

B SMEs in international trade: stylized facts

Every firm that contemplates expanding its operations in a foreign country has to choose a specific market entry strategy. As trade is the most common form of internationalization for small and medium-sized enterprises (SMEs), this section surveys available statistical evidence on the participation of SMEs in international trade in both developed and developing economies, and how their activities relate to traditional trade flows and to trade in the context of global value chains. The objective is to provide an accurate and detailed description of the SME trade landscape, but also to identify important gaps in information and data coverage.



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Some key facts and findings

- Trade participation of SMEs in developing countries is low, with exports accounting for 7.6 per cent of manufacturing sales, compared to 14.1 per cent for larger firms.
- MSMEs account for 34 per cent of exports on average in developed countries. There is a positive relationship between enterprise size and export participation, with lower rates of participation for micro enterprises (9 per cent) and small enterprises (38 per cent) than for medium-sized (59 per cent) and large enterprises (66 per cent).
- In developing economies, indirect exports in the manufacturing sector of SMEs were estimated, on average, at 2.4 per cent of total sales, a level three times lower than the estimated share of direct exports. Most manufacturing SMEs in developing countries have low levels of integration in global value chains, with few backward and forward linkages in production.
- In developed economies, the direct contribution of SMEs to domestic value-added exports is predominant over indirect exports.
- Electronic commerce expands opportunities for SMEs to participate in international trade. On average, 97 per cent of internet-enabled small businesses export. Meanwhile export participation rates for traditional SMEs range between 2 per cent and 28 per cent in most countries.
- In developing countries, there is an inverse relationship between the number of employees that a firm has when it begins operations and the number of years before it starts to export. For large firms that started as SMEs, it took 17 years to export for those that began with five employees or less, compared to five years for those that had 60-100 employees.



Internationalization is often defined as the strategy adopted by firms engaged in overseas activities (Welch and Luostarinen, 1993).¹ Internationalization may take various forms, namely: (1) direct exports; (2) indirect exports (i.e. sales of goods through a third domestic party that exports); (3) non-equity contractual agreements; and (4) foreign direct investment (FDI) and other forms of equity agreements.

First, SMEs can directly serve international markets by beginning to export to distributors or to final consumers located in foreign markets. Second, SMEs may opt for an indirect internationalization strategy by providing parts and components or services to other domestic firms participating in regional or global value chains (GVCs) or by selling products or services to export intermediaries, such as wholesalers, export buying agents and brokers, situated in their own countries, who in turn export to international markets. Third, SMEs may opt for non-equity contractual modes, such as franchising, licensing or more structural alliances (e.g. export consortia). Fourth, SMEs can engage in FDI through green field investment (i.e. a type of FDI by which a parent company founds a new venture in a foreign country by constructing new operational facilities from scratch) and through mergers and acquisitions, as well as through co-investment with other firms, such as joint ventures, with different control levels (e.g. from minority shares to 100 per cent owned).

While SMEs can use one or more of these types of internationalization modes, trade, direct or indirect, is often considered to be the first step towards engaging in international markets, operating as a platform for greater future international expansion. Exporting indirectly is typically considered to be the least risky entry mode to international markets because it enables SMEs to gain access to international markets without having to bear the upfront costs (including “sunk” costs, i.e. costs that cannot be recovered once incurred) associated with searching for new customers and negotiating contracts. Export intermediaries or other firms which undertake transaction sales and/or services in overseas markets on behalf of SMEs benefit from market knowledge and negotiation skills that allow business risks to be pooled and diversified and that reduce the searching and matching costs associated with export transactions.

Exporting is viewed as less risky than contract- or investment-based internationalization strategies because it requires a lesser commitment of organizational resources, entails fewer financial and commercial risks, and allows for greater flexibility and managerial discretion (Lages and Montgomery, 2005). In practice, some SMEs export both directly and indirectly, highlighting the potential complementarity

between both foreign market entry modes (Nguyen et al., 2012).

Other forms of internationalization, such as non-equity contracts and FDI, entail larger fixed costs, which are more difficult to reverse in particular for SMEs. That is why SMEs that have chosen in recent years to expand their research and development (R&D), production and distribution into foreign markets, tend to resort to contractual arrangements, such as outsourcing, and minority share investment positions, rather than full ownership of foreign affiliates (Hollenstein, 2005; Nakos and Brouthers, 2002). Since SMEs tend to experience greater financial, human and management constraints than large companies, and are more adversely affected by higher market barriers, it is not surprising that exporting continues to be the most common internationalization form adopted by them (Riddle et al., 2007; Westhead, 2008). For instance, less than 3 per cent of SMEs located in the European Union have a foreign subsidiary overseas, which is significantly lower than the share of SMEs exporting within and outside the European Union (European Commission, 2014a).

The availability of data on international trade by enterprise size is limited in many respects. For the most part, researchers must rely on a mix of enterprise surveys and administrative data, with all of the compromises that using different data sources entail (e.g. incomplete country coverage, inconsistent definitions of SMEs across datasets, differences in reporting standards across countries, timeliness of data, etc.). Detailed firm-level data may also be inaccessible due to confidentiality concerns. The main datasets used in this section of the report are the Organisation for Economic Co-operation and Development (OECD)’s Trade by Enterprise Characteristics (TEC) database, which mostly deals with developed economies,² and the World Bank’s Enterprise Surveys, which provide detailed information on a range of developing economies.³ These data sources are supplemented with others as necessary, including existing studies on SMEs, national statistics and private sector reports.

A number of findings emerge from this section. We observe that the participation of SMEs in international trade varies considerably across countries, geographical regions, sectors and enterprise size classes in both developed and developing economies. In developed countries, shares of MSMEs in exports and imports are relatively small compared to those of large firms, but the trade participation of medium-sized firms is greater than that of micro or small enterprises. A relatively small fraction of SMEs in developing economies export, either directly or indirectly, compared to large firms. GVC participation of SMEs in developing countries is especially low in some regions,

and firms with fewer employees in developing regions also take longer to access international markets than larger firms.

Despite these disadvantages, new technologies are enhancing trade opportunities for smaller firms in developed and developing countries alike. Unlike traditional SMEs, a very high percentage of Internet-enabled SMEs engage in international trade. This suggests that increasing SMEs' access to online platforms could potentially raise exports of smaller enterprises, particularly in developing economies where Internet access is less widespread than in developed countries.

Finally, available data on SMEs and trade are insufficient to answer many outstanding questions, in particular questions about the extent of indirect participation in trade by SMEs and their role in GVCs.

1. SME involvement in direct trade

“Direct exports” occur whenever an enterprise sells goods or services directly to customers in another country. Since there is no intermediary, a major benefit of exporting in this way is that the exporting firm is in direct contact with its consumers, enabling a better understanding of their needs, thereby creating new business opportunities. In addition, direct exports provide firms with more protection of their trademarks or patents in case of innovative products.

SMEs can export directly if they have the means to reach foreign consumers or GVC partners located abroad. However, they may find it difficult to mobilize all the necessary human and financial resources to develop their international trade activities. Thus, exporting can be challenging for SMEs, especially in developing economies.

This subsection provides details on the direct participation of SMEs in international trade by firm size, sector, and, for developed economies, where possible, by partner country and region.

As noted in section A.1, there are no universally accepted definitions of enterprise size classes. By default in this report, firms with fewer than 10 employees are referred to as “micro” enterprises, firms with between 10 and 49 employees are classified as “small” enterprises, firms with between 50 and 249 employees are categorized as “medium-sized” enterprises, and firms with 250 or more employees are considered “large”. These size classes correspond to those used in the OECD TEC database, but different categories will be used in other contexts depending on the definitions used in particular databases or

studies. For example, the categories above differ from those employed by the World Bank in their Enterprise Surveys, in that the latter excludes firms with fewer than 5 employees and businesses with 100 or more employees from its definition of SMEs. Other definitions are also used in research and statistics on SMEs, but nearly all of these encompass businesses with fewer than 500 employees. Consequently, the reader should be aware that the terms SME may refer to differently sized firms in different contexts. The term MSME, referring to “micro, small and medium enterprises”, is also used in this section and elsewhere in the report to indicate the inclusion of micro enterprises in totals where possible.

The TEC database provides breakdowns of exports and imports by economic sector and by partner country/region. Trade values in the TEC database are recorded in current US dollars, facilitating aggregation, but country coverage is mostly limited to developed economies. One notable exception is Turkey, which is usually classified as a developing/emerging economy but is sometimes treated as developed because it is a member of the OECD.

The World Bank's Enterprise Surveys provide detailed information by sector and enterprise size for a wide range of developing countries, but the data suffer from some of the common shortcomings of surveys, such as incomplete answers from respondents. Another limitation of the Enterprise Surveys is that the trade values are in national currency terms and are lagged to the fiscal year prior to that during which the survey was carried out. Converting to dollars for aggregation purposes is a non-trivial exercise, but this has been carried out to arrive at aggregate estimates for least-developed countries (LDCs) and other developing regions.

Due to differences in coverage and data sources, it is currently not possible to compare the participation of SMEs in developed economies with those in the developing group.

(a) Direct participation of SMEs and MSMEs in trade of developed countries

Despite the fact that MSMEs make up the vast majority of firms in developed economies (98 per cent of industrial firms in OECD countries, according to the TEC database), their direct exports typically account for less than half of the value of gross exports. This is illustrated by Figure B.1, which shows shares of SMEs (i.e. excluding micro firms with fewer than 10 employees) and MSMEs (i.e. including micro firms) trading with OECD economies. Shares of SMEs in trade were below 50 per cent in every country on the export side, and all but one country on the import

side. Including micro firms with 0-9 employees boosts MSME shares in exports over 50 per cent in a few cases, but shares of most countries remain below 50 per cent.

(i) *Direct trade by enterprise size*

Export shares for MSMEs significantly exceed 50 per cent in a small number of countries, including Estonia (69 per cent), Turkey (63 per cent), Cyprus (61 per cent) and Ireland (57 per cent). With the exception of Turkey, all of the countries with the highest SME

shares in export values are members of the European Union. By comparison, shares for non-EU countries such as Canada (29 per cent) and the United States (28 per cent) are considerably lower (see Figure B.1).

Shares of MSMEs in gross imports tend to be somewhat larger than their shares in exports, with the largest shares belonging to small countries such as Estonia (78 per cent), Cyprus (75 per cent), Malta (74 per cent) and Latvia (63 per cent). However, these enterprises still account for less than half of the value of imports in the largest developed countries, including

Figure B.1: SME and MSME shares in the dollar value of exports and imports of selected developed countries, 2013 (or latest year) (percentage)



Note: Bulgaria, Canada, Ireland, Romania, Slovenia and Turkey refer to 2012, while Luxembourg refers to 2011.

Source: OECD TEC database.

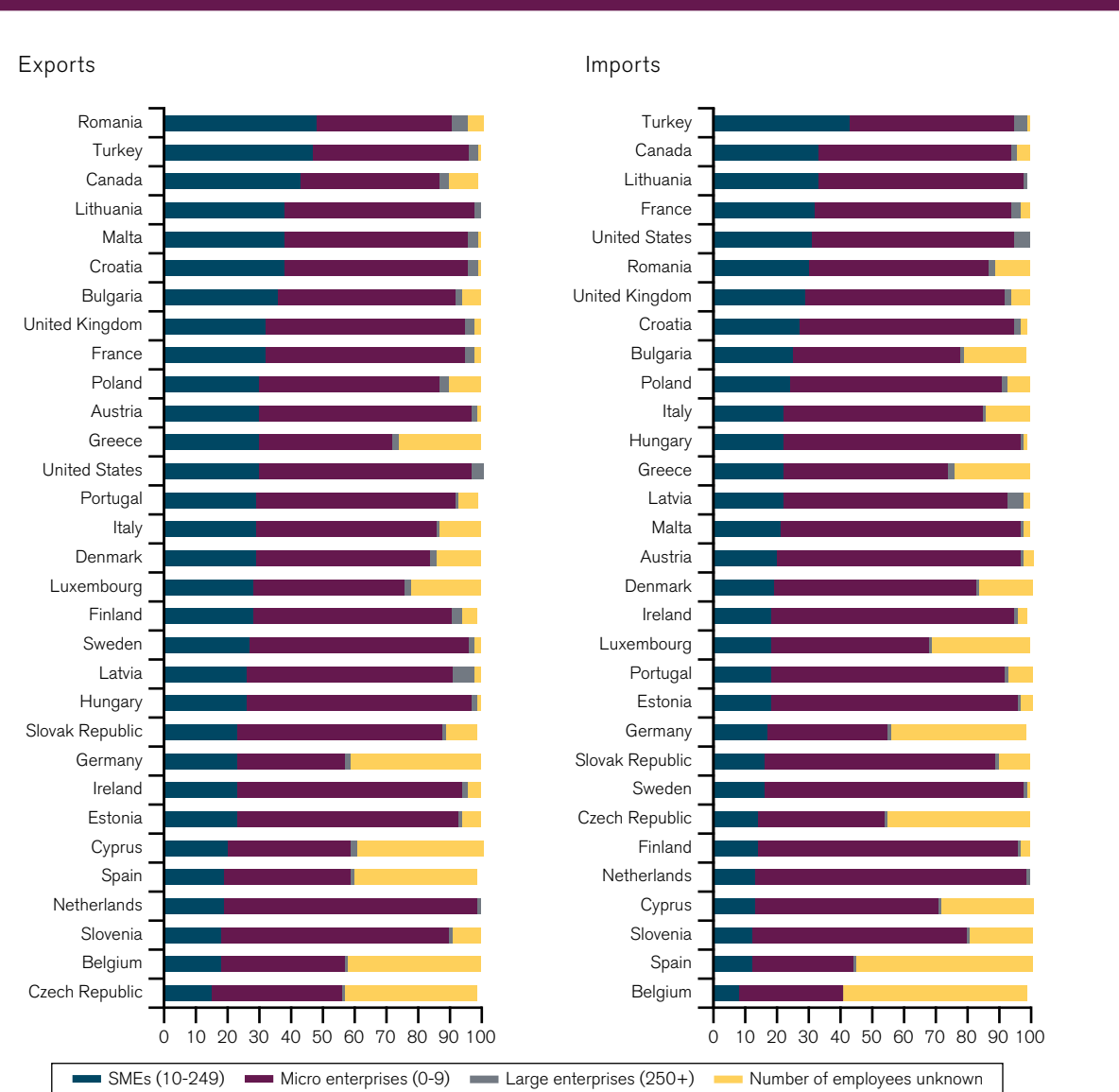
Germany (28 per cent) and the United States (26 per cent).

