International trade, foreign direct investment and global value chains

OECD

2017

UNITED STATES

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.

Over one-tenth (11% in 2014) of economic activity (GDP) in the United States depends on foreign markets, the lowest in the OECD but similar to Japan, another large economy. Inward investment (equivalent to 34% of GDP in 2015) in the United States is mainly market seeking, with export intensity of foreign affiliates among the lowest in the OECD. Outward investment offers an important channel to participate in GVCs. A broader notion of international orientation, which captures the impact on national income of exports and sales through foreign affiliates shows that the international orientation of the United States was equivalent to one-eighth (13%) of GDP in 2014.

Considering both trade and investment can also shed new light on the United States' most important partner countries and how they supply the market. Substantial variation exists across countries in how they supply the US market; Chinese, Canadian, Mexican, Korean and Indian firms supply US consumers mainly through trade, while Japanese, UK, German, French, and Swiss firms do a substantial amount through sales by foreign affiliates. Furthermore, considering both trade and investment, the relative importance of partner countries changes; Mexico slips behind Japan, the United Kingdom and Germany, while France and Switzerland move ahead of Korea and India.

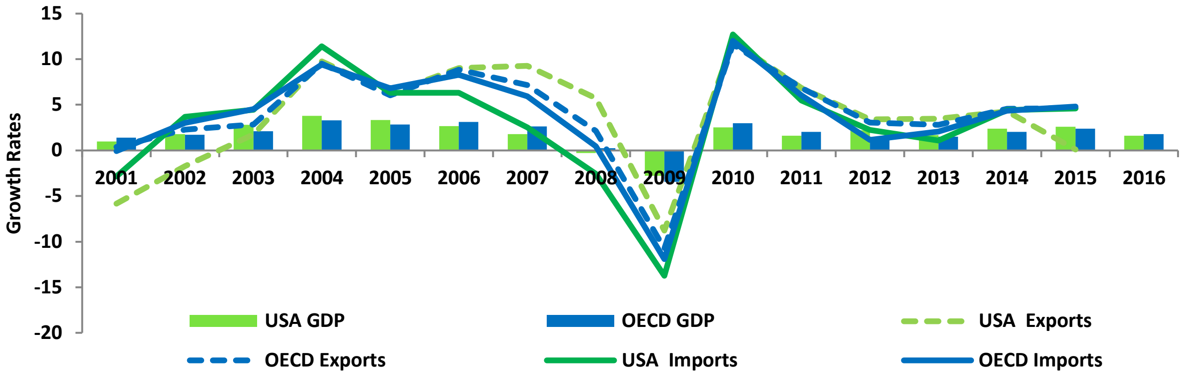
The top manufacturing exporting industries in the United States are coke and refined petroleum products (PET), chemicals and chemical products (CHM) and machinery and equipment (MEQ). Typically, industries in the United States have a lower import content of exports and are also less export orientated than other OECD members. The services content in exports by the United States at 57% is just above the OECD median, but it has one of the highest shares of domestic services value added in its exports.

Trade and investment in the United States

Growth in trade had recovered since the global but export growth slowed in 2015

Like many OECD economies, US trade contracted significantly at the height of the global crisis. US import growth fell by more than the OECD rate while exports experienced less of a drop. US trade growth rates have been broadly in sync with the OECD rates since the crisis. However, in 2015, export growth fell to 0.1%.

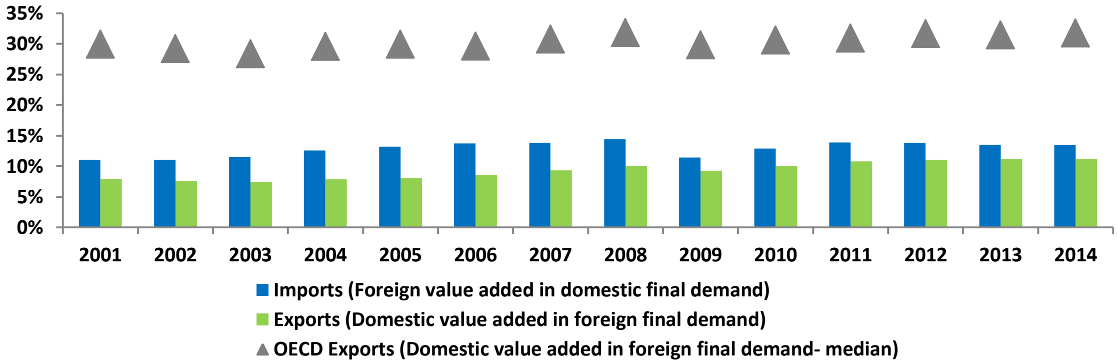
Figure 1. Growth rates of trade and GDP for the OECD and the United States, 2001-2016



