International trade, foreign direct investment and global value chains

OECD

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ESTONIA

TRADE AND INVESTMENT STATISTICAL NOTE

International trade and foreign direct investment (FDI) are the main defining features and key drivers of global value chains (GVCs). However, despite their strong complementarities, the two flows are typically presented and treated separately in the statistical information system. Drawing on new and improved measures of trade and investment, this country note provides relevant statistical information from OECD databases on trade, investment, the activities of multinational enterprises (MNEs) and global value chains (TiVA). It sheds new light on the trade-investment nexus by highlighting the interrelationships between trade and FDI, their economic impact in the context of GVCs, and the role of MNEs as the main directors of these flows. The data are as of 1 May 2017. More information and country notes are available at www.oecd.org/investment/trade-investment-gvc.htm.

Estonia is an open and internationally engaged economy, reflected in high volumes of both gross and value added trade and inward investment. Inward investment helps integrate the Estonian economy into GVCs; exports account for over 50% of the turnover of foreign owned firms. Foreign owned firms directly support 38% of private sector jobs in Estonia and 41% of value added. Estonia is one of the more export orientated countries in the OECD, with 44% of its domestic value added meeting foreign final demand. Taking a broader notion of international orientation, which captures the impact on national income of exports and sales through foreign affiliates, Estonia has a lower international orientation than trade data alone would suggest because it is a net recipient of inward investment. Nevertheless, it remains one of the most internationally oriented of OECD countries.

Considering both trade and investment through this broader perspective can also shed new light on Estonia's most important partner countries. For example, while most partner countries supply Estonian consumers mainly through trade, Finnish firms do a substantial part through sales by foreign affiliates. Furthermore, the United States and United Kingdom become more important partners than Latvia, Estonia's largest trading partner, because of their more extensive investment links with Estonia.

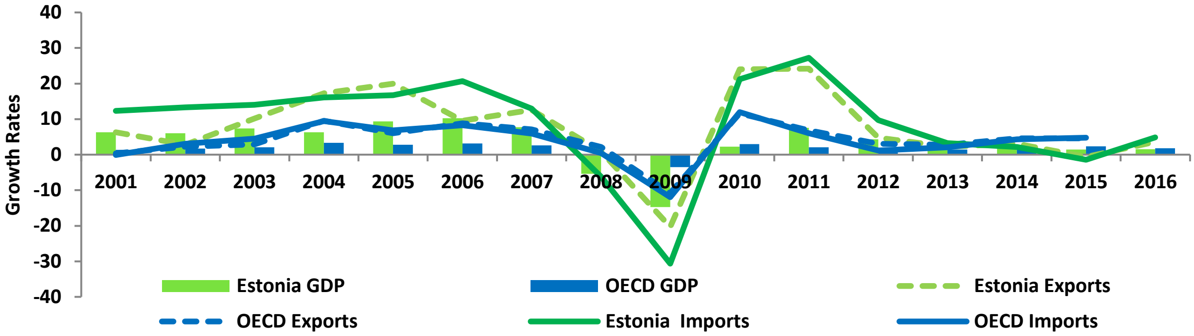
The top manufacturing export industries in Estonia are computers and electronics products (CEQ), wood and and products of wood (WOD) and food products (FOD). The computer and electronic industry is deeply integrated in GVCs as measured by the import content of exports (57%), consistent with a high share (90%) of value added produced by foreign-owned firms. Estonia has high services content in its exports at 62%, and this is correlated with a relatively high share of its inward investment going to the services sector.

Trade and investment in Estonia

Growth in trade had recovered after the global crisis but has struggled since 2012

Like many OECD economies, Estonian trade contracted significantly at the height of the global crisis and again during the euro crisis. Estonian trade growth was above the OECD average in the pre-crisis years, and recovered strongly post crisis. Since 2012 trade growth has been subdued; a possible spill-over of sanctions on Russia by the international community. In 2016, export growth rose to 3.6%.