In aggregate, the share of MSME exports in total exports of developed countries in the TEC database in 2013 was 34 per cent. The equivalent share on the import side was 38 per cent. Note that these shares include Turkey, which is usually classified as a developing economy but is a member of the OECD.

Despite relatively small shares of SMEs in developed countries' exports and imports by value, MSMEs (and

micro firms in particular) represent the large majority of trading firms in most developed economies. This is illustrated by Figure B.2, which shows the percentage of exporting and importing firms that are MSMEs in selected developed economies by enterprise size in 2013 or the latest available year. Shares of MSMEs are lowest in countries with large numbers of firms of unknown size (e.g. Belgium, Czech Republic and Germany). However, MSMEs account for as much as 99 per cent of exporting and importing firms in the Netherlands and more than 95 per cent in Sweden. Shares are considerably smaller if micro firms

Figure B.2: Percentage of exporting and importing firms that are SMEs in selected developed economies by enterprise size, 2013 or latest year (percentage)



Note: Bulgaria, Canada, Ireland, Romania, Slovenia and Turkey refer to 2012, while Luxembourg refers to 2011.

Source: OECD TEC database.

(0-9 employees) are excluded, ranging from 8 per cent to 48 per cent. By comparison, small enterprises (10-249 employees) account for more than half of exporting and importing firms in most countries in the TEC database. In total, the share of MSMEs in the number of exporting and importing firms was 78 per cent on the export side and 76 per cent on the import side in 2013 (or latest year).

Small enterprises in the OECD TEC database may be more representative of SMEs than either micro or medium-sized firms, since the former frequently operate in non-tradable sectors while the latter sometimes resemble larger firms more closely. This is especially true when comparing TEC data to the World Bank's Enterprise Surveys, which classify establishments with more than 100 employees as large enterprises. Focusing on small enterprises exclusively, we see that their overall share in exports (9 per cent) is significantly less than their share in the number of exporting firms (21 per cent). Their share in imports (11 per cent) is also less than their share in importing firms (16 per cent), but not dramatically so. Meanwhile, medium-sized businesses account for a greater fraction of international trade (15 per cent of both exports and imports) than their numbers would suggest (7 per cent of enterprises that export and 5 per cent of those that import).

If we restrict our attention to industrial enterprises, we can see a positive association between enterprise-size SMEs and participation in international trade. This is shown for developed OECD countries in

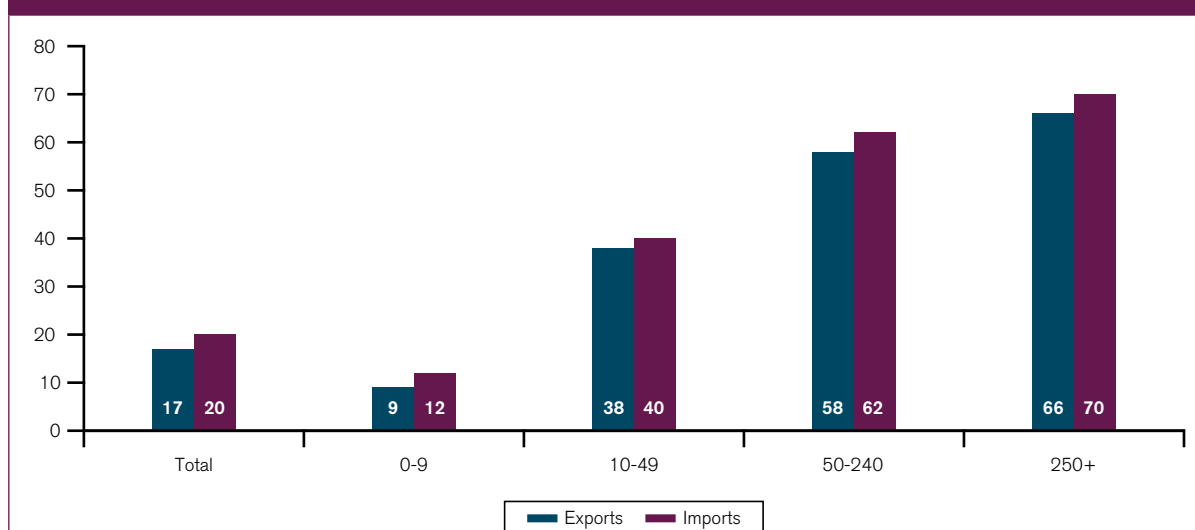
Figure B.3. The low shares for micro firms with fewer than 10 employees (9 per cent on the export side and 12 per cent on the import side) have dragged down average figures for all size classes due to the large number of micro firms in OECD economies. All of the other enterprise size classes (small, medium and large) have above-average shares of firms engaging in international trade, ranging from 38 per cent to 66 per cent on the export side and 40 per cent to 70 per cent on the import side. In particular, export and import participation rates for medium-sized enterprises approach those of large enterprises, while participation rates for small and micro enterprises are considerably smaller.

In summary, shares of SMEs and MSME's in trade flows of developed OECD countries are generally low, but there is considerable heterogeneity across enterprise size classes. In particular, rates of export and import participation for medium-sized enterprises are quite high, approaching those of large businesses.

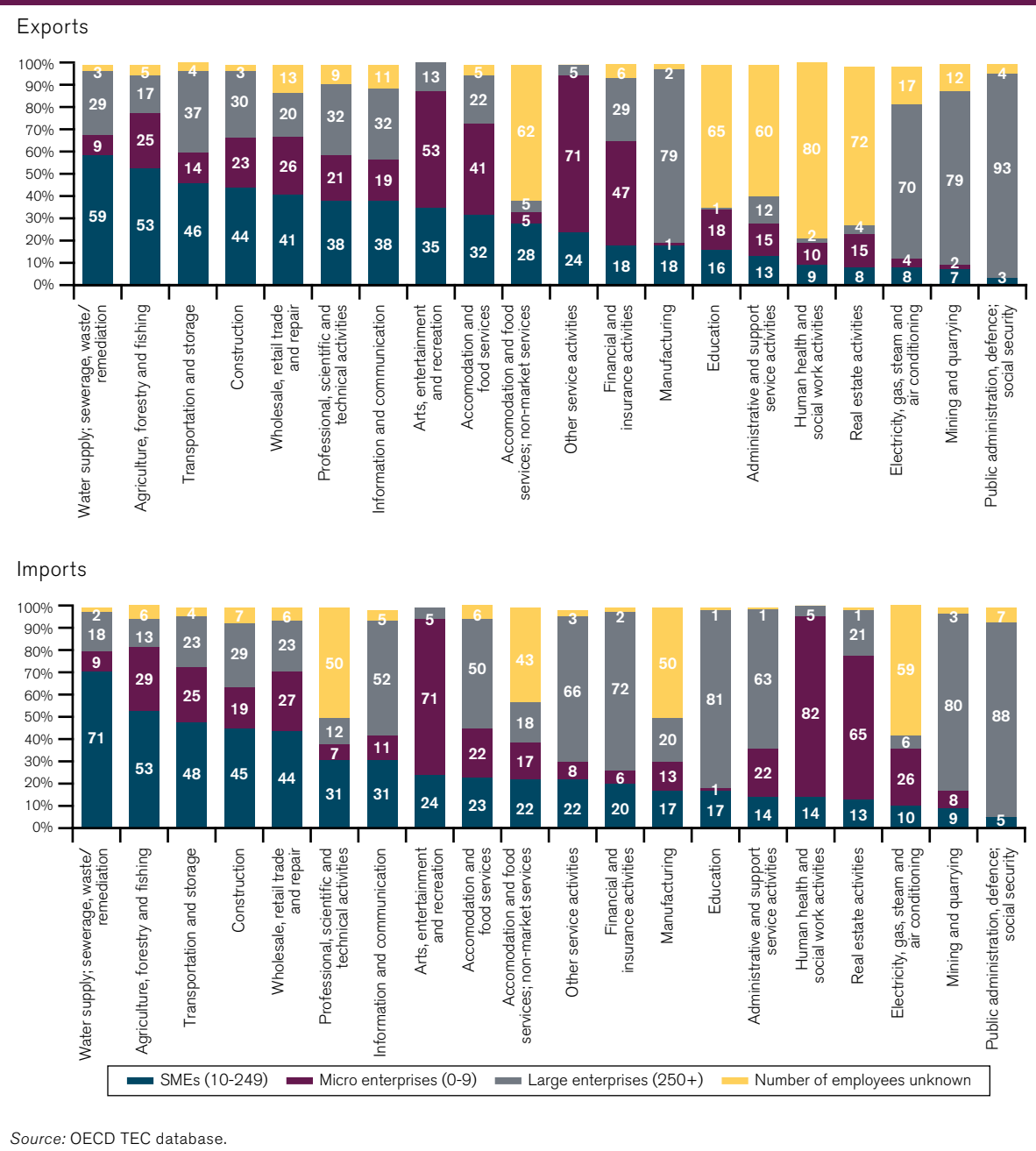
(ii) Direct trade of MSMEs by sector and partner

Dollar values of trade flows by firm size and sector are shown in Figure B.4 through 2012, the last year for which a complete sectoral breakdown was available in the TEC database for a sufficient number of countries. Micro enterprises appear to have the largest shares in exports in certain services categories including accommodation, arts/entertainment/recreation and other service activities, while large enterprises

Figure B.3: Percentage of industrial firms that are exporting and importing by enterprise size, 2013 or latest year (percentage)



Note: Data for Canada and Ireland refer to 2012. Turkey is excluded due to missing data.
Source: OECD TEC database.

Figure B.4: Trade values by sector, exports and imports, 2012 (percentage)


predominate in sectors such as manufacturing and mining/quarrying. On the import side, micro firms are dominant in service sectors, including health care, while large firms account for an outsized share of financial services imports. There does not appear to be any systematic relationship between economic sectors and enterprise size other than the fact that more capital-intensive sectors (mining, manufacturing, electricity and gas supply) tend to be dominated by large enterprises. At a higher level of aggregation, it appears that most MSME exports and imports in developed economies are in fact

services, with 68 per cent on the export side and 83 per cent on the import side (see Figure B.5, also with data through 2012).

Two findings regarding the services trade of SMEs are worthy of note. First, those SMEs that begin to export tend to persist in this behaviour, i.e. they have a high survival rate conditional upon exporting. Second, although a smaller fraction of SMEs engage in trade compared to large firms, those SMEs that do trade direct a larger share of their sales toward foreign

Figure B.5: Exports and imports of MSMEs by broad product category, 2012 (percentage)

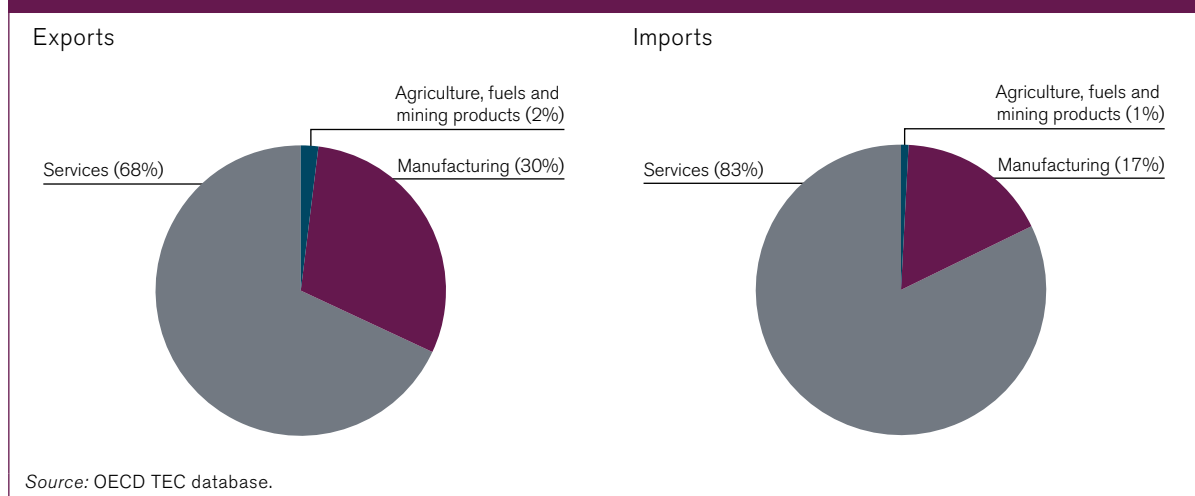
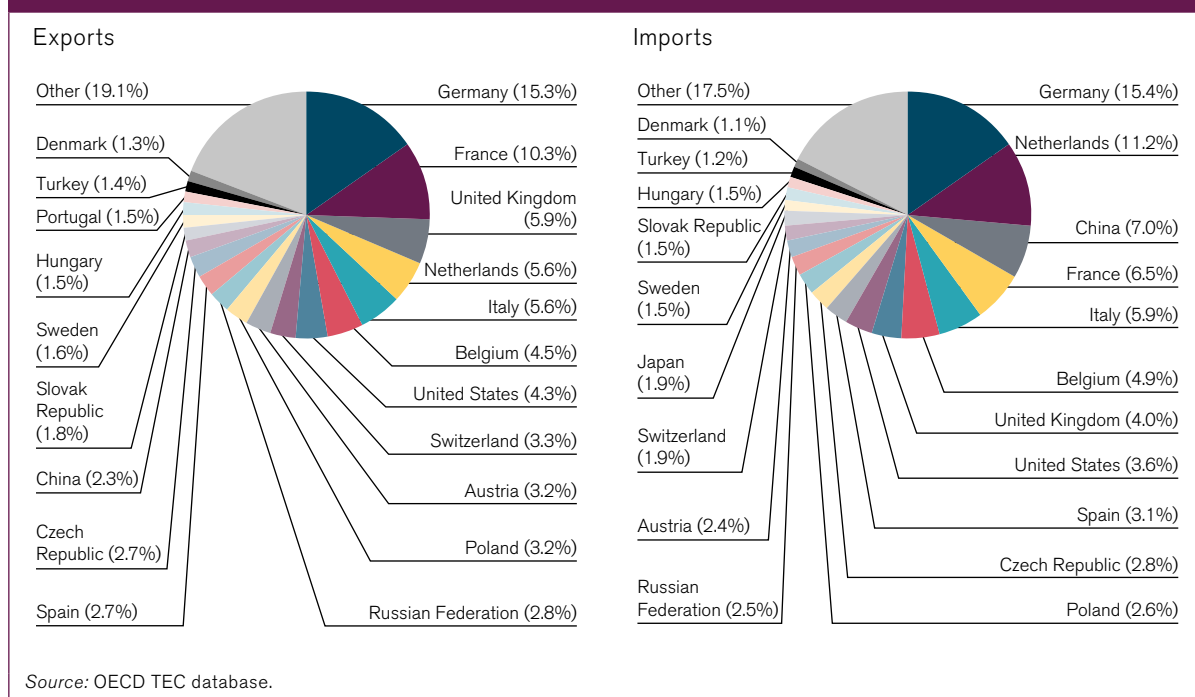


