International trade, foreign direct investment and global value chains

OECD

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IRELAND

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.

Ireland is an open and internationally engaged economy, reflected in high volumes of both gross and value added trade and inward investment. Ireland is one of the most export orientated countries in the OECD with 61% of its domestic value added being exported. Taking a broader view of international orientation that captures the impact on national income of both exports and sales though foreign affiliates, Ireland has a lower international orientation than trade data alone would suggest because it is a net recipient of inward investment. Nevertheless, it remains at the upper end of OECD countries and wages paid by foreign-owned firms are equivalent to 9% of Irish GDP, one of the highest in the OECD.

Considering both trade and investment through this broader perspective can also shed new light on Ireland's most important partner countries and how they supply the Irish market. For example, while most partner countries supply Irish consumers mainly through trade, for the United States, Switzerland and Luxembourg sales by foreign affiliates offer a crucial channel to the Irish market. Furthermore, considering both trade and investment, the United Kingdom is a distant second to the United States; this is not evident when looking at trade data alone.

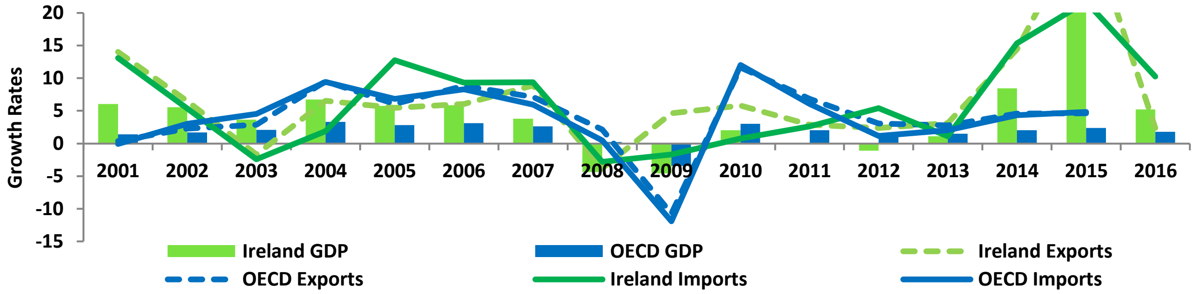
The top manufacturing exporting industries in Ireland are chemicals and chemical products (CHM), food and beverages (FOD) and CEQ (computer, electronic and optical products). Inward investment facilitates Ireland's integration in GVCs in some industries, such as in the computer and electrical industry. Ireland has the second highest services content in its exports at 69%, over half of which is foreign value added or import content in exports.

Trade and investment in Ireland

Growth in trade recovered since the global crisis

Like many European economies, Irish trade contracted significantly at the height of the global crisis but not as much during the euro crisis, reflecting the divergence between Irish trade growth and the health of the Irish economy. In 2015, Ireland reported extraordinarily high rates of growth in both trade and GDP.* In 2016, export and GDP growth rates returned to more normal levels as exports grew 2.4% and GDP grew 5.2%.

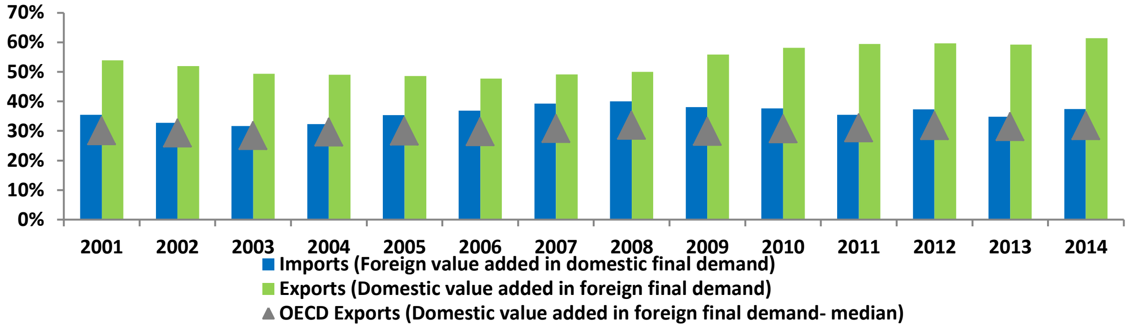
Figure 1. Growth rates of trade and GDP for the OECD and Ireland, 2001-2016