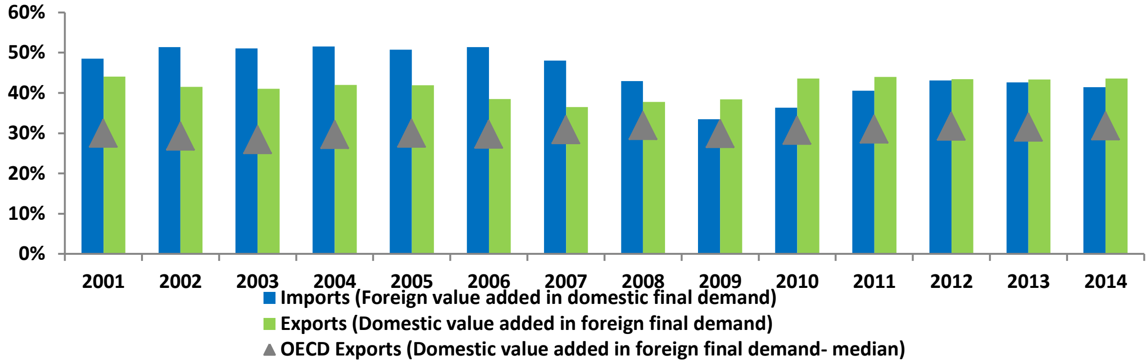
Figure 1. Growth rates of trade and GDP for the OECD and Estonia, 2001-2016



Source: OECD SNA

Gross exports amounted to USD 18 billion in 2016, (93% of GDP), and gross imports to USD 17 billion, (88% of GDP). Gross trade figures however overstate the ‘real’ contribution of trade to the economy. In value-added terms, exports contributed 44% of total GDP in 2014; this has been consistent for the last five years, and above the OECD median (grey diamond). The contribution of direct and indirect imports to domestic final demand measured 41% in 2014.

Figure 2. Trade in value added terms, imports and exports, 2001-2014

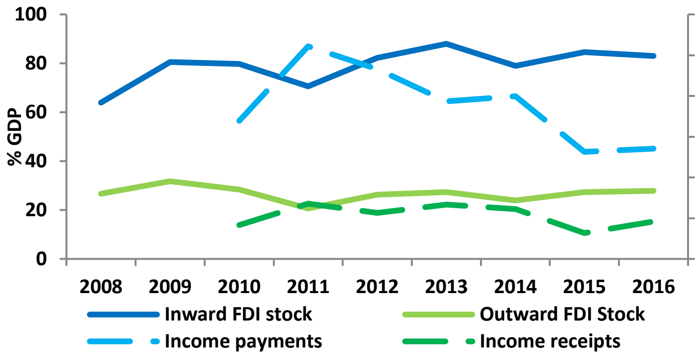


Source: OECD-WTO Trade in Value Added Data

Investment is more inward than outward

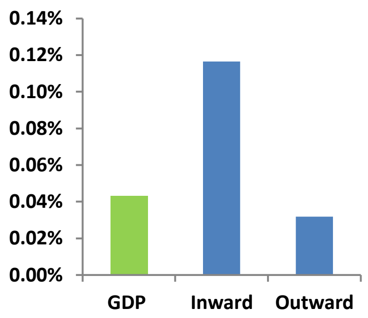
Estonia's inward FDI stocks have been growing relative to GDP since 2008, but less so for outward FDI stocks, resulting in FDI remaining heavily inward orientated (Figure 3). In 2015, Estonia’s share of the OECD total inward FDI stock (0.12%) was three times higher than its share of GDP (0.04%), but its share in outward stock was 0.03% of the OECD total, below its share of GDP (Figure 4).

Figure 3. FDI stocks and income as a share of GDP



Source: OECD FDI Statistics (BMD4)

Figure 4. FDI stocks and GDP as a share of OECD total, 2015



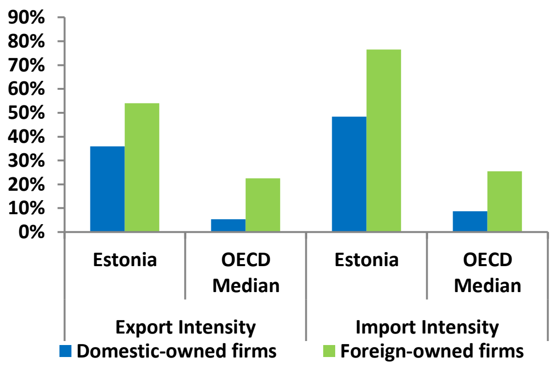
Source: OECD FDI Statistics (BMD4)

Foreign-owned firms directly sustained 38% of jobs in the private sector in 2013….