Source: OECD SNA

Gross exports amounted to USD 2.5 trillion in 2015 (12% of GDP), and gross imports to USD 3.4 trillion (16% of GDP). Gross trade figures, however, overstate the ‘real’ contribution of trade to the economy. In value-added terms, exports contributed 11% of total GDP in 2014, the highest value of the period, but still significantly below the OECD median (grey diamond). The contribution of direct and indirect imports to domestic final demand measured 13% in 2014.

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

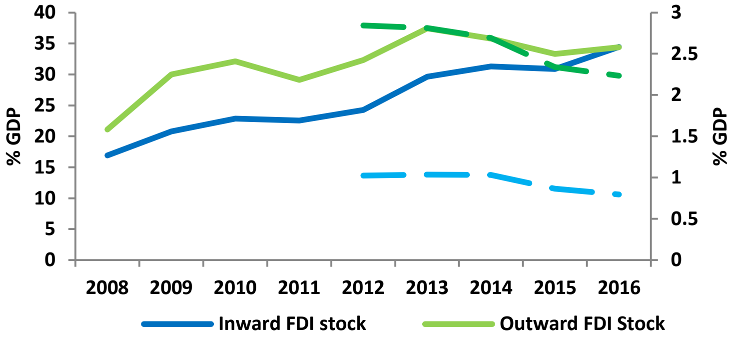


Source: OECD-WTO Trade in Value Added Data

Investment is roughly balanced between inward and outward

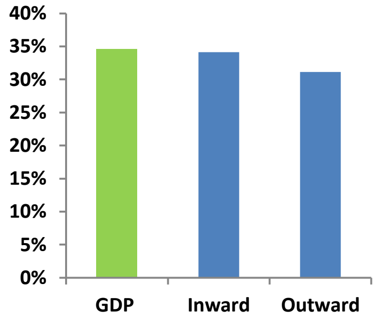
Although both outward and inward FDI stocks have been growing relative to GDP since 2008, inward FDI has been growing faster resulting in FDI stocks that are broadly balanced (equivalent to 34% of GDP) (Figure 3). In 2015, the United States’ share of the OECD total inward FDI stock (34%) was approximately the same as its share of GDP, but its share in outward stock was 31% of the OECD total, slightly 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)

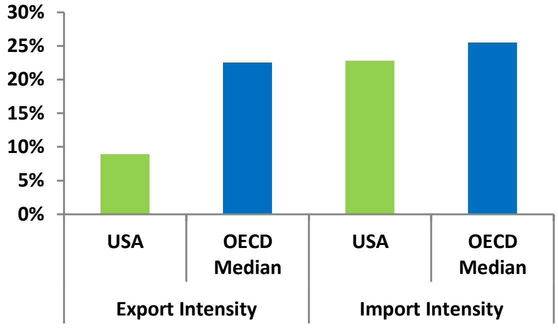
Foreign-owned firms directly sustained 5% of jobs in the private sector in 2013….

Inward investment accounted for 5% of jobs in the private sector in 2013 and 6% of private sector value added produced in the United States. These values are low compared to other OECD economies, excluding the agriculture and finance sectors.

…and are less export intensive than affiliates in other OECD economies

On average, foreign-owned firms in the United States are less export intensive (share of exports in turnover) than their counterparts in other OECD economies, partly reflecting market seeking behaviour by these firms. The import intensity of foreign-owned firms (share of imports in purchases) is much closer to the OECD median value.