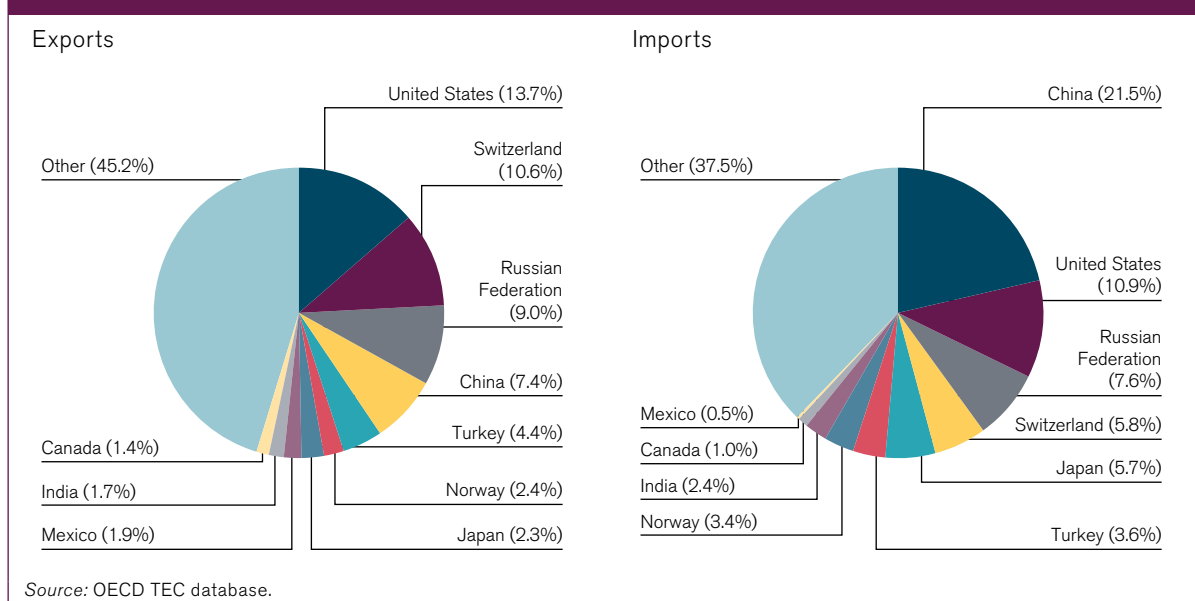
Figure B.6: Exports and imports of SMEs in developed countries by partner, 2012 (percentage)



markets than large firms. These findings by Lejárraga et al. (2014) could have important policy implications regarding the effectiveness of support for SMEs in accessing international markets.

The vast majority of MSME exports in developed countries are destined for other developed economies, and most MSME imports also originate in developed economies. China is the main exception, accounting for 2.3 per cent of developed country exports and 7 per cent of imports. This is shown in Figure B.6 for 2012,

the last year with sufficiently detailed data by partner. Shares of developed countries as partners of MSMEs may be exaggerated due to the fact that intra-EU trade is included in the chart. An alternative perspective is provided by Figure B.7, which shows the same data excluding trade between members of the European Union. In this case, China's shares in exports and imports of developed country SMEs rise substantially, to 7 per cent and 22 per cent, respectively, as do shares of other emerging markets such as India, the Russian Federation and Turkey.

Figure B.7: Extra-EU exports and imports of SMEs in developed countries by partner, 2012 (percentage)


One conclusion that might be drawn from the preceding charts is that MSMEs in developed countries, and particularly micro SMEs, have more difficulty in bridging the trade gaps between themselves and distant or dissimilar trading partners.

(b) Direct participation of SMEs in trade of developing countries

As noted in Section A, SMEs play an important role in economic and social development, particularly in poorer countries and LDCs. According to WTO calculations, based on data from World Bank Enterprise Surveys, out of more than 15,500 manufacturing and services firms in 41 LDCs, 88 per cent were SMEs, including some 59 per cent of small firms employing fewer than 20 people, and 29 per cent of medium-sized firms with 20-99 employees. In general, their direct participation in international trade is low. According to WTO estimates, based on data from World Bank Enterprise Surveys for over 25,000 SMEs in the manufacturing industry in developing economies, SMEs' direct exports represent on average just 7.6 per cent of total manufacturing sales.⁴ In contrast, large manufacturing firms, with more than 100 employees, directly exported 14.1 per cent of their total sales.

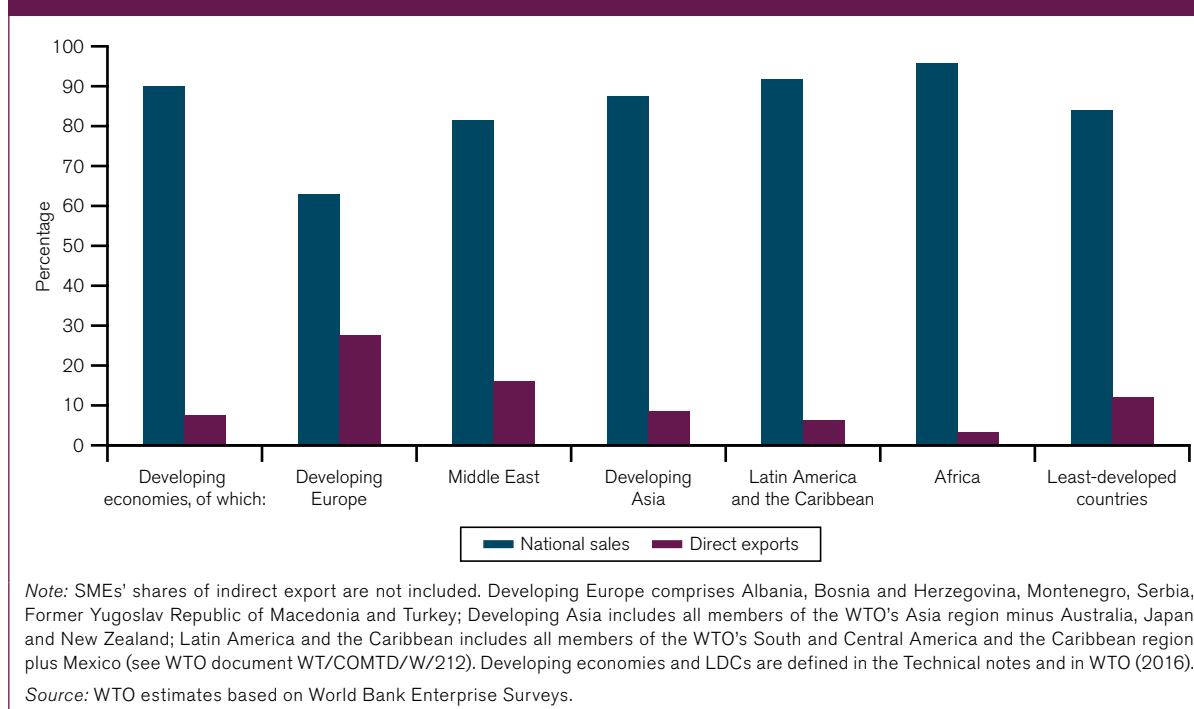
The involvement of SMEs in direct exports varies significantly across developing regions. The highest shares were recorded in Developing Europe, where they accounted for around 28 per cent of overall sales by SMEs, and in the Middle East (16 per cent). These shares are much higher than in SMEs in Developing

Asia (8.7 per cent). SMEs in Africa exported directly only 3 per cent of their total sales (see Figure B.8). As indicated above, the World Bank Enterprise surveys exclude micro enterprises (in the class size between zero and four employees). However, the World Bank has collected micro firm surveys in selected developing countries. Using these data, Box B.1 shows that in LDCs, direct involvement in trade of micro firms with less than five employees is marginal.

A sectoral analysis reveals that, in developing economies, SMEs' lower participation in direct exports than larger firms affects all manufacturing sectors, with the exception of the wooden furniture manufacturing industry and the publishing and printing industries (see Figure B.9). It should be noted that higher shares were in both cases predominantly due to SMEs in LDCs (66 and 30 per cent respectively). A considerable number of medium-sized firms in several LDCs, such as Bhutan, Mozambique, Myanmar, Tanzania, Uganda and Zambia, directly exported wooden sofas, beds, chairs, tables, etc. SMEs did not participate actively in the direct exports of textiles and garments. Their share of direct exports was often less than 5 per cent, well below the high percentages reported by large enterprises. Another example is manufacturing of office equipment and electronics, where large firms in developing economies exported directly, on average, around 43 per cent of their total sales, compared with 4 per cent by SMEs.

Participation by developing economies' SMEs in direct services exports was negligible, at less than 1 per cent

Figure B.8: SMEs' shares of direct exports in total sales in the manufacturing sector, by developing region and in the LDCs (percentage of total sales)



Box B.1: Participation of micro firms in exports in selected LDCs

Evidence from recent World Bank Micro firm surveys in selected LDCs confirms the marginalization of micro firms (i.e., less than five employees) in international trade. Micro firms were engaged in different sectors of the economy ranging from food manufacturing to the retail and wholesale trade and the leather goods industry, as well as restaurants and IT services. In 2013, out of the 412 surveyed micro firms in the Democratic Republic of the Congo, only 6 per cent were engaged in exports. The share of exporting micro firms, whether in manufacturing or services, in Bhutan and Ethiopia was even lower, at 3 per cent of the total. Finally, in Myanmar, less than one per cent of the 430 surveyed micro firms exported their products to foreign countries.

Micro firms were young, having started operations between 2004 and 2005, and several were run by females owners, with at least secondary education. In Myanmar, half of the owners held a university degree; in Ethiopia, one quarter.

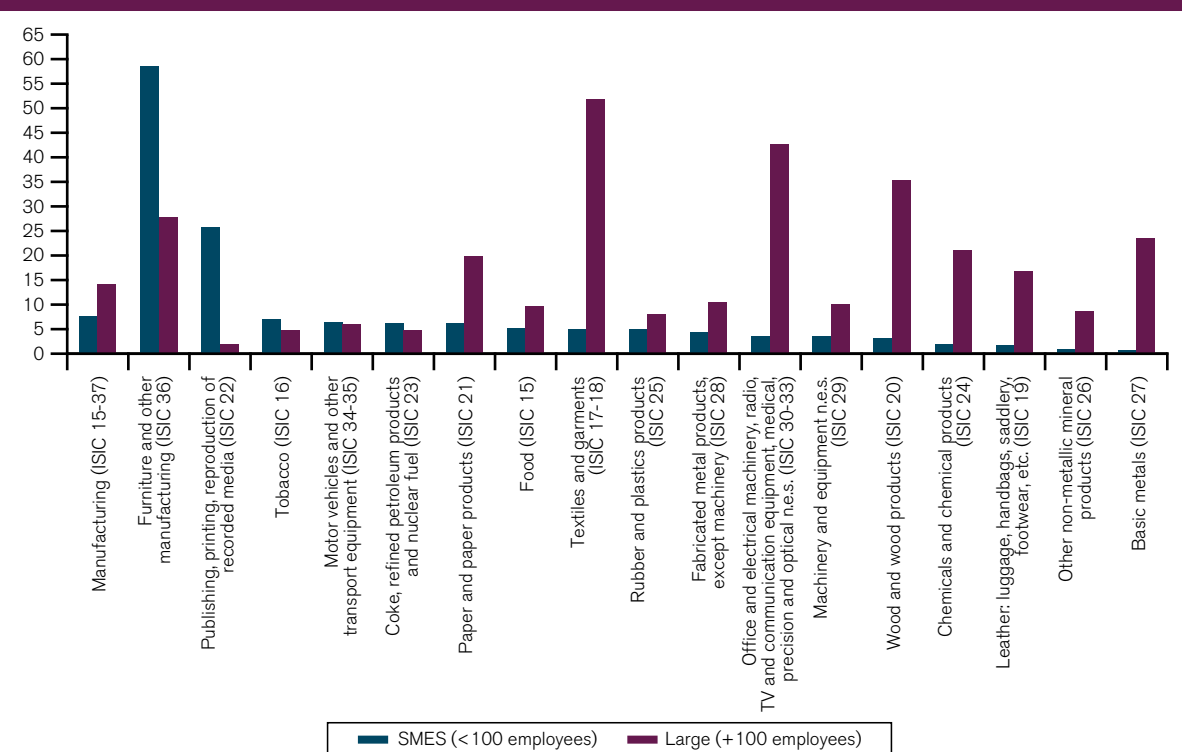
Virtually all micro firms were domestically-owned and targeted the local or national market. Only a handful in each country held international certificates of products and/or processes. While several micro-firms used the Internet to reach their clients or suppliers, only a few had their own websites, ranging from 2 per cent in Bhutan to 20 per cent in Ethiopia.

of total services sales, compared with 32 per cent of large firms. The difference in performance with large services firms is striking, ranging from 16 per cent in LDCs to peak to 40 per cent in large enterprises located in other developing economies (see Figure B.10).

In services, the highest share of direct exports by SMEs in developing economies was in transport (20 per cent of total sales). In communications, including

the provision of Internet access, the contribution was around 4 per cent. In the accommodation sector, the share of direct exports by SMEs was below one per cent. In LDCs, virtually all SMEs in construction activities, often foreign-controlled, supplied the national market. Finally, SMEs' participation in direct exports in higher-skilled services was marginal. Computer-related activities accounted for less than 1 per cent of their total sales compared with 23 per cent of large firms.