Reflecting the relatively large size of inward investment compared to other OECD economies, foreign-owned enterprises accounted for 38% of jobs in the private sector in 2013 and 41% of private sector value added produced in Estonia, excluding the agriculture and finance sectors.

…and foreign owned firms are more export intensive than domestically owned firms

Figure 5. Export and import intensity of domestic and foreign-owned enterprises



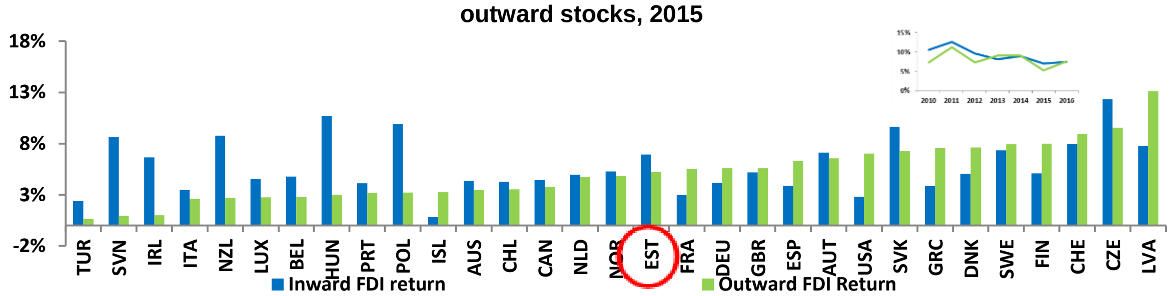
Source: OECD AMNE and Trade by Enterprise Characteristics (TEC) statistics (2011)

On average, foreign-owned firms in Estonia are more export intensive (share of exports in turnover) as domestically owned firms, and their export intensity is twice the OECD median. The import intensity of foreign-owned firms (share of imports in purchases) is also significantly higher for foreign-owned than domestic firms, and three times as high as the OECD median.

Domestic MNEs provide important channels to penetrate foreign markets via affiliates…

In 2015, Estonia received USD 483 million in income from its outward investment, equivalent to approximately 1% of GDP. Estonia's rate of return at 5.2% (green bar) on its outward FDI is at the OECD median, but is below its 2011 peak rate (see chart insert). On the other hand, the return to foreign investors in Estonia was 6.9% in 2015, at the higher end of OECD countries.

Figure 6. Return on investment, income receipts and payments as a share of inward and outward stocks, 2015

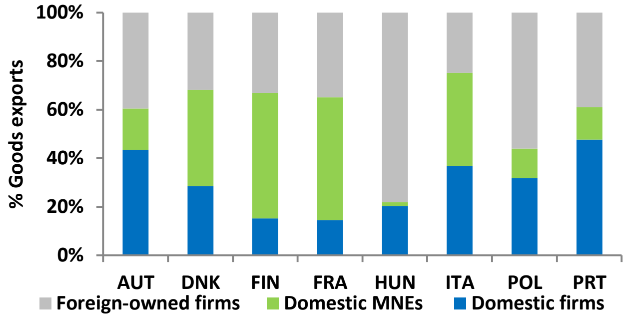


Source: OECD FDI Statistics (BMD4)

…or via exports

In some European economies, parent MNEs play a substantial role in GVC integration. Goods exports and imports are by mainly by these parent MNEs, while for other economies, foreign-owned firms offer a channel for GVC participation. This breakdown cannot be made for Belgium due to data availability.