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

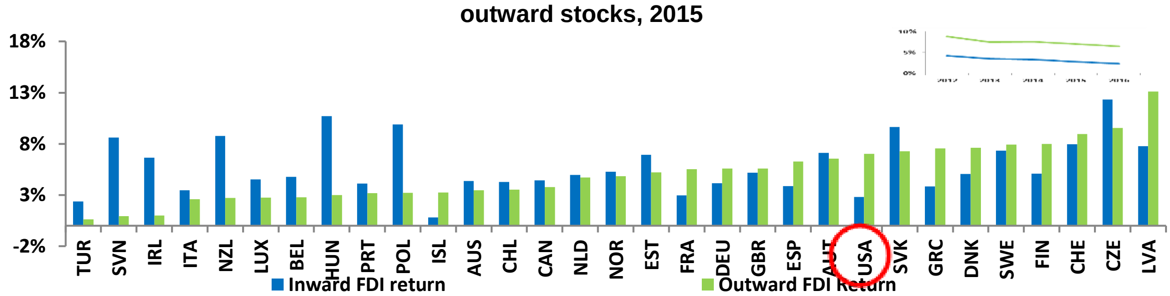


Source: OECD AMNE and Trade by Enterprise Characteristics (TEC) statistics (2011)

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

In 2015, the United States received USD 414 billion in income from its outward investment, equivalent to approximately 2% of GDP. The United States' rate of return at 7.0% (green bar) on its outward FDI is above the OECD median, but is the lowest value since 2012 (see chart insert). On the other side, the return to foreign investors in the United States was 2.8% in 2015, at the lower end of OECD countries.

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

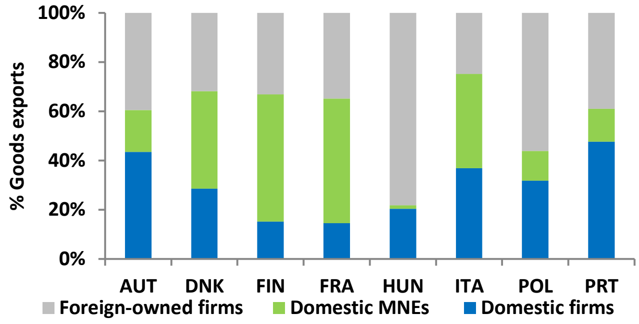


Source: OECD FDI Statistics (BMD4)

…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. This chart cannot be produced for the United States.

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

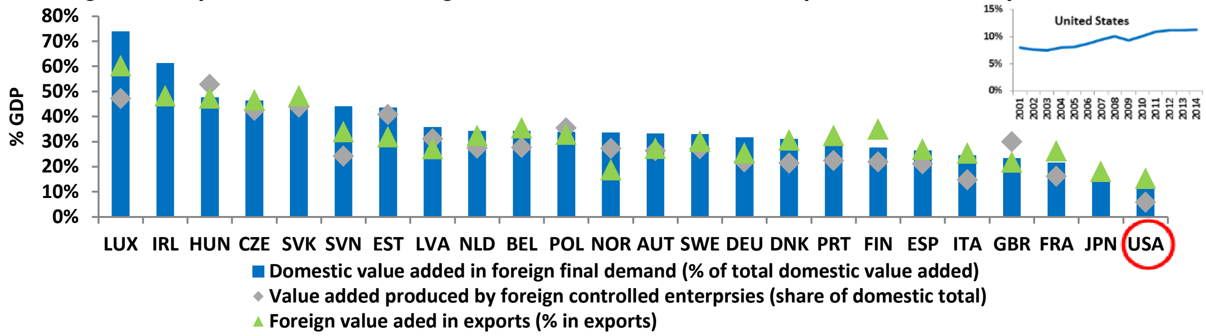


Source: OECD TEC statistics (2011)

But the United States' export orientation is the lowest in the OECD

Exports (in value added terms) contribute around 11% of US GDP. This is the lowest in the OECD, but comparable with Japan, which may, in part, reflect low levels of inward investment and their relatively low export intensity (compared to foreign affiliates operating in other countries) contributing to their 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

