0.207* (0.114)	0.213* (0.114)	0.180 (0.122)	0.196 (0.122)	0.434 (0.308)	0.368 (0.308)	0.603* (0.345)	0.543 (0.345)
A new or significantly improved product or service to the market		0.335*** (0.0252)		0.325*** (0.0267)		0.191*** (0.0665)		0.151** (0.0719)
A new or significantly improved production process or method		0.111*** (0.0272)		0.118*** (0.0288)		0.142* (0.0726)		0.153* (0.0782)
A new organisation of management		0.0412 (0.0255)		0.0481* (0.0271)		0.0178 (0.0665)		-0.00445 (0.0719)
A new way of selling goods or services		-0.0232 (0.0255)		-0.0306 (0.0271)		-0.134* (0.0665)		-0.0673 (0.0719)

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (new waves only)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
how much does your enterprise expect to grow per year? (next two or three years) = 1, Over 20% per year		(0.0261) 0.210***		(0.0279) 0.221***		(0.0758) 0.258**		(0.0819) 0.183
how much does your enterprise expect to grow per year? (next two or three years) = 2, Less than 20% per year		(0.0400) 0.135***		(0.0422) 0.131***		(0.125) 0.193***		(0.134) 0.180**
how much does your enterprise expect to grow per year? (next two or three years) = 4, Get smaller		(0.0255) -0.121***		(0.0272) -0.137***		(0.0722) 0.0669		(0.0795) 0.117
Turnover (new coding) = 3, more than €500,000 and up to €1 million		(0.0417)	0.245***	(0.0454) 0.232***		(0.136)	-0.231	(0.151) -0.237
Turnover (new coding) = 4, more than €1 million and up to €2 million			(0.0365) 0.379***	(0.0368) 0.388***			(0.193) -0.249	(0.194) -0.252
Turnover (new coding) = 5, more than €2 million and up to €10 million			(0.0401) 0.665***	(0.0406) 0.676***			(0.175) 0.168	(0.175) 0.137
Turnover (new coding) = 6, more than €10 million and up to €50 million			(0.0409) 1.008***	(0.0414) 1.010***			(0.158) 0.258	(0.159) 0.230
Turnover (new coding) = 7, more than €50 million			(0.0545) 0.916***	(0.0551) 0.922***			(0.169) 0.161	(0.170) 0.152
			(0.0902)	(0.0909)			(0.187)	(0.189)

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (new waves only)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
Foreign parent							0.602*** (0.0690)	0.595*** (0.0693)
Constant	-0.629*** (0.113)	-0.876*** (0.115)	-0.842*** (0.118)	-1.111*** (0.121)	-0.670** (0.320)	-0.851*** (0.325)	-1.014*** (0.361)	-1.170*** (0.367)
Observations	16,730	16,730	14,929	14,929	2,476	2,476	2,191	2,191
Pseudo R-squared	0.155	0.173	0.160	0.178	0.157	0.167	0.193	0.200

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The base categories for country, sector, turnover, size class, time elapsed since registration, and growth expectations are respectively Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade, up to €500,000 in turnover (up to €2m when older waves are included); enterprises with less than 10 employees, less than two years since registration, and no growth.

Source: LE Europe analysis of SAFE surveys

**Table 54: Innovation and ambition to grow - Linear**

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
common_ECB = 0,	-	-	-	-	-	-	-	-
Year = 2014	-1.481 (1.203)	-1.669 (1.201)			5.575* (3.142)	5.484* (3.136)		
Year = 2015	-1.624 (1.233)	-1.741 (1.235)	-0.183 (0.913)	-0.114 (0.914)	5.719* (3.137)	5.728* (3.132)	2.668 (2.086)	2.741 (2.083)
Year = 2016	- 2.314* (1.238)	-2.410* (1.239)	-0.905 (0.919)	-0.805 (0.919)	5.674* (3.129)	5.929* (3.126)	1.788 (2.069)	2.243 (2.069)
Country = 1, AT	-0.117 (1.809)	-0.252 (1.808)	0.0563 (1.969)	0.0870 (1.968)	1.588 (4.079)	1.849 (4.097)	2.396 (4.348)	2.704 (4.364)
Country = 2, BE	-0.370 (2.029)	-0.425 (2.027)	-0.167 (2.255)	-0.136 (2.251)	6.291 (4.161)	6.672 (4.164)	3.606 (4.537)	3.943 (4.541)
Country = 3, BG	19.87* ** (3.210)	19.36*** (3.205)	20.80*** (3.239)	20.36*** (3.233)	-6.483 (8.304)	-6.266 (8.308)	-8.585 (8.428)	-7.740 (8.420)
Country = 4, CY	6.418 (8.621)	4.912 (8.608)	6.591 (8.625)	5.059 (8.611)	-42.40*** (16.22)	-42.97*** (16.19)	-40.77** (18.46)	-39.93** (18.42)
Country = 5, CZ	2.079 (2.798)	1.493 (2.798)	2.459 (2.819)	1.973 (2.820)	-1.102 (5.230)	-0.679 (5.220)	-3.931 (5.290)	-3.482 (5.273)
Country = 6, DE	- 8.219* ** (1.433)	-8.514*** (1.434)	-7.633*** (1.534)	-7.809*** (1.535)	-14.59*** (4.045)	-13.78*** (4.066)	-15.66*** (4.292)	-14.63*** (4.320)
Country = 7, DK	-1.208 (2.951)	-1.809 (2.952)	-1.189 (2.971)	-1.668 (2.972)	-0.524 (4.785)	-0.383 (4.805)	-0.644 (4.831)	-0.299 (4.850)
Country = 8, EE	2.622 (8.946)	2.804 (8.928)	3.903 (8.960)	4.074 (8.941)	14.18 (10.49)	13.91 (10.47)	10.53 (10.43)	9.639 (10.40)
Country = 9, ES	-0.927 (1.402)	-1.141 (1.405)	-0.784 (1.537)	-1.007 (1.540)	-6.380 (4.073)	-5.986 (4.086)	-8.930** (4.413)	-8.847** (4.416)
Country = 10, FI	-2.812 (2.125)	-2.483 (2.140)	-2.254 (2.297)	-1.745 (2.315)	-12.69** (4.959)	-12.64** (4.961)	-14.24*** (5.097)	-14.47*** (5.096)
Country = 11, FR	- 11.37*	-11.24***	-11.20***	-11.07***	-10.16***	-10.30***	-13.96***	-14.38***

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
	**							
Country = 12, EL	(1.492) - 3.707* *	(1.491) -4.346**	(1.623) -3.014	(1.622) -3.648*	(3.599) -5.895	(3.628) -8.609	(3.822) -19.99	(3.854) -21.44
Country = 13, HR	(1.867) -1.597 (4.389)	(1.871) -1.306 (4.386)	(2.027) -1.056 (4.403)	(2.031) -0.639 (4.400)	(10.63) -15.03 (9.684)	(10.70) -13.67 (9.679)	(14.65) -21.33* (11.63)	(14.67) -20.29* (11.60)
Country = 14, HU	13.48* **	13.03***	14.21***	13.97***	13.19**	14.27**	8.411	9.599
Country = 15, IE	(2.862) -3.088 (2.058)	(2.866) -3.756* (2.063)	(2.892) -3.696 (2.262)	(2.897) -4.306* (2.267)	(6.242) 1.792 (5.024)	(6.280) 2.019 (5.039)	(6.449) -4.266 (5.532)	(6.490) -3.975 (5.533)
Country = 17, LT	13.23* **	12.41***	13.98***	13.25***	9.128	7.124	5.573	3.760
Country = 18, LU	(4.439) 9.881* (5.379)	(4.436) 10.38* (5.368)	(4.455) 9.809* (5.388)	(4.454) 10.37* (5.377)	(8.306) -1.661 (8.461)	(8.331) -2.457 (8.450)	(8.299) -3.628 (8.431)	(8.321) -4.373 (8.413)
Country = 19, LV	2.798 (5.728)	2.632 (5.720)	3.298 (5.738)	3.284 (5.731)	12.61 (12.45)	12.78 (12.45)	10.67 (13.33)	10.23 (13.32)
Country = 20, MT	23.14* **	22.54***	23.37***	22.85***	-6.946	-7.548	-8.789	-10.22
Country = 21, NL	(8.018) - 3.358* (1.800)	(8.001) -3.728**	(8.021) -3.892**	(8.003) -4.099**	(12.41) 5.378	(12.40) 5.422	(12.33) 5.128	(12.31) 5.030
Country = 22, PL	(1.800) - 0.0708 (1.937)	(1.805) -0.920	(1.944) 0.558	(1.949) -0.175	(3.744) 7.660	(3.753) 8.039	(3.989) 5.539	(3.997) 6.241
Country = 23, PT	7.072* **	6.777***	8.825***	8.488***	2.643	2.188	-0.789	-1.270
Country = 24, RO	(1.867) 5.926* (3.350)	(1.865) 5.081 (3.351)	(2.060) 6.711** (3.378)	(2.057) 5.952* (3.380)	(7.107) 13.39 (10.67)	(7.089) 13.91 (10.67)	(8.043) 10.33 (11.89)	(8.014) 12.77 (11.88)
Country = 25, SE	- 6.662* *	-7.582**	-6.683**	-7.543**	-6.950	-6.810	-7.063	-7.063
	(3.170)	(3.171)	(3.189)	(3.191)	(4.418)	(4.420)	(4.565)	(4.565)

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
Country = 26, SI	9.372* *	8.524**	9.596**	8.797**	9.265	9.534	6.989	7.104
	(3.836)	(3.831)	(3.851)	(3.847)	(7.231)	(7.234)	(7.223)	(7.222)
Country = 27, SK	4.343* (2.350)	3.958* (2.348)	4.923** (2.379)	4.667** (2.378)	-6.081 (4.693)	-5.817 (4.711)	-8.757* (5.007)	-8.596* (5.020)
Country = 28, UK	- 10.11* **	-10.96***	-9.858***	-10.60***	1.369	1.295	-0.0748	-0.0723
	(2.089)	(2.094)	(2.117)	(2.122)	(4.297)	(4.300)	(4.405)	(4.408)
Sector = 1, Industry	14.73* **	14.17***	14.92***	14.43***	29.71***	28.91***	29.86***	29.09***
	(0.964)	(0.977)	(1.037)	(1.051)	(2.197)	(2.213)	(2.307)	(2.314)
Sector = 2, Construction	2.184 (1.586)	1.849 (1.588)	2.615 (1.682)	2.282 (1.683)	6.437 (4.056)	6.035 (4.069)	4.238 (4.387)	4.023 (4.387)
Sector = 4, Services	11.13* **	10.99***	11.76***	11.68***	16.66***	16.46***	15.70***	15.51***
	(1.026)	(1.028)	(1.102)	(1.104)	(2.502)	(2.504)	(2.656)	(2.653)
Turnover (old coding) = 5, more than €2 million and up to €10 million	5.277* **	5.256***			0.111	0.529		
	(1.023)	(1.024)			(3.231)	(3.248)		
Turnover (old coding) = 6, more than €10 million and up to €50 million	10.31* **	10.11***			5.262	6.317*		
	(1.366)	(1.369)			(3.428)	(3.468)		
Turnover (old coding) = 7, more than €50 million	17.86* ** (2.355)	17.63*** (2.353)			5.260 (3.952)	6.421 (3.991)		
Size class = 2, 10-49	- 3.326* **	-3.408***	-4.394***	-4.561***	-8.071**	-7.753**	-6.456	-5.857
	(1.044)	(1.046)	(1.190)	(1.192)	(3.594)	(3.599)	(3.962)	(3.957)
Size class = 3, 50-249	-2.137 (1.381)	-2.108 (1.383)	-3.490** (1.534)	-3.553** (1.536)	-8.020** (3.756)	-7.851** (3.770)	-5.404 (4.085)	-4.963 (4.092)
Years elapsed since firm first registered = 1, 10 years or more	5.320 (4.265)	5.488 (4.261)	4.445 (4.528)	4.522 (4.524)	-2.090 (8.959)	-1.612 (8.972)	9.373 (10.67)	9.830 (10.67)

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
Years elapsed since firm first registered = 2, 5 years or more, but less than 10 years	9.864* *	9.426**	8.903*	8.318*	5.007	4.933	16.75	16.54
	(4.367)	(4.361)	(4.634)	(4.628)	(9.243)	(9.252)	(10.93)	(10.92)
Years elapsed since firm first registered = 3, 2 years or more, but less than 5 years	6.779	6.203	5.627	4.913	8.536	7.931	17.39	17.14
	(4.565)	(4.560)	(4.842)	(4.837)	(9.846)	(9.840)	(11.56)	(11.54)
A new or significantly improved product or service to the market		0.916		0.979		0.337		0.824
		(0.790)		(0.843)		(1.753)		(1.845)
A new or significantly improved production process or method		-0.417		-0.363		2.830		2.969
		(0.833)		(0.888)		(1.864)		(1.950)
A new organisation of management		0.549		0.729		-0.0562		0.379
		(0.819)		(0.875)		(1.776)		(1.867)
A new way of selling goods or services		-3.405***		-3.433***		-2.798		-1.180
		(0.870)		(0.933)		(2.146)		(2.244)
how much does your enterprise expect to grow per year? (next two or three years) = 1, Over 20% per year		6.763***		6.702***		6.512*		6.243*
		(1.332)		(1.420)		(3.540)		(3.730)
how much does your enterprise expect to grow per year? (next two or three years) = 2, Less than 20% per year		1.205		0.614		-3.858*		-5.236**
		(0.889)		(0.953)		(2.084)		(2.200)
how much does your enterprise expect to grow per year? (next two or three years) = 4, Get smaller		-0.0560		-0.424		-4.154		-2.699
		(1.574)		(1.744)		(3.922)		(4.247)
Turnover (new coding) = 3,			1.591	1.563			-12.92*	-12.49*

VARIABLES	(1) Autonomous	(2) Autonomous - innovation and growth expectations	(3) Autonomous (new waves only)	(4) Autonomous - innovation and growth expectations (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - innovation and growth expectations	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - innovation and growth expectations (foreign parent control)
more than €500,000 and up to €1 million			(1.475)	(1.473)			(6.808)	(6.788)
Turnover (new coding) = 4, more than €1 million and up to €2 million			2.508*	2.697*			-1.897	-1.146
Turnover (new coding) = 5, more than €2 million and up to €10 million			(1.521) 7.679***	(1.521) 7.835***			(5.954) -6.312	(5.949) -5.163
Turnover (new coding) = 6, more than €10 million and up to €50 million			(1.484) 12.55***	(1.488) 12.57***			(4.980) -2.874	(4.993) -1.206
Turnover (new coding) = 7, more than €50 million			(1.813) 20.50***	(1.821) 20.51***			(5.109) -3.998	(5.137) -2.231
Foreign parent			(2.718)	(2.718)			(5.551) 8.561***	(5.587) 8.799***
Constant	18.55* ** (4.472)	18.24*** (4.515)	16.37*** (4.705)	16.08*** (4.753)	25.48** (10.15)	26.27** (10.26)	(1.773) 20.62* (12.14)	(1.771) 20.51* (12.24)
Observations	7,676	7,676	6,735	6,735	1,651	1,651	1,457	1,457
R-squared	0.086	0.092	0.089	0.095	0.173	0.182	0.201	0.212

Notes: Standard errors in parentheses: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The base categories for country, sector, turnover, size class, time elapsed since registration, and growth expectations are respectively Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade, up to €500,000 in turnover (up to €2m when older waves are included); enterprises with less than 10 employees, less than two years since registration, and no growth.

Source: LE Europe analysis of SAFE surveys

**Table 55: Problems – Probit**

VARIABLES	(1) Autonomous	(2) Autonomous - problems	(3) Autonomous (new waves only)	(4) Autonomous - problems (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - problems	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - problems (foreign parent control)
common_ECB	0.103*** (0.0381)	0.0987** (0.0390)	0.0977* (0.0524)	0.0762 (0.0549)	0.0555 (0.119)	0.106 (0.131)	-0.0155 (0.182)	-0.0284 (0.217)
Year = 2014	-0.0636 (0.0468)	-0.0724 (0.0476)			-0.164 (0.134)	-0.116 (0.147)		
Year = 2015	0.0147 (0.0525)	0.0179 (0.0541)	0.0868* (0.0497)	0.0786 (0.0528)	-0.0372 (0.158)	0.0145 (0.172)	0.101 (0.167)	0.0716 (0.200)
Year = 2016	-0.0542 (0.0546)	-0.0461 (0.0576)	0.0155 (0.0450)	0.0111 (0.0504)	-0.0642 (0.171)	-0.0470 (0.197)	0.104 (0.154)	0.0942 (0.202)
Country = 1, AT	0.486*** (0.0764)	0.470*** (0.0798)	0.399*** (0.0872)	0.407*** (0.0907)	0.382 (0.251)	0.333 (0.281)	0.400 (0.297)	0.441 (0.341)
Country = 2, BE	0.312*** (0.0839)	0.298*** (0.0858)	0.235** (0.0958)	0.233** (0.0981)	0.447* (0.252)	0.340 (0.275)	0.207 (0.300)	0.173 (0.332)
Country = 3, BG	0.307** (0.137)	0.334** (0.140)	0.341** (0.140)	0.377*** (0.143)	0.889 (0.825)	1.139 (0.860)	1.061 (0.877)	1.305 (0.996)
Country = 4, CY	0.246 (0.279)	0.217 (0.280)	0.244 (0.281)	0.221 (0.282)				
Country = 5, CZ	0.576*** (0.151)	0.549*** (0.153)	0.578*** (0.154)	0.561*** (0.156)	0.624 (0.391)	0.610 (0.425)	0.443 (0.408)	0.609 (0.462)
Country = 6, DE	0.0544 (0.0655)	0.0304 (0.0693)	0.0169 (0.0733)	0.0181 (0.0776)	-0.0962 (0.235)	-0.120 (0.265)	0.0269 (0.276)	0.105 (0.317)
Country = 7, DK	0.155 (0.241)	0.164 (0.245)	0.0696 (0.242)	0.115 (0.246)	0.496 (0.536)	0.570 (0.565)	0.715 (0.544)	0.926 (0.604)
Country = 8, EE	-0.000103 (0.462)	0.104 (0.464)	-0.00334 (0.464)	0.0593 (0.465)				
Country = 9, ES	0.0913 (0.0626)	0.0701 (0.0639)	0.0872 (0.0696)	0.0759 (0.0713)	0.0183 (0.241)	0.0140 (0.263)	-0.167 (0.282)	-0.0532 (0.309)
Country = 10, FI	-0.0677 (0.0823)	-0.0243 (0.0855)	-0.140 (0.0976)	-0.0803 (0.101)	-0.380 (0.257)	-0.423 (0.290)	-0.318 (0.302)	-0.132 (0.342)
Country = 11, FR	-0.228*** (0.0684)	-0.254*** (0.0697)	-0.228*** (0.0777)	-0.242*** (0.0794)	-0.119 (0.238)	-0.158 (0.265)	0.0337 (0.284)	0.126 (0.321)
Country = 12, EL	0.390*** (0.0697)	0.363*** (0.0730)	0.370*** (0.0760)	0.340*** (0.0803)	-0.348 (0.404)	-0.285 (0.421)	-0.616 (0.520)	-0.354 (0.563)
Country = 13, HR	0.141 (0.210)	0.154 (0.211)	0.143 (0.213)	0.179 (0.215)				

VARIABLES	(1) Autonomous	(2) Autonomous - problems	(3) Autonomous (new waves only)	(4) Autonomous - problems (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - problems	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - problems (foreign parent control)
Country = 14, HU	0.481*** (0.145)	0.489*** (0.147)	0.528*** (0.148)	0.541*** (0.150)	0.965 (0.715)	0.964 (0.700)	0.630 (0.717)	0.734 (0.738)
Country = 15, IE	0.227*** (0.0857)	0.181** (0.0877)	0.0946 (0.105)	0.0665 (0.107)	-0.276 (0.305)	-0.283 (0.326)	-0.0561 (0.378)	0.0133 (0.408)
Country = 17, LT	0.159 (0.186)	0.206 (0.189)	0.189 (0.188)	0.274 (0.192)				
Country = 18, LU	0.967** (0.409)	0.920** (0.407)	0.858** (0.408)	0.818** (0.407)				
Country = 19, LV	0.178 (0.228)	0.219 (0.228)	0.177 (0.230)	0.238 (0.230)				
Country = 20, MT	-0.0741 (0.330)	-0.0429 (0.334)	-0.0742 (0.333)	-0.0160 (0.337)				
Country = 21, NL	0.111 (0.0734)	0.0876 (0.0756)	0.0807 (0.0837)	0.0641 (0.0862)	-0.0540 (0.222)	-0.0753 (0.244)	0.107 (0.263)	0.212 (0.292)
Country = 22, PL	0.178 (0.125)	0.184 (0.127)	0.185 (0.127)	0.203 (0.130)	0.0342 (0.553)	-0.0636 (0.593)	0.157 (0.588)	0.0994 (0.645)
Country = 23, PT	0.370*** (0.0751)	0.326*** (0.0769)	0.314*** (0.0886)	0.268*** (0.0908)	0.116 (0.284)	0.104 (0.314)	0.700 (0.467)	0.821 (0.517)
Country = 24, RO	0.0173 (0.126)	0.0160 (0.128)	0.0328 (0.129)	0.0640 (0.131)	0.571 (0.633)	0.979 (0.666)	-0.125 (0.747)	0.0574 (0.811)
Country = 25, SE	0.000168 (0.165)	0.0394 (0.166)	-0.0673 (0.166)	-0.0159 (0.168)	0.266 (0.299)	0.218 (0.329)	0.406 (0.323)	0.539 (0.362)
Country = 26, SI	0.975*** (0.354)	0.923*** (0.353)	0.921*** (0.353)	0.892** (0.355)				
Country = 27, SK	0.337*** (0.0993)	0.319*** (0.102)	0.356*** (0.102)	0.356*** (0.106)	0.229 (0.351)	0.362 (0.399)	-0.0114 (0.387)	0.336 (0.451)
Country = 28, UK	-0.0566 (0.116)	-0.0890 (0.118)	-0.0800 (0.117)	-0.106 (0.120)	-0.212 (0.285)	-0.337 (0.312)	-0.134 (0.317)	-0.121 (0.354)
Sector = 1, Industry	0.823*** (0.0436)	0.821*** (0.0443)	0.886*** (0.0497)	0.883*** (0.0506)	0.815*** (0.124)	0.975*** (0.136)	0.786*** (0.149)	0.868*** (0.168)
Sector = 2, Construction	-0.473*** (0.0529)	-0.470*** (0.0537)	-0.426*** (0.0591)	-0.431*** (0.0601)	-0.523*** (0.171)	-0.521*** (0.184)	-0.514** (0.207)	-0.561** (0.229)
Sector = 4, Services	-0.0660* (0.0381)	-0.0671* (0.0387)	-0.00326 (0.0431)	-0.00470 (0.0438)	-0.176 (0.121)	-0.146 (0.129)	-0.213 (0.147)	-0.267* (0.162)
Turnover (old coding) = 5, more than €2 million and up to €10 million	0.441*** (0.0434)	0.446*** (0.0441)			0.423*** (0.158)	0.361** (0.168)		