Source: OECD SNA

Gross exports amounted to USD 352 billion in 2016 (130% of GDP) and gross imports to USD 284 billion (105% of GDP). Gross trade figures, however, overstate the 'real' contribution of trade to the economy. In value-added terms, exports contributed 61% of total GDP in 2014, the highest level recorded and above the OECD median (grey diamond). The contribution of direct and indirect imports to domestic final demand measured 37% in 2014. The highly globalised nature of the Irish economy makes trade data on a value added basis rather than gross measures particularly important for assessing the Irish economy.

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



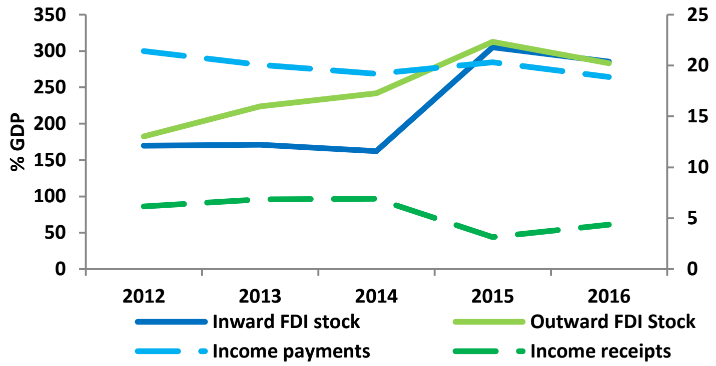
Source: OECD-WTO Trade in Value Added Data

Inward and outward investment have converged in recent years

Ireland is a highly internationally orientated economy from an FDI perspective; FDI stocks were equivalent to multiples of GDP in 2016, inward (285%) and outward (283%), so that FDI was broadly balanced (Figure 3). In 2015, Ireland's share of the OECD total inward FDI stock (5.3%) was ten times the share of GDP (0.5%), and its share in outward stock was 4.6% of the OECD total, also much higher than its share of GDP (Figure 4).

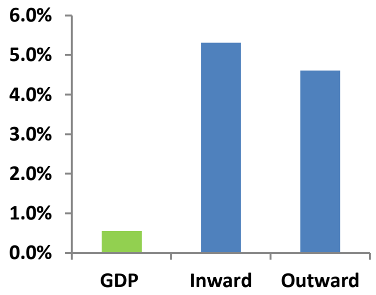
* For more information, see https://www.oecd.org/std/na/Irish-GDP-up-in-2015-OECD.pdf

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)

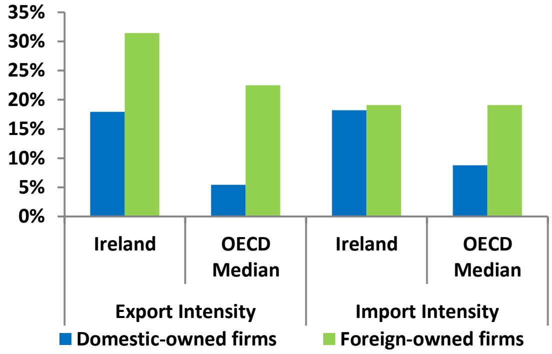
Foreign-owned firms directly sustained 23% of jobs in the private sector in 2013….

Reflecting the size of inward investment compared to other OECD economies, foreign-owned enterprises accounted for 23% of jobs in the private sector in 2013 and 57% of private sector value added produced in Ireland, excluding the agriculture and finance sectors.