Figure 7. Goods Exports by firm type, the role of MNEs

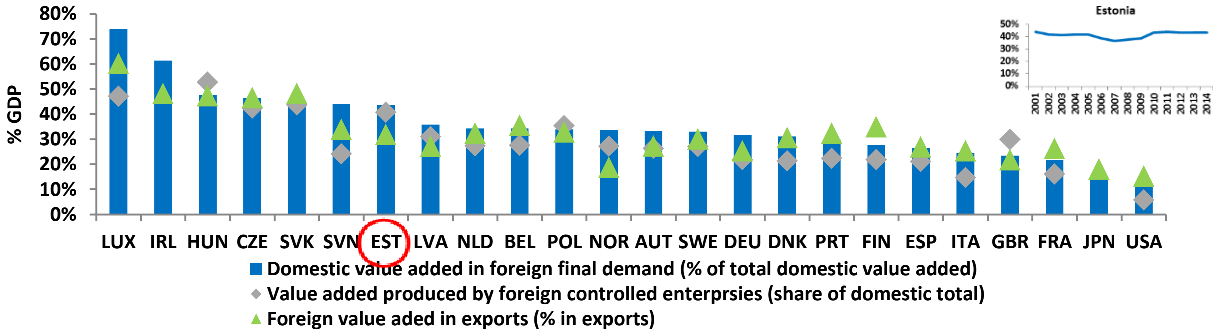


Source: OECD TEC statistics (2011)

Estonia's export orientation is comparable to similarly to similarly sized economies

Exports (in value added terms) contribute around 44% of Estonian GDP, this is towards the upper end of OECD countries and comparable with Slovenia and Slovakia. This may in part reflect high levels of inward investment and their relatively high export intensity (compared to foreign affiliates operating in other countries) contributing to their GVC integration as measured by the import content of exports. Estonia's export orientation recovered and has remained stable since the crisis.

Figure 8. Export orientation, foreign affiliates value added and import content of exports, 2014

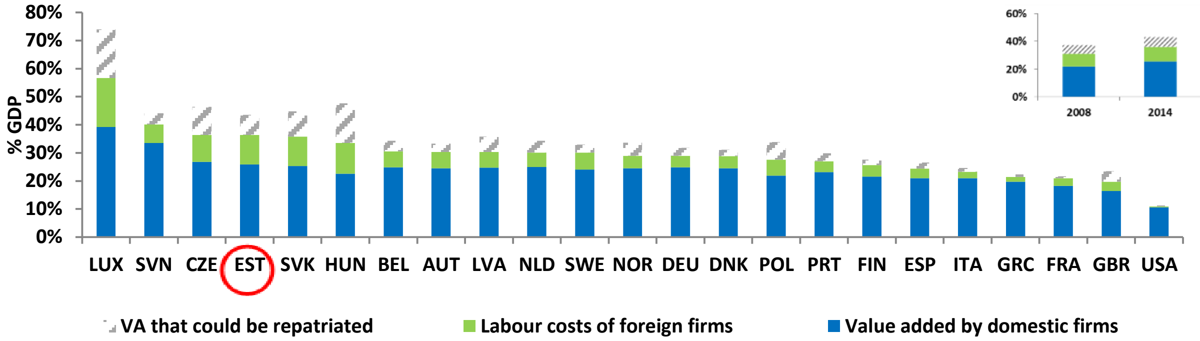


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

Not all of the domestic value added content of exports sticks in the economy…

Gross export figures overstate the real economic impacts of trade to the exporting economy, but TiVA estimates can also overstate these impacts as the profits earned by foreign-owned firms through exports are repatriated if they are not reinvested. Figure 9 illustrates the importance of these flows across countries by showing the value added in exports of domestically-owned firms (blue bar), wages paid by foreign-owned firms (green bar), and profits of foreign-owned firms (grey bar), which in practice can be repatriated. Excluding these profits, Estonian exports contain 36% of value-added that remains in the economy; 10% is wages paid by foreign-owned firms. So, 17% of Estonia's exported domestic value added represents profits by foreign-owned firms reflecting high levels of inward investment and their export intensity. The share of value added that remains in the economy increased since 2008 (see chart insert).

Figure 9. Exports by ownership and their contribution to income, as a share of GDP, 2014