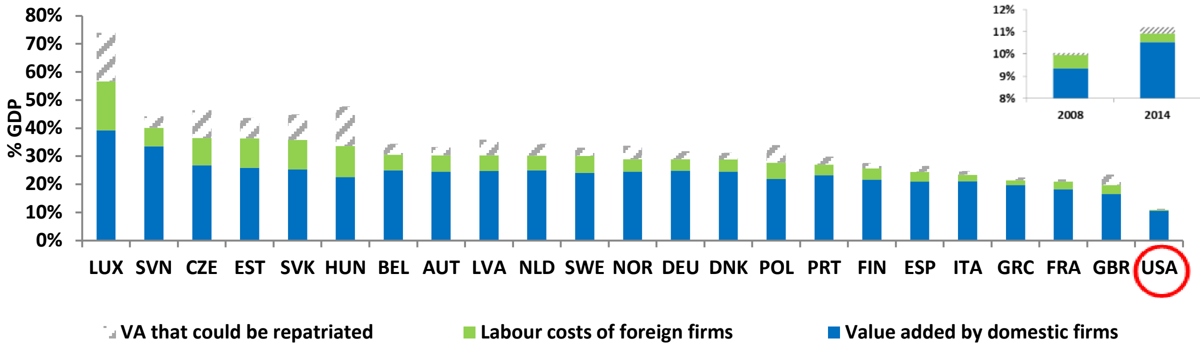


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

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 these profits, US exports contain 11% of value-added that remains in the economy. So, only 2% of the United States' exported domestic value added represents profits by foreign-owned firms, and only 3% reflects their labour costs, reflecting low levels of inward investment. The share of value added that remains in the economy increased since 2008, mainly due to value added produced by domestic firms (see insert chart).

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

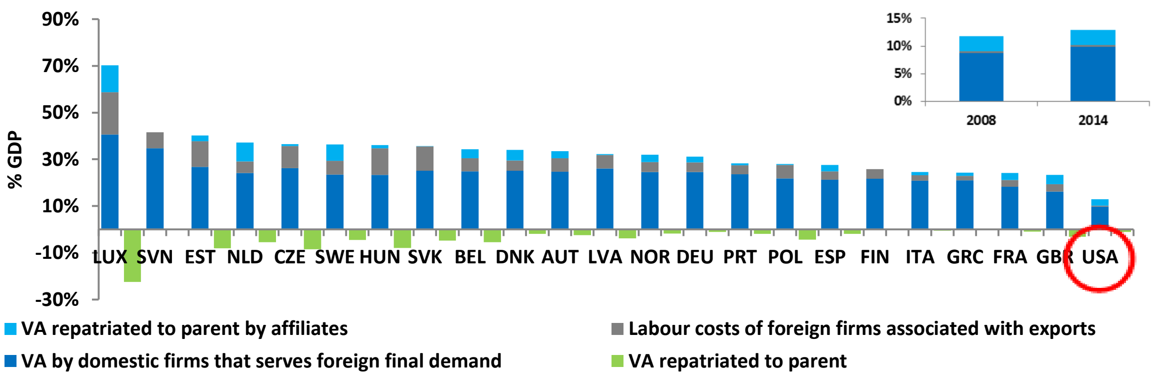


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics

Taking a broader view by including the income of foreign affiliates can provide a more complete picture of the international orientation of the US 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 United States, this broader measure (13% of GDP) is higher than the export orientation measure from TiVA (11%) because the United States is a net outward direct investor. The United States still has the lowest international orientation of OECD countries using this measure, but its international orientation has increased since 2008, due to higher

