

# International trade, foreign direct investment and global value chains



2017

## GREECE

### 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](http://www.oecd.org/investment/trade-investment-gvc.htm).

Over one-fifth (22% in 2014) of economic activity (GDP) in Greece depends on foreign markets, below the OECD median and low compared to similar sized economies. Outward investment is slightly higher than direct investment in Greece but they are almost balanced, and are comparatively low, equivalent to approximately 15% of GDP in 2015. Inward investment in Greece supports just 5% of private sector jobs and accounts for 11% of value added in the economy. A broader notion of international orientation, which captures the impact on national impact of exports and sales through affiliates, shows that Greece's international orientation was equivalent to nearly one quarter (24%) of GDP in 2014.

Gross bilateral trade figures can disguise the true nature of trade interdependencies, particularly between consumers in one country and producers at upstream parts of the value chain. For example, value added export data identify that more Greek value added goes to the United Kingdom, Italy and France than Turkey, and that China is a larger export destination than Bulgaria and Spain; these details are hidden when using gross data. On the import side, the United States moves ahead of Italy as the third biggest Greek supplier.

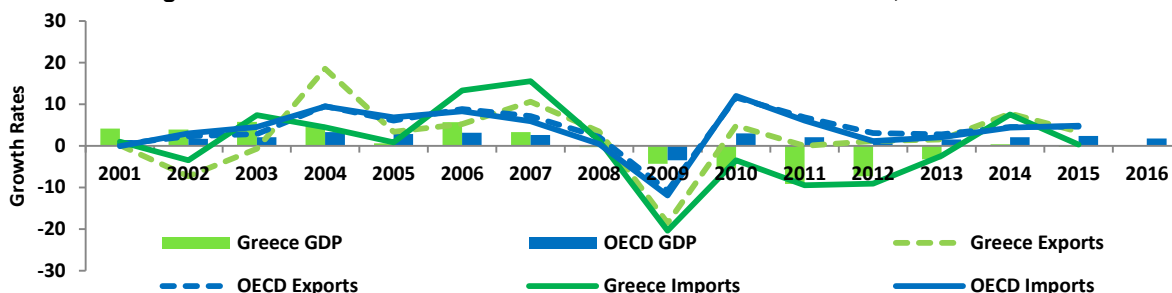
The top manufacturing exporting industries in Greece are coke and petroleum (PET), food and beverages (FOD) and basic metals (MET). The food and beverages industry has relatively low export orientation, import content of exports and value added by foreign-owned firms; in contrast, the chemicals industry has one of the highest export orientations (44%) and one fifth of value added is produced by foreign-owned firms. Greece has one of the highest services content in its exports at 64%, and this is correlated with a relatively high share of its inward investment going to the services sector.

# Trade and investment in Greece

## Growth in trade remains below pre-crisis trends

Like many European economies, Greek trade contracted significantly at the height of the global crisis and again during the euro crisis. Greek import growth was negative between 2008 and 2014; however, exports fared better, with positive growth since 2010. In 2015, export growth was 3.4% while import growth was just 0.3%.

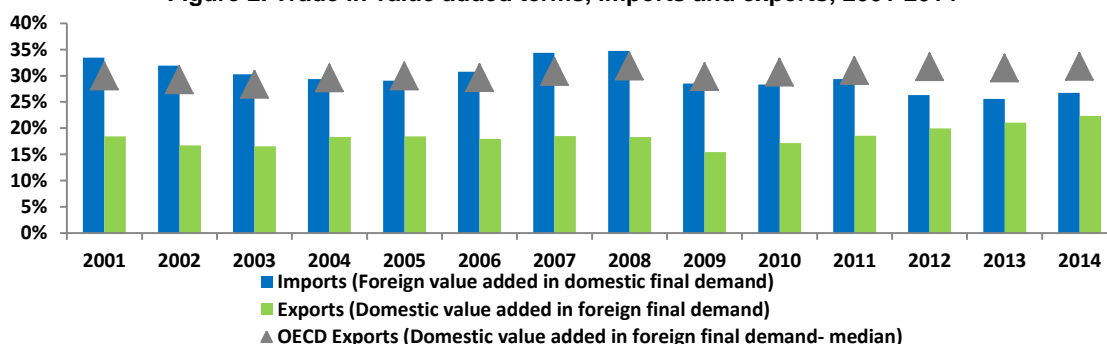
Figure 1. Growth rates of trade and GDP for the OECD and Greece, 2001-2016