VARIABLES	(1) Autonomous	(2) Autonomous - problems	(3) Autonomous (new waves only)	(4) Autonomous - problems (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - problems	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - problems (foreign parent control)
Turnover (old coding) = 6, more than €10 million and up to €50 million	0.816*** (0.0641)	0.828*** (0.0651)			0.786*** (0.176)	0.784*** (0.190)		
Turnover (old coding) = 7, more than €50 million	0.860*** (0.122)	0.869*** (0.125)			0.618*** (0.215)	0.584** (0.233)		
Size class = 2, 10-49	0.0891** (0.0394)	0.0861** (0.0401)	-0.0263 (0.0491)	-0.0276 (0.0500)	-0.118 (0.165)	-0.143 (0.178)	-0.224 (0.211)	-0.0395 (0.241)
Size class = 3, 50-249	0.0819 (0.0587)	0.0658 (0.0596)	-0.0201 (0.0700)	-0.0422 (0.0715)	-0.142 (0.182)	-0.198 (0.197)	-0.0239 (0.229)	0.116 (0.261)
Years elapsed since firm first registered = 1, 10 years or more	0.424** (0.165)	0.413** (0.165)	0.339* (0.187)	0.344* (0.188)	0.607 (0.409)	0.753* (0.423)	1.547** (0.674)	1.879** (0.734)
Years elapsed since firm first registered = 2, 5 years or more, but less than 10 years	0.389** (0.169)	0.378** (0.169)	0.347* (0.191)	0.350* (0.192)	0.545 (0.425)	0.694 (0.442)	1.395** (0.688)	1.683** (0.750)
Years elapsed since firm first registered = 3, 2 years or more, but less than 5 years	0.498*** (0.176)	0.475*** (0.177)	0.487** (0.199)	0.469** (0.200)	0.276 (0.450)	0.248 (0.466)	1.108 (0.709)	1.258 (0.772)
Finding customers = 2		0.146 (0.0970)		0.130 (0.110)		0.399 (0.315)		0.709* (0.394)
Finding customers = 3		0.163* (0.0870)		0.122 (0.0969)		0.453* (0.263)		0.638** (0.309)
Finding customers = 4		0.212** (0.0957)		0.251** (0.106)		0.790*** (0.291)		1.096*** (0.368)
Finding customers = 5		0.149** (0.0723)		0.145* (0.0793)		0.627*** (0.230)		0.699** (0.277)
Finding customers = 6		0.303*** (0.0833)		0.309*** (0.0924)		0.388 (0.257)		0.586* (0.309)
Finding customers = 7		0.219*** (0.0794)		0.204** (0.0881)		0.874*** (0.236)		1.095*** (0.279)
Finding customers = 8		0.213***		0.169**		0.440*		0.696***

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Autonomous	Autonomous - problems	Autonomous (new waves only)	Autonomous - problems (new waves only)	Branches and subsidiaries	Branches and subsidiaries - problems	Branches and subsidiaries (foreign parent control)	Branches and subsidiaries - problems (foreign parent control)
Finding customers = 9		(0.0753) 0.215**		(0.0830) 0.207**		(0.227) 0.919***		(0.269) 0.954***
Finding customers = 10		(0.0897) 0.283***		(0.101) 0.269***		(0.272) 0.751***		(0.335) 0.914***
Competition = 2		(0.0748) 0.164		(0.0818) 0.151		(0.230) -0.0770		(0.282) -0.188
Competition = 3		(0.108) 0.120		(0.120) 0.135		(0.376) 0.556*		(0.452) 0.665*
Competition = 4		(0.0979) 0.0496		(0.108) 0.0811		(0.323) 0.448		(0.402) 0.0852
Competition = 5		(0.0996) 0.0703		(0.111) 0.102		(0.344) 0.353		(0.419) 0.415
Competition = 6		(0.0848) 0.0800		(0.0936) 0.106		(0.279) 0.543*		(0.344) 0.412
Competition = 7		(0.0943) 0.0205		(0.104) 0.0205		(0.298) 0.157		(0.355) 0.105
Competition = 8		(0.0907) -0.0706		(0.101) -0.0367		(0.291) 0.183		(0.349) 0.00822
Competition = 9		(0.0881) -0.0732		(0.0976) -0.145		(0.288) -0.0910		(0.344) -0.0688
Competition = 10		(0.102) -0.126		(0.114) -0.147		(0.314) 0.380		(0.383) 0.261
Access to finance = 2		(0.0940) 0.140**		(0.104) 0.128*		(0.310) -0.237		(0.378) -0.0317
Access to finance = 3		(0.0638) 0.196***		(0.0710) 0.167**		(0.164) -0.313*		(0.201) -0.140
Access to finance = 4		(0.0641) 0.152**		(0.0720) 0.161*		(0.174) -0.198		(0.207) -0.120
Access to finance = 5		(0.0771) 0.0769		(0.0882) 0.0754		(0.219) 0.115		(0.272) 0.299
Access to finance = 6		(0.0559) 0.00213		(0.0626) -0.0171		(0.171) -0.229		(0.219) 0.242
Access to finance = 7		(0.0738) 0.157**		(0.0840) 0.184**		(0.273) -0.272		(0.351) -0.225
Access to finance = 8		(0.0655) 0.0467		(0.0751) 0.0483		(0.226) -0.0610		(0.271) 0.0347
Access to finance = 9		(0.0595) 0.158**		(0.0671) 0.170**		(0.215) -0.348		(0.274) -0.116

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Autonomous	Autonomous - problems	Autonomous (new waves only)	Autonomous - problems (new waves only)	Branches and subsidiaries	Branches and subsidiaries - problems	Branches and subsidiaries (foreign parent control)	Branches and subsidiaries - problems (foreign parent control)
Access to finance = 10		(0.0727)		(0.0828)		(0.258)		(0.319)
		0.122**		0.102		-0.0407		-0.0782
Costs of production or labour = 2		(0.0585)		(0.0656)		(0.219)		(0.274)
		-0.0683		-0.0297		-0.670**		-0.864**
Costs of production or labour = 3		(0.112)		(0.123)		(0.328)		(0.427)
		0.0201		0.0448		-0.399		-0.655*
Costs of production or labour = 4		(0.0984)		(0.110)		(0.286)		(0.357)
		0.0783		0.101		-0.356		-0.324
Costs of production or labour = 5		(0.0994)		(0.111)		(0.280)		(0.361)
		-0.0769		-0.0877		-0.290		-0.503
Costs of production or labour = 6		(0.0837)		(0.0931)		(0.243)		(0.319)
		-0.0976		-0.0981		-0.456*		-0.489
Costs of production or labour = 7		(0.0905)		(0.101)		(0.263)		(0.336)
		-0.130		-0.111		-0.271		-0.468
Costs of production or labour = 8		(0.0872)		(0.0971)		(0.256)		(0.335)
		-0.107		-0.0821		-0.258		-0.411
Costs of production or labour = 9		(0.0861)		(0.0965)		(0.256)		(0.334)
		-0.136		-0.124		0.0486		0.125
Costs of production or labour = 10		(0.0971)		(0.109)		(0.303)		(0.394)
		-0.0886		-0.0419		-0.102		-0.303
Availability of skilled staff and experienced managers = 2		(0.0926)		(0.104)		(0.320)		(0.403)
		0.133*		0.173**		0.0139		-0.0611
Availability of skilled staff and experienced managers = 3		(0.0753)		(0.0860)		(0.283)		(0.367)
		0.0242		0.0818		0.227		0.108
		(0.0738)		(0.0846)		(0.252)		(0.307)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Autonomous	Autonomous - problems	Autonomous (new waves only)	Autonomous - problems (new waves only)	Branches and subsidiaries	Branches and subsidiaries - problems	Branches and subsidiaries (foreign parent control)	Branches and subsidiaries - problems (foreign parent control)
Availability of skilled staff and experienced managers = 4		0.0414		0.00982		0.183		-0.108
		(0.0805)		(0.0915)		(0.277)		(0.338)
Availability of skilled staff and experienced managers = 5		0.0938		0.119		0.171		-0.0385
		(0.0649)		(0.0743)		(0.241)		(0.300)
Availability of skilled staff and experienced managers = 6		-0.0212		-0.00155		0.254		0.00936
		(0.0739)		(0.0846)		(0.259)		(0.315)
Availability of skilled staff and experienced managers = 7		0.140**		0.127		0.0896		-0.0125
		(0.0691)		(0.0787)		(0.234)		(0.281)
Availability of skilled staff and experienced managers = 8		0.0595		0.0426		0.227		0.138
		(0.0654)		(0.0751)		(0.244)		(0.296)
Availability of skilled staff and experienced managers = 9		0.126		0.0883		0.0484		-0.366
		(0.0781)		(0.0886)		(0.280)		(0.335)
Availability of skilled staff and experienced managers = 10		-0.0248		-0.00882		-0.124		-0.296
		(0.0716)		(0.0806)		(0.276)		(0.340)
Regulation = 2		0.177**		0.149		0.0821		-0.182
		(0.0824)		(0.0926)		(0.274)		(0.329)
Regulation = 3		0.145*		0.0687		-0.0506		-0.0614
		(0.0794)		(0.0908)		(0.258)		(0.310)
Regulation = 4		0.0781		0.0357		0.114		0.104
		(0.0843)		(0.0943)		(0.259)		(0.313)
Regulation = 5		0.239***		0.201***		-0.275		-0.209
		(0.0648)		(0.0736)		(0.220)		(0.267)
Regulation = 6		0.217***		0.209**		-0.0922		0.0349
		(0.0757)		(0.0859)		(0.245)		(0.295)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Autonomous	Autonomous - problems	Autonomous (new waves only)	Autonomous - problems (new waves only)	Branches and subsidiaries	Branches and subsidiaries - problems	Branches and subsidiaries (foreign parent control)	Branches and subsidiaries - problems (foreign parent control)
Regulation = 7		0.217*** (0.0718)		0.237*** (0.0813)		-0.190 (0.230)		-0.228 (0.278)
Regulation = 8		0.126* (0.0681)		0.136* (0.0771)		-0.120 (0.236)		-0.119 (0.285)
Regulation = 9		0.180** (0.0798)		0.156* (0.0895)		-0.279 (0.269)		-0.155 (0.320)
Regulation = 10		0.118* (0.0702)		0.0602 (0.0790)		-0.513* (0.268)		-0.350 (0.328)
Other = 2		-0.00403 (0.0933)		0.0141 (0.107)		-0.108 (0.248)		-0.305 (0.303)
Other = 3		-0.0155 (0.0872)		0.0265 (0.101)		0.218 (0.244)		0.343 (0.311)
Other = 4		-0.114 (0.0943)		-0.111 (0.109)		0.285 (0.295)		0.383 (0.346)
Other = 5		0.0316 (0.0567)		-0.0275 (0.0682)		0.137 (0.162)		0.0471 (0.204)
Other = 6		0.0293 (0.0750)		0.0594 (0.0880)		0.320 (0.237)		0.348 (0.307)
Other = 7		-0.0167 (0.0702)		0.00529 (0.0825)		0.214 (0.207)		0.0355 (0.260)
Other = 8		0.0801 (0.0626)		0.0784 (0.0746)		0.168 (0.193)		0.336 (0.243)
Other = 9		0.0461 (0.0707)		0.0552 (0.0831)		-0.156 (0.247)		-0.295 (0.318)
Other = 10		-0.00360 (0.0591)		0.0408 (0.0702)		0.129 (0.201)		0.0914 (0.248)
Turnover (new coding) = 3, more than €500,000 and up to €1 million			0.211*** (0.0535)	0.208*** (0.0541)			-0.556 (0.371)	-0.573 (0.424)
Turnover (new coding) = 4, more than €1 million and up to €2 million			0.365*** (0.0592)	0.363*** (0.0602)			-0.188 (0.326)	-0.426 (0.363)
Turnover (new coding) = 5, more than €2 million and up to €10 million			0.683*** (0.0621)	0.691*** (0.0634)			-0.0146 (0.296)	-0.298 (0.336)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Autonomous	Autonomous - problems	Autonomous (new waves only)	Autonomous - problems (new waves only)	Branches and subsidiaries	Branches and subsidiaries - problems	Branches and subsidiaries (foreign parent control)	Branches and subsidiaries - problems (foreign parent control)
Turnover (new coding) = 6, more than €10 million and up to €50 million			1.064***	1.086***			0.226	0.00450
			(0.0839)	(0.0858)			(0.310)	(0.351)
Turnover (new coding) = 7, more than €50 million			1.098***	1.138***			-0.105	-0.395
			(0.149)	(0.152)			(0.344)	(0.389)
Foreign parent							0.620***	0.650***
							(0.116)	(0.132)
Constant	-1.063***	-1.482***	-1.193***	-1.620***	-0.651	-1.362**	-1.500**	-2.227**
	(0.179)	(0.202)	(0.203)	(0.231)	(0.483)	(0.584)	(0.758)	(0.906)
Observations	8,135	8,135	6,464	6,464	1,033	1,033	768	768
Pseudo R-squared	0.148	0.159	0.153	0.166	0.165	0.227	0.200	0.270

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The base categories for country, sector, turnover, size class, and time elapsed since registration are respectively Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade, up to €500,000 in turnover (up to €2m when older waves are included); enterprises with less than 10 employees, and less than two years since registration.

Source: LE Europe analysis of SAFE surveys

**Table 56: Problems - Linear**

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Autonomo us	Autonomo us - problems	Autonomo us (new waves only)	Autonomo us - problems (new waves only)	Branches and subsidiarie s	Branches and subsidiarie s - problems	Branches and subsidiarie s (foreign parent control)	Branches and subsidiarie s - problems (foreign parent control)
common_ECB	-0.305 (1.315)	-0.244 (1.344)	-1.219 (1.848)	-1.461 (1.943)	-2.403 (3.335)	-3.297 (3.471)	5.374 (4.582)	5.326 (5.146)
Year = 2014	-0.663 (1.548)	-0.421 (1.582)			5.343 (3.578)	3.809 (3.701)		
Year = 2015	0.100 (1.756)	0.751 (1.814)	0.258 (1.738)	0.439 (1.859)	4.112 (4.150)	3.009 (4.279)	4.589 (4.196)	4.659 (4.703)
Year = 2016	-1.829 (1.848)	-1.058 (1.959)	-1.429 (1.587)	-1.228 (1.771)	8.249* (4.401)	4.916 (4.717)	6.383* (3.765)	5.797 (4.730)
Country = 1, AT	-0.0623 (2.446)	0.0782 (2.548)	0.876 (2.856)	0.644 (2.968)	8.295 (6.013)	9.939 (6.276)	9.749 (7.083)	8.235 (7.616)
Country = 2, BE	3.453 (2.781)	3.252 (2.836)	3.829 (3.245)	3.910 (3.307)	12.97** (5.895)	12.52** (6.147)	8.912 (7.141)	7.642 (7.672)
Country = 3, BG	18.62*** (4.924)	16.77*** (5.024)	19.74*** (5.035)	18.27*** (5.168)	-28.97 (18.45)	-37.97* (19.38)	-25.88 (18.66)	-40.62** (20.64)
Country = 4, CY	-9.873 (13.99)	-8.436 (14.10)	-8.564 (14.11)	-5.645 (14.28)				
Country = 5, CZ	0.318 (4.405)	-1.329 (4.482)	1.397 (4.492)	-0.0278 (4.599)	-3.056 (8.629)	-3.798 (9.256)	-7.845 (9.097)	-11.59 (10.16)
Country = 6, DE	-7.792*** (2.195)	-8.255*** (2.290)	-7.028*** (2.484)	-7.546*** (2.582)	-3.778 (6.088)	-2.336 (6.430)	-7.006 (7.143)	-7.830 (7.734)
Country = 7, DK	8.692 (8.455)	7.245 (8.524)	8.777 (8.548)	8.462 (8.651)	28.38** (12.62)	22.61* (13.25)	28.79** (12.84)	21.87 (13.98)
Country = 8, EE	16.73 (15.61)	19.80 (15.71)	17.92 (15.75)	19.37 (15.90)	15.38 (12.89)	20.86 (13.73)	8.783 (13.13)	13.00 (14.63)
Country = 9, ES	-0.0281 (2.150)	-0.0157 (2.198)	0.333 (2.416)	0.276 (2.477)	-7.822 (6.183)	-9.709 (6.438)	-17.44** (7.272)	-18.28** (7.746)
Country = 10, FI	-5.971** (2.907)	-5.848* (2.996)	-6.059* (3.438)	-6.215* (3.551)	-1.365 (7.452)	-4.141 (7.922)	-3.273 (8.635)	-5.842 (9.434)
Country = 11, FR	-12.41*** (2.478)	-12.93*** (2.513)	-12.40*** (2.859)	-12.79*** (2.912)	-3.126 (6.012)	-4.201 (6.307)	-8.535 (7.084)	-10.79 (7.612)
Country = 12, EL	-5.660** (2.375)	-5.314** (2.498)	-4.394* (2.607)	-3.953 (2.768)	-11.11 (11.99)	-20.61 (12.68)	-27.78* (15.24)	-36.79** (16.87)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Autonomous	Autonomous - problems	Autonomous (new waves only)	Autonomous - problems (new waves only)	Branches and subsidiaries	Branches and subsidiaries - problems	Branches and subsidiaries (foreign parent control)	Branches and subsidiaries - problems (foreign parent control)
Country = 13, HR	3.028 (7.318)	-0.0182 (7.424)	3.725 (7.402)	1.628 (7.550)	-11.47 (14.69)	-11.60 (15.44)	-44.19** (22.43)	-40.72* (24.21)
Country = 14, HU	8.721* (4.844)	9.442* (4.891)	9.722** (4.946)	9.965** (5.016)	14.65 (11.91)	5.282 (12.60)	6.884 (12.20)	0.148 (13.30)
Country = 15, IE	-2.894 (2.924)	-2.472 (2.996)	0.0426 (3.663)	0.938 (3.743)	7.098 (8.545)	6.000 (8.951)	1.457 (9.493)	-1.835 (10.24)
Country = 17, LT	8.763 (7.515)	10.72 (7.586)	10.00 (7.622)	11.77 (7.725)	1.410 (12.65)	-7.875 (13.40)	-0.773 (12.92)	-10.82 (14.35)
Country = 18, LU	11.23 (9.966)	8.391 (10.03)	11.70 (10.07)	9.761 (10.17)				
Country = 19, LV	3.112 (9.547)	2.375 (9.609)	4.118 (9.653)	3.383 (9.752)				
Country = 20, MT	44.54*** (12.78)	40.43*** (12.92)	45.09*** (12.89)	41.95*** (13.09)				
Country = 21, NL	-1.990 (2.534)	-2.987 (2.597)	-0.552 (2.910)	-1.365 (2.990)	6.713 (5.724)	5.254 (6.018)	6.233 (6.812)	2.916 (7.305)
Country = 22, PL	5.127 (4.595)	3.743 (4.636)	6.121 (4.702)	5.060 (4.765)	3.902 (14.70)	6.613 (15.43)	0.663 (14.91)	-1.378 (16.38)
Country = 23, PT	1.839 (2.493)	1.433 (2.545)	2.595 (2.980)	2.174 (3.047)	6.653 (8.277)	2.054 (8.773)	7.597 (11.27)	2.184 (12.27)
Country = 24, RO	7.995* (4.744)	7.722 (4.802)	8.890* (4.860)	8.360* (4.943)	28.18* (16.47)	32.12* (17.54)	1.631 (19.43)	6.789 (20.57)
Country = 25, SE	-4.982 (5.820)	-5.044 (5.901)	-4.156 (5.900)	-6.012 (6.012)	-1.051 (7.820)	-3.720 (8.322)	0.196 (8.341)	-3.703 (9.127)
Country = 26, SI	20.36** (7.946)	18.37** (8.017)	21.42*** (8.033)	19.47** (8.143)	-2.925 (31.21)	-2.937 (31.63)	-6.142 (31.08)	-13.39 (32.35)
Country = 27, SK	3.931 (3.315)	3.102 (3.414)	4.896 (3.416)	4.285 (3.549)	-3.252 (8.215)	-5.088 (8.602)	-3.117 (9.283)	-6.460 (9.923)
Country = 28, UK	-11.30*** (4.307)	-11.01** (4.381)	-10.12** (4.398)	-9.383** (4.502)	8.280 (7.493)	7.554 (7.864)	2.260 (8.056)	1.567 (8.727)
Sector = 1, Industry	16.30*** (1.368)	16.06*** (1.386)	16.49*** (1.566)	16.44*** (1.595)	29.54*** (3.264)	28.30*** (3.371)	29.67*** (3.776)	29.68*** (4.103)
Sector = 2, Construction	1.953 (2.270)	2.053 (2.299)	2.925 (2.550)	3.129 (2.593)	5.444 (5.878)	6.250 (6.144)	0.884 (6.875)	4.546 (7.477)
Sector = 4, Services	12.24*** (1.430)	12.04*** (1.445)	12.39*** (1.634)	12.39*** (1.660)	17.99*** (3.804)	18.26*** (3.961)	15.19*** (4.379)	16.61*** (4.745)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Autonomo us	Autonomo us - problems	Autonomo us (new waves only)	Autonomo us - problems (new waves only)	Branches and subsidiarie s	Branches and subsidiarie s - problems	Branches and subsidiarie s (foreign parent control)	Branches and subsidiarie s - problems (foreign parent control)
Turnover (old coding) = 5, more than €2 million and up to €10 million	3.930*** (1.495)	4.353*** (1.514)			-7.789 (4.769)	-7.999 (4.914)		
Turnover (old coding) = 6, more than €10 million and up to €50 million	11.73*** (1.986)	11.83*** (2.022)			-3.389 (5.028)	-4.735 (5.238)		
Turnover (old coding) = 7, more than €50 million	17.27*** (3.361)	17.06*** (3.394)			-8.005 (6.038)	-8.802 (6.325)		
Size class = 2, 10-49	-4.864*** (1.491)	-5.031*** (1.510)	-5.934*** (1.823)	-6.048*** (1.853)	-3.249 (5.196)	-1.163 (5.485)	-3.413 (6.131)	-3.390 (6.809)
Size class = 3, 50-249	-3.629* (1.992)	-3.302 (2.015)	-4.461* (2.368)	-4.088* (2.411)	-1.004 (5.493)	2.281 (5.756)	1.343 (6.497)	2.686 (7.135)
Years elapsed since firm first registered = 1, 10 years or more	7.037 (7.577)	7.605 (7.618)	10.85 (8.413)	10.90 (8.492)	-28.63** (13.95)	-28.48** (14.34)	-41.97 (30.81)	-39.25 (31.85)
Years elapsed since firm first registered = 2, 5 years or more, but less than 10 years	15.14** (7.700)	15.36** (7.749)	18.32** (8.546)	18.15** (8.636)	-23.97* (14.30)	-25.04* (14.69)	-40.56 (30.97)	-37.87 (32.08)
Years elapsed since firm first registered = 3, 2 years or more, but less than 5 years	12.39 (7.914)	12.71 (7.962)	15.98* (8.785)	15.73* (8.870)	-23.72 (14.96)	-21.90 (15.32)	-36.18 (31.35)	-30.39 (32.40)
Finding customers = 2		-2.919 (3.440)		-4.184 (3.931)		4.081 (9.143)		5.199 (10.47)
Finding customers = 3		1.133 (3.094)		-2.025 (3.488)		-12.02 (7.753)		-11.35 (9.085)
Finding customers = 4		-1.324 (3.365)		-4.666 (3.730)		-11.86 (7.978)		-15.94* (9.429)
Finding customers = 5		-1.231 (2.672)		-2.558 (2.946)		-2.123 (6.774)		-3.026 (7.918)
Finding customers = 6		0.920 (2.997)		0.230 (3.338)		-10.31 (7.480)		-11.26 (8.575)
Finding customers = 7		0.355 (2.899)		-1.846 (3.245)		-11.31* (6.767)		-16.35** (7.750)

