

International trade, foreign direct investment and global value chains



2017

CZECH REPUBLIC

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.

The Czech Republic is an open and internationally engaged economy, reflected in high volumes of both gross and value added trade and inward investment. Almost one-half (46% in 2014) of economic activity (GDP) in the Czech Republic is exported, around the same as in Hungary and Slovakia. Inward investment in the Czech Republic supports over one quarter of all private sector jobs and 42% of the private sector's value added. Taking a broader view of international orientation that captures the impact on national income of both exports and sales through foreign affiliates, the Czech Republic has a lower international orientation than trade data alone would suggest because it is a net recipient of direct investment. Nevertheless, it remains towards the upper end of OECD countries and the wages paid by foreign-owned firms are equivalent to 10% of GDP, one of the highest in the OECD.

Gross bilateral trade figures can disguise the true nature of trade interdependencies. This is evident for the bilateral relationship with the United States; gross measures understate the relative relations of the two economies. Once value added is considered, the United States moves to the second most important export destination from just outside the top 10.

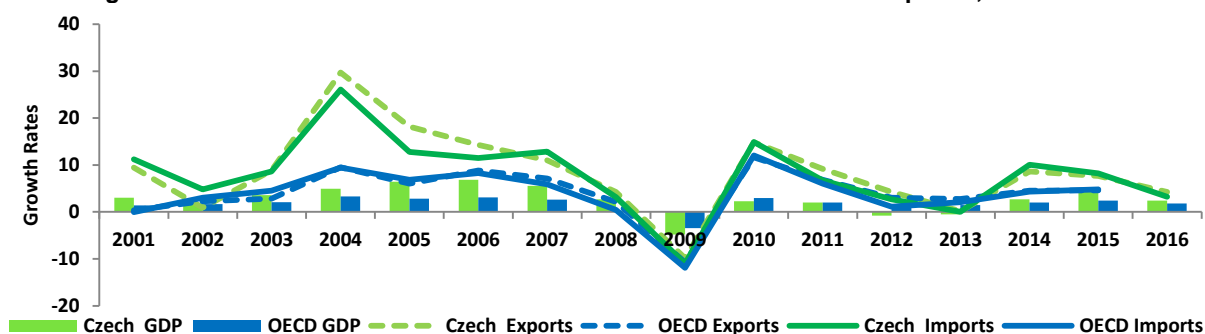
The top manufacturing exporting industries in the Czech Republic are motor vehicles (MTR) and computer, electronic and optical products (CEQ). In the former, inward investment plays an important role in GVC integration, where 90% of value added is produced by foreign-owned firms. While the computer industry has an extremely high export orientation with over 90% of domestic value added meeting foreign final demand.

Trade and investment in the Czech Republic

Growth in trade has recovered since the global and euro crises but slowed in 2016

Like many European economies, Czech trade contracted significantly at the height of the global crisis and again during the euro crisis. Czech trade growth was higher than the OECD average in the pre-crisis years, this continued post-crisis albeit to a lesser extent. However, in 2016, export growth slowed to 3.2%.

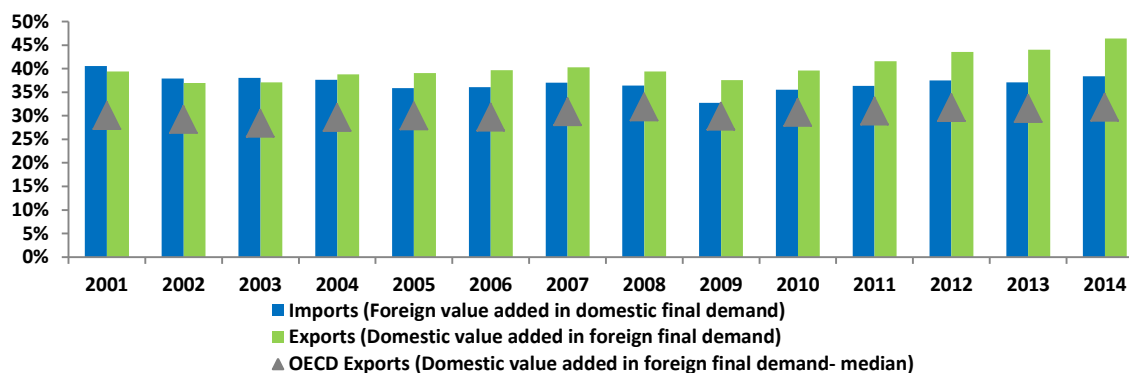
Figure 1. Growth rates of trade and GDP for the OECD and the Czech Republic, 2001-2016



Source: OECD SNA

Gross exports amounted to USD 156 billion in 2016 (89% of GDP), and gross imports to USD 141 billion (81% of GDP). Gross trade figures however overstate the ‘real’ contribution of trade to the economy. In value-added terms, exports contributed 46% per cent of total GDP in 2014, the highest value recorded and above the OECD median (grey diamond). The contribution of direct and indirect imports to domestic final demand reached a post-crisis high of 38% in 2014.