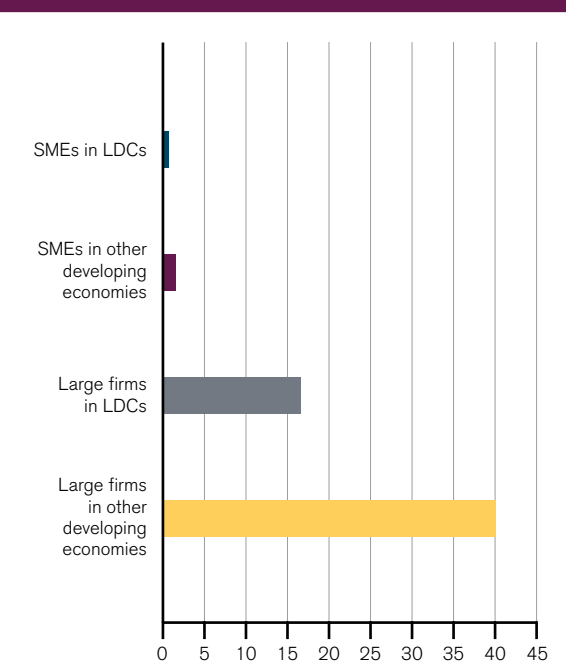
Figure B.9: Direct exports by manufacturing sector and firm size in developing economies (percentage of total sales)



Note: WTO estimates based on the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 3.1. N.e.s. stands for "not elsewhere specified".

Source: World Bank Enterprise Surveys.

Figure B.10: Shares of direct services exports by firm size and developing group (percentage of total sales)



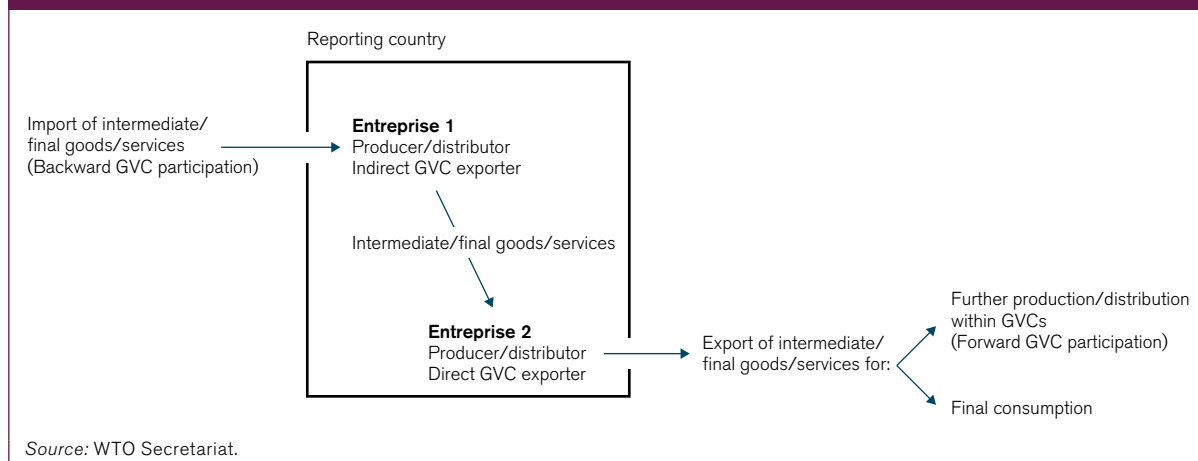
Source: WTO estimates based on World Bank Enterprise Surveys.

2. SME involvement in indirect trade and global value chains

Rather than exporting directly, SMEs may connect indirectly to global markets by supplying goods and services to other domestic firms that export. SMEs can use the services of domestic intermediaries such as agents or distributors to help market their products in foreign countries and reach new markets. However, goods and services produced by SMEs can also be indirectly exported as intermediate inputs incorporated in products exported through larger firms. In the manufacturing sector, for example, SMEs may be contracted to produce certain parts according to specifications of other companies, often larger ones, and enter value chains.

Over the last decades, rapid technological changes, coupled with more efficient and less costly transportation means, have significantly affected the ways goods and services are produced and sold. Thanks to lower barriers to international trade, the production of goods and services, rather than taking place in a single economy, is globalized and spread over firms located in different countries, along a chain. Trade in GVCs mainly refers to the exchange of goods

Figure B.11: Schematic presentation of GVC trade flows



and services along the production and distribution chains that are fragmented across countries. The production sequence is often supplemented by a logistics and distribution network in which intermediate and final products circulate within and across countries until they reach the final consumption market. Although GVC trade relates essentially to the exchange of intermediates, exports of final products always take place within the final stage of the chain. Based on the inputs produced by upstream suppliers, the ultimate enterprise in the production chain, which may or may not be the lead firm in the chain, completes the final product and sends it either to international distributors (wholesalers or retailers) or straight for consumption in the importing country.

Enterprises participate in GVCs in two ways related to the linkages with their foreign partners. *Backward linkages* correspond to the import of inputs from enterprises in order to produce intermediate or final goods and services for domestic consumption or further export. Enterprises may also import final products for further distribution through national or international networks. Backward linkages represent the “buyer’s” perspective or sourcing side in GVCs. *Forward linkages* represent the “seller-related” measure or supply side in GVC participation, when an enterprise exports intermediates through the international production chain or final products to distribution circuits.

It is also necessary to distinguish between direct and indirect forward linkages. An enterprise contributes directly to a GVC when it exports inputs to partner countries along the production chain for more processing (and subsequent domestic consumption) or further export through international networks. Direct exports of final products through international distribution chains are also part of GVC trade.

The indirect forward participation in GVCs mainly concerns enterprises that provide intermediate or final goods and services to larger domestic firms for exports through international networks. In this way, an enterprise behaves like an “indirect exporter” by contributing to the production or distribution of goods and services exported by other domestic enterprises. Direct and indirect forward participation in GVCs deal with exports of products for further exchanges within the production or distribution chains. Figure B.11 illustrates the above definitions and shows the domestic and international trade flows related to GVCs.

(a) Indirect exports and GVC participation of SMEs in developed countries

Only a few studies have examined the role of SMEs in indirect exports. In a report on the involvement of US companies in international supply chains, Slaughter (2013) stated that US multinational enterprises in a typical year purchase inputs valued at more than US\$ 3 billion from SMEs in the United States, equal to 25 per cent of total input purchases. Other estimates from the United States International Trade Commission (USITC) (2010) indicate that in 2007 the share of SMEs in gross exports rose from 28 per cent to 41 per cent once indirect exports were considered. A similar study on Canadian SMEs from Industry Canada (2011) produced estimates showing that 26 per cent of manufacturing enterprises sold inputs to other Canadian enterprises that were used in the production of final goods for export. However, Canadian SMEs were actually less likely than larger enterprises to export intermediate goods indirectly. Specifically, 26 per cent of small enterprises and 27 per cent of medium-sized firms exported intermediate goods indirectly, compared to 30 per cent of large enterprises.

Official enterprise surveys and business-related data sources such as Trade by Enterprise Characteristics (TEC), Services Trade by Enterprise Characteristic (STEC) or Structural and Demographic Business Statistics (SDBS) provide relevant information on SME trade and other domains like production, employment, productivity or consumption but they do not necessarily contain details to delineate the actual activity of SMEs indirect exports and within GVCs.

An alternative is to use the value added approach to trade, which allows the decomposition of gross exports into their domestic and foreign value added components, and tracking of trade in intermediates taking place within GVCs. Currently, the OECD-WTO Trade in Value Added (TiVA) database provides estimates on backward and forward linkages to GVCs for 61 reporters, 34 industries and seven historical years. For the time being, the global input-output table underlying TiVA and GVC participation data relies on the hypothesis of the homogeneity of firms and industries, meaning that all firms within a same industry are supposed to have the same production technology and the same share of imported inputs. This does not match the wide variety of enterprises engaged in GVCs (SMEs, multinational enterprises, processors, multinational affiliates).

An expert group on “Extended supply-use tables (E-SUT)” launched in 2015 by the OECD investigates ways to better reflect the heterogeneity of enterprises in the national Supply-Use Tables (SUTs) that are used to construct the global input-output table for

the TiVA database. The principle is to combine SUTs with business-related data sources, like TEC, SDBS or Foreign Affiliates Trade Statistics (FATS), to get E-SUTs that will expand the granularity of standard SUTs in several domains (see OECD, 2015b). Based on such developments, TiVA and related GVC indicators will be broken down by:

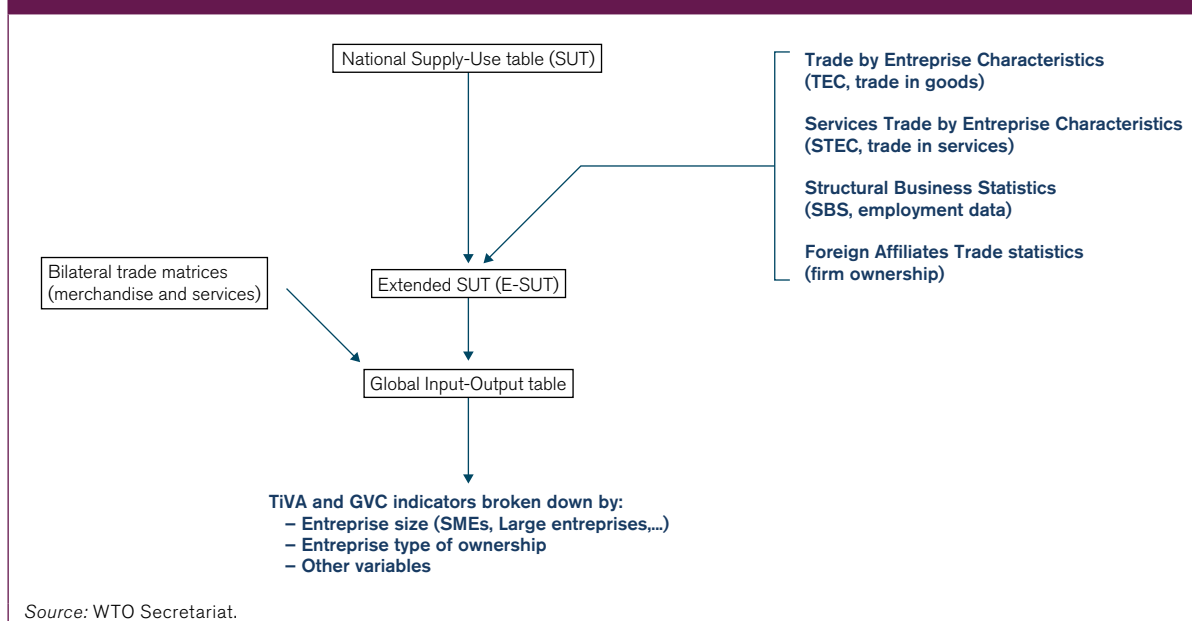
- Firm size (micro enterprises, SMEs, large enterprises, multinational enterprises).
- Ownership (domestic or foreign, using FATS).
- Export or processing intensity (companies involved or not in global production).

Figure B.12 presents the various data sources and production sequence that will be involved to produce trade in value added and GVC statistics by enterprise type.

The OECD carried out exploratory work to figure out the type of trade-in-value-added indicators that may result from the future extended-SUTs. The exercise consisted in linking national business statistics on SMEs with the global input-output tables developed for the OECD-WTO TiVA initiative. The results were presented in an OECD-World Bank Group report prepared for the G20 Trade Ministers Meeting held in Istanbul on 6 October 2015 (see OECD and World Bank, 2015).

The contribution of SMEs to GVCs is broken down into direct and indirect domestic value added contents

Figure B.12: Moving towards trade in value added and GVC participation by enterprise characteristics



of exports. The direct approach measures the contribution made by an SME in a sector of activity to the production of goods and services for export. The notion of indirect value added exports corresponds to the domestic value added originating from SMEs in upstream industries that provide inputs to the exporting industry.

For most of the OECD countries covered in the report, SMEs accounted for more than 50 per cent of the total domestic value added exports in 2009. Generally speaking, the direct contribution of SMEs to domestic value added exports is predominant over indirect exports. However, the proportion between direct and indirect exports varies greatly between industries. As shown in Figure B.13, the direct exports made by SMEs in the motor vehicles industry are marginal, whereas SMEs in other domestic sectors (manufacturing and services) contribute much more to the exports of this industry by providing components or intermediate services to motor vehicle exporters. Indeed, the direct contribution of SMEs to exports of the business services industry often exceeded 40 per cent of the total domestic value added

exported by the industry in 2009 for most of the reviewed countries (see Figure B.14). Overall, when cumulating the direct exports of SMEs with upstream supplies from other sectors, SMEs turn out to be the main exporters of business services in many OECD countries.

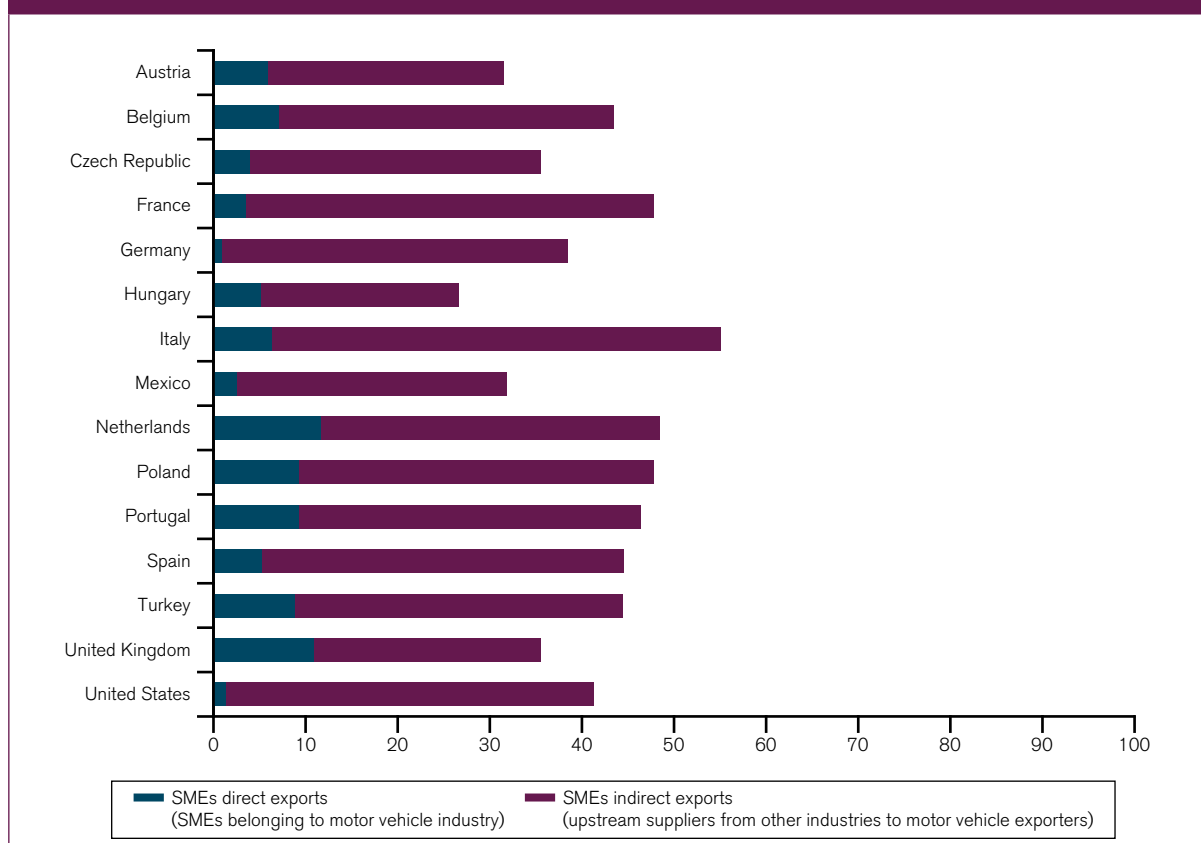
(b) Indirect exports and GVC participation of SMEs in developing economies

The World Bank Enterprise Surveys allow the indirect trade and potential activity of SMEs within GVCs to be quantified. This subsection exploits the available indicators to establish stylized facts for SMEs in developing economies.