Source: OECD SNA

Gross exports amounted to USD 62 billion in 2015 (36% of GDP), and gross imports to USD 62 billion (36% of GDP). Gross trade figures, however, overstate the ‘real’ contribution of trade to the economy. In value-added terms, exports contributed 22% of total GDP in 2014, the highest recorded for the period, but still below the OECD median (grey diamond). The contribution of direct and indirect imports to domestic final demand measured 27% in 2014.

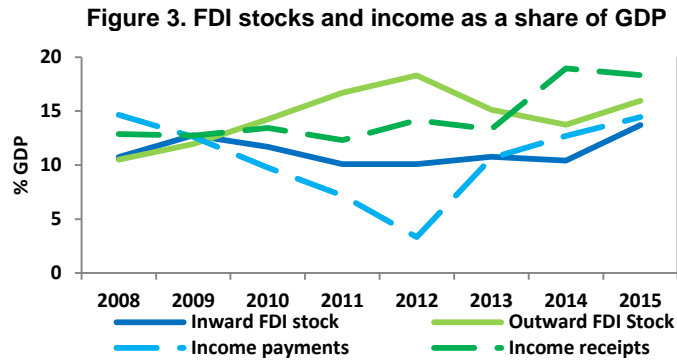
Figure 2. Trade in value added terms, imports and exports, 2001-2014



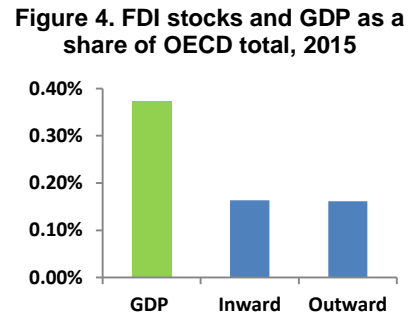
Source: OECD-WTO Trade in Value Added Data

## Investment is slightly more outward than inward

Although they diverged over the period, Greek inward and outward investment positions are now similar at 14% and 16% (equivalent to) GDP. Both stocks have increased relative to GDP since 2008 (Figure 3). In 2015, Greece’s shares of both the OECD total inward and outward FDI stock (0.16%) were less than half its share of GDP (0.37%) (Figure 4).



Source: OECD FDI Statistics (BMD4)



Source: OECD FDI Statistics (BMD4)

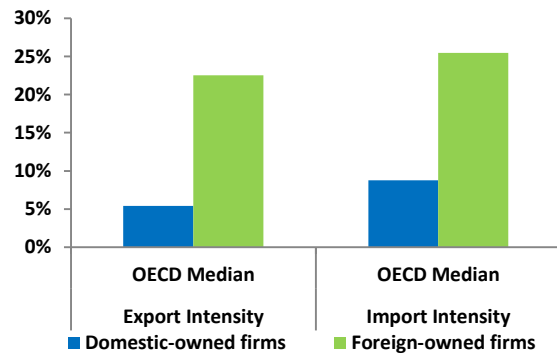
**Foreign-owned firms directly sustained 5% of jobs in the private sector in 2013....**

Reflecting the relatively small size of inward investment compared to other OECD economies, foreign-owned enterprises accounted for just 5% of jobs in the private sector in 2013 and 11% of private sector value added produced in Greece, 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 typically higher for foreign-owned than domestic firms. These figures cannot be computed for Greece due to data limitations.