…and are more export intensive than domestically owned firms

On average, foreign-owned firms in Ireland are almost twice as export intensive (share of exports in turnover) as domestically owned firms, and their export intensity is substantially higher than the OECD median. The import intensity of (share of imports in purchases) is similar for foreign-owned and domestic firms.

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

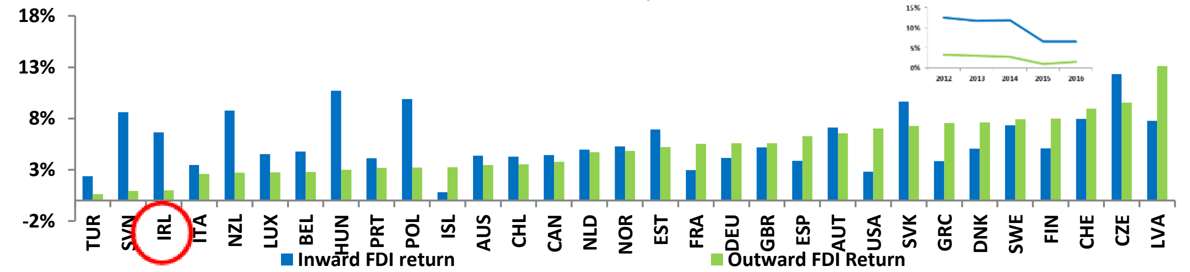


Source: OECD AMNE and Trade by Enterprise Characteristics (TEC) statistics (2011)

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

In 2015, Ireland received USD 13 billion in income from its outward investment, equivalent to approximately 4% of GDP. Ireland's rate of return at 1.0% (green bar) on its outward FDI is one of the lowest in the OECD, and is below its 2014 rate (see chart insert). On the other hand, the return to foreign investors in Ireland was 6.7% 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

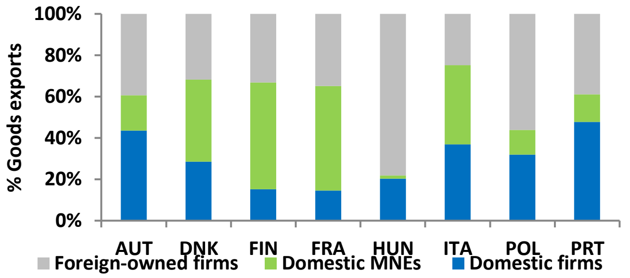


Source: OECD FDI Statistics (BMD4)

…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

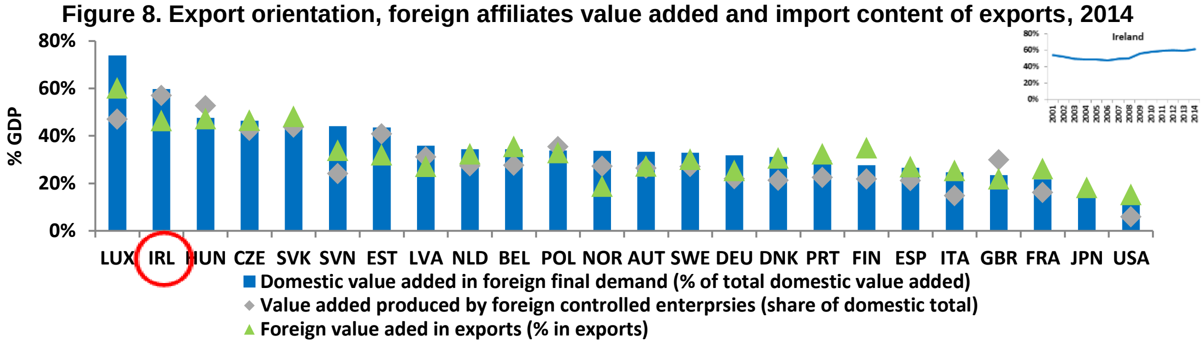


Source: OECD TEC statistics (2011)

Ireland's export orientation is high relative to OECD economies

Exports (in value added terms) contribute around 60% of Irish GDP, this is relatively high compared to other OECD economies, but comparable with Luxembourg and Hungary, which may in part reflect high levels of inward investment and their relatively high export intensity (compared to foreign affiliates operating in other countries). Inward investment contributes to the high GVC integration of the Irish economy as measured by the import content of exports. Export orientation has increased since the crisis (see chart insert).