(i) Indirect exports

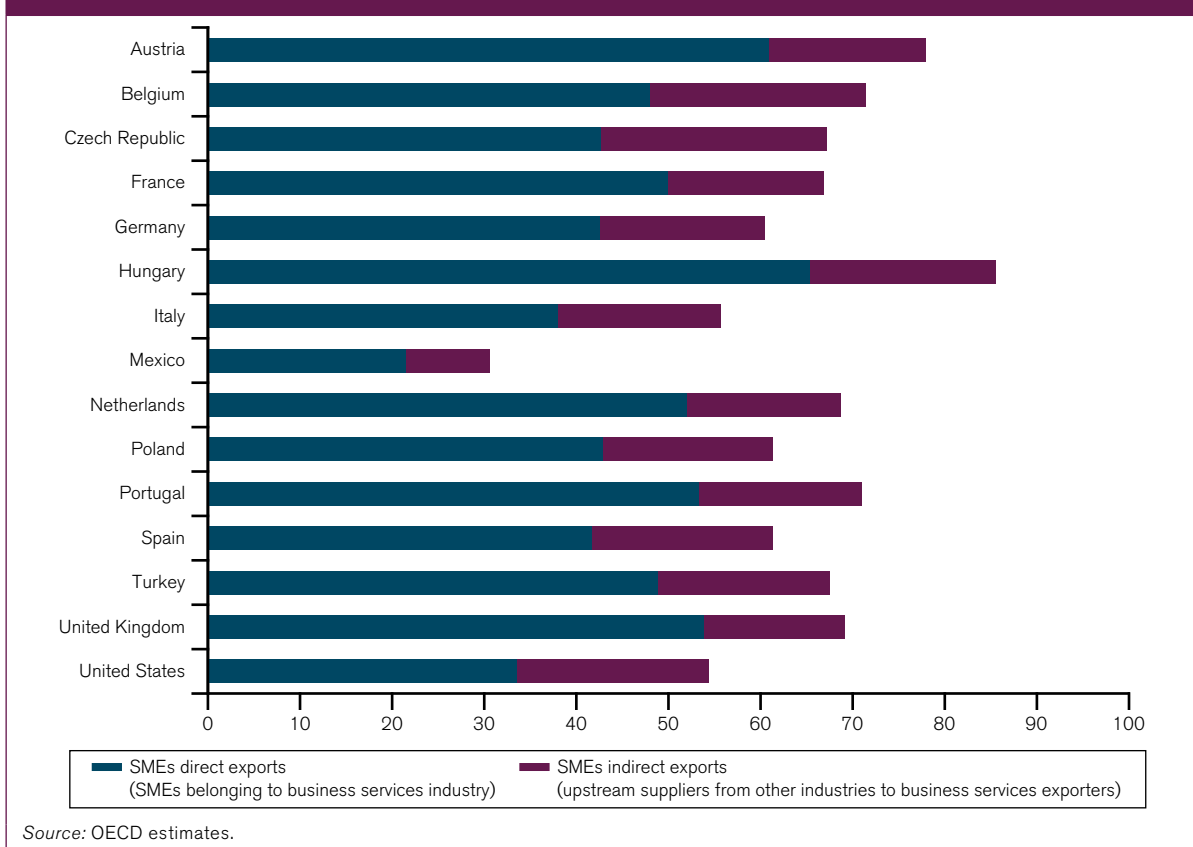
According to WTO estimates, in developing economies, the indirect exports in the manufacturing sector of SMEs were estimated, on average, at 2.4 per cent of total sales, a level three times lower than the estimated share of direct exports. Indirect exports account for

Figure B.13: SMEs' share of total domestic value added contained in exports of motor vehicles, 2009 (percentage)



Source: OECD estimates.

Figure B.14: SMEs' share of total domestic value added contained in exports of business services, 2009 (percentage)



a much larger share of sales in large firms (14.1 per cent), suggesting that they can adapt more easily to product requirements, such as standards and certification, made by other firms, or have a more efficient network of intermediaries (see Figure B.15). Overall, in developing economies, SME participation in exports, direct and indirect, was estimated at only 10 per cent of total manufacturing sales compared with some 27 per cent in larger firms.

SMEs in Developing Europe recorded the highest share of indirect participation in exports, estimated at around 9.3 per cent, followed by Developing Asia (3.7 per cent) and the Middle East (2.4 per cent), while African SMEs, excluding LDCs, saw only 1 per cent of their total sales exported indirectly (see Figure B.16).

At the product level, SMEs' highest shares of indirect exports were found in the manufacturing of various types of machinery, in the publishing and printing industry and in paper and paper products manufacturing, as well as in the automotive industry, where international production is widely organized. In all these sectors, the share of indirect exports in SMEs' total sales largely outpaced that of large firms (see Figure B.17). Large firms, by comparison, appeared

Figure B.15: Shares of direct and indirect manufacturing exports by firm size in developing economies (percentage of total sales)

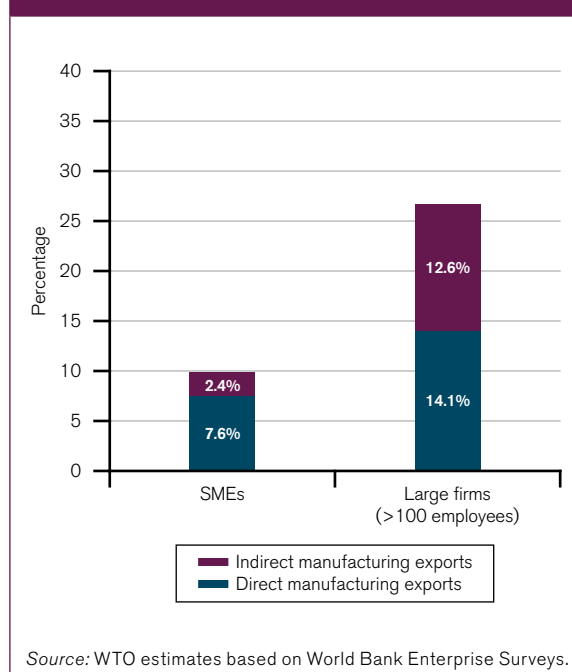
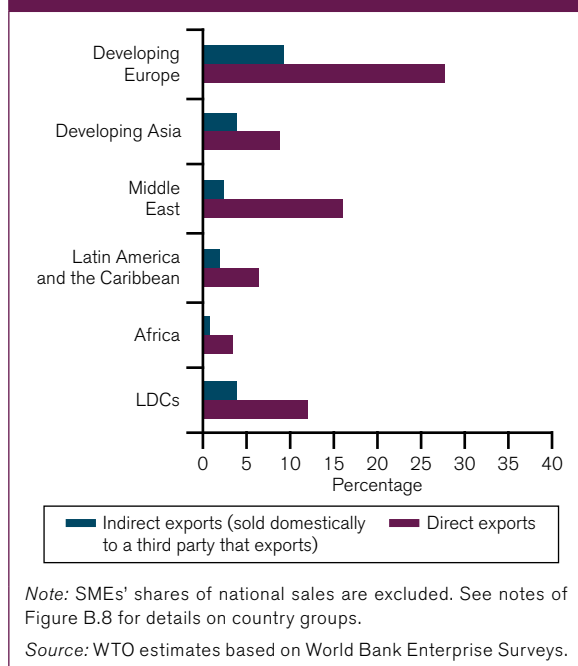


Figure B.16: SMEs' shares of indirect exports in total sales in the manufacturing sector, by developing region and in LDCs (percentage of total sales)



to be heavily engaged in the manufacturing of textiles and garments, office equipment and electronics, tobacco, glass and ceramics. And, especially in LDCs, leather goods and footwear.

Services SMEs in developing economies participated more in indirect exports than in direct exports. However, their overall participation in services exports is marginal, at 4 per cent of total services sales. It is interesting to note that large firms in developing economies supply services to foreign consumers predominantly through direct exports (see Figure B.18).

(ii) GVC participation

The opportunities for SMEs in global value chains are enormous. Participation in value chains exposes them to a large customer/buyer base, as well as to opportunities to learn from large firms and from engaging and surviving in the hotly contested sectors of the global marketplace. The penetration of global value chains, however, also presents huge and often daunting challenges for SMEs (ADB, 2015).

Unfortunately, data on SMEs trade in GVCs are scarce. Official business data sources, like TEC, STEC or

Figure B.17: Indirect exports by manufacturing sector and firm size in developing economies (percentage of total sales)

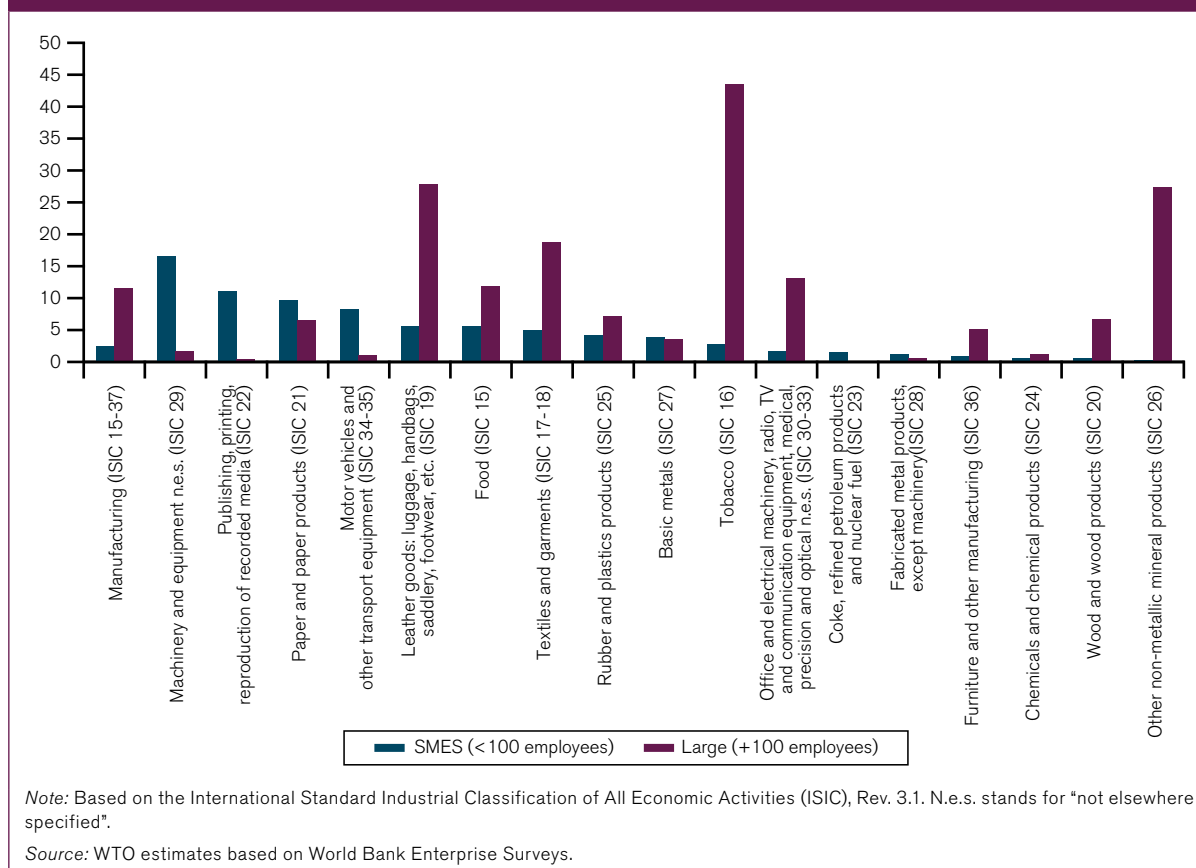
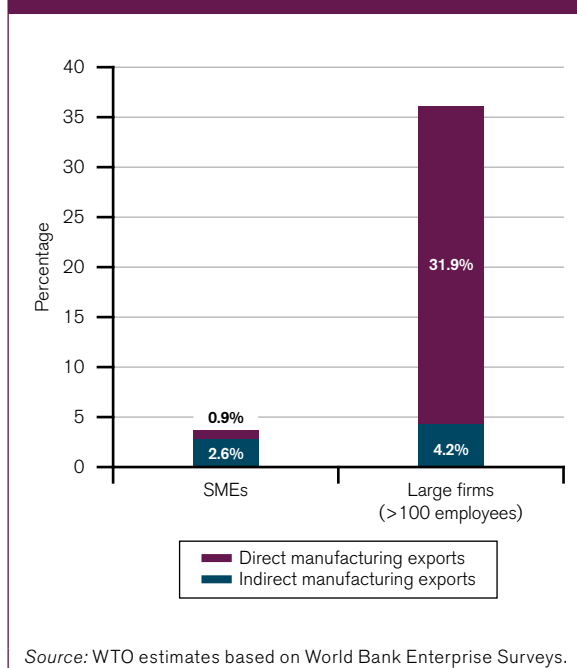


Figure B.18: Shares of direct and indirect services exports by firm size in developing economies (percentage of total sales)



SDBS, do not always cover GVC activity and they focus largely on developed economies.