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

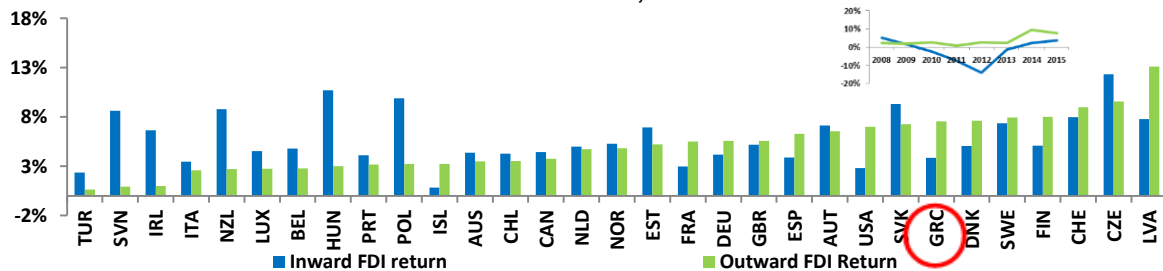


Source: OECD AMNE and Trade by Enterprise Characteristics (TEC) statistics (2011)

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

In 2015, Greece received USD 2.3 billion in income from its outward investment, equivalent to approximately 1.2% of GDP. Greece's rate of return at 7.6% (green bar) on its outward FDI is above the OECD median and has recovered since the crisis but is down on the 2014 value (see chart insert). On the other hand, the return to foreign investors in Greece was 3.9% in 2015, below the median of OECD countries.

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

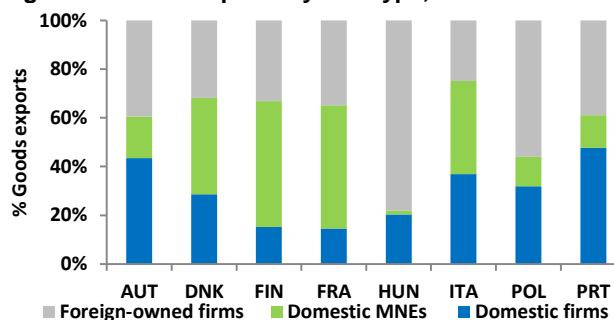


Source: OECD FDI Statistics (BMD4)

### ...and 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**

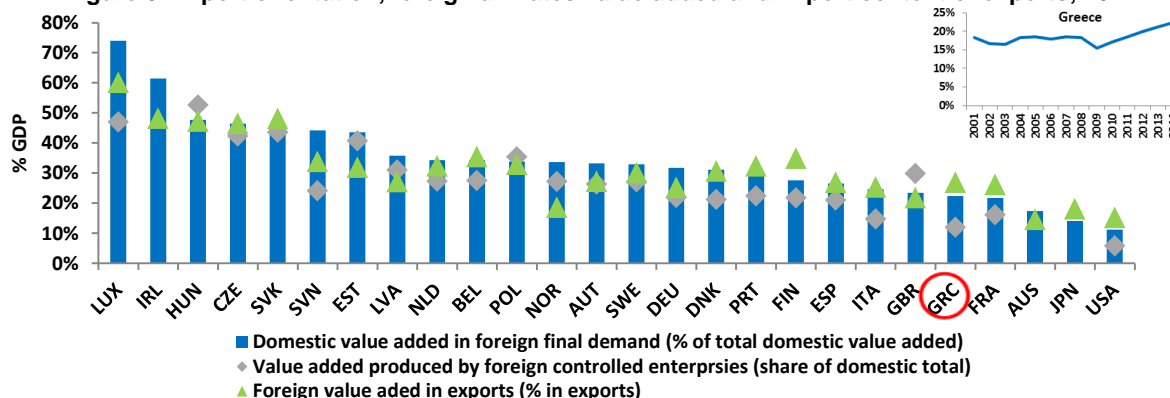


Source: OECD TEC statistics (2011)

### But Greece's export orientation is low relative to many similarly sized economies

Exports (in value added terms) contribute around 22% of Greek GDP. This is relatively low compared to other small OECD economies, and comparable with Italy and Spain. It may in part reflect low levels of inward investment contributing to low GVC integration as measured by the import content of exports. However, export orientation has increased strongly since the crisis (see insert chart).