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

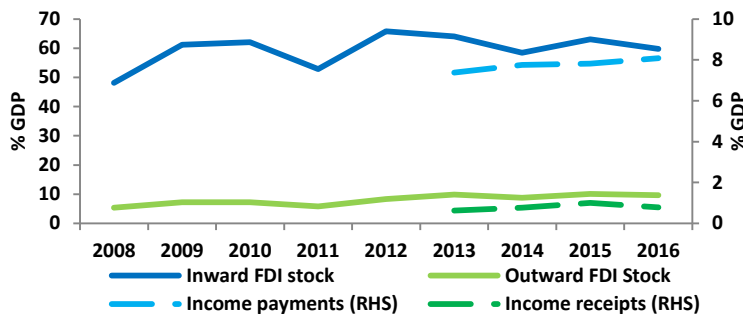


Source: OECD-WTO Trade in Value Added Data

Investment is more inward than outward

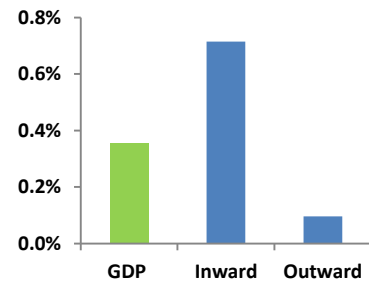
Although both outward and inward FDI stocks have been growing relative to GDP since 2008, FDI remains heavily inward orientated (Figure 3). In 2015, the Czech Republic’s share of the OECD total inward FDI stock (0.7%) was twice its share of GDP (0.4%), but its share in outward stock was 0.1% of the OECD total, significantly lower than 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)

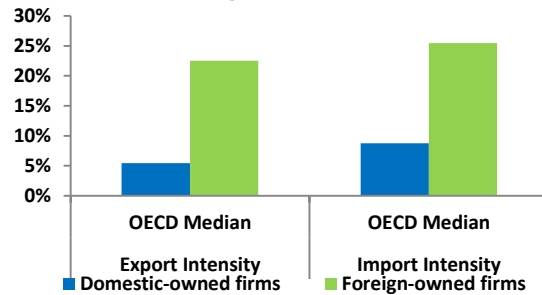
Foreign owned firms directly sustained 27% of jobs in the private sector in 2013....

Reflecting the relatively large size of inward investment compared to other OECD economies, foreign-owned enterprises accounted for 27% of jobs in the private sector in 2013 and 42% of private sector value added produced in the Czech Republic, excluding the agriculture and finance sectors.

...and are more export intensive than domestically owned firms

On average, foreign-owned firms in the OECD are more export intensive (share of exports in turnover) than domestically owned firms. The import intensity of foreign-owned firms (share of imports in purchases) is also significantly higher for foreign-owned than domestic firms. Although data are not available for the Czech Republic, it is likely that similar firm behaviour would be observed, especially given the relatively high level of inward investment.

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

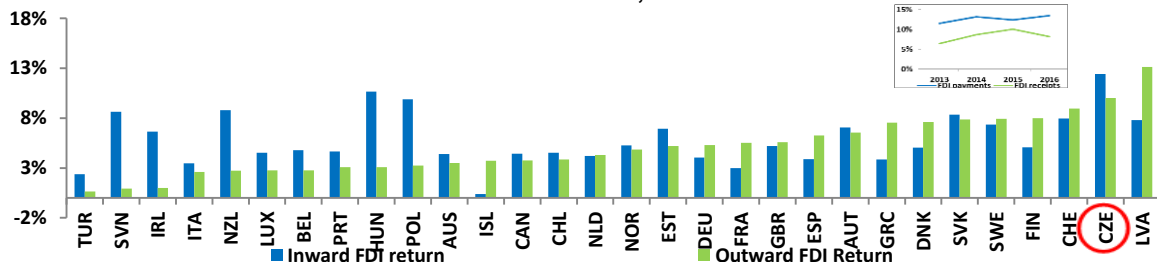


Source: OECD AMNE and Trade by Enterprise Characteristics (TEC) statistics (2011)