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



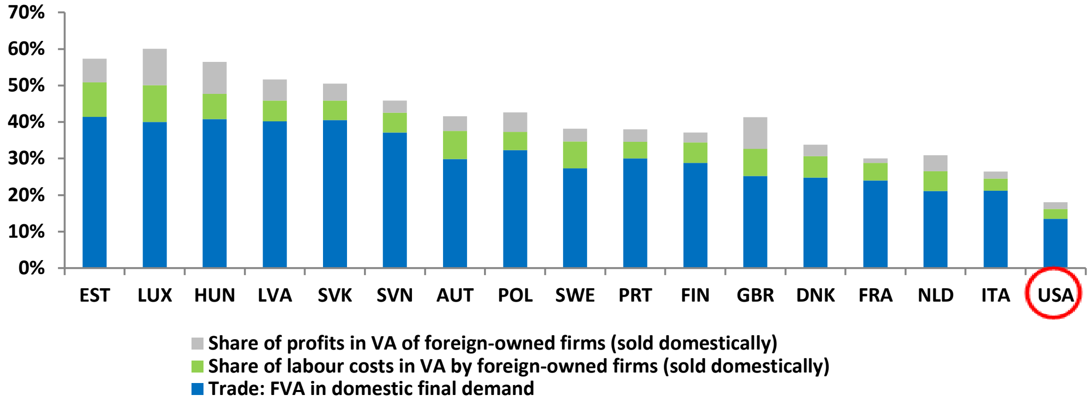
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD FDI (BMD4) statistics

exports of domestic firms' value added (see chart insert).

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

Foreign producers supplied products and services for US final consumption equivalent to 18% of GDP in 2014; the majority is through trade (foreign value added in US final demand equals approximately 14% of GDP), but value added generated by foreign affiliates in the United States for domestic (non-export) sales (Figure 11) accounts for a not insignificant 5% of GDP. Although some of this value added can be repatriated to parents, the share is significantly lower in the United States than in most other OECD economies (grey bar).

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



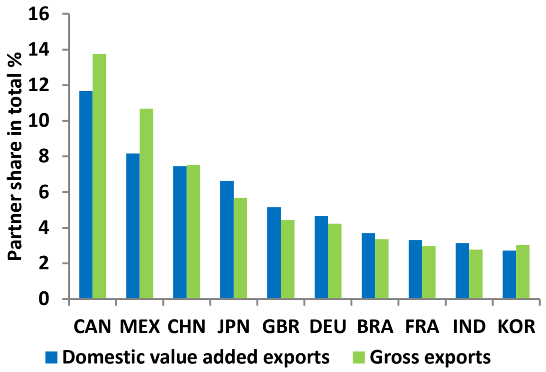
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD TEC statistics

Trade and investment by partner country

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

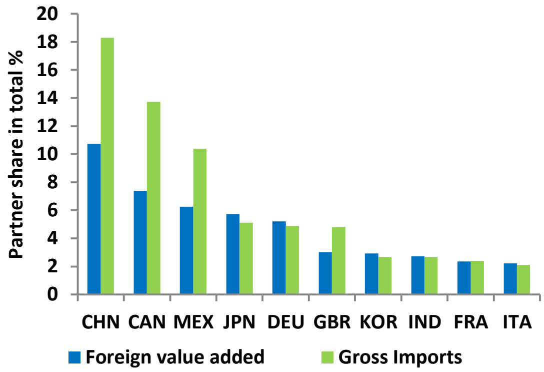
Gross bilateral trade figures can disguise the true nature of trade interdependencies, particularly between final consumers in one country and producers at upstream parts of the value chain. For the United States, the gross data overstates the importance of Canada and Mexico as trading partners and underestimates how much value added is destined for non-neighbouring countries.