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

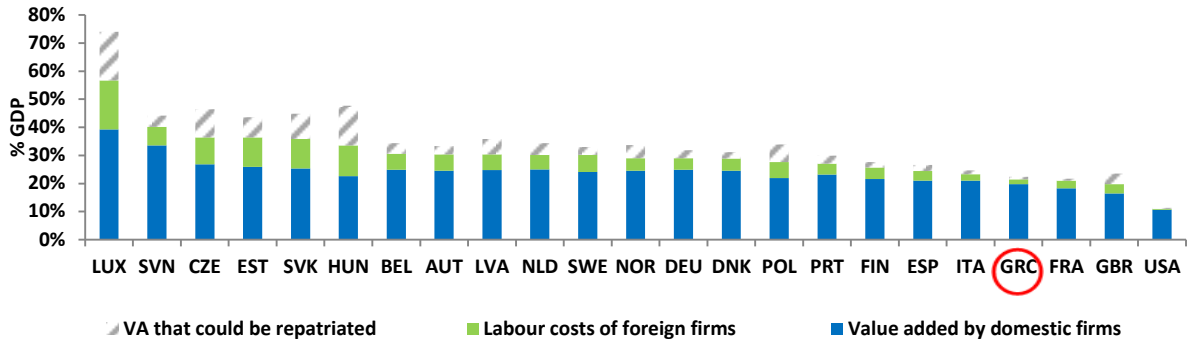


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

### 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 profits generated by foreign-owned firms, Greek exports contain 21% of value added that stays in the economy. So, 4% of Greece's exported domestic value added represents profits by foreign-owned firms and 8% represents labour costs paid by these firms.

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

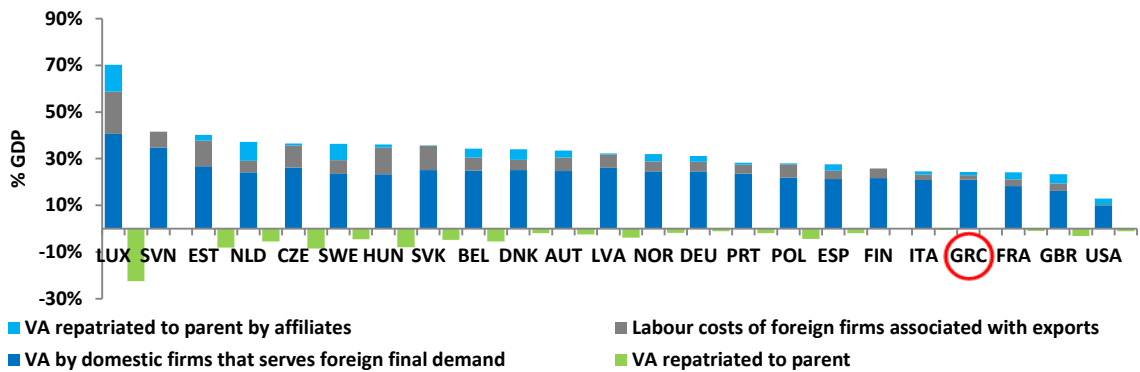


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

**Taking a broader view by including the income of foreign affiliates can provide a more complete picture of the international orientation of the Greek 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 Greece, this broader measure (24%) is higher than the export orientation measure from TiVA (22%) because Greece is a net outward direct investor.