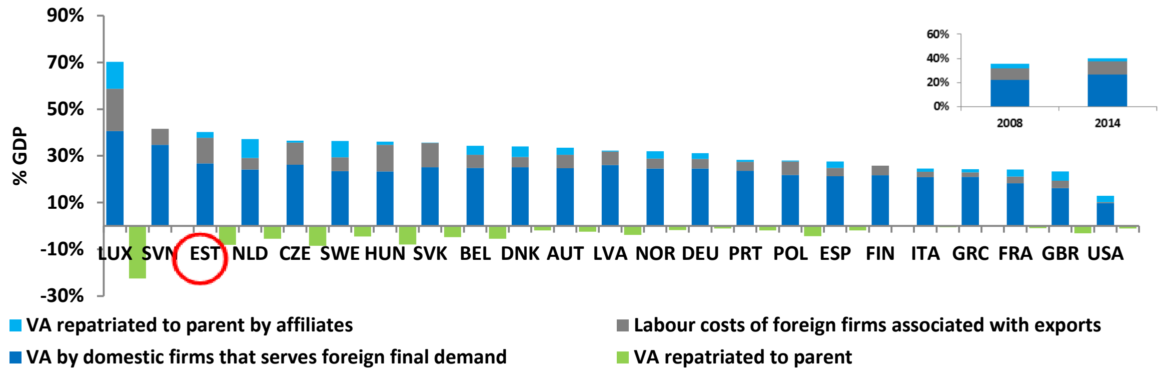


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

Taking a broader view by including the income of foreign affiliates can provide a more complete picture of the international orientation of the Estonian economy

Firms serve foreign markets by exporting or by selling through their foreign affiliates. Figure 10 takes a broader view of an economy's international orientation by taking account of both trade and investment. The chart begins with the domestic value added in exports that remains in the economy – exports of value added by domestic firms (blue bar) and wages paid by foreign-owned firms associated with exporting (grey bar) – and adds to it the profits that domestic MNEs receive from the activities of their foreign affiliates as measured by FDI income receipts (light blue bar). The income payments made to foreign parents are presented for information purposes (green bar). For Estonia this broader measure is lower (40%) than the export orientation measure from TiVA (44%) because Estonia is a net recipient of FDI. Estonia remains at the upper end of OECD countries using this measure, and this has increased since 2008, mainly due to higher exports of value added (see chart insert).

Figure 10. Supplying markets through trade and investment: a broader perspective, 2014



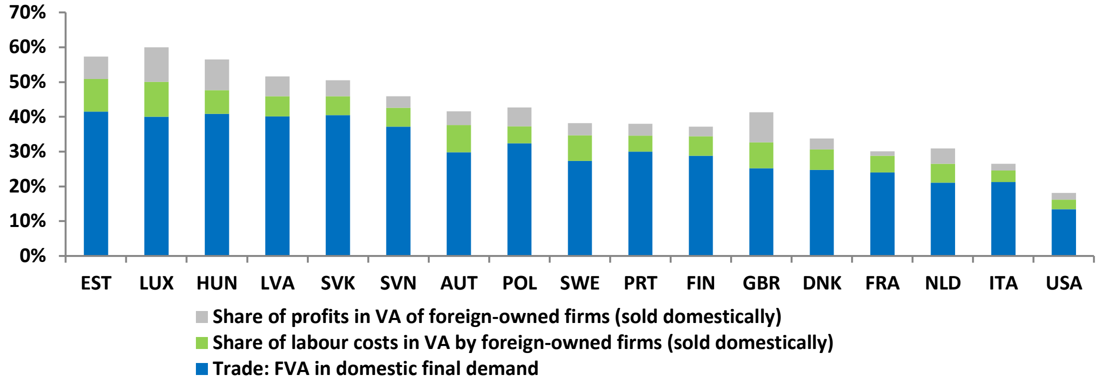
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD FDI (BMD4) statistics

This broader perspective can also shed light on how foreign firms serve the Estonian market

Foreign producers supplied products and services for Estonian final consumption equivalent to 57% of GDP in 2014, the majority is through trade (foreign value added in Estonian final demand equals 41% of GDP), but value added generated by foreign affiliates in Estonia for domestic (non-export) sales (Figure

11) accounts for a substantial 16% of GDP. Although some of this value added can be repatriated to parents, that share is similar to other OECD economies (grey bar).

Figure 11. How foreign firms serve your market: a value added perspective, 2014



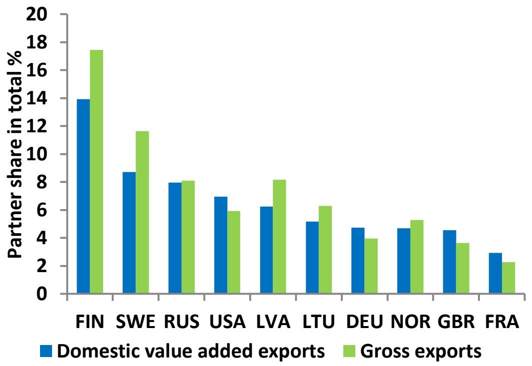
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD TEC statistics