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

In 2015, the Czech Republic received USD 1.8 billion in income from its outward investment, equivalent to approximately 1% of GDP. The Czech Republic's rate of return at 10% (green bar) on its outward FDI is one of the highest in the OECD, but it fell to 8% in 2016 (see chart insert). On the other hand, the return to foreign investors in the Czech Republic was over 12% in 2015, the highest in the OECD.

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

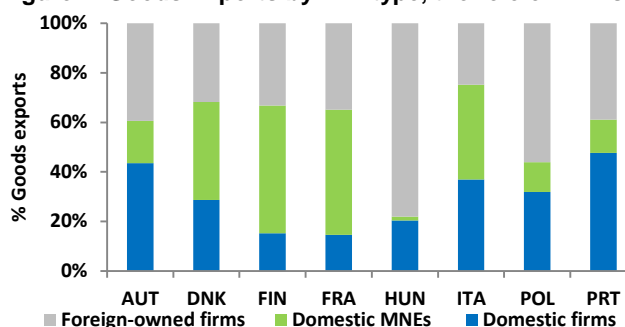


Source: OECD FDI Statistics (BMD4)

...or via exports

Looking across a selection of European economies, MNEs play a significant role in GVC integration. In some countries it is through the activity of MNE parents, while for other it is foreign-owned firms. In each country with available data, at least half of all goods exports are conducted by MNEs.

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

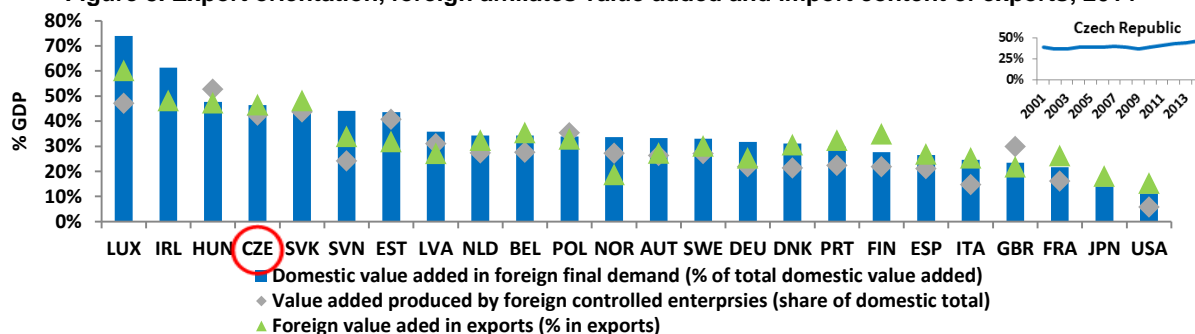


Source: OECD TEC statistics (2011)

But the Czech Republic's export orientation is high relative to similarly sized economies

Exports (in value added terms) contribute around 46% of Czech GDP in 2014, this is high compared to other OECD economies, which may in part reflect high levels of inward investment contributing to GVC integration as measured by the import content of exports. Export orientation has increased since the crisis.

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

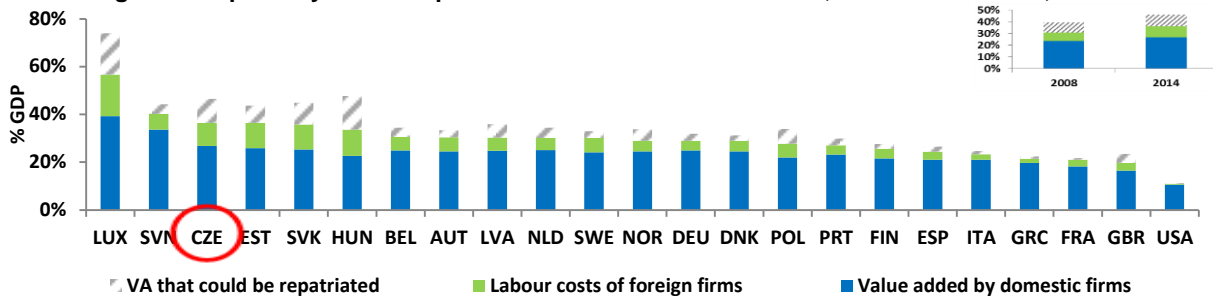


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

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 Czech exports contain 37% of value-added that remains in the economy. So, 20% of the Czech Republic's exported domestic value added represents profits by foreign-owned firms, and an equivalent share, 20%, represents wages paid by foreign-owned firms, reflecting high levels of inward investment. The share of value added that remains in the economy has increased since 2008 (see chart insert).