VARIABLES	(1) Autonomous	(2) Autonomous - problems	(3) Autonomous (new waves only)	(4) Autonomous - problems (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - problems	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - problems (foreign parent control)
Finding customers = 8		-2.163 (2.784)		-3.331 (3.104)		-6.492 (6.756)		-7.839 (7.747)
Finding customers = 9		-1.046 (3.236)		-0.846 (3.661)		-7.009 (7.791)		-9.340 (9.287)
Finding customers = 10		-2.872 (2.795)		-2.744 (3.094)		-17.11** (6.764)		-18.11** (7.785)
Competition = 2		-8.593** (3.905)		-6.519 (4.459)		-20.09* (12.00)		-10.76 (13.33)
Competition = 3		-10.60*** (3.551)		-7.792** (3.969)		-15.66 (9.965)		-8.888 (10.94)
Competition = 4		-9.223*** (3.577)		-6.035 (4.028)		-16.14 (10.16)		-11.33 (11.99)
Competition = 5		-11.24*** (3.145)		-8.777** (3.530)		-16.91* (9.057)		-12.20 (9.996)
Competition = 6		-10.97*** (3.414)		-8.756** (3.843)		-13.91 (9.434)		-11.69 (10.38)
Competition = 7		-12.91*** (3.323)		-11.09*** (3.750)		-12.46 (9.342)		-6.337 (10.30)
Competition = 8		-12.41*** (3.274)		-10.55*** (3.688)		-12.52 (9.349)		-4.965 (10.37)
Competition = 9		-10.39*** (3.721)		-7.491* (4.282)		-9.625 (10.01)		-1.729 (11.24)
Competition = 10		-8.559** (3.551)		-7.540* (4.011)		-17.74* (9.668)		-5.144 (11.01)
Access to finance = 2		-0.631 (2.159)		-3.755 (2.417)		3.827 (4.061)		4.944 (4.710)
Access to finance = 3		1.202 (2.136)		-0.163 (2.428)		9.843** (4.561)		10.31* (5.263)
Access to finance = 4		-1.031 (2.581)		-1.759 (2.962)		6.714 (5.724)		8.608 (6.961)
Access to finance = 5		1.173 (1.952)		-0.0488 (2.225)		-3.196 (4.102)		-3.728 (5.086)
Access to finance = 6		1.155 (2.565)		0.769 (2.978)		-1.505 (6.393)		0.197 (7.822)
Access to finance = 7		3.935* (2.232)		2.934 (2.594)		-2.163 (5.924)		-2.820 (7.220)

VARIABLES	(1) Autonomous	(2) Autonomous - problems	(3) Autonomous (new waves only)	(4) Autonomous - problems (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - problems	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - problems (foreign parent control)
Access to finance = 8		1.653 (2.093)		2.361 (2.385)		4.458 (5.346)		2.960 (6.814)
Access to finance = 9		-2.908 (2.502)		-4.072 (2.897)		-8.970 (6.352)		-8.519 (7.378)
Access to finance = 10		0.746 (2.115)		-1.028 (2.429)		8.383 (6.043)		10.18 (7.701)
Costs of production or labour = 2		-1.728 (4.043)		-2.647 (4.498)		3.635 (9.557)		-4.241 (11.77)
Costs of production or labour = 3		-1.146 (3.588)		-1.607 (4.036)		-5.146 (7.840)		-5.530 (9.177)
Costs of production or labour = 4		-1.957 (3.526)		-2.410 (3.995)		-2.766 (7.709)		-0.815 (9.131)
Costs of production or labour = 5		0.854 (3.119)		-0.262 (3.524)		-3.613 (6.699)		-4.056 (8.056)
Costs of production or labour = 6		0.787 (3.316)		-0.0970 (3.742)		-7.391 (7.223)		-5.861 (8.494)
Costs of production or labour = 7		-1.452 (3.202)		-3.249 (3.610)		1.567 (6.923)		-0.463 (8.311)
Costs of production or labour = 8		-2.451 (3.198)		-2.640 (3.610)		-6.577 (6.989)		-5.519 (8.450)
Costs of production or labour = 9		-3.363 (3.577)		-3.817 (4.050)		-15.61** (7.612)		-20.68** (9.285)
Costs of production or labour = 10		-1.358 (3.459)		-1.722 (3.921)		-1.212 (8.272)		-2.772 (10.32)
Availability of skilled staff and experienced managers = 2		2.029 (2.677)		3.463 (3.110)		-0.200 (7.874)		-0.418 (9.533)
Availability of skilled staff and experienced managers = 3		-0.981 (2.667)		1.922 (3.079)		-0.376 (7.205)		-2.166 (8.437)
Availability of skilled staff and experienced managers = 4		-1.487 (2.851)		-2.099 (3.335)		-5.252 (7.701)		-7.167 (9.210)
Availability of skilled staff and experienced managers = 5		0.0889 (2.347)		0.498 (2.733)		-3.267 (6.895)		-5.794 (7.945)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Autonomo us	Autonomo us - problems	Autonomo us (new waves only)	Autonomo us - problems (new waves only)	Branches and subsidiarie s	Branches and subsidiarie s - problems	Branches and subsidiarie s (foreign parent control)	Branches and subsidiarie s - problems (foreign parent control)
Availability of skilled staff and experienced managers = 6		1.115		0.967		6.328		1.716
		(2.671)		(3.108)		(7.048)		(8.223)
Availability of skilled staff and experienced managers = 7		4.913**		5.424*		-2.548		-0.583
		(2.436)		(2.840)		(6.513)		(7.407)
Availability of skilled staff and experienced managers = 8		1.084		1.457		0.715		-0.813
		(2.390)		(2.801)		(6.772)		(7.757)
Availability of skilled staff and experienced managers = 9		-1.031		-0.198		-4.398		-4.584
		(2.767)		(3.228)		(7.794)		(9.092)
Availability of skilled staff and experienced managers = 10		-0.152		0.474		0.906		4.625
		(2.666)		(3.067)		(7.738)		(8.934)
Regulation = 2		1.601		0.0985		-12.83*		-6.418
		(2.932)		(3.358)		(7.454)		(9.177)
Regulation = 3		1.224		0.125		-12.94*		-3.783
		(2.840)		(3.310)		(6.640)		(7.756)
Regulation = 4		-0.971		-2.015		-18.26***		-12.36
		(3.008)		(3.415)		(6.646)		(7.578)
Regulation = 5		0.130		-1.293		-11.60**		-6.583
		(2.394)		(2.761)		(5.865)		(6.709)
Regulation = 6		-0.722		-1.899		-9.783		-4.988
		(2.691)		(3.073)		(6.537)		(7.610)
Regulation = 7		2.102		0.817		-11.00*		-1.905
		(2.585)		(2.958)		(6.195)		(7.166)
Regulation = 8		3.214		0.913		-14.82**		-6.160
		(2.517)		(2.874)		(6.184)		(7.222)
Regulation = 9		3.279		1.980		-2.972		0.887
		(2.915)		(3.323)		(7.202)		(8.494)
Regulation = 10		3.508		1.879		-5.165		-3.785
		(2.637)		(3.014)		(7.550)		(8.927)
Other = 2		-3.482		-5.018		-1.571		-5.175
		(3.217)		(3.705)		(7.395)		(8.748)
Other = 3		-3.223		-4.955		2.903		-1.089

VARIABLES	(1) Autonomous	(2) Autonomous - problems	(3) Autonomous (new waves only)	(4) Autonomous - problems (new waves only)	(5) Branches and subsidiaries	(6) Branches and subsidiaries - problems	(7) Branches and subsidiaries (foreign parent control)	(8) Branches and subsidiaries - problems (foreign parent control)
Other = 4		(3.025) -3.609		(3.501) -2.890		(6.309) -7.155		(7.332) -10.29
Other = 5		(3.231) -0.929		(3.783) -0.744		(6.927) -0.398		(7.867) -3.448
Other = 6		(1.925) -1.540		(2.422) -0.456		(4.272) 10.33*		(5.178) 6.056
Other = 7		(2.530) -1.603		(3.008) 0.291		(5.729) 4.450		(7.085) -2.816
Other = 8		(2.360) -2.848		(2.833) -2.550		(5.129) 5.961		(6.529) 2.038
Other = 9		(2.132) -4.092*		(2.608) -2.693		(4.911) 4.609		(5.818) 1.990
Other = 10		(2.437) -1.529		(2.915) -1.555		(6.422) -2.689		(7.809) -8.632
Turnover (new coding) = 3, more than €500,000 and up to €1 million		(2.074)	-1.214	(2.530) -1.553		(5.162)	-19.80*	(6.286) -12.83
Turnover (new coding) = 4, more than €1 million and up to €2 million			(2.159) 1.445	(2.189) 1.770			(11.39) -0.617	(12.36) 1.916
Turnover (new coding) = 5, more than €2 million and up to €10 million			(2.242) 4.010*	(2.280) 4.403*			(9.139) -16.65**	(9.777) -12.97
Turnover (new coding) = 6, more than €10 million and up to €50 million			(2.231) 11.48***	(2.282) 11.60***			(7.788) -14.97*	(8.296) -12.33
Turnover (new coding) = 7, more than €50 million			(2.752) 18.46***	(2.828) 18.54***			(7.816) -20.31**	(8.367) -16.66*
Foreign parent			(4.279)	(4.343)			(8.821) 8.335***	(9.497) 7.770**
Constant	16.70** (7.964)	27.76*** (8.780)	12.86 (8.908)	26.01*** (9.957)	51.67*** (16.04)	88.79*** (18.60)	69.27** (32.78)	94.11*** (35.08)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Autonomous	Autonomous - problems	Autonomous (new waves only)	Autonomous - problems (new waves only)	Branches and subsidiaries	Branches and subsidiaries - problems	Branches and subsidiaries (foreign parent control)	Branches and subsidiaries - problems (foreign parent control)
Observations	3,737	3,737	2,928	2,928	696	696	526	526
R-squared	0.098	0.115	0.099	0.118	0.212	0.314	0.268	0.366

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The base categories for country, sector, turnover, size class, and time elapsed since registration are respectively Italy (the country which accounts for the most SMEs over the period covered in the analysis); trade, up to €500,000 in turnover (up to €2m when older waves are included); enterprises with less than 10 employees, and less than two years since registration .

Source: LE Europe analysis of SAFE surveys"

## ANNEX 4 ESTIMATION RESULTS OF THE ANALYSIS OF THE 2015 EUROBAROMETER

**Table 57: The determinants of firms' propensity to export - baseline specification**

	Baseline - Independent	Baseline - Part of a group
exporter		
<i>Country</i>		
FR - France	-0.206*** (0.0207)	0.163** (0.0688)
BE - Belgium	0.0519 (0.0362)	0.170** (0.0707)
NE - The Netherlands	-0.0326 (0.0267)	0.395*** (0.0657)
DE - Germany	0.370*** (0.0333)	0.224*** (0.0520)
LU - Luxembourg	0.168*** (0.0523)	0.583*** (0.0702)
DK - Denmark	0.233*** (0.0351)	0.284*** (0.0776)
IE - Ireland	-0.157*** (0.0304)	-0.0918 (0.0588)
UK - United Kingdom	-0.210*** (0.0371)	-0.131 (0.0910)
EL - Greece	0.0489* (0.0281)	0.294*** (0.0657)
ES - Spain	0.267*** (0.0206)	0.487*** (0.0636)
PT - Portugal	0.476*** (0.0354)	-0.350*** (0.0709)
FI - Finland	-0.261*** (0.0389)	-0.324*** (0.0853)
SE - Sweden	-0.371*** (0.0525)	0.0410 (0.0807)
AT - Austria	0.292*** (0.0458)	0.586*** (0.0576)
CY - Cyprus (Republic)	-0.540*** (0.0512)	0.231*** (0.0894)
CZ - Czech Republic	0.266*** (0.0315)	0.318*** (0.0859)
EE - Estonia	0.358*** (0.0275)	0.664*** (0.0757)
HU - Hungary	0.256*** (0.0335)	0.442*** (0.0561)
LV - Latvia	0.336*** (0.0346)	0.379*** (0.0863)
LT - Lithuania	0.557*** (0.0264)	0.489*** (0.0580)
MT - Malta	-0.189*** (0.0447)	0.0846* (0.0496)
PL - Poland	-0.0904*** (0.0287)	0.334*** (0.0591)
SK - Slovakia	0.0824** (0.0333)	0.297*** (0.0740)
SI - Slovenia	0.477*** (0.0232)	0.943*** (0.0697)
BG - Bulgaria	0.303*** (0.0372)	0.146 (0.132)
RO - Romania	-0.313*** (0.0265)	-0.465*** (0.0732)
HR - Croatia	0.291*** (0.0415)	0.365*** (0.0637)
<i>Sector</i>		
Manufacturing (NACE category C)	0.502*** (0.0720)	0.631*** (0.0995)
Services (NACE categories H/I/J/K/L/M/N/Q/R/S)	0.0206 (0.0665)	0.0128 (0.117)

	Baseline - Independent	Baseline - Part of a group
Industry (NACE categories B/D/E/F)	-0.467*** (0.0798)	-0.617*** (0.137)
<i>Number of employees</i>		
None or 1 employee	-0.159 (0.130)	-0.273 (0.247)
2 to 3 employees	-0.144 (0.105)	-0.294* (0.169)
4 to 5 employees	-0.129 (0.104)	-0.00554 (0.188)
6 to 9 employees	-0.147* (0.0839)	0.0366 (0.140)
10 to 29 employees	-0.0886 (0.0695)	-0.155 (0.116)
30 to 49 employees	-0.113 (0.0970)	0.0279 (0.144)
Age in 2015 (years)	-0.001000 (0.000802)	0.000486 (0.00159)
<i>Turnover (2014)</i>		
€25k-€50k	0.379* (0.219)	1.059* (0.614)
€50k-€100k	0.261 (0.165)	0.635* (0.373)
€100k-€250k	0.675*** (0.167)	-0.0975 (0.424)
€250k-€500k	0.560*** (0.156)	0.820*** (0.297)
€500k-€2M	0.694*** (0.157)	0.478* (0.272)
€2M-€10M	0.732*** (0.170)	0.544** (0.271)
More than €10M	0.819*** (0.189)	0.596** (0.272)
<i>Growth since 2008</i>		
Risen by more than 25%	0.108** (0.0521)	0.278*** (0.108)
Risen by between 5 and 25%	0.0414 (0.0573)	0.134 (0.101)
Fallen by between 5 and 25%	-0.0433 (0.0822)	0.178 (0.145)
Fallen by more than 25%	-0.0266 (0.0725)	0.215* (0.113)
<i>Type of output</i>		
Goods only	0.475*** (0.0680)	0.561*** (0.130)
Goods and services	0.456*** (0.0544)	0.542*** (0.127)
<i>Type of customers</i>		
Individual consumers only	-0.896*** (0.0787)	-0.858*** (0.172)
Individual consumers, and companies or other organisations	-0.363*** (0.0353)	-0.164* (0.0974)
<i>Engagement in other international business activities</i>		
Imported	0.971*** (0.0694)	1.034*** (0.106)
Worked with a partner based abroad for R&D	0.313*** (0.0775)	0.235** (0.109)
Subcontractor for a company based abroad	0.513*** (0.0789)	0.420*** (0.0976)
Used a subcontractor based abroad	0.407*** (0.0678)	0.329*** (0.104)
Invested in a company based abroad	0.607*** (0.108)	0.829*** (0.124)
<i>Ownership</i>		
Part of an international group		0.152 (0.120)
Constant	-1.737*** (0.192)	-2.145*** (0.307)
Observations	6780	1706
Pseudo R-squared	0.360	0.378

## Standard errors in parentheses

The baseline categories for country, sector, number of employees, turnover, growth since 2008, type of output and type of customers are respectively Italy, retail, 50 to 249 employees, €25k or less, approximately no growth, services only, and companies or organisations only

<sup>\*</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$

Source: LE Europe analysis of 2015 Eurobarometer

**Table 58: The determinants of firms' propensity to export - problems related to international business**

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
exporter				
<i>Country</i>				
FR - France	-0.178*** (0.0203)	0.0228 (0.0343)	0.166** (0.0748)	0.296*** (0.0961)
BE - Belgium	0.127*** (0.0353)	0.175*** (0.0419)	0.221** (0.0863)	0.163 (0.102)
NE - The Netherlands	0.175** (0.0266)	0.135*** (0.0295)	0.596*** (0.0809)	0.461*** (0.109)
DE - Germany	0.516*** (0.0358)	0.492*** (0.0409)	0.367*** (0.0708)	0.196* (0.106)
LU - Luxembourg	0.393** (0.0533)	0.457*** (0.0581)	0.609*** (0.0753)	0.530*** (0.107)
DK - Denmark	0.290** (0.0333)	0.158*** (0.0351)	0.319*** (0.0945)	0.167 (0.124)
IE - Ireland	0.0314 (0.0313)	0.0269 (0.0369)	0.0897 (0.0748)	-0.0507 (0.0970)
UK - United Kingdom	0.0374 (0.0385)	0.0426 (0.0379)	-0.0728 (0.107)	-0.212 (0.135)
EL - Greece	0.234** (0.0290)	0.280*** (0.0405)	0.633*** (0.0753)	0.449*** (0.0970)
ES - Spain	0.412** (0.0231)	0.430*** (0.0259)	0.592*** (0.0848)	0.462*** (0.102)
PT - Portugal	0.488*** (0.0344)	0.693*** (0.0487)	-0.262*** (0.0760)	-0.156* (0.0886)
FI - Finland	-0.260*** (0.0366)	-0.263*** (0.0326)	-0.164 (0.107)	-0.368** (0.143)
SE - Sweden	-0.363*** (0.0481)	-0.489*** (0.0483)	0.0763 (0.105)	-0.124 (0.135)
AT - Austria	0.415*** (0.0437)	0.389*** (0.0449)	0.626*** (0.0722)	0.455*** (0.101)
CY - Cyprus (Republic)	-0.489*** (0.0520)	-0.425*** (0.0559)	0.879*** (0.102)	0.586*** (0.126)
CZ - Czech Republic	0.484** (0.0361)	0.460*** (0.0425)	0.482*** (0.0892)	0.366*** (0.128)

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
EE - Estonia	0.373*** (0.0368)	0.169*** (0.0468)	0.788*** (0.110)	0.449*** (0.145)
HU - Hungary	0.369*** (0.0360)	0.279*** (0.0436)	0.565*** (0.0609)	0.364*** (0.0803)
LV - Latvia	0.635*** (0.0404)	0.627*** (0.0468)	0.626*** (0.0986)	0.404*** (0.135)
LT - Lithuania	0.847*** (0.0335)	0.798*** (0.0371)	0.734*** (0.0918)	0.458*** (0.125)
MT - Malta	-0.0563 (0.0483)	-0.111** (0.0553)	0.254*** (0.0686)	-0.0207 (0.0981)
PL - Poland	0.114*** (0.0321)	0.147*** (0.0339)	0.577*** (0.0881)	0.495*** (0.0987)
SK - Slovakia	0.231*** (0.0346)	0.203*** (0.0480)	0.232*** (0.0810)	0.0575 (0.105)
SI - Slovenia	0.666*** (0.0264)	0.536*** (0.0334)	1.120*** (0.0949)	0.968*** (0.105)
BG - Bulgaria	0.731*** (0.0463)	0.733*** (0.0423)	0.138 (0.143)	-0.208 (0.140)
RO - Romania	-0.184*** (0.0353)	-0.261*** (0.0453)	-0.387*** (0.0813)	-0.577*** (0.0982)
HR - Croatia	0.499*** (0.0454)	0.318*** (0.0509)	0.480*** (0.0904)	0.172 (0.128)
<i>Sector</i>				
Manufacturing (NACE category C)	0.526*** (0.0775)	0.525*** (0.0713)	0.670*** (0.114)	0.729*** (0.113)
Services (NACE categories H/I/J/K/L/M/N/Q/R/S)	0.00440 (0.0745)	0.00149 (0.0684)	0.0293 (0.117)	0.0336 (0.113)
Industry (NACE categories B/D/E/F)	-0.513*** (0.0881)	-0.491*** (0.0918)	-0.678*** (0.154)	-0.618*** (0.163)
<i>Number of employees</i>				
None or 1 employee	-0.0672 (0.137)	-0.121 (0.151)	-0.375 (0.281)	-0.251 (0.248)
2 to 3 employees	-0.140 (0.106)	-0.155 (0.111)	-0.359* (0.195)	-0.304 (0.187)
4 to 5 employees	-0.150 (0.116)	-0.127 (0.124)	-0.0619 (0.240)	-0.0173 (0.248)
6 to 9 employees	-0.143* (0.116)	-0.139 (0.124)	0.00775 (0.240)	-0.00454 (0.248)