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

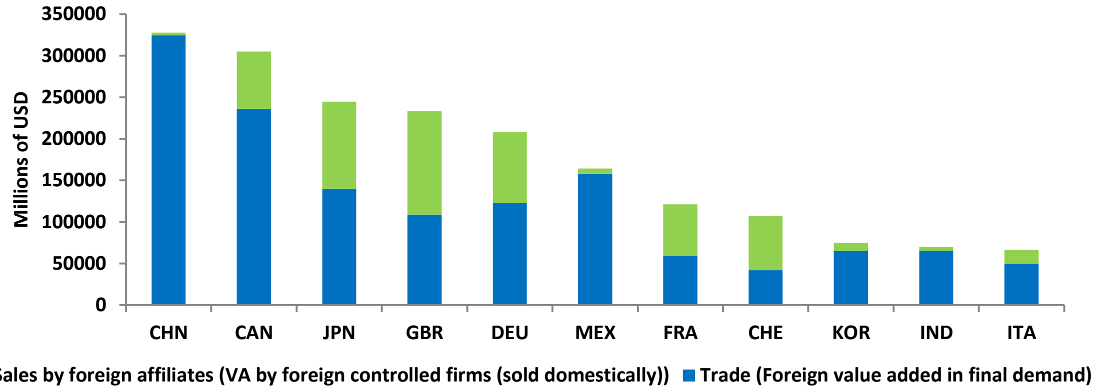


Source: OECD-WTO TiVA Data

…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 US market. Chinese, Canadian, Mexican, Korean and Indian firms supply US consumers mainly through trade, while Japanese, UK, German, French, and Swiss firms do a substantial amount through sales by foreign affiliates. Furthermore, considering both trade and investment the relative importance of partner countries changes; Mexico slips behind Japan, the United Kingdom and Germany, while France and Switzerland move ahead of Korea and India.

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



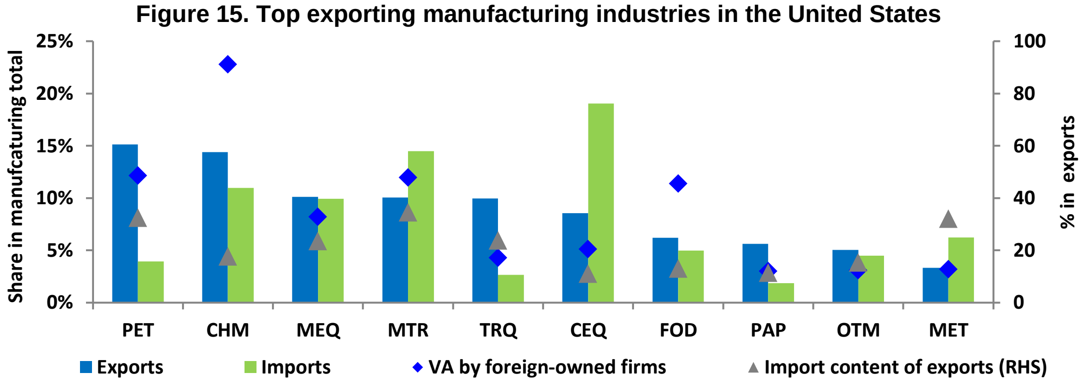
Source: OECD-WTO TiVA Data and OECD AMNE statistics

Trade and investment by industry

Outward investment helps shape the United States' GVC integration

The top manufacturing exporting industries in the United States are coke and refined petroleum products (PET), chemicals and chemical products (CHM) and machinery and equipment (MEQ). The import content of exports varies across industries–illustrating the role that importing plays in supporting exports the different degrees of GVC integration in these industries, and the importance of natural resources for US exports. The role of foreign-owned firms differs substantially across US industry, in part reflecting the United States' own comparative advantages and specialisation of its MNEs.

Figure 15. Top exporting manufacturing industries in the United States

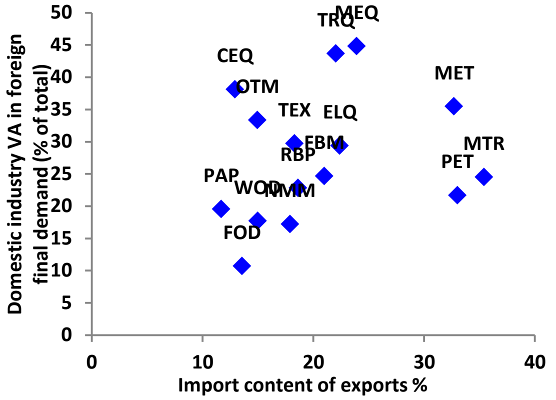


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics. See page 10 for a description of industry codes.