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

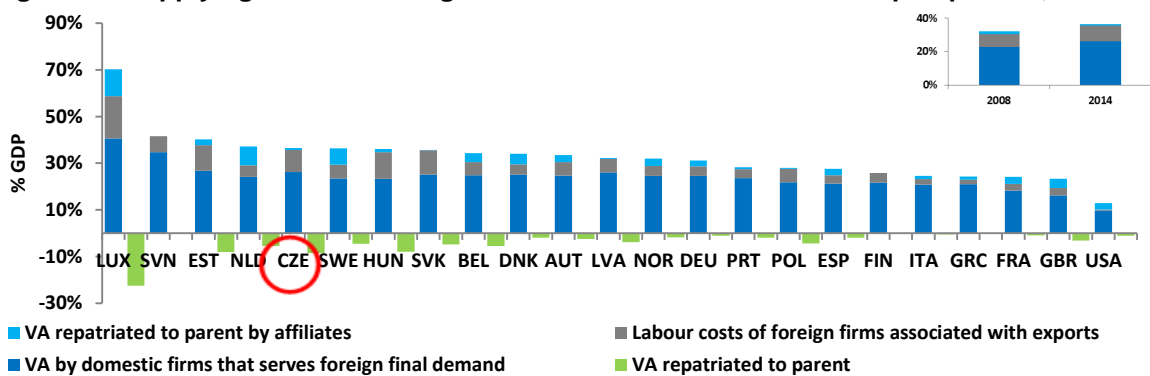


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

Taking a broader view by including the income of foreign affiliates can provide a more complete picture of the international orientation of the Czech 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 the Czech Republic, this broader measure (36%) is lower than the export orientation measure from TiVA (46%) because the Czech Republic is a net recipient of FDI. The Czech Republic remains at the upper end of OECD countries using this measure, and this has increased since 2008, due to increases in both exports of value added and wages (labour costs of foreign firms) associated with exports (see chart insert).

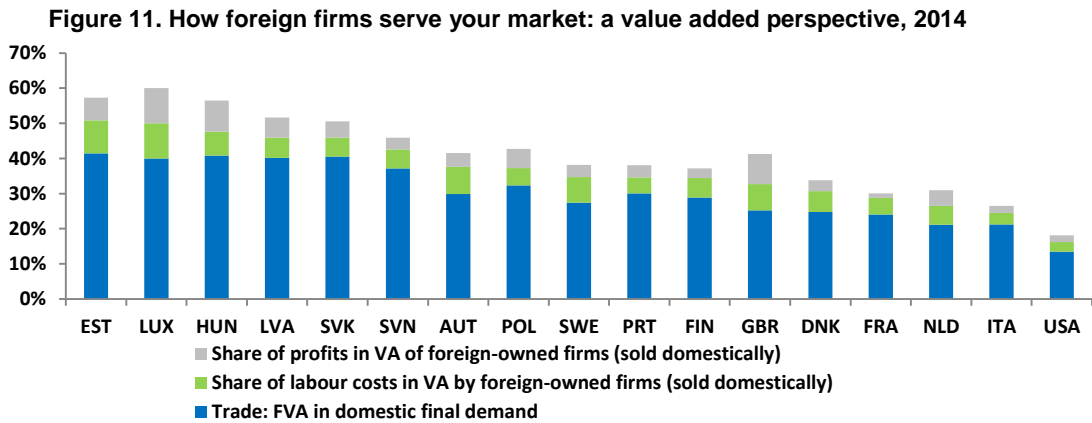
Figure 10. Supplying markets through trade and investment: a broader perspective, 2014



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 domestic market

Foreign producers supply products and services for final consumption through trade (foreign value added in final demand), and sales by foreign affiliates (non-export). The value added by foreign affiliates can either stay in the economy, including in the form of wages, or can leave the economy in the form of repatriated profits; these shares vary across OECD countries. Due to data availability this can’t be calculated for the Czech Republic.