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
	(0.0823)	(0.0900)	(0.155)	(0.156)
10 to 29 employees	-0.0669 (0.0673)	-0.0707 (0.0693)	-0.273** (0.118)	-0.235* (0.121)
30 to 49 employees	-0.131 (0.104)	-0.107 (0.105)	0.00305 (0.134)	0.0756 (0.147)
Age in 2015 (years)	-0.000754 (0.000899)	-0.000485 (0.00102)	0.00114 (0.00209)	0.000437 (0.00204)
<i>Turnover (2014)</i>				
€25k-€50k	0.382* (0.229)	0.361 (0.228)	1.019 (0.656)	1.009 (0.685)
€50k-€100k	0.274 (0.188)	0.286 (0.195)	0.703 (0.449)	0.753 (0.505)
€100k-€250k	0.633*** (0.179)	0.706*** (0.173)	-0.117 (0.426)	-0.0544 (0.429)
€250k-€500k	0.520*** (0.189)	0.518*** (0.184)	0.988*** (0.305)	1.098*** (0.321)
€500k-€2M	0.660*** (0.196)	0.644*** (0.186)	0.514* (0.307)	0.646** (0.327)
€2M-€10M	0.734*** (0.208)	0.711*** (0.201)	0.467 (0.293)	0.529 (0.330)
More than €10M	0.767*** (0.226)	0.718*** (0.219)	0.582* (0.310)	0.629* (0.346)
<i>Growth since 2008</i>				
Risen by more than 25%	0.151*** (0.0494)	0.162*** (0.0539)	0.298** (0.143)	0.241* (0.131)
Risen by between 5 and 25%	0.0679 (0.0564)	0.0856 (0.0644)	0.140 (0.118)	0.114 (0.119)
Fallen by between 5 and 25%	-0.0592 (0.0802)	-0.0253 (0.0882)	0.261 (0.187)	0.239 (0.206)
Fallen by more than 25%	0.0183 (0.0732)	0.0474 (0.0758)	0.222 (0.137)	0.261* (0.142)
<i>Type of output</i>				
Goods only	0.477*** (0.0691)	0.460*** (0.0723)	0.475*** (0.135)	0.424*** (0.142)
Goods and services	0.414*** (0.0747)	0.417*** (0.0720)	0.503*** (0.142)	0.517*** (0.146)
<i>Type of customers</i>				

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
Individual consumers only	-0.964*** (0.0891)	-0.963*** (0.0966)	-0.860*** (0.178)	-0.828*** (0.175)
Individual consumers, and companies or other organisations	-0.374*** (0.0450)	-0.349*** (0.0488)	-0.111 (0.0909)	-0.0875 (0.0822)
<i>Engagement in other international business activities</i>				
Imported	0.971*** (0.0764)	0.958*** (0.0767)	1.057*** (0.118)	1.074*** (0.114)
Worked with a partner based abroad for R&D	0.340*** (0.0875)	0.272*** (0.0916)	0.275** (0.125)	0.297** (0.133)
Subcontractor for a company based abroad	0.492*** (0.0948)	0.493*** (0.0959)	0.403*** (0.110)	0.368*** (0.121)
Used a subcontractor based abroad	0.428*** (0.0725)	0.416*** (0.0689)	0.384*** (0.138)	0.362*** (0.140)
Invested in a company based abroad	0.586*** (0.128)	0.638*** (0.136)	0.785*** (0.146)	0.840*** (0.174)
<i>Problems related to international business</i>				
Company's products and/or services are specific to the domestic market		-0.434*** (0.0972)		-0.775*** (0.136)
Identifying partners abroad is too difficult		-0.0583 (0.0629)		0.354** (0.170)
Company does not have specialised staff to deal with exports		-0.598*** (0.0543)		-0.434*** (0.154)
Dealing with foreign taxation is too complicated or too costly		-0.000227 (0.0719)		-0.0228 (0.148)
Company does not know where to find information about the potential market		0.238*** (0.0741)		-0.262 (0.200)
The financial investment is too large		-0.146** (0.0602)		-0.00158 (0.117)
Company does not know the rules which have to be followed		-0.184** (0.0814)		-0.529*** (0.178)
Delivery costs are too high		0.0563 (0.0647)		-0.125 (0.140)
The administrative procedures are too complicated		0.0304 (0.0758)		0.0170 (0.122)
Resolving cross-border complaints and disputes is too expensive		-0.110** (0.0485)		0.00890 (0.134)
Company lacks the language skills to deal with foreign		-0.0223		0.0127

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
countries		(0.0494)		(0.167)
Payments from other countries are not secure enough		-0.148** (0.0755)		-0.126 (0.127)
<i>Ownership</i>				
Part of an international group			0.188 (0.120)	0.141 (0.117)
Constant	-1.737*** (0.215)	-1.491*** (0.216)	-2.172*** (0.360)	-1.872*** (0.341)
Observations	5080	5080	1423	1423
Pseudo R-squared	0.369	0.403	0.384	0.420

Standard errors in parentheses

The baseline categories for country, sector, number of employees, turnover, growth since 2008, type of output and type of customers are respectively Italy, retail, 50 to 249 employees, €25k or less, approximately no growth, services only, and companies or organisations only

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Source: LE Europe analysis of 2015 Eurobarometer

**Table 59: The determinants of firms' propensity to export – availability of a website for purchasing products online**

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
exporter								
<i>Country</i>								
FR - France	-0.237*** (0.0263)	-0.0294 (0.0388)	-0.0336 (0.0393)	-0.0707* (0.0373)	0.207*** (0.0628)	0.217* (0.114)	0.201* (0.113)	0.187 (0.119)
BE - Belgium	0.105*** (0.0358)	0.134*** (0.0414)	0.129*** (0.0417)	0.00449 (0.0347)	0.203** (0.0854)	0.0277 (0.114)	0.0214 (0.114)	0.0209 (0.115)
NE - The Netherlands	0.0783*** (0.0277)	0.0463 (0.0301)	0.0491 (0.0305)	0.0215 (0.0293)	0.552*** (0.0697)	0.317** (0.126)	0.308** (0.124)	0.299** (0.125)
DE - Germany	0.458*** (0.0363)	0.444*** (0.0383)	0.442*** (0.0387)	0.344*** (0.0347)	0.295*** (0.0732)	-0.00204 (0.117)	-0.0206 (0.117)	-0.0589 (0.129)
LU - Luxembourg	0.152*** (0.0513)	0.214*** (0.0524)	0.205*** (0.0544)	0.0493 (0.0448)	0.582*** (0.0825)	0.396*** (0.120)	0.387*** (0.122)	0.377*** (0.116)
DK - Denmark	0.243*** (0.0348)	0.121*** (0.0364)	0.116*** (0.0363)	0.0856** (0.0360)	0.224** (0.0985)	-0.0319 (0.136)	-0.0349 (0.137)	-0.0357 (0.146)
IE - Ireland	0.0118 (0.0350)	-0.00996 (0.0403)	0.00313 (0.0463)	-0.0846** (0.0427)	0.0976 (0.0783)	-0.125 (0.130)	-0.107 (0.132)	-0.208 (0.135)
UK - United Kingdom	-0.0239 (0.0482)	-0.0371 (0.0466)	-0.0263 (0.0495)	-0.0649 (0.0464)	-0.0721 (0.109)	-0.357** (0.159)	-0.366** (0.156)	-0.434*** (0.155)
EL - Greece	0.226*** (0.0297)	0.271*** (0.0412)	0.286*** (0.0443)	0.257*** (0.0472)	0.584*** (0.0755)	0.278** (0.108)	0.305*** (0.112)	0.297*** (0.109)
ES - Spain	0.327*** (0.0198)	0.348*** (0.0262)	0.351*** (0.0266)	0.368*** (0.0280)	0.515*** (0.0804)	0.298*** (0.111)	0.289*** (0.111)	0.273** (0.110)
PT - Portugal	0.438*** (0.0350)	0.601*** (0.0458)	0.604*** (0.0463)	0.524*** (0.0413)	-0.160* (0.0850)	-0.143* (0.0836)	-0.134 (0.0845)	-0.183** (0.0808)
FI - Finland	-0.337*** (0.0410)	-0.336*** (0.0398)	-0.335*** (0.0398)	-0.365*** (0.0410)	-0.168 (0.103)	-0.475*** (0.156)	-0.474*** (0.155)	-0.456*** (0.161)
SE - Sweden	-0.390*** (0.0514)	-0.502*** (0.0495)	-0.503*** (0.0495)	-0.532*** (0.0471)	0.0714 (0.107)	-0.249* (0.147)	-0.255* (0.146)	-0.284* (0.154)
AT - Austria	0.375*** (0.0428)	0.339*** (0.0429)	0.329*** (0.0450)	0.269*** (0.0380)	0.862*** (0.0749)	0.552*** (0.114)	0.531*** (0.115)	0.465*** (0.115)
CY - Cyprus (Republic)	-0.484*** (0.0538)	-0.457*** (0.0583)	-0.455*** (0.0588)	-0.536*** (0.0623)	0.780*** (0.0973)	0.345** (0.135)	0.322** (0.140)	0.365** (0.142)
CZ - Czech Republic	0.421*** (0.0396)	0.406*** (0.0460)	0.410*** (0.0474)	0.371*** (0.0416)	0.466*** (0.0856)	0.226 (0.140)	0.233 (0.142)	0.184 (0.132)
EE - Estonia	0.341***	0.146***	0.153***	0.125***	0.632***	0.154	0.147	0.0937

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
HU - Hungary	(0.0432) 0.272*** (0.0407)	(0.0477) 0.166*** (0.0477)	(0.0504) 0.164*** (0.0479)	(0.0452) 0.146*** (0.0449)	(0.0894) 0.517*** (0.0757)	(0.149) 0.200** (0.0961)	(0.147) 0.184* (0.0996)	(0.145) 0.196** (0.0995)
LV - Latvia	0.498*** (0.0401)	0.499*** (0.0486)	0.501*** (0.0489)	0.462*** (0.0486)	0.517*** (0.0975)	0.177 (0.140)	0.169 (0.140)	0.146 (0.141)
LT - Lithuania	0.867*** (0.0337)	0.812*** (0.0357)	0.828*** (0.0439)	0.841*** (0.0408)	0.669*** (0.0889)	0.266* (0.147)	0.285* (0.148)	0.225 (0.142)
MT - Malta	-0.130*** (0.0473)	-0.167*** (0.0539)	-0.169*** (0.0535)	-0.286*** (0.0461)	0.238*** (0.0657)	-0.165 (0.125)	-0.153 (0.128)	-0.229* (0.124)
PL - Poland	-0.0431 (0.0392)	-0.000465 (0.0416)	0.0267 (0.0520)	-0.00388 (0.0479)	0.531*** (0.0906)	0.295** (0.124)	0.289** (0.124)	0.137 (0.120)
SK - Slovakia	0.115*** (0.0393)	0.0798 (0.0539)	0.0860 (0.0552)	0.0310 (0.0502)	0.125 (0.0894)	-0.185* (0.105)	-0.195* (0.108)	-0.196* (0.107)
SI - Slovenia	0.572*** (0.0283)	0.448*** (0.0366)	0.440*** (0.0365)	0.366*** (0.0343)	1.033*** (0.0980)	0.715*** (0.134)	0.702*** (0.134)	0.630*** (0.128)
BG - Bulgaria	0.584*** (0.0517)	0.587*** (0.0495)	0.591*** (0.0504)	0.577*** (0.0467)	-0.133 (0.0978)	-0.613*** (0.125)	-0.645*** (0.132)	-0.658*** (0.130)
RO - Romania	-0.291*** (0.0435)	-0.337*** (0.0560)	-0.326*** (0.0574)	-0.364*** (0.0557)	-0.345*** (0.0923)	-0.632*** (0.118)	-0.633*** (0.119)	-0.706*** (0.123)
HR - Croatia	0.383*** (0.0489)	0.216*** (0.0540)	0.224*** (0.0559)	0.222*** (0.0547)	0.473*** (0.0962)	0.0671 (0.153)	0.0701 (0.153)	0.0739 (0.144)
<i>Sector</i>								
Manufacturing (NACE category C)	0.554*** (0.0899)	0.550*** (0.0848)	0.545*** (0.0858)	0.603*** (0.0805)	0.690*** (0.137)	0.755*** (0.139)	0.749*** (0.140)	0.758*** (0.137)
Services (NACE categories H/I/J/K/L/M/N/Q/R/S)	-0.00338 (0.0927)	-0.0131 (0.0883)	-0.0136 (0.0885)	-0.0221 (0.0797)	0.0495 (0.144)	0.0428 (0.127)	0.0510 (0.125)	-0.0217 (0.126)
Industry (NACE categories B/D/E/F)	-0.512*** (0.108)	-0.498*** (0.113)	-0.504*** (0.114)	-0.500*** (0.115)	-0.689*** (0.154)	-0.637*** (0.160)	-0.648*** (0.163)	-0.672*** (0.167)
<i>Number of employees</i>								
None or 1 employee	-0.0232 (0.149)	-0.0690 (0.168)	-0.0735 (0.166)	-0.0588 (0.162)	-0.399 (0.389)	-0.195 (0.317)	-0.219 (0.323)	-0.224 (0.298)
2 to 3 employees	-0.0705 (0.109)	-0.0880 (0.116)	-0.0978 (0.116)	-0.107 (0.112)	-0.547** (0.229)	-0.499** (0.219)	-0.509** (0.221)	-0.531*** (0.197)
4 to 5 employees	-0.0926 (0.120)	-0.0482 (0.130)	-0.0485 (0.130)	-0.0239 (0.127)	-0.151 (0.250)	-0.124 (0.263)	-0.141 (0.267)	-0.132 (0.270)

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
6 to 9 employees	-0.133* (0.0764)	-0.136* (0.0795)	-0.141* (0.0779)	-0.122 (0.0747)	-0.0437 (0.170)	-0.0766 (0.164)	-0.0898 (0.163)	-0.0362 (0.165)
10 to 29 employees	-0.00799 (0.0650)	-0.0180 (0.0689)	-0.0213 (0.0677)	-0.00132 (0.0642)	-0.260** (0.124)	-0.235* (0.127)	-0.246* (0.126)	-0.223* (0.124)
30 to 49 employees	-0.101 (0.103)	-0.0903 (0.105)	-0.0932 (0.104)	-0.109 (0.103)	-0.00695 (0.137)	0.0977 (0.152)	0.0927 (0.153)	0.107 (0.159)
Age in 2015 (years)	-0.000421 (0.000988)	-0.000212 (0.00107)	-0.000184 (0.00107)	-0.000539 (0.00113)	0.000460 (0.00243)	-0.000563 (0.00248)	-0.000625 (0.00250)	-0.000265 (0.00245)
<i>Turnover (2014)</i>								
€25k-€50k	0.464** (0.233)	0.489** (0.246)	0.482* (0.250)	0.426 (0.280)	0.230 (0.667)	0.235 (0.701)	0.268 (0.685)	0.167 (0.747)
€50k-€100k	0.294 (0.261)	0.336 (0.277)	0.331 (0.278)	0.297 (0.292)	0.331 (0.504)	0.469 (0.602)	0.481 (0.607)	0.433 (0.595)
€100k-€250k	0.446* (0.240)	0.534** (0.247)	0.524** (0.249)	0.467* (0.274)	-0.0446 (0.477)	0.00279 (0.506)	0.00546 (0.510)	0.0669 (0.503)
€250k-€500k	0.413* (0.217)	0.449** (0.212)	0.439** (0.215)	0.440* (0.235)	0.780** (0.376)	0.973** (0.400)	0.974** (0.403)	1.047** (0.410)
€500k-€2M	0.615*** (0.233)	0.623*** (0.230)	0.614*** (0.232)	0.670** (0.263)	0.296 (0.363)	0.466 (0.395)	0.467 (0.396)	0.534 (0.392)
€2M-€10M	0.668*** (0.245)	0.671*** (0.244)	0.662*** (0.247)	0.740*** (0.276)	0.241 (0.354)	0.308 (0.400)	0.307 (0.402)	0.364 (0.398)
More than €10M	0.665*** (0.256)	0.638** (0.252)	0.627** (0.256)	0.726** (0.285)	0.341 (0.377)	0.388 (0.425)	0.385 (0.429)	0.472 (0.422)
<i>Growth since 2008</i>								
Risen by more than 25%	0.203*** (0.0520)	0.222*** (0.0542)	0.223*** (0.0538)	0.240*** (0.0555)	0.316*** (0.121)	0.262** (0.113)	0.263** (0.114)	0.268** (0.119)
Risen by between 5 and 25%	0.0967* (0.0582)	0.133** (0.0670)	0.133** (0.0672)	0.138** (0.0653)	0.127 (0.107)	0.106 (0.114)	0.106 (0.113)	0.106 (0.112)
Fallen by between 5 and 25%	-0.0277 (0.0868)	0.0222 (0.0967)	0.0264 (0.0955)	0.0184 (0.0959)	0.300* (0.172)	0.282 (0.186)	0.282 (0.189)	0.290 (0.184)
Fallen by more than 25%	0.0110 (0.0757)	0.0495 (0.0778)	0.0495 (0.0780)	0.0372 (0.0778)	0.264* (0.138)	0.292* (0.154)	0.297* (0.152)	0.296* (0.153)
<i>Type of output</i>								
Goods only	0.508*** (0.0895)	0.479*** (0.0899)	0.481*** (0.0892)	0.461*** (0.0875)	0.598*** (0.142)	0.560*** (0.143)	0.560*** (0.144)	0.500*** (0.142)
Goods and services	0.405*** (0.0814)	0.400*** (0.0785)	0.401*** (0.0777)	0.378** (0.0798)	0.544*** (0.146)	0.586*** (0.145)	0.591*** (0.144)	0.547*** (0.133)

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
<i>Type of customers</i>								
Individual consumers only	-0.933*** (0.107)	-0.922*** (0.112)	-0.910*** (0.110)		-0.974*** (0.203)	-0.888*** (0.196)	-0.870*** (0.194)	
Individual consumers, and companies or other organisations	-0.333*** (0.0522)	-0.302*** (0.0544)	-0.293*** (0.0520)		-0.170* (0.103)	-0.155* (0.0926)	-0.137 (0.0970)	
<i>Engagement in other international business activities</i>								
Imported	0.961*** (0.0806)	0.946*** (0.0796)	0.946*** (0.0791)	0.961*** (0.0808)	0.961*** (0.118)	0.974*** (0.111)	0.977*** (0.111)	1.017*** (0.108)
Worked with a partner based abroad for R&D	0.263*** (0.0903)	0.196** (0.0940)	0.195** (0.0941)	0.213** (0.0963)	0.285** (0.141)	0.322** (0.153)	0.325** (0.151)	0.350** (0.148)
Subcontractor for a company based abroad	0.511*** (0.0951)	0.514*** (0.0965)	0.511*** (0.0969)	0.556*** (0.0921)	0.377*** (0.117)	0.342** (0.135)	0.332** (0.135)	0.370*** (0.139)
Used a subcontractor based abroad	0.393*** (0.0798)	0.387*** (0.0741)	0.388*** (0.0743)	0.422*** (0.0704)	0.450*** (0.150)	0.422*** (0.151)	0.422*** (0.150)	0.423*** (0.149)
Invested in a company based abroad	0.656*** (0.132)	0.712*** (0.140)	0.710*** (0.139)	0.721*** (0.131)	0.719*** (0.148)	0.734*** (0.179)	0.728*** (0.177)	0.724*** (0.164)
<i>Problems related to international business</i>								
Company's products and/or services are specific to the domestic market		-0.388*** (0.101)	-0.388*** (0.101)	-0.397*** (0.101)		-0.885*** (0.137)	-0.888*** (0.138)	-0.927*** (0.138)
Identifying partners abroad is too difficult		-0.0619 (0.0758)	-0.0635 (0.0756)	-0.0434 (0.0752)		0.256 (0.176)	0.255 (0.176)	0.282 (0.178)
Company does not have specialised staff to deal with exports		-0.619*** (0.0614)	-0.619*** (0.0624)	-0.640*** (0.0641)		-0.487*** (0.169)	-0.489*** (0.168)	-0.517*** (0.165)
Dealing with foreign taxation is too complicated or too		-0.00407 (0.0803)	-0.00524 (0.0806)	-0.00424 (0.0771)		0.125 (0.159)	0.128 (0.160)	0.110 (0.154)

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
costly								
Company does not know where to find information about the potential market		0.185** (0.0887)	0.182** (0.0874)	0.166** (0.0844)		-0.386* (0.217)	-0.386* (0.217)	-0.327 (0.219)
The financial investment is too large		-0.139** (0.0709)	-0.139** (0.0709)	-0.145** (0.0735)		0.0484 (0.120)	0.0471 (0.121)	0.0511 (0.117)
Company does not know the rules which have to be followed		-0.167* (0.0943)	-0.166* (0.0939)	-0.156* (0.0936)		-0.504*** (0.190)	-0.511*** (0.192)	-0.512*** (0.192)
Delivery costs are too high		0.0907 (0.0640)	0.0939 (0.0635)	0.0892 (0.0611)		-0.159 (0.135)	-0.158 (0.134)	-0.193 (0.130)
The administrative procedures are too complicated		0.0250 (0.0774)	0.0250 (0.0779)	0.0184 (0.0762)		0.0182 (0.130)	0.0133 (0.129)	0.00625 (0.129)
Resolving cross- border complaints and disputes is too expensive		-0.134** (0.0584)	-0.136** (0.0580)	-0.138** (0.0598)		0.0305 (0.146)	0.0337 (0.145)	0.0502 (0.143)
Company lacks the language skills to deal with foreign countries		0.0201 (0.0529)	0.0224 (0.0532)	0.0148 (0.0564)		-0.0802 (0.209)	-0.0849 (0.208)	-0.110 (0.196)
Payments from other countries are not secure enough		-0.127 (0.0793)	-0.127 (0.0794)	-0.102 (0.0752)		-0.0989 (0.143)	-0.107 (0.142)	-0.118 (0.141)
Availability of an online platform for purchasing products or services			-0.0694 (0.0714)	-0.135* (0.0702)			-0.115 (0.107)	-0.164 (0.100)
<i>Ownership</i>								
Part of an international group					0.148 (0.134)	0.0832 (0.131)	0.0819 (0.131)	0.109 (0.125)
Constant	-1.649*** (0.270)	-1.438*** (0.264)	-1.412*** (0.272)	-1.643*** (0.292)	-1.838*** (0.460)	-1.406*** (0.444)	-1.370*** (0.454)	-1.516*** (0.456)
Observations	4186	4186	4186	4186	1258	1258	1258	1258

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
Pseudo R-squared	0.357	0.389	0.390	0.373	0.371	0.414	0.414	0.403

Standard errors in parentheses

The baseline categories for country, sector, number of employees, turnover, growth since 2008, type of output and type of customers are respectively Italy, retail, 50 to 249 employees, €25k or less, approximately no growth, services only, and companies or organisations only

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Source: LE Europe analysis of 2015 Eurobarometer