Exports and imports often go hand in hand…

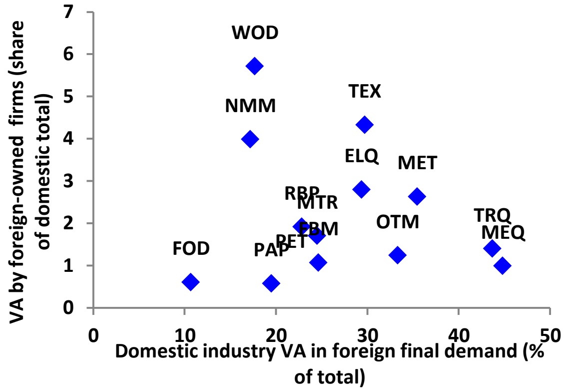
Across many industries in OECD countries there is a positive correlation between higher import content of exports and a higher share of their domestic value added being exported (export orientation) illustrating the strong complementarity of exports and imports. This relationship is not as evident for the United States, with a low import content of exports in many industries, reflecting among other things the natural resource content of exports.

Figure 16. Import content of exports and export orientation, 2013



Source: OECD-WTO TiVA Data and OECD AMNE statistics

Figure 17. Foreign-owned firms and export orientation, 2013



Source: OECD-WTO TiVA data and OECD AMNE statistics

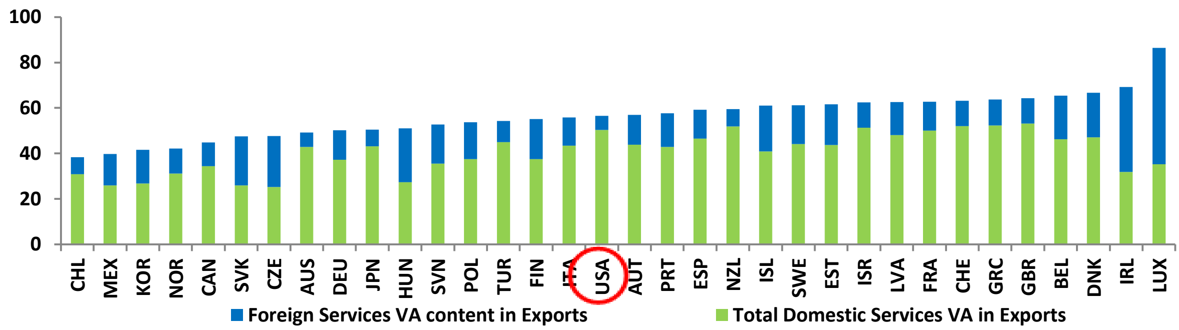
...and investment and export orientation can also go hand in hand

At the same time, strong complementarities can exist between inward investment and export orientation (Figure 17). This is not as obvious for US industry as many foreign affiliates locate to the United States for market access rather than for GVC participation; as a result, the value added by foreign owned firms in US industry is low compared to other OECD countries. Figure 18, goods trade by ownership and industry, cannot be produced for the United States 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 the United States' total exports of goods and services was 57% in 2014 (Figure 19), at the OECD median, and almost all of this services content was domestic. Considering the services content of manufactured goods alone, less than 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

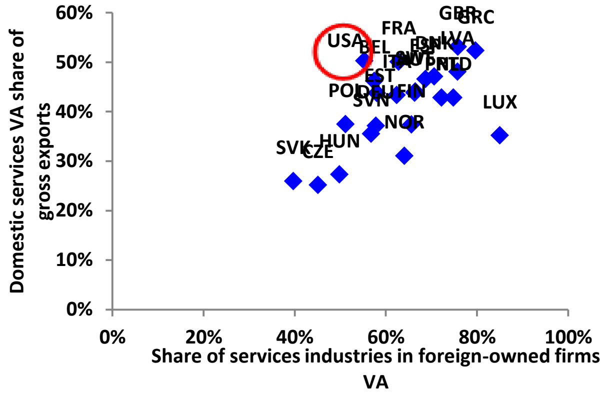


Source: OECD-WTO TiVA Data

…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 the United States, the domestic services value added in exports is relatively high despite the share of investment in services being relatively low.

Figure 20. Share of services industries in foreign-owned firms' value added and domestic services value added share of gross exports, OECD countries, 2013



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

To make this note as informative as those of other OECD members, more detailed data about US trade and investment are needed. More complete data on trade by enterprise characteristics (TEC) would greatly benefit the analysis, facilitating the production of figures 7 and 18.

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