The World Bank Enterprise Surveys shed light on SMEs' potential activity within GVCs in developing economies. The indicator within the Enterprise Surveys, "Percentage of material inputs and/or supplies of foreign origin" refers to the upstream linkages that SMEs set up with foreign partners to get inputs for their production and related exports. This indicator is used as a proxy for the backward participation in GVCs. Average backward participation was calculated as the average of foreign inputs used in the manufacturing process for each economy, by firm size and by manufacturing sector.

On the supplier side, two indicators are combined to approximate SMEs' forward participation to GVCs, namely the "Sales exported directly as percentage of total sales" and the "Sales exported indirectly as percentage of total sales". However, such indicators present some limits in outlining the actual role of SMEs in GVCs, as they do not give information on the end-use category of the exported goods and services. Although no distinction is made between exports of intermediate goods and services that are further used along the production chain, and products dedicated to final consumption, these two indicators are retained to estimate the potential of SMEs' downstream linkages to GVCs.

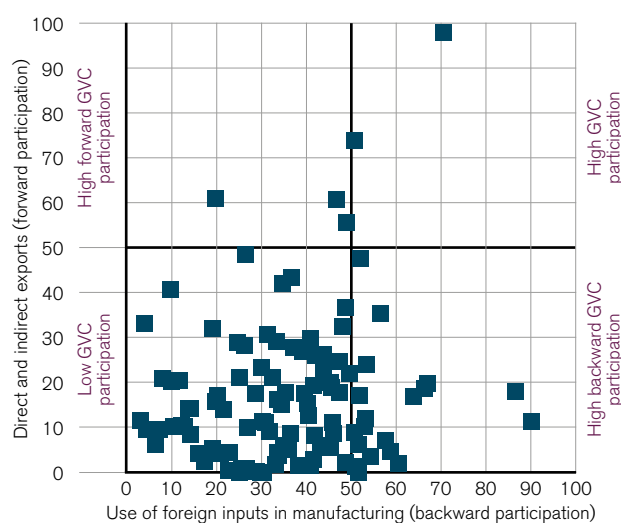
Over 33,000 surveyed establishments engaged in the manufacturing sector in developing economies reported the values of total sales, largely in local currencies, and their percentage breakdown into national sales, direct exports, and indirect exports. Values of direct exports and of indirect exports were calculated for each establishment then converted into US dollars. Direct exports and indirect exports data were then aggregated to provide average shares of direct exports and indirect exports for individual economies, further broken down by size of firm and by manufacturing sector.

According to WTO estimates, SMEs in the manufacturing sector in developing economies are not actively engaged in GVCs. Participation is mainly driven by upstream links (backward participation), with SMEs importing inputs needed in the manufacturing process from abroad. However, only a limited part of SMEs' production is exported to foreign countries, whether directly or indirectly. As shown in Figure B.19, the vast majority of SMEs in developing economies are located in the bottom left quadrant, suggesting a low GVC participation (low backward/forward participation).

The low levels of integration of SMEs into GVCs are evident especially if compared with large manufacturing firms (Figure B.20). In Developing Asia and in Latin America and the Caribbean, large firms are integrated into GVCs, as shown by some economies' very high values of backward/forward participation. By contrast, SMEs in the region have a low forward participation, with most countries concentrated in the bottom-left square in the chart, suggesting that they are not yet involved in GVCs. SMEs in Developing Asia also use on average fewer inputs of foreign origin (Figure B.21). This can be explained by the fact that Asia's industrial network is more advanced than in other developing regions. Asian firms are themselves the manufacturers of inputs/intermediate products, for foreign firms in particular, in developed economies. Necessary inputs are largely available domestically and so do not need to be imported from abroad.

Estimates suggest that in Africa, it is not only SMEs but also large firms that do not benefit from participation in GVCs. Both SMEs and large firms in several African economies show high backward participation. Compared with other regions, they import a large share of inputs from foreign countries in order to be able to manufacture their products. However, their forward participation is the lowest across all the developing regions. A sectoral analysis shows that, in general, SMEs' poor integration in GVCs affects all manufacturing industries, with the exception of the furniture-making sector, in which SMEs in LDCs have a high share of direct exports (as shown in the

Figure B.19: SMEs in developing economies: backward and forward participation in GVCs (share in total sales and share in total inputs, percentage)



Note: Each square represents the average GVC participation of SMEs in a given developing economy.

Source: WTO estimates based on World Bank Enterprise Surveys.

previous subsection). By contrast, large enterprises are relatively more connected to GVCs in several sectors, in particular in the textiles and garments industry and in the manufacturing of office equipment such as computers and electronic products. In these industries, developing economies have high levels of forward participation in GVCs. Large firms also show a good level of integration in GVCs in the leather goods manufacturing industry.

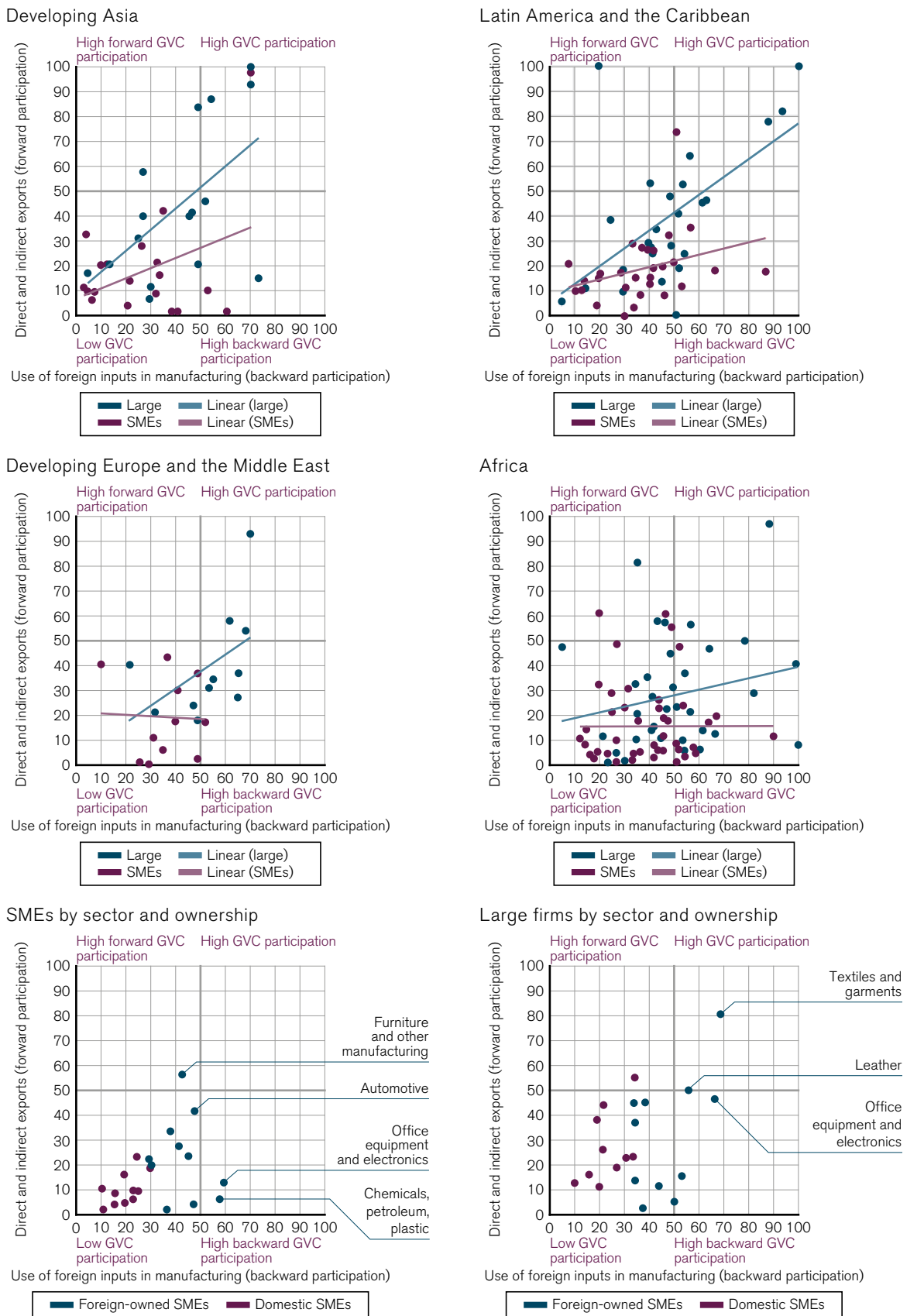
Figure B.20 also shows average backward/forward participation in GVCs by firm size, manufacturing sector and ownership. FDI plays an important role in firms' integration to GVCs, whether small or large. Estimates show that foreign-owned SMEs have more linkages to GVCs than domestic SMEs. These firms import more inputs to be used in the manufacturing process than domestic SMEs, showing higher levels of backward participation in GVCs. In addition, they can export a much larger share of their production (forward participation), and this applies to almost all manufacturing exports. For example, in the automotive sector, direct and indirect exports accounted for over 40 per cent of SMEs' total sales, while in domestic SMEs the share was around 10 per cent. Similarly, in the furniture manufacturing industry, which recorded the highest share of direct export to total sales, the contribution was essentially made by foreign-owned SMEs.

3. SME participation in international e-commerce

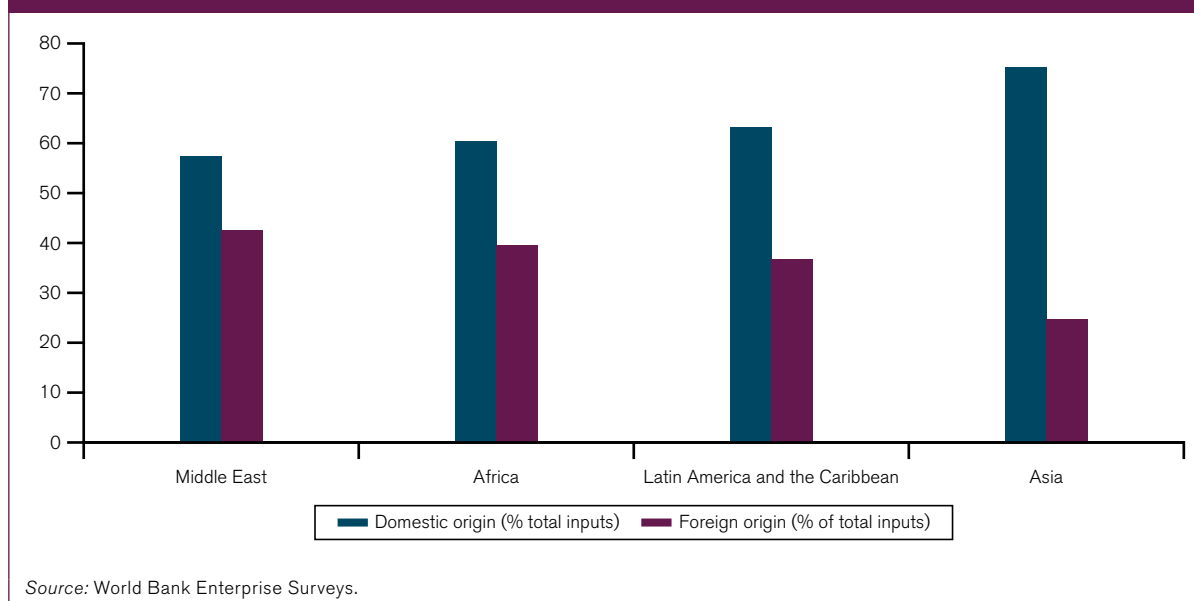
The development of electronic commerce as a means for firms to reach customers in overseas markets promises to dramatically expand export opportunities for SMEs if certain obstacles – including those related to information and communications technology (ICT) infrastructure, and to the legal and regulatory environment, discussed in Section D.4 – can be overcome. Retail businesses and service providers such as Amazon, eBay, PayPal and others now provide platforms and payment systems that facilitate exports by even the smallest firms. Digital technologies reduce trade costs for SMEs and give them a global presence that was once reserved for large multinational firms, allowing small businesses to compete directly with larger companies. Some of the services that the Internet-based technologies have made more accessible to SMEs include shipping/logistics, international payments, translation services, customer services and market research.

This section reviews available evidence on SME trade enabled by information technology. For the purposes of this report, e-commerce is defined as the production, advertising, sale and distribution of goods and services via telecommunication networks such as the Internet.

Figure B.20: SMEs and large enterprises: backward and forward participation in GVCs by region, ownership and manufacturing sector (share in total sales and share in total inputs, percentage)



Source: WTO estimates based on World Bank Enterprise Surveys.

Figure B.21: Use of foreign and domestic inputs in production of SMEs by developing region (percentage)

E-commerce can be broken down into sales (e-sales) and purchases (e-purchases). In its survey on ICT usage in enterprises survey, the European Union finds that purchases by companies are twice as frequent as sales.⁵ This section discusses cross-border online sales, as opposed to domestic online sales. It should be emphasized from the outset that most e-commerce today is reported to be domestic commerce, especially in large economies (McKinsey Global Institute, 2013a). Cross-border online transactions, as a share of total online sales to consumers, are significantly larger in some developing countries (e.g. more than 50 per cent in India and Singapore) than in developed countries (e.g. 20 per cent for Canada and 18 per cent for Japan) (McKinsey Global Institute, 2013a).

The Internet has proved to be significantly more amenable to SMEs than private business networks that predated it. The United Kingdom Office for National Statistics has estimated that between 2009 and 2013, SMEs web-based sales increased five times faster than sales via EDI (electronic data interchange) systems. eBay also published a series of studies (eBay, 2012; 2014; 2016) using data covering transactions on the eBay Marketplace since 2010. To ensure that the community of small commercial enterprises is properly captured, and that small individual sellers are excluded, the data are limited to transactions by sellers with annual sales of more than US\$ 10,000 (or local currency equivalents) on the eBay marketplace. These firms are referred to as “commercial sellers”, or small online businesses. To allow for comparisons with “traditional”, non-Internet-enabled SMEs, eBay has

used data from publicly available sources including the World Bank, Eurostat, and various national statistical agencies.