**Table 60: The determinants of firms' propensity to export - baseline specification (young firms included)**

	Baseline - Independent	Baseline - Part of a group
exporter		
<i>Country</i>		
FR - France	-0.204*** (0.0207)	0.0845 (0.0770)
BE - Belgium	0.0179 (0.0364)	0.135* (0.0760)
NE - The Netherlands	-0.0194 (0.0263)	0.373*** (0.0721)
DE - Germany	0.354*** (0.0346)	0.207*** (0.0626)
LU - Luxembourg	0.0924* (0.0489)	0.538*** (0.0732)
DK - Denmark	0.240*** (0.0401)	0.251*** (0.0846)
IE - Ireland	-0.124*** (0.0303)	-0.0208 (0.0696)
UK - United Kingdom	-0.172*** (0.0348)	0.0342 (0.0878)
EL- Greece	0.0701** (0.0299)	0.251*** (0.0738)
ES - Spain	0.303*** (0.0202)	0.501*** (0.0722)
PT - Portugal	0.461*** (0.0340)	-0.344*** (0.0807)
FI - Finland	-0.257*** (0.0417)	-0.467*** (0.0921)
SE - Sweden	-0.296*** (0.0561)	0.00831 (0.0871)
AT - Austria	0.275*** (0.0457)	0.455*** (0.0684)
CY - Cyprus (Republic)	-0.491*** (0.0508)	0.318*** (0.0986)
CZ - Czech Republic	0.249*** (0.0320)	0.403*** (0.0921)
EE - Estonia	0.438*** (0.0273)	0.739*** (0.0852)
HU - Hungary	0.243*** (0.0350)	0.393*** (0.0633)
LV - Latvia	0.436*** (0.0348)	0.333*** (0.0879)
LT - Lithuania	0.658*** (0.0297)	0.482*** (0.0669)
MT - Malta	-0.155*** (0.0421)	0.0762 (0.0594)
PL - Poland	-0.0752*** (0.0282)	0.430*** (0.0617)
SK - Slovakia	0.0488 (0.0344)	0.289*** (0.0707)
SI - Slovenia	0.528*** (0.0229)	0.953*** (0.0758)
BG - Bulgaria	0.315*** (0.0344)	0.273** (0.111)
RO - Romania	-0.317*** (0.0271)	-0.604*** (0.0763)
HR - Croatia	0.343*** (0.0397)	0.249*** (0.0756)
<i>Sector</i>		
Manufacturing (NACE category C)	0.479*** (0.0674)	0.605*** (0.104)
Services (NACE categories H/I/J/K/L/M/N/Q/R/S)	-0.0404 (0.0586)	-0.0332 (0.113)
Industry (NACE categories B/D/E/F)	-0.490*** (0.0678)	-0.535*** (0.133)
<i>Number of employees</i>		
None or 1 employee	-0.203	-0.239

	(0.125)	(0.233)
2 to 3 employees	-0.112 (0.0994)	-0.262* (0.156)
4 to 5 employees	-0.119 (0.111)	-0.0987 (0.192)
6 to 9 employees	-0.155* (0.0926)	0.0537 (0.136)
10 to 29 employees	-0.0753 (0.0745)	-0.140 (0.102)
30 to 49 employees	-0.0913 (0.0941)	0.0315 (0.133)
Age in 2015 (years)	-0.000183 (0.000779)	0.00128 (0.00158)
<i>Turnover (2014)</i>		
€25k-€50k	0.225 (0.175)	0.901* (0.528)
€50k-€100k	0.119 (0.140)	0.578* (0.320)
€100k-€250k	0.485*** (0.135)	-0.203 (0.365)
€250k-€500k	0.427*** (0.130)	0.726*** (0.250)
€500k-€2M	0.550*** (0.134)	0.415* (0.228)
€2M-€10M	0.609*** (0.145)	0.546** (0.224)
More than €10M	0.672*** (0.165)	0.556** (0.224)
<i>Seven-year growth implied by compound annual growth</i>		
Growth - over 25%	0.101** (0.0477)	0.248** (0.108)
Growth - 5%-25%	0.0565 (0.0554)	0.103 (0.106)
Decline - 5%-25%	-0.0180 (0.0779)	0.163 (0.151)
Decline - over 25%	-0.0346 (0.0643)	0.253** (0.114)
<i>Type of output</i>		
Goods only	0.443*** (0.0657)	0.540*** (0.122)
Goods and services	0.418*** (0.0514)	0.482*** (0.125)
<i>Type of customers</i>		
Individual consumers only	-0.896*** (0.0762)	-0.989*** (0.169)
Individual consumers, and companies or other organisations	-0.351*** (0.0344)	-0.225** (0.0951)
<i>Engagement in other international business activities</i>		
Imported	0.950*** (0.0621)	1.015*** (0.104)
Worked with a partner based abroad for R&D	0.323*** (0.0732)	0.257** (0.114)
Subcontractor for a company based abroad	0.532*** (0.0743)	0.391*** (0.0816)
Used a subcontractor based abroad	0.397*** (0.0640)	0.340*** (0.0990)
Invested in a company based abroad	0.572*** (0.0925)	0.795*** (0.102)
<i>Ownership</i>		
Part of an international group		0.177* (0.0988)
Constant	-1.609*** (0.161)	-2.054*** (0.237)
Observations	7632	1901
Pseudo R-squared	0.358	0.376

Standard errors in parentheses \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

The baseline categories for country, sector, number of employees, turnover, seven-year implied growth, type of output and type of customers are respectively Italy, retail, 50 to 249 employees, €25k or less, approximately no growth, services only, and companies or organisations only

Source: LE Europe analysis of 2015 Eurobarometer

**Table 61: The determinants of firms' propensity to export - problems related to international business (young firms included)**

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
exporter				
<i>Country</i>				
FR - France	-0.157*** (0.0190)	0.0438 (0.0336)	0.102 (0.0875)	0.228** (0.106)
BE - Belgium	0.114*** (0.0337)	0.157*** (0.0382)	0.213** (0.0913)	0.182* (0.109)
NE - The Netherlands	0.199** (0.0258)	0.164** (0.0287)	0.596*** (0.0871)	0.512*** (0.111)
DE - Germany	0.517*** (0.0345)	0.482*** (0.0380)	0.357*** (0.0799)	0.217** (0.0979)
LU - Luxembourg	0.297*** (0.0454)	0.321*** (0.0507)	0.600*** (0.0789)	0.526*** (0.111)
DK - Denmark	0.292** (0.0346)	0.159*** (0.0354)	0.305*** (0.0954)	0.182 (0.116)
IE - Ireland	0.0806*** (0.0299)	0.0783** (0.0349)	0.180** (0.0867)	0.0755 (0.101)
UK - United Kingdom	0.0625* (0.0331)	0.0698** (0.0323)	0.123 (0.100)	-0.0268 (0.128)
EL - Greece	0.246*** (0.0325)	0.295*** (0.0415)	0.558*** (0.0891)	0.416*** (0.102)
ES - Spain	0.470*** (0.0234)	0.490*** (0.0267)	0.611*** (0.0926)	0.524*** (0.104)
PT - Portugal	0.492*** (0.0332)	0.694*** (0.0448)	-0.247*** (0.0855)	-0.133 (0.0904)
FI - Finland	-0.253*** (0.0374)	-0.237*** (0.0360)	-0.322*** (0.111)	-0.486*** (0.144)
SE - Sweden	-0.283*** (0.0494)	-0.396*** (0.0503)	0.0548 (0.103)	-0.116 (0.123)
AT - Austria	0.408** (0.0423)	0.377*** (0.0428)	0.510*** (0.0852)	0.382*** (0.103)
CY - Cyprus (Republic)	-0.410*** (0.0519)	-0.351*** (0.0571)	0.871*** (0.107)	0.622*** (0.119)
CZ - Czech Republic	0.452*** (0.0329)	0.415*** (0.0371)	0.629*** (0.0982)	0.542*** (0.136)
EE - Estonia	0.541***	0.342***	0.895***	0.611***

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
	(0.0341)	(0.0436)	(0.126)	(0.150)
HU - Hungary	0.352***	0.278***	0.480***	0.344***
	(0.0367)	(0.0415)	(0.0680)	(0.0830)
LV - Latvia	0.726***	0.726***	0.635***	0.510***
	(0.0395)	(0.0433)	(0.102)	(0.136)
LT - Lithuania	0.960***	0.906***	0.783***	0.597***
	(0.0343)	(0.0386)	(0.0932)	(0.121)
MT - Malta	0.0103	-0.0433	0.247***	0.0170
	(0.0435)	(0.0496)	(0.0773)	(0.0972)
PL - Poland	0.0958***	0.133***	0.709***	0.689***
	(0.0288)	(0.0314)	(0.0759)	(0.0891)
SK - Slovakia	0.208***	0.177***	0.255***	0.145
	(0.0352)	(0.0453)	(0.0791)	(0.105)
SI - Slovenia	0.732***	0.614***	1.159***	1.041***
	(0.0258)	(0.0318)	(0.0968)	(0.107)
BG - Bulgaria	0.738***	0.743***	0.282**	-0.0159
	(0.0435)	(0.0385)	(0.113)	(0.113)
RO - Romania	-0.158***	-0.215***	-0.478***	-0.616***
	(0.0365)	(0.0436)	(0.0813)	(0.0879)
HR - Croatia	0.559***	0.391***	0.295***	0.0288
	(0.0421)	(0.0471)	(0.0956)	(0.129)
<i>Sector</i>				
Manufacturing (NACE category C)	0.504***	0.496***	0.629***	0.669***
	(0.0754)	(0.0700)	(0.122)	(0.116)
Services (NACE categories H/I/J/K/L/M/N/Q/R/S)	-0.0579	-0.0632	-0.0222	-0.00694
	(0.0675)	(0.0627)	(0.119)	(0.113)
Industry (NACE categories B/D/E/F)	-0.537***	-0.520***	-0.597***	-0.541***
	(0.0755)	(0.0788)	(0.149)	(0.154)
<i>Number of employees</i>				
None or 1 employee	-0.117	-0.161	-0.323	-0.248
	(0.136)	(0.143)	(0.254)	(0.230)
2 to 3 employees	-0.109	-0.116	-0.381**	-0.337**
	(0.101)	(0.104)	(0.176)	(0.169)
4 to 5 employees	-0.149	-0.127	-0.147	-0.128
	(0.112)	(0.119)	(0.232)	(0.240)
6 to 9 employees	-0.157*	-0.154	0.00777	-0.0102
	(0.0889)	(0.0939)	(0.147)	(0.152)
10 to 29 employees	-0.0478	-0.0493	-0.245**	-0.210**

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
	(0.0747)	(0.0764)	(0.105)	(0.106)
30 to 49 employees	-0.105 (0.101)	-0.0889 (0.104)	-0.00346 (0.128)	0.0609 (0.136)
Age in 2015 (years)	0.000240 (0.000807)	0.000525 (0.000912)	0.00201 (0.00203)	0.00151 (0.00197)
<i>Turnover (2014)</i>				
€25k-€50k	0.275 (0.188)	0.238 (0.191)	0.864 (0.555)	0.850 (0.599)
€50k-€100k	0.140 (0.170)	0.149 (0.173)	0.623 (0.388)	0.668 (0.439)
€100k-€250k	0.466*** (0.157)	0.513*** (0.150)	-0.212 (0.345)	-0.133 (0.352)
€250k-€500k	0.423*** (0.163)	0.415*** (0.158)	0.880*** (0.239)	0.986*** (0.254)
€500k-€2M	0.547*** (0.172)	0.519*** (0.166)	0.434* (0.250)	0.568** (0.270)
€2M-€10M	0.638*** (0.184)	0.610*** (0.178)	0.468* (0.239)	0.535* (0.276)
More than €10M	0.649*** (0.204)	0.594*** (0.200)	0.532** (0.247)	0.581** (0.284)
<i>Seven-year growth implied by compound annual growth</i>				
Growth - over 25%	0.137*** (0.0469)	0.142*** (0.0504)	0.239 (0.146)	0.180 (0.133)
Growth - 5%-25%	0.0823 (0.0545)	0.0971 (0.0593)	0.105 (0.125)	0.0824 (0.127)
Decline - 5%-25%	-0.0251 (0.0756)	0.00642 (0.0826)	0.244 (0.190)	0.223 (0.204)
Decline - over 25%	0.0182 (0.0698)	0.0511 (0.0719)	0.270* (0.142)	0.283* (0.146)
<i>Type of output</i>				
Goods only	0.448*** (0.0657)	0.436*** (0.0671)	0.466*** (0.131)	0.424*** (0.130)
Goods and services	0.380*** (0.0649)	0.373*** (0.0630)	0.418*** (0.134)	0.442*** (0.135)
<i>Type of customers</i>				
Individual consumers only	-0.960*** (0.0888)	-0.956*** (0.0973)	-1.009*** (0.174)	-1.009*** (0.163)
Individual consumers, and companies or other organisations	-0.351***	-0.329***	-0.195**	-0.179**

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
	(0.0464)	(0.0495)	(0.0910)	(0.0844)
<i>Engagement in other international business activities</i>				
Imported	0.943*** (0.0706)	0.923*** (0.0704)	1.040*** (0.117)	1.045*** (0.113)
Worked with a partner based abroad for R&D	0.326*** (0.0885)	0.271*** (0.0914)	0.292** (0.132)	0.297** (0.141)
Subcontractor for a company based abroad	0.514*** (0.0827)	0.516*** (0.0823)	0.372*** (0.0900)	0.325*** (0.0956)
Used a subcontractor based abroad	0.418*** (0.0673)	0.401*** (0.0667)	0.377*** (0.126)	0.363*** (0.127)
Invested in a company based abroad	0.546*** (0.117)	0.597*** (0.125)	0.754*** (0.119)	0.812*** (0.146)
<i>Problems related to international business</i>				
Company's products and/or services are specific to the domestic market		-0.415*** (0.0930)		-0.681*** (0.135)
Identifying partners abroad is too difficult		-0.0546 (0.0565)		0.360** (0.164)
Company does not have specialised staff to deal with exports		-0.530*** (0.0591)		-0.456*** (0.133)
Dealing with foreign taxation is too complicated or too costly		0.0234 (0.0661)		-0.0182 (0.148)
Company does not know where to find information about the potential market		0.233*** (0.0689)		-0.322* (0.172)
The financial investment is too large		-0.177*** (0.0605)		-0.0413 (0.104)
Company does not know the rules which have to be followed		-0.200*** (0.0746)		-0.531*** (0.185)
Delivery costs are too high		0.0458 (0.0621)		-0.0674 (0.140)
The administrative procedures are too complicated		0.0250 (0.0736)		0.0695 (0.0976)
Resolving cross-border complaints and disputes is too expensive		-0.126*** (0.0478)		0.0298 (0.121)
Company lacks the language skills to deal with foreign countries		-0.0225 (0.0533)		0.0312 (0.162)
Payments from other countries are not secure enough		-0.131** (0.0639)		-0.118 (0.120)
<i>Ownership</i>				

	Baseline - Independent	Problems related to international business - Independent	Baseline - Part of a group	Problems related to international business - Part of a group
Part of an international group			0.199** (0.0923)	0.149* (0.0885)
Constant	-1.657*** (0.189)	-1.397*** (0.193)	-2.049*** (0.256)	-1.803*** (0.257)
Observations	5723	5723	1593	1593
Pseudo R-squared	0.367	0.398	0.382	0.414

## Standard errors in parentheses

The baseline categories for country, sector, number of employees, turnover, seven-year implied growth, type of output and type of customers are respectively Italy, retail, 50 to 249 employees, €25k or less, approximately no growth, services only, and companies or organisations only

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Source: LE Europe analysis of 2015 Eurobarometer

**Table 62: The determinants of firms' propensity to export – availability of a website for purchasing products online (young firms included)**

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
exporter								
<i>Country</i>								
FR - France	-0.197*** (0.0248)	0.0146 (0.0383)	0.0103 (0.0393)	-0.0280 (0.0371)	0.172** (0.0703)	0.217** (0.102)	0.209** (0.102)	0.253** (0.109)
BE - Belgium	0.109*** (0.0327)	0.126*** (0.0363)	0.123*** (0.0363)	-0.00483 (0.0307)	0.175** (0.0881)	0.0670 (0.113)	0.0619 (0.112)	0.112 (0.117)
NE - The Netherlands	0.109*** (0.0264)	0.0827*** (0.0296)	0.0848*** (0.0300)	0.0583** (0.0285)	0.522*** (0.0766)	0.379*** (0.119)	0.371*** (0.117)	0.397*** (0.121)
DE - Germany	0.464*** (0.0346)	0.440*** (0.0345)	0.438*** (0.0346)	0.336*** (0.0325)	0.291*** (0.0775)	0.0768 (0.0994)	0.0657 (0.0980)	0.0110 (0.114)
LU - Luxembourg	0.0591 (0.0490)	0.0817 (0.0503)	0.0766 (0.0509)	-0.0895** (0.0415)	0.578*** (0.0806)	0.438*** (0.109)	0.432*** (0.110)	0.468*** (0.105)
DK - Denmark	0.241*** (0.0362)	0.116*** (0.0367)	0.112*** (0.0363)	0.0827** (0.0341)	0.222** (0.0945)	0.0454 (0.128)	0.0415 (0.129)	0.105 (0.139)
IE - Ireland	0.0562 (0.0354)	0.0393 (0.0390)	0.0507 (0.0435)	-0.0360 (0.0388)	0.203** (0.0874)	0.0625 (0.120)	0.0711 (0.124)	0.00361 (0.134)
UK - United Kingdom	0.00358 (0.0437)	-0.00810 (0.0409)	0.00129 (0.0424)	-0.0355 (0.0390)	0.113 (0.107)	-0.108 (0.151)	-0.115 (0.148)	-0.131 (0.150)
EL - Greece	0.244*** (0.0322)	0.289*** (0.0408)	0.303*** (0.0436)	0.284*** (0.0455)	0.527*** (0.0867)	0.316*** (0.109)	0.328*** (0.113)	0.357*** (0.117)
ES - Spain	0.374*** (0.0196)	0.394*** (0.0258)	0.397*** (0.0261)	0.416*** (0.0273)	0.544*** (0.0844)	0.408*** (0.102)	0.401*** (0.102)	0.422*** (0.103)
PT - Portugal	0.457*** (0.0338)	0.627*** (0.0424)	0.631*** (0.0425)	0.567*** (0.0393)	-0.0818 (0.0803)	0.00273 (0.0717)	0.00757 (0.0708)	0.0409 (0.0805)
FI - Finland	-0.313*** (0.0405)	-0.294*** (0.0424)	-0.292*** (0.0425)	-0.315*** (0.0403)	-0.233** (0.108)	-0.452*** (0.151)	-0.453*** (0.150)	-0.379** (0.156)
SE - Sweden	-0.306*** (0.0532)	-0.409*** (0.0525)	-0.412*** (0.0523)	-0.445*** (0.0485)	0.0373 (0.106)	-0.201 (0.133)	-0.204 (0.133)	-0.159 (0.144)
AT - Austria	0.369*** (0.0433)	0.332*** (0.0439)	0.323*** (0.0457)	0.281*** (0.0379)	0.748*** (0.0872)	0.530*** (0.109)	0.521*** (0.108)	0.536*** (0.109)
CY - Cyprus (Republic)	-0.394*** (0.0556)	-0.365*** (0.0611)	-0.363*** (0.0615)	-0.436*** (0.0626)	0.674*** (0.108)	0.301** (0.132)	0.283** (0.139)	0.221 (0.138)
CZ - Czech Republic	0.404*** (0.0365)	0.373*** (0.0410)	0.377*** (0.0416)	0.330*** (0.0339)	0.623*** (0.0949)	0.466*** (0.134)	0.468*** (0.134)	0.460*** (0.126)
EE - Estonia	0.501***	0.317***	0.325***	0.315***	0.799***	0.447***	0.442***	0.441***

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
	(0.0389)	(0.0434)	(0.0456)	(0.0407)	(0.102)	(0.143)	(0.141)	(0.140)
HU - Hungary	0.263*** (0.0420)	0.180*** (0.0450)	0.177*** (0.0454)	0.166*** (0.0403)	0.486*** (0.0695)	0.270*** (0.0822)	0.259*** (0.0876)	0.330*** (0.0807)
LV - Latvia	0.626*** (0.0398)	0.638*** (0.0467)	0.637*** (0.0466)	0.616*** (0.0448)	0.541*** (0.101)	0.358*** (0.136)	0.353*** (0.137)	0.382*** (0.139)
LT - Lithuania	0.964*** (0.0355)	0.904*** (0.0389)	0.919*** (0.0444)	0.937*** (0.0406)	0.718*** (0.0851)	0.463*** (0.126)	0.472*** (0.128)	0.463*** (0.124)
MT - Malta	-0.0632 (0.0451)	-0.101** (0.0501)	-0.104** (0.0499)	-0.208*** (0.0423)	0.225*** (0.0732)	-0.0760 (0.108)	-0.0705 (0.110)	-0.100 (0.114)
PL - Poland	-0.0389 (0.0347)	0.00149 (0.0371)	0.0255 (0.0433)	0.00239 (0.0390)	0.659*** (0.0673)	0.572*** (0.0915)	0.568*** (0.0907)	0.460*** (0.0985)
SK - Slovakia	0.106*** (0.0410)	0.0638 (0.0516)	0.0694 (0.0528)	0.0255 (0.0458)	0.138* (0.0766)	-0.0511 (0.0962)	-0.0579 (0.0970)	- 0.000662 (0.0936)
SI - Slovenia	0.634*** (0.0270)	0.523*** (0.0356)	0.515*** (0.0358)	0.439*** (0.0310)	1.114*** (0.0929)	0.889*** (0.114)	0.883*** (0.113)	0.833*** (0.111)
BG - Bulgaria	0.599*** (0.0456)	0.607*** (0.0432)	0.611*** (0.0440)	0.601*** (0.0424)	0.118 (0.0978)	-0.233* (0.121)	-0.248* (0.130)	-0.198 (0.125)
RO - Romania	-0.245*** (0.0445)	-0.280*** (0.0544)	-0.269*** (0.0552)	-0.302*** (0.0514)	-0.496*** (0.0830)	-0.685*** (0.0954)	-0.685*** (0.0952)	-0.688*** (0.101)
HR - Croatia	0.438*** (0.0446)	0.282*** (0.0501)	0.290*** (0.0517)	0.294*** (0.0494)	0.259** (0.102)	-0.0602 (0.142)	-0.0619 (0.142)	-0.0129 (0.129)
<i>Sector</i>								
Manufacturing (NACE category C)	0.509*** (0.0871)	0.500*** (0.0834)	0.496*** (0.0843)	0.558*** (0.0794)	0.678*** (0.147)	0.725*** (0.140)	0.723*** (0.141)	0.763*** (0.137)
Services (NACE categories H/I/J/K/L/M/N/Q/R/S)	-0.0642 (0.0831)	-0.0761 (0.0796)	-0.0767 (0.0800)	-0.0832 (0.0699)	0.0311 (0.155)	0.0323 (0.139)	0.0379 (0.138)	-0.0432 (0.136)
Industry (NACE categories B/D/E/F)	-0.532*** (0.0933)	-0.522*** (0.0977)	-0.526*** (0.0985)	-0.524*** (0.0982)	-0.578*** (0.153)	-0.531*** (0.155)	-0.537*** (0.158)	-0.547*** (0.164)
<i>Number of employees</i>								
None or 1 employee	-0.0620 (0.153)	-0.0880 (0.164)	-0.0916 (0.162)	-0.0708 (0.161)	-0.349 (0.337)	-0.238 (0.303)	-0.248 (0.305)	-0.171 (0.290)