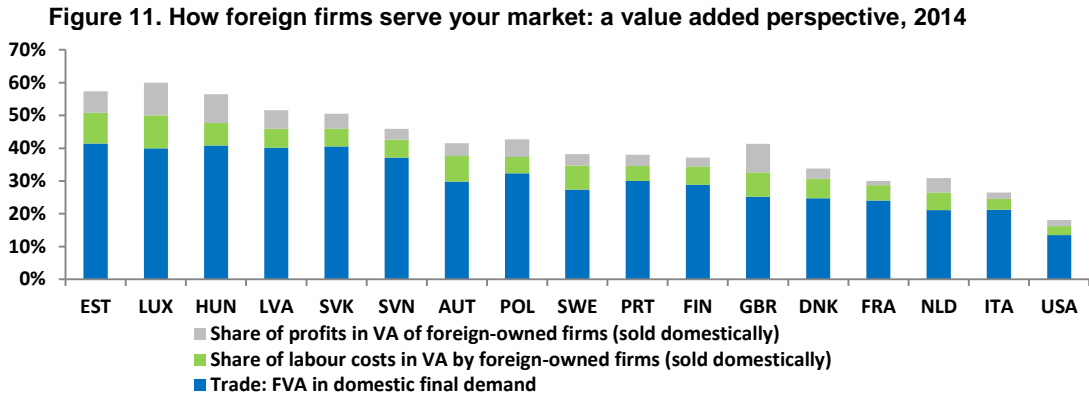
**Figure 10. Supplying markets through trade and investment: a broader perspective, 2014**



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 domestic final demand) blue bar, and sales by foreign affiliates sold domestically (green and grey bar) (Figure 11). Foreign production can be split between labour costs and profits, the profit component of value added by foreign-owned firms can be repatriated to the parents. Due to limited data availability the following chart cannot be reproduced for Greece, but it is likely that foreign firms serve the Greek market more through trade than through investment reflecting the low inward investment in Greece.



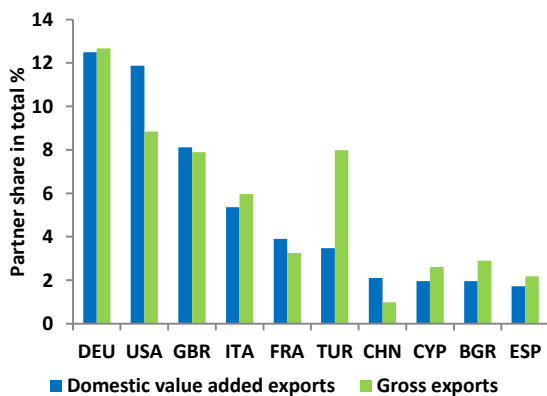
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD TEC statistics

## Trade and investment by partner country

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

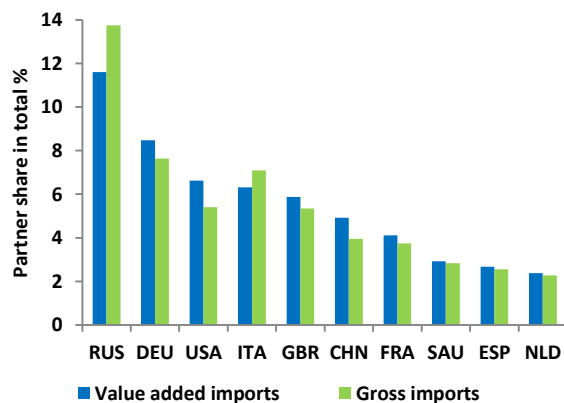
Gross bilateral trade figures can disguise the true nature of trade interdependencies, particularly between final consumers in one country and producers at upstream parts of the value chain. For example, value added export data identify that more Greek value added goes to the United Kingdom, Italy and France than Turkey, and that China is a larger export destination than Cyprus\*, Bulgaria and Spain; these details are hidden when using gross data. On the import side, the United States moves ahead of Italy as the third biggest Greek supplier.