Trade and investment by partner country

Trade measured from a value added perspective better reflects the bilateral relationships

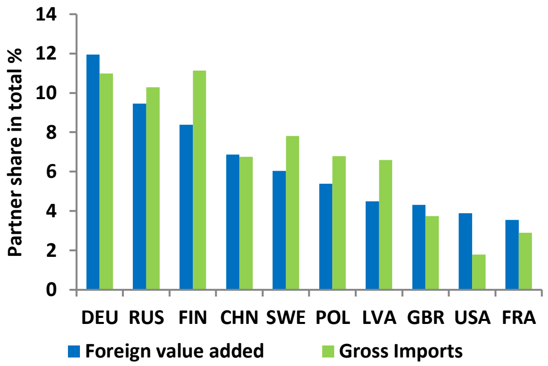
Gross bilateral trade figures can disguise the true nature of trade interdependencies, particularly between final consumers in one country and producers at upstream parts of the value chain. This is evident for the bilateral relationship with the United States and Latvia as their relative importance for Estonian exports switches when looking at value added instead of gross trade statistics.

Figure 12. Exports: gross and value added terms, by partner country, 2014



Source: OECD-WTO TiVA Data

Figure 13. Imports: gross and value added terms, by partner country, 2014

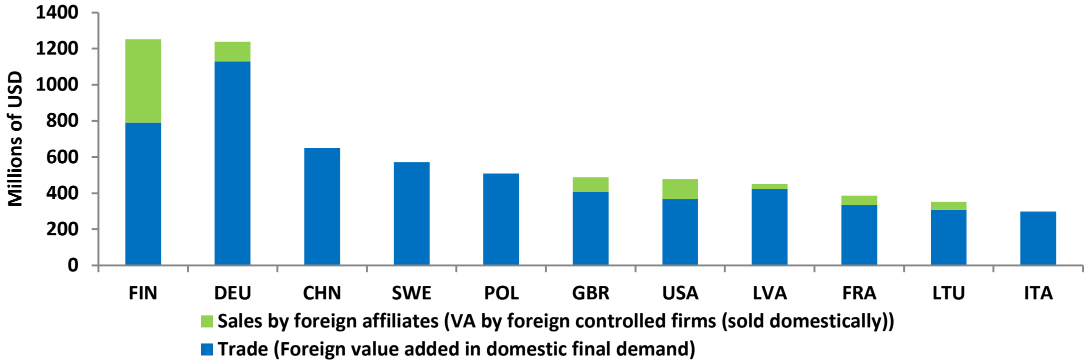


Source: OECD-WTO TiVA Data

…and interdependencies are further revealed when looking at the broader notion of 'trade'

Foreign firms can serve an economy though trade or sales by foreign affiliates; bringing the trade and investment perspectives together can shed a different light on who a country's most important partners are (Figure 14). Substantial variation exists across countries in how they supply the Estonian market. For example, while most partner countries supply Estonian consumers mainly through trade, Finnish firms do a substantial part through sales by foreign affiliates. Furthermore, considering both trade and investment, the United States and United Kingdom are more important partners than Latvia; this is not evident when looking at trade alone.

Figure 14. Supplying the Estonian market via trade and investment: Top 10 partner countries, 2014



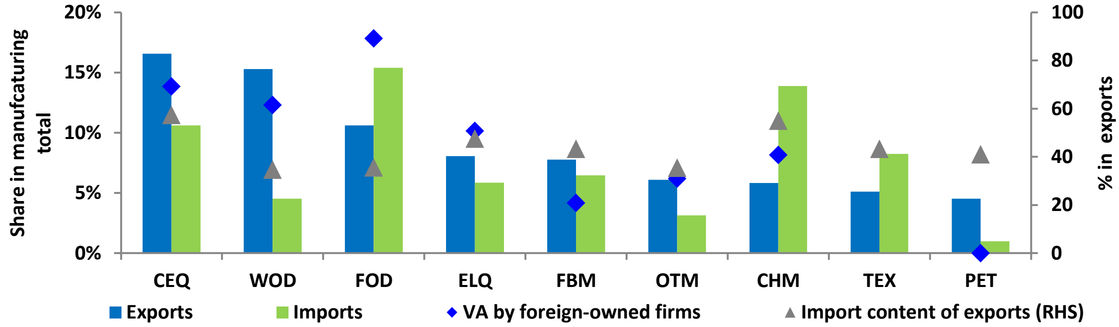
Source: OECD-WTO TiVA Data and OECD AMNE statistics
Note: Data on foreign affiliate presence are not available for China, Sweden or Poland.