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

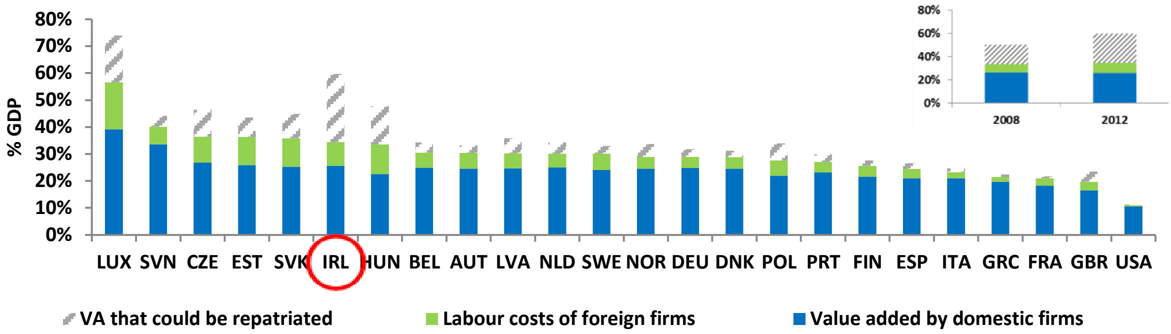


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics
Note: Irish value added for foreign firms refers to 2012.

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 Irish exports contain 34% of value-added that remains in the economy. So, 42% of Ireland's exported domestic value added represents profits of foreign-owned firms while 15% represent the labour costs of these firms. Yet, labour costs of foreign-owned firms account for 9% of Irish GDP; this is at the higher end of OECD countries, 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

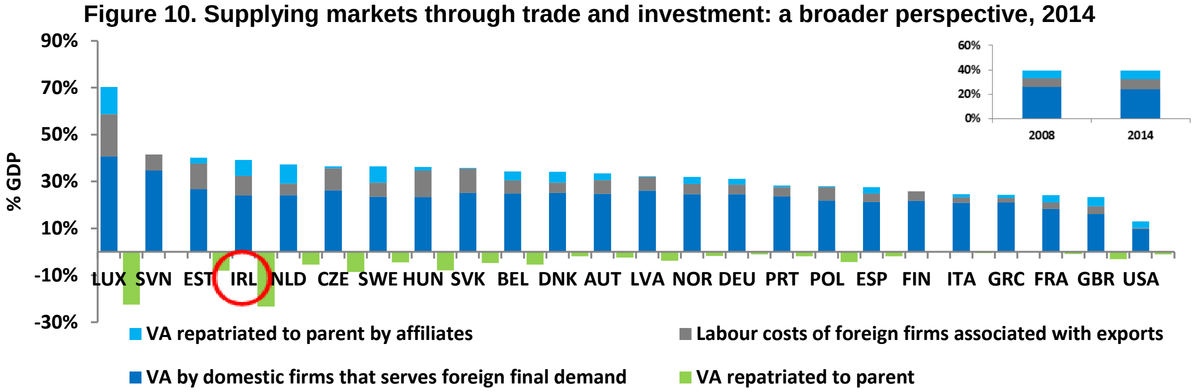


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics.
Note: Irish figure refers to 2012, the latest available data.

Taking a broader view by including the income of foreign affiliates can provide a more complete picture of the international orientation of the Irish 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 Ireland this broader measure (39%) is lower than the export orientation measure from TiVA (61%) because Irish firms receive less income from their affiliates abroad than affiliates who operate in Ireland repatriate to their parents. Ireland remains at the upper end of OECD countries using this measure, and it has increased since 2008 due to increases in exports of value added and wages paid by foreign-owned firms (see chart insert).