**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

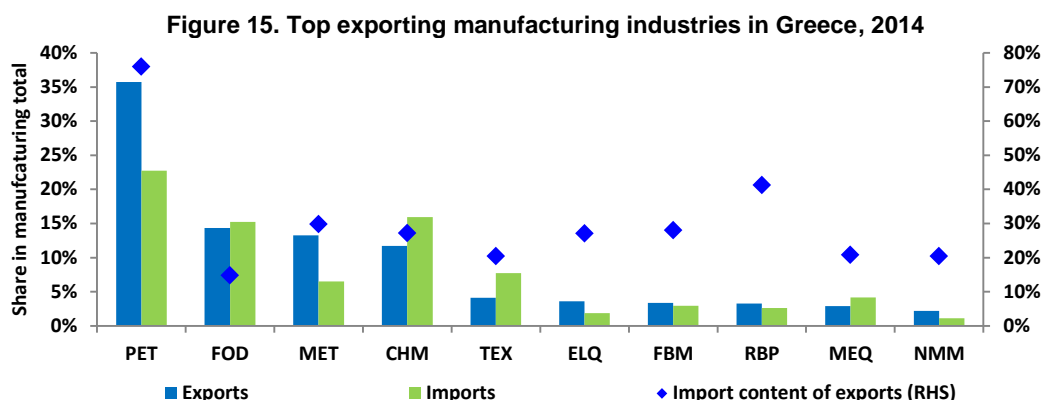
\* Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Figure 14, supplying the domestic market through trade and investment, cannot be produced for Greece due to data availability.

## Trade and investment by industry

The top manufacturing exporting industries in Greece are Coke, refined petroleum products and nuclear fuel (PET), food and beverages (FOD) and basic metals (MET). The import content of exports varies across industries—illustrating the role that importing play can in supporting exports and the degree of GVC integration in these industries.

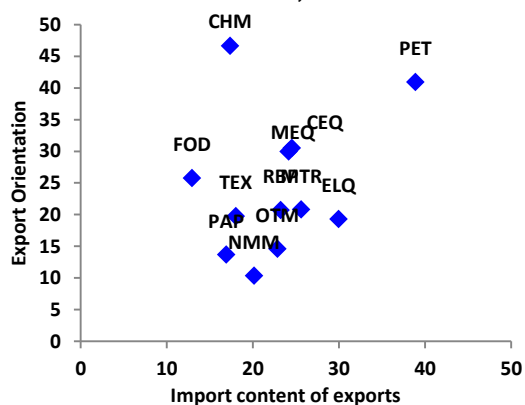


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics. See page 10 for a description of industry codes.

### Exports and imports can go hand in hand...

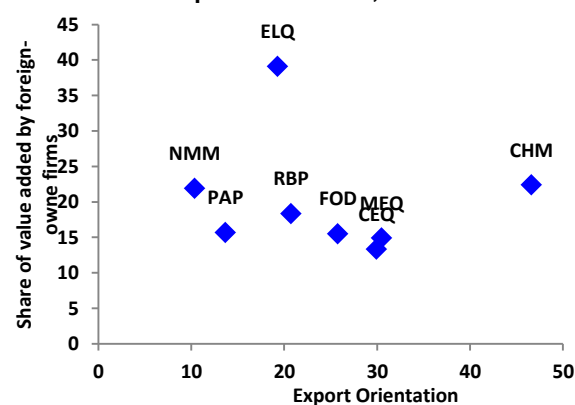
Across OECD countries and industries there is often a strong positive correlation between higher import content of exports and a higher share of their domestic value-added being exported (export orientation) illustrating the strong complementarity of exports and imports. This is less the case for Greece (Figure 16), possibly reflecting the low export orientation and low import content of exports of many industries.