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
2 to 3 employees	-0.0457 (0.105)	-0.0554 (0.108)	-0.0623 (0.109)	-0.0653 (0.104)	-0.519** (0.214)	-0.481** (0.205)	-0.486** (0.207)	-0.473*** (0.173)
4 to 5 employees	-0.0891 (0.114)	-0.0456 (0.119)	-0.0460 (0.119)	-0.0147 (0.117)	-0.193 (0.232)	-0.186 (0.239)	-0.192 (0.242)	-0.141 (0.250)
6 to 9 employees	-0.149* (0.0820)	-0.150* (0.0834)	-0.155* (0.0817)	-0.140* (0.0785)	-0.00795 (0.153)	-0.0418 (0.151)	-0.0476 (0.151)	0.0526 (0.155)
10 to 29 employees	0.00508 (0.0743)	0.000642 (0.0776)	-0.00236 (0.0765)	0.0189 (0.0752)	-0.230** (0.114)	-0.218** (0.110)	-0.223** (0.110)	-0.182* (0.106)
30 to 49 employees	-0.0940 (0.100)	-0.0883 (0.104)	-0.0906 (0.103)	-0.105 (0.102)	-0.0167 (0.130)	0.0636 (0.137)	0.0615 (0.137)	0.0705 (0.142)
Age in 2015 (years)	0.000544 (0.00092)	0.000795 (0.00097)	0.000810 (0.00097)	0.000593 (0.00099)	0.00131 (0.00238)	0.000678 (0.00241)	0.000648 (0.00242)	0.00129 (0.00225)
<i>Turnover (2014)</i>								
€25k-€50k	0.366* (0.195)	0.398* (0.207)	0.395* (0.208)	0.328 (0.228)	0.208 (0.568)	0.191 (0.608)	0.216 (0.593)	0.106 (0.651)
€50k-€100k	0.184 (0.225)	0.248 (0.241)	0.243 (0.242)	0.206 (0.251)	0.313 (0.418)	0.452 (0.494)	0.461 (0.497)	0.433 (0.467)
€100k-€250k	0.377* (0.217)	0.470** (0.222)	0.461** (0.223)	0.401* (0.241)	-0.0597 (0.389)	-0.0257 (0.419)	-0.0260 (0.422)	0.0562 (0.400)
€250k-€500k	0.382** (0.177)	0.428** (0.170)	0.421** (0.172)	0.417** (0.186)	0.746** (0.290)	0.907*** (0.302)	0.909*** (0.305)	0.984*** (0.310)
€500k-€2M	0.560*** (0.194)	0.577*** (0.193)	0.570*** (0.195)	0.629*** (0.222)	0.243 (0.277)	0.404 (0.305)	0.404 (0.307)	0.458 (0.297)
€2M-€10M	0.624*** (0.206)	0.642*** (0.204)	0.634*** (0.207)	0.714*** (0.231)	0.265 (0.259)	0.336 (0.300)	0.334 (0.303)	0.405 (0.298)
More than €10M	0.589*** (0.222)	0.580*** (0.218)	0.572*** (0.221)	0.674*** (0.245)	0.337 (0.278)	0.387 (0.321)	0.384 (0.325)	0.491 (0.317)
<i>Seven-year growth implied by compound annual growth</i>								
Growth - over 25%	0.173*** (0.0496)	0.189*** (0.0492)	0.189*** (0.0493)	0.199*** (0.0517)	0.247** (0.120)	0.180 (0.112)	0.181 (0.112)	0.190* (0.115)
Growth - 5%-25%	0.0981* (0.0541)	0.132** (0.0589)	0.132** (0.0592)	0.133** (0.0599)	0.0601 (0.111)	0.0356 (0.124)	0.0361 (0.123)	0.0461 (0.125)
Decline - 5%-25%	-	0.0487	0.0514	0.0397	0.255	0.231	0.232	0.235

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
	0.000800 (0.0797)	(0.0886)	(0.0879)	(0.0886)	(0.175)	(0.185)	(0.186)	(0.180)
Decline - over 25%	0.00237 (0.0718)	0.0431 (0.0728)	0.0427 (0.0733)	0.0261 (0.0741)	0.294** (0.135)	0.289* (0.148)	0.294** (0.146)	0.283* (0.151)
<i>Type of output</i>								
Goods only	0.490*** (0.0828)	0.467*** (0.0840)	0.467*** (0.0831)	0.437*** (0.0800)	0.590*** (0.145)	0.558*** (0.142)	0.558*** (0.142)	0.465*** (0.137)
Goods and services	0.374*** (0.0709)	0.358*** (0.0689)	0.359*** (0.0684)	0.339*** (0.0691)	0.470*** (0.148)	0.514*** (0.148)	0.515*** (0.148)	0.428*** (0.140)
<i>Type of customers</i>								
Individual consumers only	-0.939*** (0.106)	-0.930*** (0.112)	-0.920*** (0.111)		-1.154*** (0.200)	-1.110*** (0.189)	-1.102*** (0.186)	
Individual consumers, and companies or other organisations	-0.325*** (0.0521)	-0.295*** (0.0544)	-0.286*** (0.0517)		-0.270*** (0.100)	-0.261*** (0.0886)	-0.250*** (0.0948)	
<i>Engagement in other international business activities</i>								
Imported	0.927*** (0.0753)	0.908*** (0.0737)	0.908*** (0.0733)	0.928*** (0.0735)	0.972*** (0.110)	0.971*** (0.103)	0.972*** (0.103)	1.007*** (0.0992)
Worked with a partner based abroad for R&D	0.271*** (0.0937)	0.208** (0.0955)	0.207** (0.0958)	0.229** (0.0966)	0.271* (0.145)	0.285* (0.159)	0.285* (0.159)	0.320** (0.156)
Subcontractor for a company based abroad	0.529*** (0.0829)	0.535*** (0.0824)	0.531*** (0.0822)	0.573*** (0.0788)	0.355*** (0.0950)	0.305*** (0.106)	0.299*** (0.106)	0.343*** (0.110)
Used a subcontractor based abroad	0.377*** (0.0756)	0.359*** (0.0728)	0.361*** (0.0728)	0.395*** (0.0693)	0.441*** (0.135)	0.429*** (0.133)	0.430*** (0.134)	0.425*** (0.132)
Invested in a company based abroad	0.618*** (0.121)	0.681*** (0.129)	0.679*** (0.128)	0.690*** (0.121)	0.739*** (0.136)	0.751*** (0.163)	0.747*** (0.162)	0.734*** (0.140)
<i>Problems related to international business</i>								
Company's		-0.377***	-0.377***	-0.387***		-0.784***	-0.786***	-0.828***

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
products and/or services are specific to the domestic market		(0.101)	(0.100)	(0.100)		(0.128)	(0.128)	(0.128)
Identifying partners abroad is too difficult		-0.0648 (0.0745)	-0.0661 (0.0745)	-0.0434 (0.0744)		0.251 (0.163)	0.251 (0.163)	0.299* (0.165)
Company does not have specialised staff to deal with exports		-0.549*** (0.0627)	-0.549*** (0.0638)	-0.567*** (0.0637)		-0.503*** (0.153)	-0.505*** (0.153)	-0.527*** (0.146)
Dealing with foreign taxation is too complicated or too costly		0.00709 (0.0748)	0.00665 (0.0751)	0.0172 (0.0697)		0.107 (0.158)	0.108 (0.158)	0.0833 (0.149)
Company does not know where to find information about the potential market		0.183** (0.0833)	0.181** (0.0826)	0.158** (0.0768)		-0.433** (0.185)	-0.431** (0.185)	-0.342* (0.186)
The financial investment is too large		-0.174** (0.0705)	-0.173** (0.0707)	-0.178** (0.0741)		0.0233 (0.103)	0.0229 (0.103)	0.0260 (0.1000)
Company does not know the rules which have to be followed		-0.185** (0.0879)	-0.184** (0.0876)	-0.177** (0.0869)		-0.476** (0.185)	-0.480*** (0.186)	-0.480*** (0.184)
Delivery costs are too high		0.0838 (0.0594)	0.0865 (0.0593)	0.0744 (0.0561)		-0.0973 (0.132)	-0.0968 (0.132)	-0.141 (0.126)
The administrative procedures are too complicated		0.0202 (0.0746)	0.0199 (0.0748)	0.00864 (0.0735)		0.0786 (0.105)	0.0771 (0.104)	0.0851 (0.101)
Resolving cross- border complaints and disputes is too expensive		-0.147*** (0.0561)	-0.150*** (0.0560)	-0.144** (0.0570)		0.0546 (0.143)	0.0568 (0.143)	0.0599 (0.144)
Company lacks the		0.0165	0.0193	0.00396		-0.0308	-0.0330	-0.0648

	Baseline - Independent	Problems related to international business - Independent	Full specification - Independent	Removal of customer type - Independent	Baseline - Part of a group	Problems related to international business - Part of a group	Full specification - Part of a group	Removal of customer type - Part of a group
language skills to deal with foreign countries		(0.0538)	(0.0543)	(0.0563)		(0.200)	(0.199)	(0.184)
Payments from other countries are not secure enough		-0.111*	-0.112*	-0.0940		-0.103	-0.108	-0.124
Availability of an online platform for purchasing products or services		(0.0667)	(0.0669)	(0.0636)		(0.143)	(0.142)	(0.139)
<i>Ownership</i>			-0.0658	-0.125*			-0.0643	-0.127
Part of an international group			(0.0661)	(0.0672)			(0.109)	(0.0955)
Constant	-1.600***	-1.398***	-1.374***	-1.614***	0.134	0.0726	0.0722	0.132
	(0.222)	(0.214)	(0.221)	(0.238)	(0.109)	(0.107)	(0.107)	(0.109)
					-1.769***	-1.439***	-1.419***	-1.700***
					(0.339)	(0.331)	(0.339)	(0.330)
Observations	4690	4690	4690	4690	1409	1409	1409	1409
Pseudo R-squared	0.354	0.384	0.385	0.367	0.375	0.411	0.411	0.392

Standard errors in parentheses

The baseline categories for country, sector, number of employees, turnover, seven-year implied growth, type of output and type of customers are respectively Italy, retail, 50 to 249 employees, €25k or less, approximately no growth, services only, and companies or organisations only

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Source: LE Europe analysis of 2015 Eurobarometer

**Table 63: Measures that would help firms most engage in business abroad (young firms included)**

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
main								
<i>Country</i>								
FR - France	0.00288 (0.0266)	0.716*** (0.0230)	0.0588** (0.0283)	0.196*** (0.0267)	0.132*** (0.0225)	0.442*** (0.0236)	0.171*** (0.0213)	-0.504*** (0.0342)
BE - Belgium	0.0766** (0.0334)	0.428*** (0.0328)	0.404*** (0.0479)	0.192*** (0.0278)	0.184*** (0.0286)	0.330*** (0.0354)	0.324*** (0.0417)	-0.496*** (0.0465)
NE - The Netherlands	-0.158*** (0.0227)	0.249*** (0.0266)	0.161*** (0.0341)	0.0918*** (0.0234)	-0.0665*** (0.0229)	0.169*** (0.0254)	0.459*** (0.0343)	-0.285*** (0.0315)
DE - Germany	-0.0331 (0.0304)	0.282*** (0.0299)	0.132*** (0.0422)	-0.198*** (0.0231)	-0.172*** (0.0245)	0.0462 (0.0324)	0.255*** (0.0425)	-0.0394 (0.0439)
LU - Luxembourg	0.206*** (0.0385)	0.254*** (0.0260)	0.228*** (0.0424)	-0.485*** (0.0316)	0.0246 (0.0296)	0.0828* (0.0457)	0.0621 (0.0412)	-0.0766 (0.0467)
DK - Denmark	0.155*** (0.0375)	0.346*** (0.0437)	0.341*** (0.0533)	-0.410*** (0.0324)	-0.0305 (0.0313)	-0.150*** (0.0430)	0.127** (0.0574)	0.0156 (0.0597)
IE - Ireland	0.434*** (0.0182)	0.443*** (0.0180)	0.252*** (0.0275)	-0.0688*** (0.0252)	0.128*** (0.0245)	0.240*** (0.0248)	-0.107*** (0.0186)	-0.863*** (0.0254)
UK - United Kingdom	0.209 (0.0228)	0.228*** (0.0210)	0.207*** (0.0282)	-0.00701 (0.0322)	0.283*** (0.0221)	0.0559* (0.0305)	0.0825*** (0.0269)	-0.0410 (0.0314)
EL - Greece	0.363*** (0.0169)	0.305*** (0.0247)	-0.298*** (0.0260)	0.243*** (0.0273)	-0.119*** (0.0216)	0.812*** (0.0237)	-0.339*** (0.0229)	-0.906*** (0.0266)
ES - Spain	0.328*** (0.0289)	0.372*** (0.0257)	0.520*** (0.0302)	0.222*** (0.0255)	0.271*** (0.0178)	0.465*** (0.0311)	0.0244 (0.0260)	-0.651*** (0.0328)
PT - Portugal	0.426*** (0.0330)	0.574*** (0.0332)	0.207*** (0.0374)	0.207*** (0.0328)	0.0895*** (0.0302)	0.0746** (0.0369)	0.0409 (0.0329)	-0.495*** (0.0413)
FI - Finland	0.119*** (0.0257)	0.535*** (0.0337)	0.364*** (0.0469)	0.0129 (0.0316)	0.0647** (0.0299)	0.0927** (0.0417)	-0.139*** (0.0398)	-0.485*** (0.0541)
SE - Sweden	-0.166*** (0.0391)	0.248*** (0.0466)	0.228*** (0.0590)	-0.785*** (0.0376)	-0.216*** (0.0337)	-0.440*** (0.0525)	-0.118** (0.0522)	0.235*** (0.0644)
AT - Austria	0.104*** (0.0269)	0.444*** (0.0297)	0.152*** (0.0404)	-0.115*** (0.0299)	-0.0733*** (0.0284)	0.256*** (0.0362)	-0.0330 (0.0476)	-0.236*** (0.0466)
CY - Cyprus (Republic)	0.0556** (0.0246)	0.367*** (0.0289)	-0.265*** (0.0363)	-0.153*** (0.0379)	-0.269*** (0.0309)	0.750*** (0.0303)	-0.601*** (0.0464)	-0.143*** (0.0409)
CZ - Czech Republic	-0.123*** (0.0350)	0.237*** (0.0332)	0.0722* (0.0399)	-0.400*** (0.0328)	-0.0518* (0.0297)	0.201*** (0.0357)	-0.0154 (0.0428)	0.000617 (0.0458)
EE - Estonia	0.376***	0.390***	0.307***	-0.314***	-0.0933***	-0.0298	-0.303***	-0.219***

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
	(0.0251)	(0.0302)	(0.0342)	(0.0328)	(0.0321)	(0.0313)	(0.0369)	(0.0426)
HU - Hungary	0.357***	0.284***	0.109***	-0.150***	0.209***	-0.387***	-0.0422	-0.0155
	(0.0270)	(0.0298)	(0.0326)	(0.0279)	(0.0268)	(0.0298)	(0.0342)	(0.0373)
LV - Latvia	0.229***	0.406***	0.131***	0.0902**	0.162***	0.176***	-0.259***	-0.535***
	(0.0299)	(0.0347)	(0.0409)	(0.0367)	(0.0360)	(0.0364)	(0.0432)	(0.0520)
LT - Lithuania	0.405***	0.524***	0.240***	-0.284***	0.0107	0.112***	-0.389***	-0.568***
	(0.0263)	(0.0315)	(0.0320)	(0.0332)	(0.0309)	(0.0339)	(0.0386)	(0.0437)
MT - Malta	0.680***	0.142***	0.138***	0.349***	-0.144***	0.275***	-0.0972***	-0.301***
	(0.0270)	(0.0248)	(0.0352)	(0.0216)	(0.0304)	(0.0377)	(0.0295)	(0.0419)
PL - Poland	0.304***	0.341***	0.259***	-0.154***	-0.309***	0.691***	-0.164***	-0.674***
	(0.0252)	(0.0204)	(0.0222)	(0.0207)	(0.0199)	(0.0292)	(0.0242)	(0.0275)
SK - Slovakia	-0.179***	0.149***	0.159***	-0.144***	-0.118***	0.0552*	-0.115**	-0.185***
	(0.0364)	(0.0287)	(0.0279)	(0.0257)	(0.0252)	(0.0311)	(0.0456)	(0.0393)
SI - Slovenia	-0.112***	0.190***	0.164***	-0.0199	-0.0942***	0.389***	0.143***	-0.484***
	(0.0272)	(0.0261)	(0.0360)	(0.0274)	(0.0275)	(0.0317)	(0.0429)	(0.0471)
BG - Bulgaria	0.227***	0.337***	0.156***	-0.0142	0.252***	0.453***	-0.353***	-0.579***
	(0.0324)	(0.0327)	(0.0286)	(0.0199)	(0.0260)	(0.0332)	(0.0426)	(0.0382)
RO - Romania	0.452***	0.453***	0.295***	0.0526**	-0.0201	0.261***	0.0323	-0.715***
	(0.0280)	(0.0266)	(0.0256)	(0.0232)	(0.0205)	(0.0347)	(0.0323)	(0.0309)
HR - Croatia	0.0833***	0.667***	0.152***	0.260***	-0.357***	1.047***	-0.0322	-0.658***
	(0.0250)	(0.0220)	(0.0278)	(0.0301)	(0.0274)	(0.0296)	(0.0435)	(0.0429)
<i>Sector</i>								
Manufacturing (NACE category C)	0.0663	0.0573	-0.0942*	-0.00132	-0.0161	0.0723	-0.00569	-0.207***
	(0.0455)	(0.0526)	(0.0551)	(0.0434)	(0.0459)	(0.0508)	(0.0495)	(0.0554)
Services (NACE categories H/I/J/K/L/M/N/Q/R/S)	0.153***	0.0470	-0.00710	-0.0183	0.0577	-0.0347	0.0150	-0.0808
	(0.0514)	(0.0557)	(0.0463)	(0.0359)	(0.0513)	(0.0530)	(0.0672)	(0.0664)
Industry (NACE categories B/D/E/F)	-0.189***	-0.0109	-0.103	-0.00428	0.0305	0.0103	0.144***	0.00997
	(0.0542)	(0.0590)	(0.0690)	(0.0511)	(0.0388)	(0.0445)	(0.0554)	(0.0757)
<i>Number of employees</i>								
None or 1 employee	0.0252	-0.180	-0.113	-0.0314	-0.234***	-0.214**	-0.192	0.211**
	(0.0926)	(0.118)	(0.0938)	(0.0829)	(0.0676)	(0.0843)	(0.130)	(0.102)
2 to 3 employees	0.0234	-0.218***	-0.00561	-0.0913	-0.0805	-0.180**	-0.0685	0.167*
	(0.0737)	(0.0710)	(0.0688)	(0.0715)	(0.0689)	(0.0786)	(0.0893)	(0.0949)
4 to 5 employees	-0.0249	-0.0900	-0.0233	-0.0125	-0.00620	-0.213**	-	0.0546

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
	(0.0826)	(0.0620)	(0.0651)	(0.0659)	(0.0565)	(0.107)	0.000773 (0.0706)	(0.104)
6 to 9 employees	-0.0783 (0.0679)	-0.0922 (0.0593)	-0.0156 (0.0810)	-0.0782 (0.0581)	-0.103* (0.0599)	-0.170** (0.0707)	-0.0747 (0.0742)	0.162* (0.0835)
10 to 29 employees	- 0.000571 (0.0575)	-0.0867 (0.0646)	-0.0108 (0.0550)	-0.0462 (0.0438)	-0.107** (0.0436)	-0.103** (0.0453)	-0.0517 (0.0591)	0.0670 (0.0679)
30 to 49 employees	-0.0692 (0.0486)	0.0163 (0.0586)	-0.0838* (0.0497)	0.0103 (0.0545)	-0.0655 (0.0530)	-0.0412 (0.0659)	-0.107 (0.0729)	-0.00139 (0.0681)
Age in 2015 (years)	- 0.000472 (0.00075 6)	- 0.00202** * (0.00066 5)	- 0.000162 (0.00071 4)	- 0.000617 (0.00073 6)	0.000889* (0.00053 8)	- 0.00156** (0.00072 0)	- 0.00173** (0.00075 5)	0.00251** * (0.00091 9)
<i>Turnover (2014)</i>								
€25k-€50k	0.0794 (0.103)	0.190 (0.135)	-0.198 (0.148)	0.0805 (0.130)	-0.145 (0.114)	0.194 (0.122)	0.182 (0.176)	-0.291** (0.136)
€50k-€100k	-0.0467 (0.103)	0.0845 (0.160)	-0.0341 (0.107)	-0.00401 (0.146)	-0.208** (0.102)	0.148 (0.124)	0.249 (0.190)	-0.138 (0.104)
€100k-€250k	0.0180 (0.0965)	0.214* (0.128)	-0.140 (0.145)	0.0639 (0.123)	-0.0128 (0.125)	0.220* (0.115)	0.0174 (0.123)	-0.122 (0.102)
€250k-€500k	-0.0450 (0.102)	0.110 (0.140)	-0.174 (0.123)	0.0344 (0.113)	-0.143 (0.0947)	0.197** (0.0995)	0.0205 (0.137)	-0.153 (0.102)
€500k-€2M	0.0364 (0.0654)	0.132 (0.133)	-0.110 (0.109)	0.0504 (0.111)	-0.00840 (0.0939)	0.122 (0.108)	-0.00535 (0.131)	-0.199** (0.0986)
€2M-€10M	-0.0292 (0.0662)	0.187 (0.135)	-0.187 (0.120)	-0.0119 (0.105)	0.0411 (0.0965)	0.0932 (0.129)	0.0329 (0.138)	-0.145* (0.0852)
More than €10M	-0.0911 (0.0713)	0.236* (0.138)	-0.111 (0.122)	-0.0882 (0.117)	0.103 (0.109)	0.0142 (0.120)	0.0563 (0.142)	-0.115 (0.107)
<i>Seven-year growth implied by compound annual growth</i>								
Growth - over 25%	0.182*** (0.0375)	-0.00730 (0.0657)	0.0244 (0.0564)	0.0368 (0.0481)	0.0199 (0.0476)	0.147*** (0.0458)	0.0727 (0.0602)	-0.201*** (0.0648)
Growth - 5%-25%	0.145*** (0.0458)	0.0298 (0.0428)	0.0835 (0.0590)	0.0219 (0.0506)	0.0465 (0.0571)	- 0.000921	0.127* (0.0730)	-0.170** (0.0707)