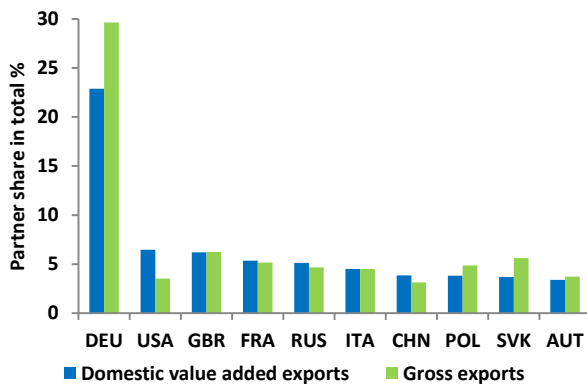
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD TEC statistics

Trade and investment by partner country

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

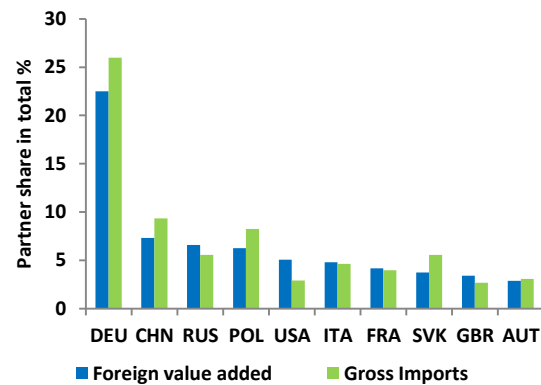
Gross bilateral trade figures can disguise the true nature of interdependencies, particularly between final consumers in one country and producers at upstream parts of the value chain. This is evident for the bilateral relationship with the United States; gross measures understate the relative relations of the two economies. Once value added is considered, the United States moves to the second most important export destination from just outside the top while some of the Czech Republic's neighbouring countries, such as Germany, Poland and Slovakia, are not as important as the gross trade data indicate.

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



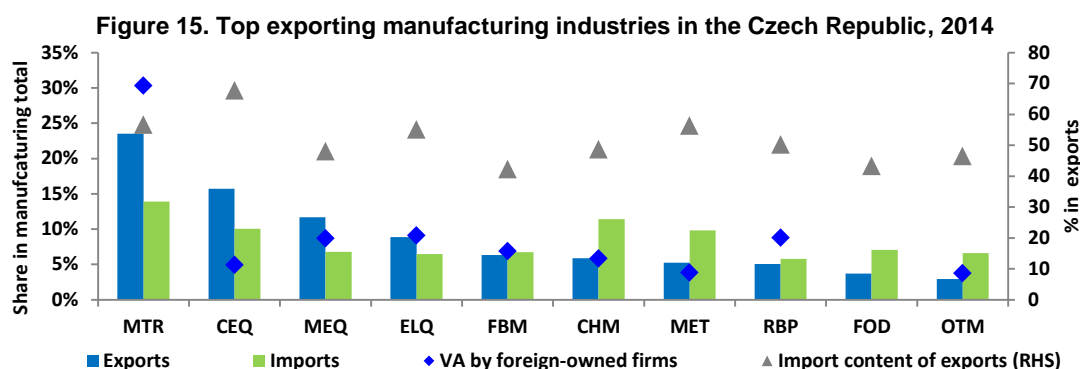
Source: OECD-WTO TiVA data

Figure 14 cannot be produced due to a lack of data on trade by enterprise characteristics that are required to estimate the export intensity of foreign-owned firms.

Trade and investment by industry

Inward investment helps shape the Czech Republic's GVC integration

The top manufacturing exporting industries in the Czech Republic are motor vehicles (MTR) and computer, electronic and optical products (CEQ). The import content of exports is relatively high across 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 Czech industry, mainly focused in the motor vehicles industry.

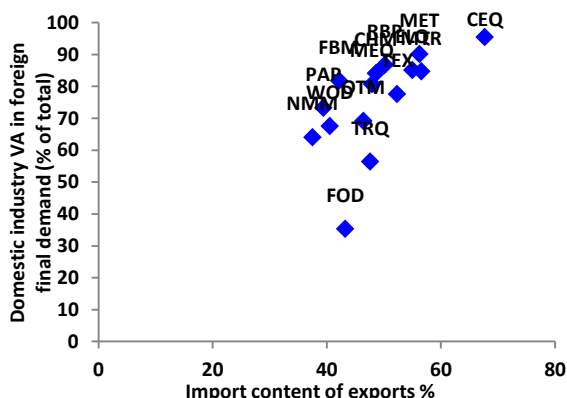


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics. See page 10 for a description of industry codes.