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



Source: OECD-WTO TIVA Data and OECD AMNE statistics

**Figure 17. Value added of 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

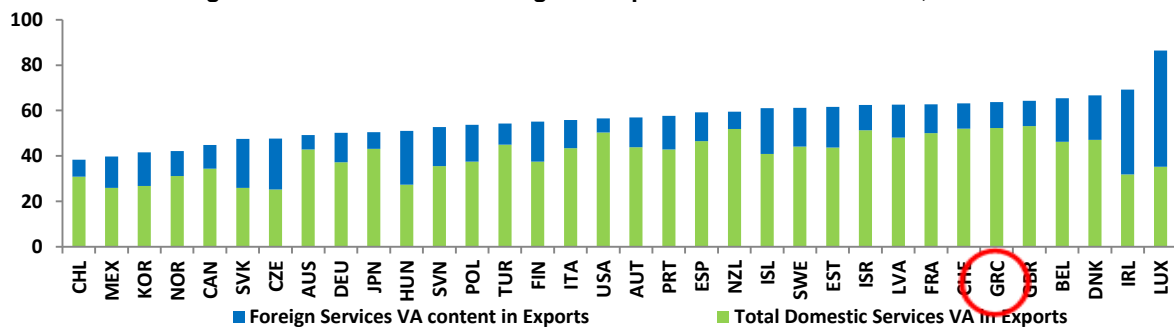
At the same time, strong complementarities can exist between inward investment and export orientation (Figure 17). This is also less evident for Greece than for other OECD countries, possibly reflecting the

low inward investment in the country and the overall low export orientation of the economy. Figure 18, goods trade by ownership and industry, cannot be produced for Greece due to data limitations.

**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 Greece’s total exports of goods and services was 64% in 2014 (Figure 19), above the OECD median of 57%. Considering the services content of manufactured goods alone, one-third of manufacturing exports reflects services value added, below the OECD average of 36%.

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

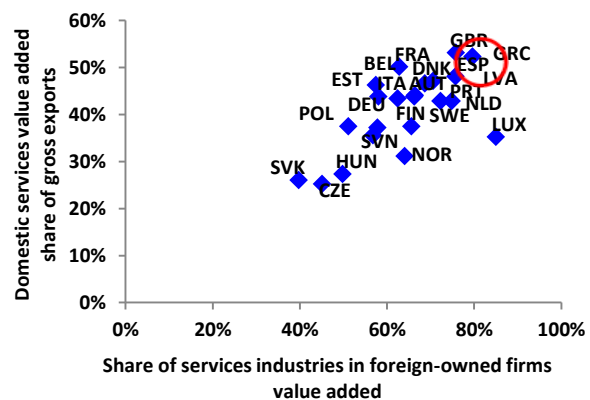


Source: OECD-WTO TiVA Data

**...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 Greece, the share of investment in services is at the higher end for OECD economies which could contribute to its relatively high 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](http://www.oecd.org/investment/Guide-trade-investment-statistical-country-notes.pdf)

**Activity of Multinational Enterprises - AMNE** [www.oecd.org/sti/ind/amne.htm](http://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](http://www.oecd.org/investment/fdibenchmarkdefinition.htm)

**Foreign Direct Investment (FDI) Statistics** [www.oecd.org/investment/statistics.htm](http://www.oecd.org/investment/statistics.htm)

### **Trade by Enterprise Characteristics - TEC**

[www.oecd.org/std/its/trade-by-enterprise-characteristics.htm](http://www.oecd.org/std/its/trade-by-enterprise-characteristics.htm)

### **Trade in Value Added - TiVA**

[www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm](http://www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm)

## Annex: Further data requirements

To make this note as informative as those of other OECD members, more detailed data about Greek trade and investment are needed. Data on trade by enterprise characteristics (TEC) would benefit the analysis. Trade of goods broken down by whether the enterprise is foreign or domestically-owned, and within domestic firms the split between domestic MNEs and domestic non-MNEs also helps analyse the importance of domestic industry and how that can facilitate GVC integration. The availability of these data would enable the production of Figures 5, 7, 11, 14 and 18.

**Table of industry codes**

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