Broadly, these studies find that the vast majority of technology-enabled small firms export: 97 per cent of them on average, and up to 100 per cent in some countries. By comparison, only a small percentage of traditional SMEs exports (between 2 per cent and 28 per cent for all countries except Italy and Thailand, see Figure B.22). Not only do Internet-enabled commercial SMEs export at a high rate, they also reach a large number of foreign destinations. For example, SMEs in China typically export to 63 countries, and Korean SMEs typically export to 57 countries (Figure B.23).⁶

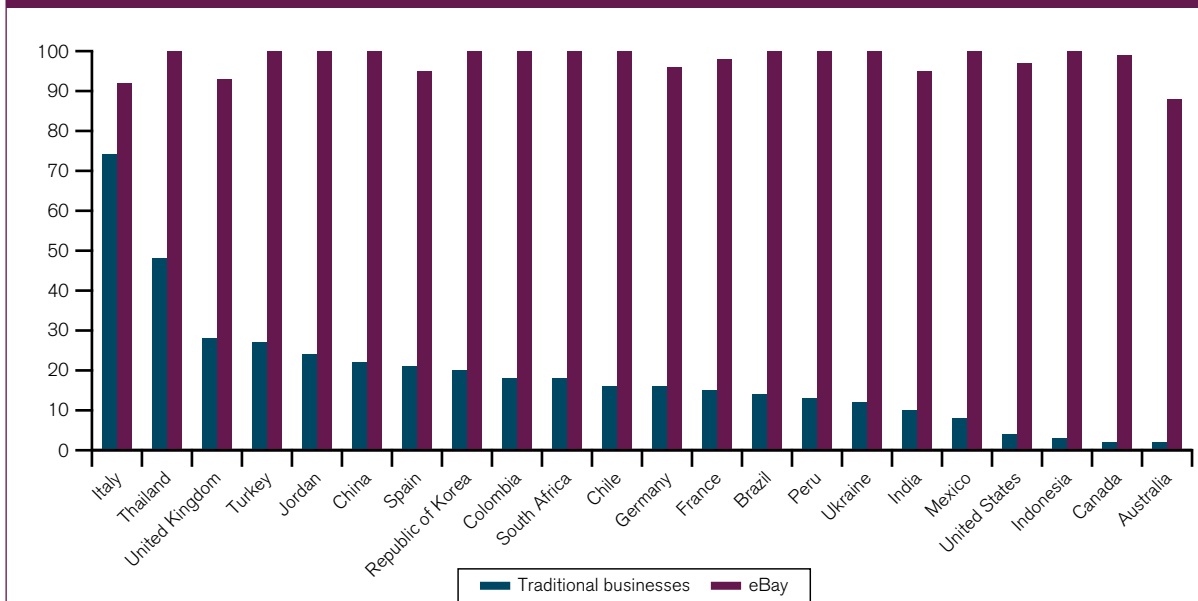
One difference between exporting SMEs and large exporters is that shipments from SMEs are often of low volumes and frequently consist of single items shipped through traditional mail or by express delivery companies. The rapid growth in shipments of parcels by post offices (Figure B.24) could signify growing shipments by SMEs. Growth has been fastest in developed countries (average annual growth of more than 10 per cent since 2005), but negative in Africa (-3.1 per cent) and stands at 0 per cent in Asia and the Pacific and in Latin America. One possible explanation for the low rates of postal delivery of packages in Africa, Asia and Latin America is that shipments in these regions may be conducted by express delivery companies and cost more than traditional mail. The 40 per cent rise in the index of international express delivery volumes registered by the Global Express

Association (DHL, FedEx, TNT, and UPS) between 2008 and 2013 is suggestive evidence in this regard.

Online buying and selling are relevant to trade in both goods and services. Even when trade in goods is involved, services also play a role. Online facilities, even those primarily offering merchandise, are also a form of retailing service. Moreover, online trade is

naturally relevant for services that can be delivered electronically. This encompasses such activities as professional services, business processing, back office services and digital products such as software, music, films, e-books and consultant reports. With the offer of online reservations, ticketing, tracking and customer service, tourism was among the first services sectors that engaged significantly in online business. As shown

Figure B.22: Share of eBay-enabled and traditional SMEs (percentage)

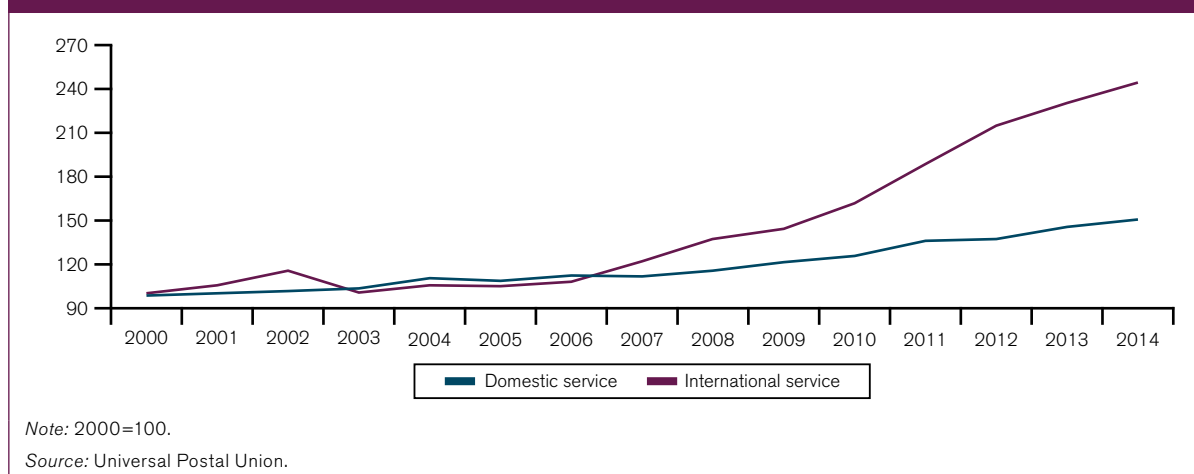


Source: Data for all countries were sourced from eBay (2016) except Jordan, Peru and Ukraine, which were sourced from eBay (2012), and Turkey, which was sourced from eBay (2014).

Figure B.23: Number of export destinations of eBay-enabled SMEs



Source: Data for all countries were sourced from eBay (2016) except Jordan, Peru and Ukraine, which were sourced from eBay (2012), and Turkey, which was sourced from eBay (2014).

Figure B.24: Index for worldwide number of ordinary parcels, domestic and international service, 2000-2014

in a case study on the sector in Egypt (Kamel and El Sherif, 2001), SMEs participated in this trend.⁷

An increasing number of e-commerce platforms are set up or adapted with the specific goal of assisting SMEs or even individual sellers, such as freelancers or designers of arts and crafts.⁸ For example, Etsy, an online market for artisans and small producers, recorded US\$ 2 billion in sales in 2014, with more than one-third of those representing international sales (McKinsey Global Institute, 2015). Large retail platforms and service providers such as Amazon, eBay and PayPal now provide or are developing ancillary services and payment systems to facilitate exports by even the smallest sellers. Such online marketplaces can offer SMEs a means to scale up at minimal cost, providing nearly instant solutions that include secure payment systems, logistics support, and global visibility of the kind once reserved for large firms.

Another promising development for SMEs engaging in all types of business activities is the growing number of independent commercial business-to-business (B2B) trade platforms. In the infancy of e-commerce, those that initially emerged were usually corporate procurement portals by large multinationals, permitting sellers to bid. The new models, however, offer sellers the possibility to market their wares to other businesses, and frequently tend to offer a wider range of goods and services than consumer-oriented platforms. Indiamart.com and Tradekey.com are two examples, offering on their websites a host not only of business supplies and equipment, but also a range of business, professional and financial (e.g. insurance) services.

Online sellers can also benefit from the possibility to analyse large volumes of data that is available from web-based applications, often referred to as Big Data.

By turning a series of discrete snapshots into a more holistic view of customer's behaviour and motivation, Big Data analysis can significantly boost online sales (Van Bommel et al., 2014). Such services are becoming more affordable for start-ups and SMEs (OECD, 2015a). Some e-commerce platforms offer such data to their sellers, while analytics software, often combined with cloud processing and storage, is also available for companies that sell via their own websites.

Even in situations where formal trading platforms are not easily accessible or affordable, social media are playing an important role in SME trade. Some commercial trade platforms, for example, require sellers to be registered businesses, whereas on social media, informal micro enterprises and even individual entrepreneurs can operate. Such sites may also be more readily accessible by means of mobile technologies for keeping in touch with customers as well as securing and organizing sales. Research by the McKinsey Global Institute (2016) shows that the number of SMEs with a Facebook page is growing, from 25 million in 2013 to 30 million in 2014 and 50 million in 2015. While local followers are currently in the majority, cross-border foreign exposure is significant (at 30 per cent). For example, more than 20,000 independent designers and artists showcase their work on Pinkoi, an online marketplace based in Chinese Taipei. The company has connected with customers in more than 47 countries, using Facebook to expand its reach throughout the Asia-Pacific region (McKinsey Global Institute, 2016).

Despite the promises of e-commerce, SMEs continue to be less well represented online than larger enterprises. One reason for this is the requirements involved in establishing a retail-ready website, which is a very important condition for facilitating online sales. In the United Kingdom (where 70 per cent of

individuals purchase products online, more than any other country according to Figure II.3 in UNCTAD, 2015) in 2013, nearly 77 per cent of firms with 49 or fewer employees had a website, whereas nearly 99 per cent of the largest firms surveyed had one (see Table B.1).⁹ Fewer SMEs in developing countries have a website, as shown in Table B.2. In a dynamic perspective, Table B.3 reports the share of enterprises receiving orders over the Internet, and its growth rate between 2010 and 2014. The table confirms that SMEs persistently rank behind larger firms in terms of online retail, despite moving toward online retail in most economies.

4. MSME trade participation over time

Very limited information is available on the evolution of MSME trade, either direct or indirect, in both developed and developing economies. No strong trend either up or down in export participation rates of MSMEs (0-250 employees) can be discerned from the

OECD TEC database, although slightly more than half of countries recorded increases over a relatively short period of less than 10 years, including large countries such as France and the United States (Figure B.24). Meanwhile, among developing countries and LDCs covered in the World Bank Enterprise surveys, one can observe a moderate growth of exports from SMEs (5-100 employees) between the first survey and the most recent one (see Figures B.25, B.26 and B.27). However, it is not possible to infer a significant trend, as sample data are too heterogeneous, having different benchmark years depending on countries.

Among LDC countries (see Figure B.26), Tanzania recorded the highest increase in exports for small enterprises between the two survey periods, with the share of exporting small enterprises moving from 2.8 per cent in 2006 to 11 per cent in 2013. This evolution is particularly due to the rise of indirect exports, most likely through larger enterprises. In general, the sample suggests that medium-sized enterprises in LDCs export more than smaller ones, with a greater increase in indirect exports between the two survey

Table B.1: Proportion of businesses in the United Kingdom with a website, by size of business, 2007-2013 (percentage)

Year	Employment size				
	10-49 employees	50-249 employees	250-999 employees	1,000+ employees	All size bands
2007	65.8	89.3	94.4	97.6	70.0
2008	70.6	91.3	95.2	97.9	74.5
2009	72.0	91.9	96.9	98.3	75.7
2010	75.3	92.3	96.0	98.7	78.5
2011	78.7	93.6	96.2	98.6	81.4
2012	77.6	92.9	95.7	98.7	80.3
2013	76.6	94.9	95.8	98.6	79.7

Source: UK Office for National Statistics.

Table B.2: Proportion of businesses in developing economies with a website, by size of business (percentage)

	Employment size				
	0-9 employees	10-50 employees	51-100 employees	101-250 employees	251+ employees
Developing	22.75	43.94	67.25	75.11	84.79
G20 developing	32.33	52.8	72.88	81.37	88.93
Other developing	23.62	43.79	65.88	73.66	84.88
LDCs	12.33	27.25	53.44	58.08	71.64

Source: World Bank Enterprise Surveys (last available survey per country), authors' own calculations.

Table B.3: Proportion of businesses receiving orders over the Internet (percentage)

Economy	10-49 employees			50-249 employees			+250 employees		
	2010	2014	% change	2010	2014	% change	2010	2014	% change
Countries with low proportion of orders received by firms with 10-49 employees in 2010									
Bulgaria	3.3	7.9	144%	6.0	11.5	92%	7.3	12.2	67%
Cyprus	5.9	8.7	46%	15.1	26.1	73%	14.8	33.5	126%
Estonia	8.7	12.5	44%	18.6	21.3	15%	29.7	32.0	8%
Greece	8.3	9.3	11%	13.0	18.7	44%	20.0	20.5	3%
Hungary	7.9	11.5	46%	12.9	17.9	39%	23.6	31.1	32%
Italy	4.5	7.3	62%	8.0	13.1	63%	16.6	26.0	57%
Latvia	6.2	7.5	21%	10.0	14.8	48%	15.5	22.8	47%
Poland	7.3	10.1	39%	11.8	16.1	37%	24.5	34.4	40%
Romania	6.4	7.4	15%	6.4	8.9	39%	8.2	15.1	84%
Slovak Republic	7.1	12.3	72%	10.0	19.5	95%	14.7	29.0	97%
Slovenia	10.0	15.1	50%	18.8	27.6	47%	39.0	50.2	29%
FYROM	3.7	6.8	87%	6.7	7.3	9%	6.0	10.7	77%
Countries with medium proportion of orders received by firms with 10-49 employees in 2010									
Austria	15.0	14.9	-1%	28.1	27.1	-3%	46.0	45.7	-1%
Belgium	25.9	22.1	-15%	42.6	32.8	-23%	53.3	49.1	-8%
Croatia	24.4	24.2	-1%	23.2	32.5	40%	29.9	51.9	74%
Czech Republic	18.8	26.1	39%	25.1	30.4	21%	38.7	45.1	17%
Denmark	27.8	25.8	-7%	33.6	35.4	5%	49.9	53.4	7%
Finland	15.8	15.4	-3%	30.9	32.4	5%	48.7	49.5	2%
France	12.3	12.4	1%	21.5	26.3	22%	34.7	44.2	27%
Germany	21.4	23.6	10%	30.2	30.3	0%	45.1	45.6	1%
Iceland	16.3	29.4	80%	34.7	53.8	55%	51.8	53.1	3%
Ireland	18.1	20.4	13%	33.6	40.4	20%	34.8	45.6	31%
Lithuania	21.3	17.9	-16%	24.0	24.6	2%	27.6	29.8	8%
Malta	15.1	15.9	5%	26.0	29.1	12%	27.8	30.7	10%
Netherlands	21.4	21.8	2%	30.5	31.5	3%	42.0	39.9	-5%
Portugal	18.3	12.6	-31%	24.8	24.3	-2%	36.5	40.6	11%
Spain	11.8	16.8	43%	18.9	26.6	41%	29.0	36.4	26%
Sweden	21.8	23.3	7%	39.6	39.7	0%	54.7	53.1	-3%
United Kingdom	14.3	19.3	36%	28.0	29.5	5%	43.8	47.9	9%
Countries with high proportion of orders received by firms with 10-49 employees in 2010									
Indonesia	26.1*	35.8	37%	57.8*	46.9	-19%	58.6*	54.6	-7%
Mauritius	35.7	35.4*	-1%	36.1	47.4*	31%	46.2	56.2*	22%
Norway	36.3	26.2	-28%	45.7	37.5	-18%	50.4	44.9	-11%
Singapore	42.0	56.3*	34%	61.0	62.9*	3%	57.1	69.2*	21%

Notes: * indicates 2013 data. Only economies for which time series data is available are included. FYROM is the former Yugoslav Republic of Macedonia.