Trade and investment by industry

Inward investment helps shape Estonia's GVC integration

The top manufacturing exporting industries in Estonia are computers and electronic products (CEQ), wood and products of wood (WOD) and food products (FOD). The import content of exports is relatively high in these industries–illustrating the role that importing plays in supporting exports and indicating the degree of GVC integration in these industries. The role of foreign-owned firms varies across Estonian industries.

Figure 15. Top exporting manufacturing industries in Estonia, 2014

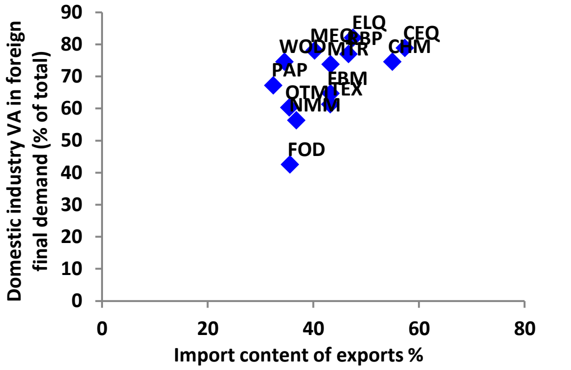


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics. See page 10 for a description of industry codes.

Exports and imports go hand in hand…

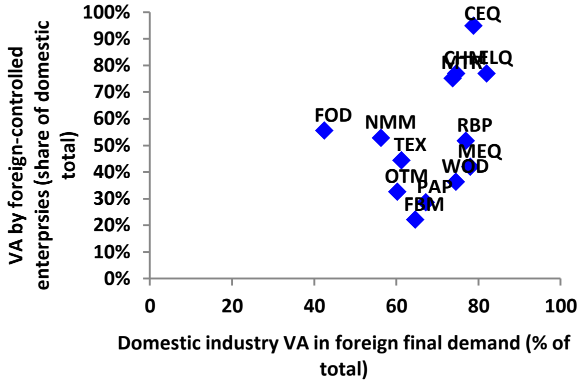
Across most industries there is a strong correlation between higher import content of exports and a higher share of their domestic value-added being exported (export orientation) illustrating the strong complementarity of exports and imports.

Figure 16. Import content of exports and export orientation, 2014



Source: OECD-WTO TiVA Data and OECD AMNE statistics

Figure 17. Foreign-owned firms and export orientation, 2014



Source: OECD-WTO TiVA Data and OECD AMNE statistics

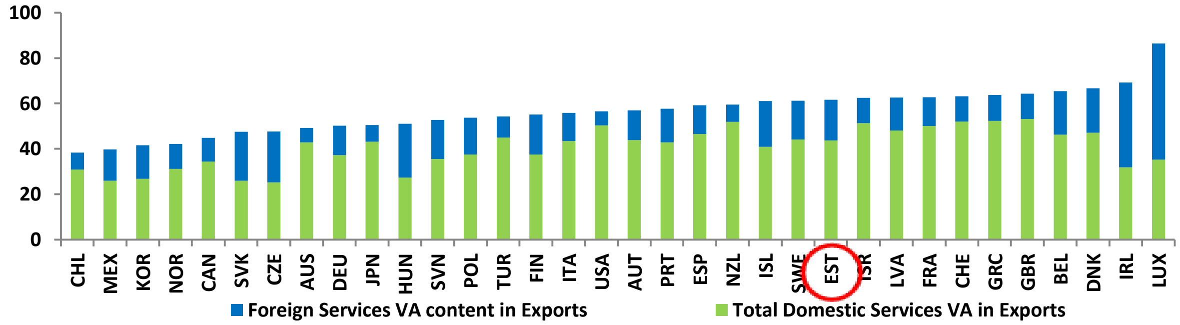
...and investment and export orientation can also go hand in hand

At the same time, strong complementarities can exist between inward investment and export orientation (Figure 17). For Estonia, the industries where foreign-owned firms produce more of the value added are also those that are more export orientated. Figure 18, goods trade by enterprise ownership and industry, cannot be calculated for Estonia due to TEC data availability at the industry level for foreign ownership, domestic MNE and domestic non-MNE ownership.