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
						(0.0529)		
Decline - 5%-25%	0.0412 (0.0693)	0.0806 (0.0607)	0.0987 (0.0724)	-0.0740 (0.0511)	0.114** (0.0577)	0.0245 (0.0549)	0.0698 (0.0773)	-0.119 (0.0809)
Decline - over 25%	0.0297 (0.0520)	0.0467 (0.0478)	0.0199 (0.0854)	0.000480 (0.0601)	0.0379 (0.0422)	0.159*** (0.0465)	0.0214 (0.0628)	-0.133 (0.0824)
<i>Type of output</i>								
Goods only	0.183*** (0.0564)	-0.0180 (0.0552)	-0.177*** (0.0481)	0.0473 (0.0512)	0.0351 (0.0610)	0.0995** (0.0473)	-0.0234 (0.0414)	-0.0443 (0.0616)
Goods and services	0.113** (0.0499)	0.00580 (0.0456)	-0.00875 (0.0401)	0.0267 (0.0449)	0.00805 (0.0430)	0.112** (0.0436)	0.0142 (0.0393)	-0.0280 (0.0676)
<i>Type of customers</i>								
Individual consumers only	-0.00264 (0.0467)	-0.163*** (0.0577)	0.0813 (0.0609)	-0.0169 (0.0495)	-0.151*** (0.0540)	0.0867 (0.0602)	-0.0566 (0.0608)	0.0816 (0.0545)
Individual consumers, and companies or other organisations	-0.0241 (0.0264)	0.0166 (0.0354)	0.0644 (0.0514)	0.0327 (0.0377)	0.0386 (0.0283)	0.0113 (0.0391)	0.0626 (0.0406)	-0.0171 (0.0405)
<i>Ownership</i>								
Part of a national group	0.110* (0.0572)	-0.0127 (0.0539)	0.0470 (0.0597)	-0.0642 (0.0608)	0.0810 (0.0512)	-0.139** (0.0547)	-0.0225 (0.0615)	0.00104 (0.0681)
Part of an international group	0.000007 68 (0.0587)	-0.205*** (0.0699)	0.0982* (0.0541)	0.0852* (0.0516)	0.0489 (0.0413)	-0.392*** (0.0522)	0.0265 (0.0556)	0.177*** (0.0503)
<i>Engagement in international business activities</i>								
Exported	0.187*** (0.0424)	0.145*** (0.0476)	0.0700 (0.0569)	0.111*** (0.0430)	0.0617 (0.0499)	0.189*** (0.0431)	0.0164 (0.0567)	-0.319*** (0.0652)
Imported	0.113** (0.0452)	-0.0757 (0.0651)	-0.00786 (0.0580)	0.0617 (0.0566)	0.156*** (0.0436)	0.0555 (0.0607)	-0.0214 (0.0607)	-0.0441 (0.0692)
Worked with a partner based abroad for R&D	0.0782 (0.0497)	0.0993* (0.0557)	0.0346 (0.0536)	0.0369 (0.0488)	0.0552 (0.0509)	0.108* (0.0576)	-0.0801 (0.0735)	-0.145* (0.0807)
Subcontractor for a company based abroad	-0.0550 (0.0522)	0.0529 (0.0433)	0.0445 (0.0507)	0.135*** (0.0440)	0.0579 (0.0462)	0.0503 (0.0540)	0.0370 (0.0467)	-0.0849 (0.0554)

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
Used a subcontractor based abroad	0.145*** (0.0473)	0.0667 (0.0501)	-0.0139 (0.0519)	0.0447 (0.0390)	0.0342 (0.0414)	0.0152 (0.0385)	-0.0141 (0.0722)	-0.220*** (0.0676)
Invested in a company based abroad	0.0655 (0.0675)	-0.00253 (0.0445)	-0.0782 (0.105)	0.175*** (0.0634)	0.0105 (0.0581)	0.112 (0.0725)	0.0510 (0.0723)	-0.192* (0.111)
None	-0.221*** (0.0555)	-0.120* (0.0693)	-0.0345 (0.0690)	-0.108* (0.0574)	0.0795 (0.0655)	-0.111 (0.0749)	-0.0982 (0.0711)	0.375*** (0.0722)
<i>Problems related to international business</i>								
Company's products and/or services are specific to the domestic market	0.00198 (0.0499)	-0.0503 (0.0471)	0.00934 (0.0553)	-0.0350 (0.0599)	-0.107** (0.0536)	0.0767 (0.0509)	0.0608 (0.0430)	0.0414 (0.0601)
Identifying partners abroad is too difficult	0.0639 (0.0477)	0.432*** (0.0472)	0.0366 (0.0514)	-0.176*** (0.0419)	0.218*** (0.0604)	-0.115*** (0.0361)	-0.0956 (0.0654)	-0.190*** (0.0586)
Company does not have specialised staff to deal with exports	-0.0461 (0.0475)	0.0288 (0.0526)	0.198*** (0.0479)	-0.0387 (0.0426)	-0.00421 (0.0546)	0.0340 (0.0410)	0.0945* (0.0499)	-0.0752 (0.0657)
Dealing with foreign taxation is too complicated or too costly	-0.0669 (0.0408)	0.0140 (0.0526)	0.0644 (0.0469)	0.189*** (0.0546)	-0.0418 (0.0491)	-0.0328 (0.0434)	0.236*** (0.0484)	-0.0865 (0.0617)
Company does not know where to find information about the potential market	0.0668 (0.0522)	0.218*** (0.0424)	0.121* (0.0652)	-0.0622 (0.0540)	0.225*** (0.0686)	- 0.000056 8 (0.0419)	-0.0144 (0.0544)	-0.143** (0.0715)
The financial investment is too large	0.0615 (0.0531)	0.0820** (0.0354)	-0.0277 (0.0468)	0.138** (0.0591)	0.0153 (0.0402)	0.338*** (0.0471)	-0.0480 (0.0391)	-0.346*** (0.0657)
Company does not know the rules which have to be	-0.0520 (0.0552)	0.00521 (0.0589)	0.0747 (0.0601)	-0.0410 (0.0448)	0.0416 (0.0518)	-0.0341 (0.0607)	0.170*** (0.0619)	-0.106 (0.0657)

	Opportunities to take part in international trade fairs	Support for finding business partners and networking	Advice or training	Tax incentives	Information on market opportunities	Grants, subsidies or low interest loans	Information on rules and regulations	None
followed								
Delivery costs are too high	0.0547 (0.0484)	-0.0137 (0.0556)	-0.118*** (0.0401)	0.0956** (0.0478)	0.0364 (0.0490)	0.0784* (0.0466)	-0.0416 (0.0418)	-0.0771 (0.0482)
The administrative procedures are too complicated	0.0199 (0.0403)	-0.0598 (0.0417)	0.0369 (0.0474)	0.156*** (0.0503)	-0.0924** (0.0441)	0.0480 (0.0471)	0.214*** (0.0541)	-0.183*** (0.0595)
Resolving cross-border complaints and disputes is too expensive	0.0435 (0.0464)	0.0720** (0.0364)	0.110* (0.0613)	0.0722** (0.0365)	0.0404 (0.0360)	- 0.000586 (0.0533)	0.0761 (0.0483)	-0.136** (0.0637)
Company lacks the language skills to deal with foreign countries	-0.132* (0.0674)	-0.0391 (0.0396)	0.165** (0.0766)	-0.0643 (0.0463)	0.0264 (0.0622)	-0.00784 (0.0792)	-0.0435 (0.0599)	0.0536 (0.0678)
Payments from other countries are not secure enough	-0.0240 (0.0558)	-0.0994* (0.0521)	0.0284 (0.0512)	0.0732 (0.0455)	-0.00328 (0.0500)	0.0545 (0.0355)	-0.0303 (0.0402)	0.0167 (0.0628)
Constant	-1.164*** (0.0921)	-1.024*** (0.182)	-1.132*** (0.149)	-0.619*** (0.112)	-0.977*** (0.116)	-0.920*** (0.135)	-1.031*** (0.182)	-0.120 (0.186)
Observations	7212	7212	7212	7212	7212	7212	7212	7212
Pseudo R-squared	0.0670	0.0524	0.0368	0.0530	0.0370	0.0914	0.0486	0.164

Standard errors in parentheses

The baseline categories for country, sector, number of employees, turnover, seven-year implied growth, type of output, type of customers, and ownership are respectively Italy, retail, 50 to 249 employees, €25k or less, approximately no growth, services only, companies or organisations only, and independent firms

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Source: LE Europe analysis of 2015 Eurobarometer

## ANNEX 5 SURVEY OF SMES, SME ASSOCIATIONS AND SME TRADE PROMOTION AGENCIES

**Table 64: Survey of SMEs, SME associations and SME trade promotion agencies**

Country	Type of respondent	Most important programmes	Description
Belgium	SME Association	Flanders Investment and trade services	Government agency that offers tailor- made export support for Flemish companies. Missions, information sessions, seminars, matchmaking... All exporting SME's are targeted.
		Masterclass export management - UNIZO	Ten practical knowledge sessions concerning all aspects of export (customs, taxation, documents, logistics...) Both experienced and non-experienced SME and starters.
		Young executive stay programme- Belgian-Japanese chamber of commerce	Supporting SMEs with development of Japanese market.
		UNIZO International - Masterclass China business	9 sessions of practical knowledge to support SMEs with their business in China. Export/import/sales/marketing/taxation/..... SME's wanting or doing business in China are targeted.
		Erasmus program for young entrepreneurs	Coaching of inexperienced SMEs for the development of interesting business ideas/concepts
Belgium	SME Trade Promotion Agency	Credendo	Risk insurance for export All SMEs
		Economical missions : King, Princess, Ministers	Some enterprises go abroad in the framework of a global program, with a prestigious country ambassador who opens the doors All enterprises
Belgium	SME Trade Promotion Agency	Coaching and advice services for high growth companies	Flanders Innovation & Entrepreneurship has appointed five organisations to deliver coaching and advice services to fast growing companies. The services include advice, mentoring on internationalisation, but also investor readiness, pitching, etc. These programmes target scale ups discovering new markets.
		SME growth subsidies	This is a state aid programme giving an aid of 50.000 €/50% to help the company when going abroad. The subsidy can be used for consultancy or attracting new staff specialized in exporting to specific markets. The programme targets SME facing new challenges i.e. exporting for the first time to specific markets
		Cluster policy	The cluster policy of the Flemish government aims to develop specific innovative clusters and help them, among others, to internationalise. This programme targets all kinds of SME's
		FIT (Flanders Investment and Trade)	Flanders Investment and Trade is a government agency helping companies exporting to new markets. The government agency gives advice, subsidies and information and has a foreign network of staff helping companies to enter into new markets. Targets all kinds of SMEs exporting

Country	Type of respondent	Most important programmes	Description
Bulgaria	SME Trade Promotion Agency	Operational Programme „Innovations and Competitiveness” 2014-2020	<p>The OPIC 2014-2020 strategy, as a part of the implementation of the EU structural and investment funds (ESIF) in Bulgaria, according to the Partnership Agreement 2014-2020, is closely related to the objectives for Growth and Jobs and Bulgaria's contribution to achieving the three complementary types of growth according to the "Europe 2020":</p> <p>Smart growth: developing an economy based on knowledge and innovations;</p> <p>Sustainable growth: promoting a greener and more competitive economy and a more efficient use of resources;</p> <p>Inclusive growth: fostering a high-employment economy leading to social and territorial cohesion.</p> <p>OPIC tackles the low degree of internationalisation – as per data for 2012, only 3.84% of the Bulgarian SMEs import from outside the EU, while only 1.76% export outside the EU. 95% of the SMEs are characterised with a low degree of internationalisation and the country ranks 27th in the EU.</p> <p>OPIC 2014-2020 will support economic activities with high and medium-high-tech level of development which have the greatest potential for increasing export, improvement of export advantages of the Bulgarian enterprises on the international market and more active involvement of the Bulgarian SMEs in value chain on the international markets.</p>
Croatia	SME Association	"Internationalisation of SMEs with support of HOK"	Information, seminars, B2B meetings, joint fair exhibition, business delegations Aimed to all trades and crafts (already exporting or have plan to export)
		Internationalisation for SMEs	Ministry of Economy financial support for SMEs to exhibit at fairs Aimed to all trades and crafts (already exporting or have plan to export)
		Supporting Annual Fair's plan	HOK's financial support for international (foreign and regional) fairs organisation Aimed to regional chambers to organise fairs for crafts promotion
		Supporting B2B meetings	HOK's advisory and logistic service for crafts who participate in B2B events Aimed to all trades and crafts (already exporting or have plan to export)
		Seminars in HOK about business conditions for doing business in EEA	Information and practical examples of legal requirements for doing business in Austria, Germany and Switzerland Aimed to all trades and crafts (already exporting or have plan to export)
Cyprus	SME Trade Promotion Agency	EEN programme	Business support centre under the EEN programme which offers the various internationalisation services of the EEN to the SMEs in Cyprus. All SMEs are targeted.
		Training programmes	Training programmes to Chamber members among which are programmes targeted to the internationalisation of SMEs. All SMEs are targeted.
		Missions abroad including B2B meetings between the Cypriot SMEs that participate and their overseas counterparts	Chamber organises business missions abroad including b2b meetings between the Cypriot SMEs that participate and their overseas counterparts. All SMEs are targeted.
		Projects under the Interreg programmes	Chamber participates in a number of projects under a variety of EU programmes. Among these are projects under the Interreg programmes where a major component deals with the internationalisation of SMEs. All SMEs are targeted but particularly those with no export experience.

Country	Type of respondent	Most important programmes	Description
		Activities of bi-lateral business associations	35 bi-lateral business associations operate under the auspices of our chamber and their main mission is to promote and facilitate the business cooperation between their member enterprises and the enterprises of the specific country they represent. All SMEs are targeted.
Czech Republic	SME Trade Promotion Agency	Operational Programme Innovation and Competitiveness	Priority axis 2 - Enhancing the internationalisation of small and medium-sized enterprises Services for SMEs focused on international competitiveness facilitating the access to foreign markets (participation in foreign exhibitions and fairs, including organisation of seminars/events on specific issues related to international competitiveness, such as the legal aspects of a specific territory etc.). Consulting services provided by experts with a knowledge of the international environment (with a specific territorial expertise) and consulting services for strategic management and innovation management (mentoring, coaching, foresight, etc.). Services aimed to promote internationalisation by involving SMEs in international research cooperation (Horizon 2020).
Estonia	SME Trade Promotion Agency	Enterprise Europe Network	Helping SMEs to find reliable partners and solving questions about market regulations.
		Export Academy	Putting export managers from different SMEs to network and giving them exercises to solve together.
		Procurement search	Helping SMEs to find suitable public procurements from abroad (government or municipal) and monitoring the tenders published.
		Legal advice for exporting companies	Helping SMEs to understand the legal requirements. Also contract templates were made available for more use cases.
Finland	SME Association	Business Finland (including Finpro, Tekes)	The foremost goal of the New Business Finland is to offer a smooth, joint service path for our customers in Finland and abroad when you need innovation funding, advise in growing internationally, investing in Finland or bringing visitors to Finland. The target group of Business Finland is companies (including SMEs but also large companies) who are looking for new market opportunities.
		Finnvera - loan for internationalization	The Internationalization Loan is intended for financing the business operations of a Finnish SME abroad.
		Regional support services from various organisations	Federation of Finnish Enterprises (regional branches) Chambers of commerce Regional development organisations
France	SME	CCI international	Information about other markets Targeting: New to export SMEs
		SER (Syndicat des énergies renouvelables)	Seminary in other countries but not specific to SME Targeting: New to export SMEs
France	SME Association	In each French region, there are opportunities of funding to help companies exporting	Depending on the region, this funding might apply to prospecting or follow-up missions, or international fairs. The set criteria might vary from one region to another.
		«Business France»	The French organisation that supports the internationalisation of French economy, «Business France», does no longer offer financing but rather offers labels and as such it is possible to take part in collective activities or having discounts on participating in fairs (for instance, on French pavilions).

Country	Type of respondent	Most important programmes	Description
		BPI France (Public bank for investment)	BPI France (Public Bank for Investment) offers export loans but no direct financing. It also provides with assistance schemes (prospecting, exchange rates, risks depending on the country).
		Some chambers of trade and crafts	Some chambers of trade and crafts fund activities, e.g. support of craftspeople on prospective and follow-up missions as well as fairs.
France	SME Trade Promotion Agency	Pack Objectifs	<p>Pack Objectifs is a professional software which was developed by the CCI from the Centre-Val de Loire region (CCI INTERNATIONAL Centre).</p> <p>It is used by the international trade development experts when consulting with companies wanting to develop their business abroad.</p> <p>Pack Objectifs is an easy to use software. Through a series of questions, the company gives out all the necessary information that will help the CCI staff member to design the international development strategy for the company.</p> <p>Pack Objectifs is designed in 4 parts:</p> <p>Export diagnosis : a full check-up of the company's potential to export</p> <p>Pack Objectifs Marché (to help identify the market that the company will target)</p> <p>Pack Objectifs Financements (to help identify all the possible financial solutions that the company is entitled to (local/ national/ European/ international)</p> <p>Pack Objectifs Implantation (to assist the company establish a business activity abroad)</p> <p>These 4 parts are separate but can be used all together.</p> <p>Pack Objectifs is a very useful tool. It allows the trade advisors to deliver first grade advice to company. The documents that are produced through the software are also very useful for the company when dealing with its associates / banks etc.</p> <p>It very designed to SME who often have clear international development Strategies.</p>
		ICD (International Connecting Days)	<p>This is a large scale event, organised in the Pays de la Loire region by the Pays de la Loire CCI (CCI INTERNATIONAL Pays de la Loire region in Nantes).</p> <p>Local companies are invited the CCI to attend business conferences, meet international experts and discuss in detail their potential international development.</p> <p>The event attracts close to 1000 participants and is ran in several cities, over a one week period.</p> <p>The event also includes B-to-B meetings and a mini expo when all sponsors and Business Organisations are able to present their services.</p> <p>ICD attracts a wide media coverage which helps promote to a wide audience the benefits of international trade</p>
France	SME Trade Promotion Agency	"Bpifrance Export" label	<p>Bpifrance Export offers exporting companies personalized and long-term international support, encouraged by the presence of Business France advisors and Coface developers in the Bpifrance network.</p> <p>The financing offer was also the subject of a simplification of the offer with the objective of facilitating access by SMEs and ETIs to export support tools ; an improvement in export support products with the aim of offering improved export support products to SME-ETIs; a strengthening of distribution around the "bpifrance export" label with the creation of a joint catalogue between COFACE, Ubifrance and Bpifrance Export and the deployment of Ubifrance international business managers within the Bpifrance Export regional divisions in order to ensure the long-term support of 1,000 ETIs and SMEs for growth on an international development plan.</p>

Country	Type of respondent	Most important programmes	Description
		"French Tech Hubs"	French Tech communities of entrepreneurs and investors based abroad in major international metropolises that represent major development territories for French Tech start-ups. A French Tech hub is an "entrepreneurial ecosystem" structured to accelerate the development of French start-ups wishing to set up and strengthen the attractiveness of French Tech internationally among entrepreneurs, investors or local media. The French Tech hubs are labelled by the State on the basis of a project which meets a set of specifications and which must build on an existing one to be reinforced and structured.
		"Business France"	National public operator at the service of the internationalisation of the French economy. Business France values and promotes the attractiveness of France's offer, its companies and its territories. Whether it is a question of exports, investment or international partnerships, Business France accompanies French and international companies from the beginning until the completion of their projects, in a clearly efficiency and results oriented approach. Thanks to its network and its dynamic team of 1500 professionals in the field, in France and in 70 countries, Business France intervenes from the operational set-up of actions to their long-term follow-up.
		Call for projects international technological partnership of SMEs competitiveness clusters (pôles de compétitivité)	The call concerns two partnership axes: cooperation for access to European R&D programmes; bilateral technological cooperation with partners from non-European countries. This call for proposals aims to select "international technological partnership programmes" (ITPPs) proposed by organisations which, on these two partnership axes, will demonstrate a capacity to develop collaborative innovation projects involving SMEs, competitiveness clusters with foreign partners (training centres, companies, research centres, etc.); these projects may result from international cooperation actions carried out by the competitiveness clusters.
		International Business Volunteering (VIE)	It allows companies to recruit young talents to enable them to open new markets. It is a "win win win" formula. It is a winner for the company, which can hire a motivated employee on advantageous terms to conquer a market (75% of commercial VIEs conclude a business contract within the first year). It is a winner for the young person who benefits from a robust international experience and increases his value on the job market (97% of hires at the end of the VIE). Today, 30% of the international executives of large companies come from the VIE. There are currently more than 9,000 VIEs deployed in 130 countries and more than 60,000 have gone on mission since its creation in 2001.
Greece	SME Association	"We make businesses abroad" - Ministry of Economy and Development	This programme focuses on financing the participation of enterprises to international commercial exhibitions and other means of promoting products. It is targeted towards very small ("micro"), small and medium sized manufacturing enterprises (all kind of SMEs, that is) which either already export, or are willing to export soon in the future.
		"Enterprises Extroversion and Competitiveness"	It refers to small, medium and large enterprises and intends to upgrade the production capabilities of Greek enterprises towards higher added value goods and services. It aims at SMEs and large enterprises, which have at least two years in the market, from all sectors of the economy.
		Trade Finance Facility (TFF) by the European Investment Bank	400 mil. Euros for the Greek small and medium enterprises in order to boost their exports and secure their imports flows. The EIB will provide guarantees for letters of credit, financial guarantees and other commodity financing products issued by Greek banks. The EIB guarantee will provide customers of Greek businesses abroad with the assurance that the financial obligations set out in these commercial finance instruments will be met. Small

Country	Type of respondent	Most important programmes	Description
			and medium-sized enterprises, as well as mid-caps, can receive aid for their trade and export transactions for a maximum of three years.
		"Creation of Exported Product & Export Procedures" by Enterprise Greece	Seminars held during 2017 in cooperation with local chambers and liaisons in several cities in the country, aiming at informing the exporters concerned in detail of all the actions and conditions that determine a successful export effort with topics such as: Creation and registration of trademarks, Creation of an exportable product (in terms of marketing), i.e. design, packaging (container, label), certifications, Product labelling - barcode, etc., Creation of communication tools, Selecting foreign markets and adapting products to them, Customer acquisition methodology in target markets, Actions needed to find customers, Trade agreement, what it contains (delivery methods, payment methods, etc.)
Hungary	SME Trade Promotion Agency	Economic Development and Innovation Operational Programme (EDIOP, HUN: GINOP)-1.1.2-17	This project aims at increasing the currently low entrepreneurial activity and prolonging the business life of SMEs by gaining entrepreneurial knowledge, information via providing access to entrepreneurial, financial mentoring, and Industry 4.0 knowledge. The project has a specific measure targeting SMEs which have not exported before and SMEs which already export.
		Economic Development and Innovation Operational Programme (EDIOP, HUN: GINOP)-1.3.1-15	Supporting national innovative SMEs to enter the international market This measure helps SME's in manufacturing industry to enter into the single market and SME's internationalisation. The fund promotes SME's to take part in European and international exhibitions and fairs. They can demand support for marketing development also. With this measure SMEs can make new businesses, get new partners and in long term they can improve their export capacity and competitiveness on the European and international markets as well. Targeted SMEs: SMEs which have not exported before.
		Economic Development and Innovation Operational Programme (EDIOP, HUN: GINOP)-1.3.2-15	Support for professional cluster organizations This fund helps clusters to improve their available services and international cooperation. The fund helps clusters to take part in international exhibitions and fairs. They can demand support for marketing development and participation in international fairs. With this measure clusters can get new partners and they can increase their competitiveness on international markets. Targeted groups: Cluster management SMEs
Ireland	SME	International Sales	International Sales
		International Marketing	Identifying Markets
Ireland	SME Association	Export Assistance by Enterprise Ireland	This program checks if SMEs are ready to export, have done their research, have the capability to export, and have an executable plan. It is aimed at high performance SMEs who want to export
		Export grant by Local Enterprise offices (LEOs)	Export Grants will part-fund the costs that can be incurred in investigating and researching export markets, e.g. exhibiting at Trade Fairs, preparing marketing material and developing websites specifically targeting overseas markets. Grant Terms: Grant Covers 50% of eligible costs (net of vat) to a max of €2,500. Applications must be made prior to any expenditure being incurred Payments will be made to approved projects on receipt of proof of payment of all qualifying and approved expenses. Projects eligible for support include:

Country	Type of respondent	Most important programmes	Description
			enterprises not employing more than 10 people; enterprises located within the geographic location of the Local Enterprise Office enterprises operating in the commercial sphere
Ireland	SME Trade Promotion Agency	International Selling Programme	The Programme comprises eight two-day modules delivered in the following format: Each module is accompanied by practical, company-specific assignments and throughout the programme, you will develop an international sales plan to execute within a chosen export market. Participants will also be assigned a sales practitioner to work with you as a Programme business adviser, helping you to implement Programme learnings and achieve an immediate impact on your sales ability. The International Selling Programme is for manufacturing and internationally traded services companies currently exporting or with advanced plans to do so. The proven tools you will master are relevant to any growth orientated company.
		Leadership 4 Growth Programme	The Programme comprises three residential modules which cover: Dynamic Business Strategy High Performance Leadership Sustainable Growth Leadership 4 Growth will support the CEO to: Identify their own personal leadership potential and capability through development of leadership style, ambition and confidence Strategically analyse and evaluate their own business to make strategic choices for rapid growth Create a Strategic Growth Action Plan and robust strategic management / deployment framework for rapid growth and sustainability. Identify and grow personal leadership with C-Suite and Board to grow a strong effective team to execute and implement step changes arising from the Growth Plan Understand the behaviours required to operate a culture of coaching / learning for continuous transformation and employee engagement. Each participant will be assigned a Business Adviser Coach who will encourage, challenge and assist them in implementing strategic frameworks and applying core leadership concepts to their companies. Each module is followed by a one day of insights involving the participant's senior team. This day aims to effect sustainable change within participating companies. Enterprise Ireland's world class Leadership 4 Growth Programme aims to enhance the leadership & strategic capability, ambition and confidence of CEO's of SME's to lead scalable, innovative companies capable of growing exports and jobs in Ireland
		Market Discovery Fund	The aim of the Market Discovery Fund is to incentivise companies to research viable and sustainable market entry strategies in new geographic markets. It provides support towards internal and external costs incurred when researching new markets for products and services. Support can be provided over an 18 month period from project start date to project end date. Support for Market Discovery Fund applies when eligible companies are either looking at a new geographic market for an existing product/service or an existing geographic market for a new product/service. A company can apply for support for Market Discovery Fund more than once provided each application considers a new market for an existing product or existing market for a new product.