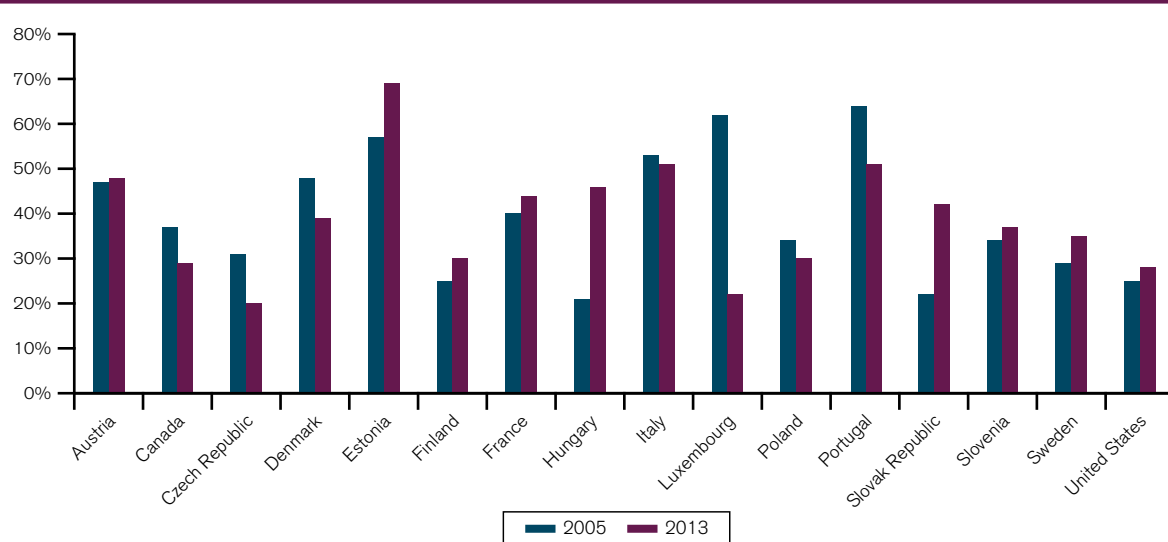
Source: Author's elaboration based on UNCTAD (2015) and additional data from UNCTAD.

periods. This is an indication of the rising integration into domestic value chains and maybe even global value chains, especially when enterprises act as local suppliers of foreign-owned corporations. Despite the increased contribution to international trade over time, the progression noticed for direct and indirect exports varies widely according to countries.

According to estimates based on the World Bank Enterprise Surveys, covering over 3,000 large firms

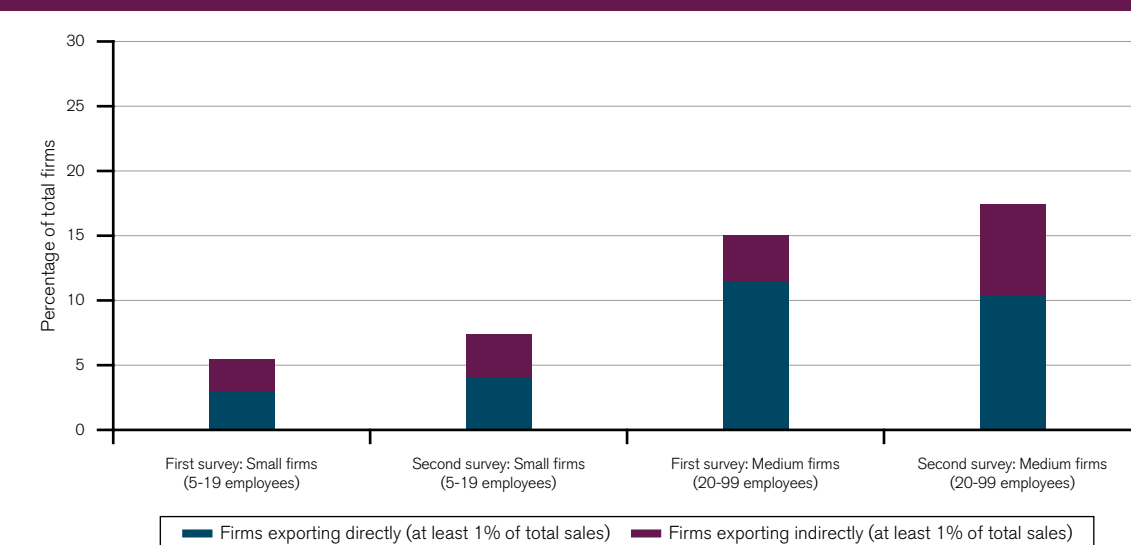
which started as SMEs in 85 developing economies, there is a negative correlation between the initial size of firms and the number of years they were in existence before they started to export. In the case of large firms which started as micro firms (one to four employees), it took on average 17 years before they exported, slightly less when the number of employees ranged between five and ten. The number of years drastically decreased for firms which started with a progressively higher number of employees (see Figure B.27).

Figure B.25: Share of MSMEs in exports of selected developed economies, 2005 and 2013 (percentage)



Source: OECD Trade by Enterprise Characteristics (TEC) database.

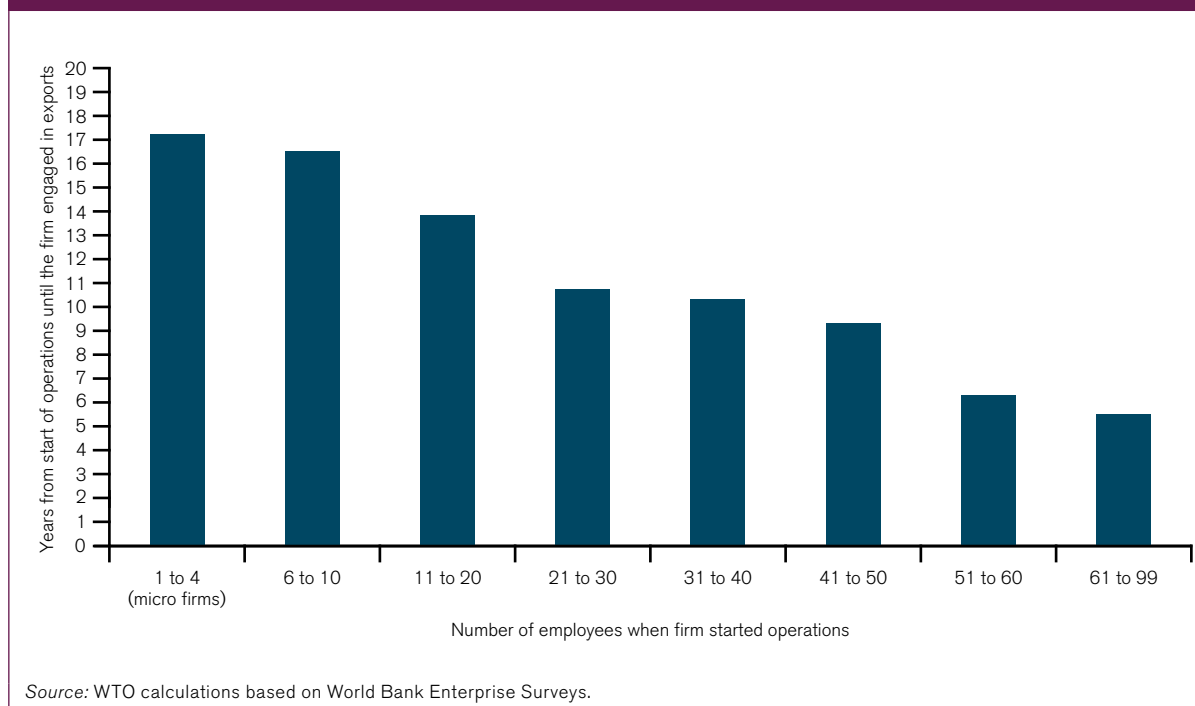
Figure B.26: Firms in LDCs that export directly and indirectly at least 1 per cent of total sales, by size of firm (percentage of total firms)



Note: First survey conducted between 2006 and 2010. Second survey conducted between 2011 and 2014.

Source: World Bank Enterprise Surveys.

Figure B.27: Time lag between firms' start of operations and engagement in exports by selected firm size in developing economies (years and number of employees)



On average it took less time for an SME in Developing Asia to start exporting compared with a firm of the same size in Africa or in Latin America. The longest time lag to export was found in the food sector, on average more than 14 years, twice the time necessary to begin exporting in the textiles and garments or office equipment and electronics manufacturing sectors. This applied to all developing regions, suggesting that SMEs in the food sector encounter additional difficulties to export if they do not comply with sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) standards (see Section D).

5. Conclusions

This section has surveyed statistical evidence on the participation of micro, small and medium-sized enterprises in international trade. It has found that the share of exporting SMEs is small when compared to that of large firms, and that the contribution of SMEs to total exports and imports is low. However, considerable heterogeneity exists across enterprise size classes, as well as along other dimensions. In developed countries in particular, the trade participation of medium-sized enterprises may approach that of large firms, whereas small and micro enterprises are less active in trade.

Meanwhile, SMEs in developing countries have low participation rates in both direct and indirect exporting, and SMEs with fewer employees take longer to access international markets than larger firms.

Internet-enabled SMEs are an exception to the rule of low trade participation, with very high rates of exporting approaching 100 per cent. The spread of online platforms promises to give small enterprises the ability to reach customers around the world. Reports from eBay find that, while only a small fraction of traditional SMEs (between 4 and 28 per cent) engage in exports, nearly all "Internet-enabled" SMEs do (97 per cent).

Since data limitations make it difficult to capture the full extent of indirect trade and GVC trade participation, this section of the report has also outlined new and better approaches to measuring SMEs' contributions to GVC trade in value added terms. The integration of SMEs in developing countries into global value chains is still relatively limited for reasons discussed in Sections C and D of this report, but new opportunities are becoming available.

Endnotes

- 1 For other definitions of internationalization, see for example Beamish (1999), Karlsen et al. (2003) or Zeng et al. (2008).
- 2 The OECD Trade by Enterprise Characteristics (TEC) database provides information on the value of exports and imports and the number of trading enterprises in 32 mostly developed countries (28 EU members plus Canada, Norway, Turkey and the United States) broken down by sector, size class and partner. Figures are produced by national statistical agencies by linking transactions data in merchandise trade statistics to business registries. Note that in international trade statistics, firm size is generally defined at the enterprise level, although these enterprises may still be part of a larger enterprise group.
- 3 The World Bank's Enterprise Surveys collect data from key manufacturing and service sectors in every region of the world. The surveys are conducted according to the global sampling methodology which uses stratified random sampling to minimize measurement error and to yield data that are comparable across economies. The sampling methodology generates a sample representative of the whole non-agricultural private economy, including services industries, and generates large enough sample sizes for selected industries to conduct statistically robust analyses with levels of precision at a minimum of 7.5 per cent for 90 per cent confidence intervals. This means that the population parameter is within the 7.5 per cent range of the observed sample estimate, except in 10 per cent of the cases.
- 4 Around 33,800 small, medium-sized and large firms surveyed by the World Bank reported the amount of their total sales and their breakdown into national sales, direct exports and indirect exports (sold through a domestic party that exports). The WTO Secretariat classified each establishment as a manufacturing or services enterprise on the basis of the reported main product/sector code according to the International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 3.1. In the surveys, the main product/sector was the one that represented the largest proportion of annual sales, which, following calculations, accounted on average for more than 83 per cent of annual sales of manufacturing SMEs and for 81 per cent of services SMEs. This information was corroborated by the description of the main two products/sectors of activity as reported by each establishment. It should be noted that only 17 per cent of all establishments surveyed by the World Bank in different countries and in different years were part of larger firms; the bulk were stand-alone firms.
- 5 The European Union Community survey on ICT usage and e-commerce in enterprises is an annual survey conducted since 2002, collecting data on the use of information and communication technology, the Internet, e-government, e-business and e-commerce in enterprises.
- 6 Recent research focusing on US firms (Lendle et al., 2013) has also found that exports are less concentrated in online exporters than in offline ones. The top 10 per cent of US online exporters capture less than 70 per cent of exports, whereas offline the top 10 per cent of US offline exporters capture more than 85 per cent of exports. This study, however, does not focus on SMEs.
- 7 Kamel and El Sherif (2001) argue that e-commerce offered Egyptian SMEs in the tourism industry "a competitive tool to increase profitability using the web technology as a promotion, marketing, and selling tool, with an immediate effect" by reducing dependency on costly travel intermediaries and attracting reservations from around the world.
- 8 Governments and international organizations have also set up platforms with the goal of facilitating participation by SMEs in e-commerce. Analysing the effectiveness of government-sponsored platforms in Australia, Gengatharen (2006) notes that, in some cases examined, it was only after six years of operation that some SMEs began to experience economic benefits. As a result, the study stresses that the factors contributing to successfully benefitting SMEs include a commitment to a long gestation period, and commensurate funding, not only for the development and maintenance of the platforms but also for their evaluation, as well as recognition of the need to devote specific attention to building the e-competencies of SMEs themselves. For an overview of e-commerce-related initiatives established by the ICT, see Section D of this report.
- 9 Table B.1, however, also shows that the smallest firms increased ownership of a website presence by ten percentage points between 2007 and 2013, and firms with 50 to 249 employees by five percentage points.