Service industries play an important role in the export orientation of an economy…

Typically, services account for a large share of the value added in the economy but conventional gross trade statistics understate this as they cannot reveal the contribution that the upstream services industry plays in the production of goods exports. Accounting for this contribution, the services content of Estonia's total exports of goods and services was 62% in 2014 (Figure 19), above the OECD median of 57%. Considering the services content of manufactured goods alone, 40% of manufacturing exports reflects services value added, significantly above the OECD value of 36%.

Figure 19. Services content of gross exports for OECD countries, 2014

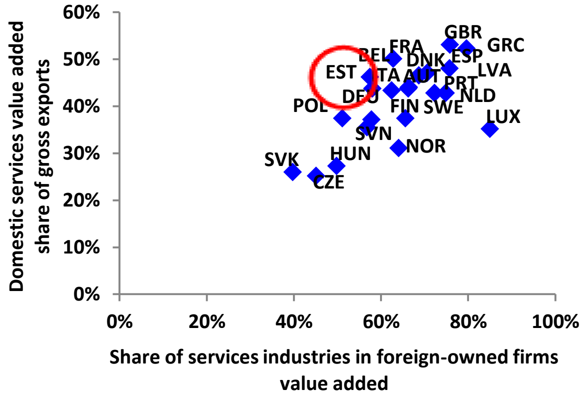


Source: OECD-WTO TiVA Data

…and so inward FDI in the services sector can be an important channel for export success

Greater foreign investment in the services sector is associated with higher services content in exports. For Estonia, the services content of its exports is relatively high despite its share of investment in services being below the OECD median.

Figure 20. Share of services industries in foreign-owned firms' value added and domestic services value added share of gross exports, OECD countries, 2014



Source: OECD-WTO TiVA Data and OECD AMNE statistics

Links and data sources

Guide to the trade and investment statistical notes
www.oecd.org/investment/Guide-trade-investment-statistical-country-notes.pdf

Activity of Multinational Enterprises - AMNE www.oecd.org/sti/ind/amne.htm

OECD Benchmark Definition of Foreign Direct Investment - 4th Edition (BMD4)
(see Chapter 8 for information on the intersection of AMNE and FDI data)
www.oecd.org/investment/fdibenchmarkdefinition.htm

Foreign Direct Investment (FDI) Statistics www.oecd.org/investment/statistics.htm

Trade by Enterprise Characteristics - TEC
www.oecd.org/std/its/trade-by-enterprise-characteristics.htm

Trade in Value Added - TiVA
www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm

Table of industry codes

Industry Type	Ind Code	Industry Description
Primary Industries	AGR	Agriculture, hunting, forestry and fishing
	MIN	Mining and quarrying
Manufacturing	FOD	Food products, beverages and tobacco
	TEX	Textiles, textile products, leather and footwear
	WOD	Wood and products of wood and cork
	PAP	Pulp, paper, paper products, printing and publishing
	PET	Coke, refined petroleum products and nuclear fuel
	CHM	Chemicals and chemical products
	RBP	Rubber and plastics products
	NMM	Other non-metallic mineral products
	MET	Basic metals
	FBM	Fabricated metal products except machinery and equipment
	MEQ	Machinery and equipment n.e.c
	CEQ	Computer, electronic and optical products
	ELQ	Electrical machinery and apparatus n.e.c
	MTR	Motor vehicles, trailers and semi-trailers
	TRQ	Other transport equipment
	OTM	Manufacturing n.e.c; recycling
Services	EGW	Electricity, gas and water supply
	CON	Construction
	WRT	Wholesale and retail trade; repairs
	HTR	Hotels and restaurants
	TRN	Transport and storage
	PTL	Post and telecommunications
	FIN	Finance and insurance
	REA	Real estate activities
	RMQ	Renting of machinery and equipment
	ITS	Computer and related activities
	BZS	Research and development & Other Business Activities
	GOV	Public admin. and defence; compulsory social security
	EDU	Education
	HTH	Health and social work
	OTS	Other community, social and personal services
	PVH	Private households with employed persons