Country	Type of respondent	Most important programmes	Description
			<p>You are eligible to apply for a Market Discovery Fund if you are a client of Enterprise Ireland and meet the following criteria:</p> <p>Manufacturing or eligible internationally traded services companies.</p> <p>Have demonstrated the capacity to internationalise.</p> <p>High Potential Start Up's engaged in eligible activities. High Potential Start Up's must meet the following criteria:</p> <p>Have a minimum of 5 full-time employees (based in Ireland) at the time of application</p> <p>Have been approved an EI equity investment</p> <p>Have drawn down the equity investment at least 6 months prior to application for the Market Discovery Grant</p> <p>Small and Medium Established sized companies engaged in eligible activities.</p> <p>With the exception of High Potential Start Ups, all companies must be trading for more than 5 years, minimum of 10 employees in the state, with sustainable annual revenues of at least €500K and are EBITDA positive in the last 9 months.</p> <p>Not have raised external finance in the form of equity in the previous 6 months.</p> <p>Food companies are not currently eligible for the Market Discovery Fund.</p>
		Strategic Marketing Review	<p>Grant support is now available under this offer to support the costs of undertaking a Strategic Marketing Review. This review is designed to bring structure and focus to a company's marketing operations through the use of a diagnostic framework tool. This framework has been developed by Enterprise Ireland from over 60 years of collective marketplace experience and is based on proven best practice.</p> <p>Established SME's that have successfully traded internationally but need to further develop their strategic marketing capability in a more structured way, will benefit from undertaking Enterprise Ireland's Strategic Marketing Review.</p> <p>A Strategic Marketing Review assignment is delivered by specialist sales and marketing consultants in conjunction with Development Advisers and in close collaboration with Enterprise Ireland Marketing Advisers from our international office network. The assignment involves 7 consultancy days which includes 4 client meetings over the course of 6-8 months.</p> <p>Companies that undertake this Review will have significantly greater clarity on specific and achievable actions which are required to grow and sustain their international development into the future.</p> <p>Ideally the Strategic Marketing Review should be undertaken by established companies that have experience in trading internationally and who are interested in reviewing and developing their market development strategy. (First time exporters should investigate Enterprise Ireland's Prepare to Export Scorecard)</p>
		Excel at Export Selling Workshop Series	<p>Enterprise Ireland has developed a series of workshops aimed at rapidly embedding the proven tools of best international selling practice into Irish companies across all industry sectors who are looking to upskill for export growth and who want access to selling skills development in a readily accessible and user-friendly format.</p> <p>Open to both new and experienced exporters.</p>
Italy	SME Association	Italian Trade Agency (ITA)	<p>Activities carried by the Italian Trade Agency (ITA) - (incoming and outgoing mission, participation to exhibitions, trainings, etc.)</p> <p>Activities promoted by ITA are useful to SMEs which have not exported</p>

Country	Type of respondent	Most important programmes	Description
		Temporary export manager programme	Promoted by the Ministry of Economic development to support SME which wants to invest in hiring an export manager
		Instruments promoted by SACE and SIMEST	
		cooperation between associations similar to Confapi which operate in different countries	The collaboration between associations are useful to organize b2b meetings, and to get in touch with foreign opportunities
		EU programmes which support internationalization (e.g. MOBILISE SME)	Confapi participated to MOBILISE SME, financed by the programme EASI. The project aimed to analyse the opportunities for cross border mobility of employees of Micro, Small, and Medium Enterprises (MSMEs) in the EU and its related benefits. One of the results was the possibility to create contacts in other countries or find partners
Italy	SME Trade Promotion Agency	Export Sud	It is a programme that support the companies of the south of Italy on foreign market giving them also training, assistance and support at promotional level. The project involves SMEs that have not exported before and partially SMEs that already export
	SME Trade Promotion Agency	Temporary export managers	The export managers are financed by the Italia government to support the SMEs on foreign market and giving them a chance to export or increase the export.
Latvia	SME Association	Cluster programmes	Large companies have no access to EU funding, but SMEs are 99.7%, so too many need support, but support is small an insufficient. Necessity to have priorities and strategic approach on national level.
		LIAA export promotion programmes	Large companies have no access to EU funding, but SMEs are 99.7%, so too many need support, but support is small an insufficient. Necessity to have priorities and strategic approach on national level.
		EU level project calls	Large companies have no access to EU funding, but SMEs are 99.7%, so too many need support, but support is small an insufficient. Necessity to have priorities and strategic approach on national level.
		Bilateral projects	Large companies have no access to EU funding, but SMEs are 99.7%, so too many need support, but support is small an insufficient. Necessity to have priorities and strategic approach on national level.
Latvia	SME Trade Promotion Agency	Interreg Central Baltic programme	<p>Name of project: Creation of export support cooperation network to China in Latvia – Estonia – Finland cross – border region (LEF network to China) (01.04.2018.-31.03.2021)</p> <p>Brief description of programme:</p> <p>China – country of opportunities and steadily growing demand of wood products, especially with added value. Experts have found out that sector’s export from Finland to China in 2015 has grown around 50%, comparing with 2014. This shows green light to Estonian and Latvian companies, that wood product export to China can be real. A common characteristic of all three countries is a competitive wood sector and also distance to China. It’s clear, that active sales are with raw materials in sector and meanwhile added value product demand is growing as well. Common challenge is to develop wood interior design industry product export to China by developing joint corporation network and activities. Under wood interior design industry are: wood building materials, furniture, wooden doors and windows, wooden houses – all wood products with added value.</p> <p>Knowledge transfer, market research, visiting and participating with booth in expo, contact matchmaking, trade mission are a first-class opportunities to develop export by LEF network to China. Partners from Latvia, Estonia and Finland have contacts both in China and industry companies and have experience in export organization, which will ensure quality. SMEs will have the opportunity to be involved directly in main project activities in</p>

Country	Type of respondent	Most important programmes	Description
			<p>China. Joint Corporation in creating support network to China will give: practical and concrete results. Practical are trainings, market research - with long term impact. Concrete - 19 companies from all partner countries in 3 export activities in China will be developing real exports through contact matchmaking events, expo visits, expo joint- booth and trade mission. Main beneficiaries of project will be SMEs - wood interior design entrepreneurs.</p> <p>Original joint corporation develops cluster: business support organization, university, companies are cluster between partners and all partners are umbrella organizations in the sector in own country, giving huge experience and strong competence.</p> <p>What type of SME the programme is targeted at i.e. SMEs which have not exported before OR SMEs which already export? Experienced SMEs.</p>
		Interreg Estonia – Latvia programme	<p>Integrated Business Development North – Latvia and South – Estonia (DELBI 2 1.04.2017.-31.03.2020 and DELBI 01.01.2012.-31.03.2014.)</p> <p>Cross border cooperation between Latvian and Estonia faces quite a lot of challenges, but one of main is that Estonia more cooperates with Scandinavia than with Latvia. South-Estonia region has a border with Latvia and the program's direct target are Latvian companies, also therefore 2 partners from Estonia are located in Tartu. The main objective of the project is to increase the number of Estonian and Latvian SMEs doing business across border by organizing relevant, common business events in programme area.</p> <p>Common specific objectives:</p> <p>To increase cross-border cooperation between food, wood and tourism SMEs and start-ups, these are defined project target sectors, based on statistics, competences and previous experience.</p> <p>Intensifying the cooperation between Estonian and Latvian business support organizations by common project as well involving other stakeholders.</p> <p>Increase SMEs competitiveness by increasing export / import knowledge and understanding about EST – LAT market opportunities between Estonian and Latvian SMEs.</p> <p>The programme is targeted at SMEs which have not exported before and which already export?</p>
		Interreg Central Baltic programme	<p>Name of project: Exports of CB economic strength maritime cluster to Namibia's market (SME Aisle) (01.03.2018.-31.08.2021.)</p> <p>CB region companies in Finland, Estonia and Latvia have strong know how and competence in maritime cluster (maritime, shipbuilding, port development, and logistics). However, for export activities to fast growing Southern African markets, many CB companies are too small alone and expertise is very limited or scattered. On the other hand, the customers in developing countries such as Namibia in Southern Africa, expect concept solutions for maritime products and services. Namibia's maritime activities, as a part of the mega corridor in Southern Africa, are expanding quickly. There are vast export possibilities for an adaptable and scalable product and services concept from the maritime and shipbuilding clusters of CB region companies. SMExports' (shipbuilding, maritime, export for small and medium sized enterprises) main objective is to achieve sales to CB's maritime and shipbuilding SME's with the joint concept into Namibia. All SMExports partners are operating actively with the maritime cluster to promote export from Finland, Estonia and Latvia. SAMK has deep expertise and solid connections in Namibia's maritime and shipbuilding business environment. The activities are market analysis and feasibility study, development and adaptation of concept products and services, capacity building of 20</p>

Country	Type of respondent	Most important programmes	Description
		<p>ERAF</p>	<p>selected pilot companies from Finland, Estonia and Latvia. The customers of CB maritime cluster in Namibia are public instances, public-private partnerships and private companies. Targets experienced SMEs.</p> <p>Name of project: Latvian Export Cluster (01.01.2017.-31.12.2020.) Latvian Export Cluster (LEC) is an initiative by the Latvian Chamber of Commerce and Industry (LCCI) aimed at improving the competitiveness of economically active Latvian companies in foreign markets. The objective is to encourage cooperation among businesses and research and knowledge transfer organisations in the field of export, increasing the competitiveness of businesses and the proportion of high added-value products and services in export, as well as innovation and development of new products. The mission of the Latvian Export Cluster is to improve export and quality support tools in collaboration with other organisations to promote export capacities, sustainability and competitiveness of small and medium enterprises.</p> <p>Vision The Latvian Export Cluster is a key pillar for Latvian companies for entry into foreign markets and achievement of a higher level of quality management.</p> <p>Quality: Latvian companies are highly competitive in international markets thanks to commitment, precision and knowledge of production processes and marketing.</p> <p>Export: Latvian companies are knowledgeable, competitive and compliant with the international market requirements.</p> <p>Reputation: Latvian companies are known for their great reputation in the markets of the European Union and third countries.</p> <p>Product: Latvian products are of a high quality, competitive and innovative - both in terms of content and packaging.</p> <p>Productivity: Employees of Latvian companies are efficient, skilled, motivated, qualified and productive to achieve increased added value per employee.</p> <p>Key areas of activity: Increasing competitiveness in international markets with a knowledge-based approach to export planning and strategy development and through justified and well-considered international marketing events; Quality management solutions both in relation to the finished goods and the processes within the company at various stages of economic activity; Improving the productivity to ensure higher competitiveness of the product/service; Development of export companies in the field of Smart Specialisation that will provide products for export markets with higher added value. The program targets SMEs which have not exported before and SMEs which already export</p>
Lithuania	SME Association	Enterprise Europe Network	<p>Enterprise Europe Network - the largest support network in the world for SMEs, which have international ambitions.</p> <p>The main services: Partner search Information and consultations Access to innovations</p>

Country	Type of respondent	Most important programmes	Description
			Target group: all SMEs
		EU funded programme "New opportunities" (Naujos galimybės)	Supporting the participation in international trade fairs and business missions. Target group: SMEs (the average of turnover from production should be more than 50 %).
		EU funding programme "InnoConect"	Supporting the participation in Enterprise Europe Network international brokerage events. Target group: SMEs searching for technology transfer partners.
		Export leaders programme "Wings" (Sparnai)	Target: persons (24)
Lithuania	SME Trade Promotion Agency	Export diagnostics	"Enterprise Lithuania" export department employees visit companies and evaluate their ability to export. During the visit to the company we have a meeting with the person responsible for export or sales at the company. We go through certain standardized questions and evaluate ability of the company to export. We tell company what they are doing well and what should be improved in order to be prepared to export or to improve their image to foreign companies. This programme is targeted at companies who want to export and to those who are already exporting.
		"Development direction - export" and "Export club"	Events targeted at particular business sector or at particular foreign market. During the events Commerce Attaché,
		"Sparnai" ("Wings")	The Wings program aims at providing prospective graduates from Lithuanian and foreign higher education institutions with knowledge and experience in business enterprises. There are 24 professionally selected young export leaders in the program. They apply the principle of rotation and currently work in over 40 small and medium-sized enterprises in Lithuania. Participants get acquainted with the best practices in business and its promotion, export development management, marketing, etc., and are guided by professional mentors.
Luxembourg	SME Association	Credit insurance by Office du Ducroire	Office du Ducroire is a public institution, insuring the exporter's risks linked to international business transactions and investments abroad. The insurance products of the Ducroire principally apply to trade markets outside the OECD area. The credits insured by the Ducroire are generally backed by the Luxembourg State. Only the risks linked to short-term credits for debtors in OECD countries are covered without any State guarantee. If the intensity and duration of the risks exceed its insurance capacities, the Ducroire may intervene for the account of the State. The Ducroire offers tailor-made solutions to all kind of SMEs and multinationals, financially sane and with sufficient own capital, are eligible for support. www.odl.lu
		Financial support by COPEL	Based on a cooperation agreement between the Office du Ducroire and the Luxembourg Government, the Committee for the Promotion of Luxembourg Exports (COPEL « Comité pour la Promotion des Exportations Luxembourgeoises) is assigned to promote Luxembourg exports of goods and services throughout a partial participation in promotion expenses, exhibition and export training expenses This financial support complies with European State aid regulations, in particular with the Commission Regulation called de minimis (with the actual ceiling of 200,000 EUR over a 3-year period). All kind of Luxembourgish companies targeted and eligible (prior and post export), except companies of the financial, insurance or real estate sector. www.odl.lu

Country	Type of respondent	Most important programmes	Description
		EXPORT AID by the Luxembourgish state	Financial aid for first-time participation in a trade fair or exhibition, covering additional costs of renting, setting up and managing their stand. The costs must relate to the rental, set up and management of an exhibition stand. Aid is provided in the form of a capital grant or interest relief and can amount to a maximum of 50 % of the expenses incurred, subject to a limit of EUR 100,000. This aid is intended for small and medium-sized businesses in a craft or commercial sector and holding a business permit granted by the General Directorate for SMEs and Entrepreneurship (Direction générale PME et Entrepreneuriat).
Luxembourg	SME Trade Promotion Agency	The House of Entrepreneurship - One-Stop Shop	One-stop shop to facilitate The House of Entrepreneurship is a first-class partner for anything to do with exports or traceability and securing of trade transactions. For example it can take care of: issue of certificates of origin; legalisation of documents; issue of LuxTrust electronic certificates; issue of ATA carnets for temporary exports. All types of companies
Malta	SME Trade Promotion Agency	Enterprise Europe Network - Work Package 2	Assisting SMEs to do cross-border activity and find partnering opportunities. The SMEs have to be internationalisation-ready
Netherlands	SME	DHK program	Program offered by RVO in the Netherlands to financially support feasibility studies for export to foreign developing countries. We have used this program for a feasibility study for South Africa Targeting: SMEs which already export
		DHI program	Program offered by RVO in the Netherlands to financially support feasibility studies for export to foreign countries. We have used this program for a feasibility study for Thailand and Japan. Targeting: SMEs which already export
Poland	SME Association	The large polish company may support the SMEs in the internationalisation of their activity	In Poland foreign expansion is driven above all by large companies - often belonging to global capital groups. The large polish company may support the SMEs in the internationalisation of their activity.
		Smart Growth Operational Programme	Government has decided that the promotional activities under the Smart Growth Operational Programme would cover the following sectors (important for handicrafts): furniture, yachts and boats, polish food and fashion, automotive parts.
Romania	SME Trade Promotion Agency	External Trade Promotion Program	Companies are helped to participate to international fairs and expos inside a country pavilion/ stand. Most of the costs are supported from public funds. All SMEs have access potentially.
		Internationalisation of Romanian economic operators	Companies are helped to participate to international fairs and expos inside a country pavilion/ stand. Most of the costs are supported from public funds. All SMEs have access potentially.

Country	Type of respondent	Most important programmes	Description
		Swiss - Romanian Program for reducing economic and social disparities between enlarged EU countries	Development of regional export centres, promotions of SMEs on foreign markets SMEs from wood/ furniture and bio-agriculture sectors, exporters or potential exporters.
Slovenia	SME Association	Program for internationalization	For domestic and foreign investors
Spain	SME Trade Promotion Agency	Programa ICEXNEXT	[Translated from Spanish: Initiation and consolidation program for internationalization for SMEs. It combines strategic advice for the preparation of the International Business Plan with operational and on-site assessments and with support for certain external promotion expenses.]
		Icex Ventana global	[Translated from Spanish: The Ventana Global service offers, in an integrated manner, all the services and knowledge of the General State Administration to promote the internationalization of your company. It provides you through a single, direct and accessible channel the resources of the Secretary of State of Commerce of the Ministry of Economy, Industry and Competitiveness, the Spanish Company of Financing of Development (COFIDES), the Spanish Company of Credit Insurance to the Export (CESCE), the Official Credit Institute (ICO), ENISA, the Center for Industrial Technological Development (CDTI) and ICEX.]
		Servicios personalizados Icx	[Translated from Spanish: They are tailored solutions for each client provided by the Economic and Commercial Offices of Spain abroad. The catalogue of services includes: Selection of potential commercial partners Interview agendas with potential partners and partners • Analysis of the competition Price comparisons in points of sale Purchase of bidding documents Assignment of spaces in the Economic and Commercial Offices Advice on electronic markets Design of marketing actions and commercial promotion Location of spaces for the celebration of corporate events Accompaniment of the Economic and Commercial Office Attraction of investors to Spain Commercial reports of foreign companies.]
		Línea ICO Internacional 2018	[Translated from Spanish: Section I Investment and Liquidity: Autonomous, Spanish companies and public and private entities, domiciled in Spain or domiciled abroad that have a majority of Spanish capital. Section II Medium and Long-Term Exporters: Granting of Loan Supplier, Purchaser and complementary financing to companies.]
		ICEX Dinamiza	[Translated from Spanish: Awareness days where diverse topics related to internationalization and their importance for the company's growth are addressed. They are aimed at SMEs, with the aim of increasing the export base.]
Sweden	SME Trade Promotion Agency	Internationalisation vouchers	To help SMEs bring in external expertise to support with their internationalisation (new to export)
United Kingdom	SME Association	General government support	37% of FSB members state that they have accessed support from central government and DIT. This represents the most common form of support accessed. Support can take the form of market research, general advice,

Country	Type of respondent	Most important programmes	Description
			trade missions, matchmaking events, and so on. The UK government strategy of getting 100,000 more companies exporting has been an important campaign in the context of getting more SMEs exporting. This support is aimed at SMEs of all sizes, including current and potential exporters, as well as those that have not yet considered exporting.
		In country support via UK embassies	UK embassies currently usually have an international trade team that provide in-market support to SMEs. This support can be in the form of market research or identifying opportunities. This will largely apply to current exporters or potential exporters that have identified a market. The service is important but awareness is limited.
		Export opportunities via great.gov.uk	The great.gov.uk website includes an 'Export opportunities' section that allows SMEs to search a database of export opportunities. The service is aimed at current exporters and potential exporters. It's an important service, but FSB has provided feedback to the UK Department for International Trade (DIT) that coverage is patchy and opportunities are often limited.
		Britain is Great campaign	The UK government has heavily invested in the Britain is Great marketing campaign, advertising the UK as an exporting nation and encouraging more companies to take up exporting. Aimed at all SMEs
		Local support	20% of our members have accessed support from either a Local Enterprise Partnership (LEP) or Growth Hub. These bodies are familiar with their local environments and the local economy, and often act as one-stop-shops for small businesses on a range of issues, including exporting. Performance varies between LEPs, however. Mainly relevant for SMEs that have not exported before

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