Exports and imports go hand in hand...

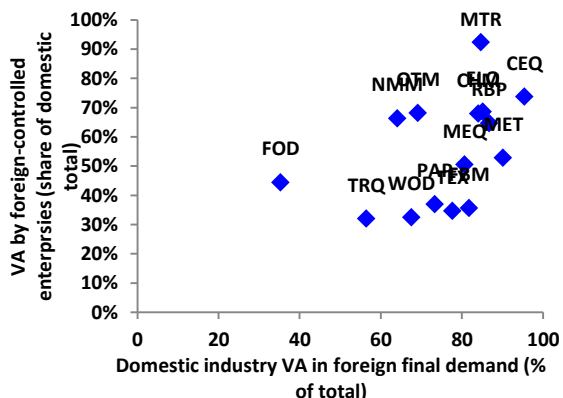
Across most industries there is a strong correlation between higher import content of exports and a higher share of their domestic value-added being exported (export orientation) illustrating the strong complementarity of exports and imports.

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

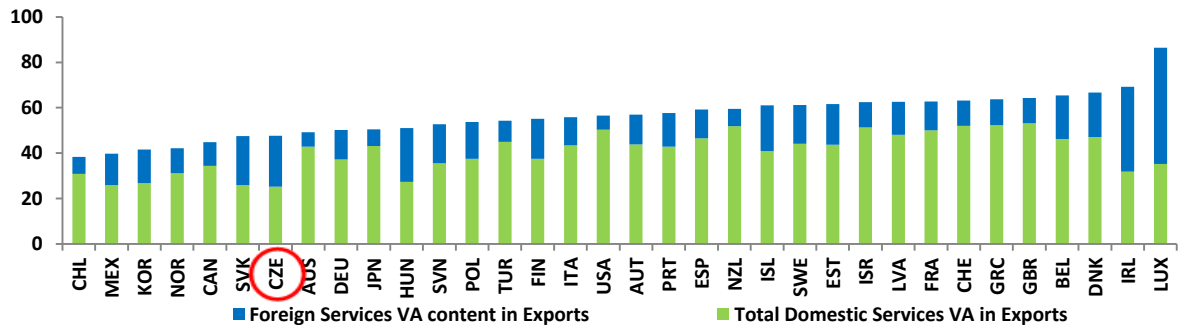
...and investment and export orientation can also go hand in hand

At the same time, strong complementarities can exist between inward investment and import content of exports (Figure 17). For the Czech Republic, in many industries where foreign-owned firms produce more of the value added are also those that have a higher export orientation, particularly MTR and CEQ. Figure 18, goods trade by enterprise ownership and industry, cannot be produced for the Czech Republic due to data availability.

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 the Czech Republic's total exports of goods and services was 48% in 2014 (Figure 19), below the OECD median value of 57%. Considering the services content of manufactured goods alone, 38% of the total value of Czech manufacturing exports reflects services value added, just above the OECD average of 36%.

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

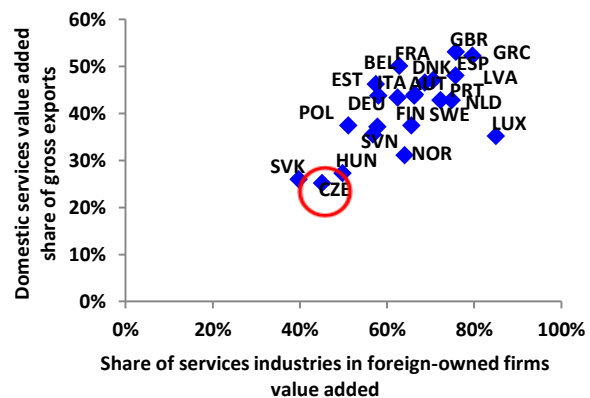


Source: OECD-WTO TiVA Data

...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 the Czech Republic, the share of investment in services is at the lower end for OECD economies which could contribute to its relatively low services content in exports.

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

Annex: Further data requirements

In order to make this note as informative as those of other OECD countries, more detailed data about Czech trade and investment are needed. In order to create Figures 5, 7, 14 and 18 data on trade by enterprise characteristics are needed at the aggregate and industry level.

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	