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

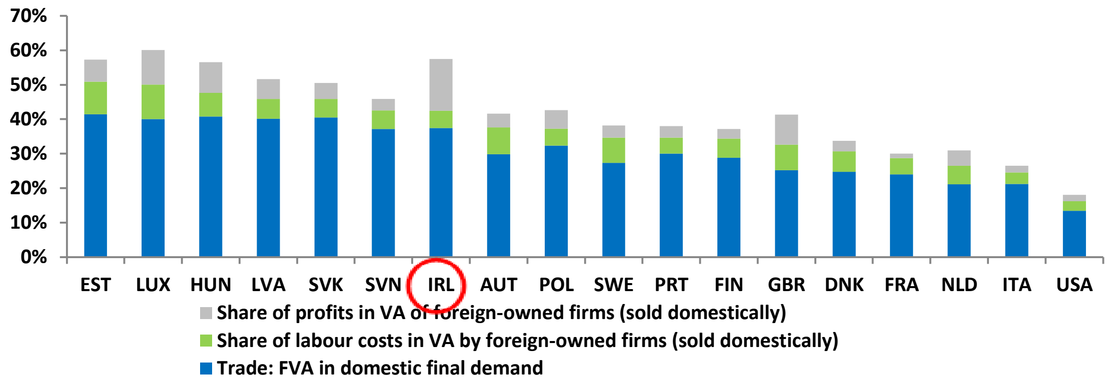


Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD FDI (BMD4) statistics
Note. Irish data refers to 2012

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

Foreign producers supplied products and services for Irish final consumption equivalent to 57% of GDP in 2014, the majority is through trade (foreign value added in Irish final demand equals approximately 37% of GDP), but value added generated by foreign affiliates in Ireland for domestic (non-export) sales (Figure 11) accounts for a substantial 20% of GDP. The share of value added by foreign-owned firms that can be repatriated to parents is higher in Ireland than in many other OECD countries, while the share of labour costs is just above the median.

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



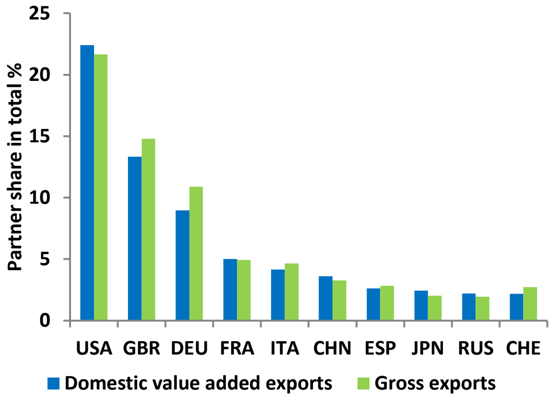
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD TEC statistics

Trade and investment by partner country

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

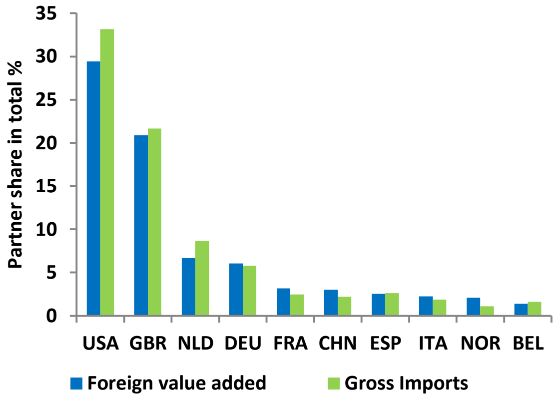
Gross bilateral trade figures can disguise the true nature of trade interdependencies, particularly between final consumers in one country and producers at upstream parts of the value chain. This is evident for the bilateral export relationship with Japan and Switzerland; value added measures point to Japan as a more important destination for Irish exports than Switzerland contrary to gross data. For the import side, value added figures point to Norway as a more important partner than Belgium.

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

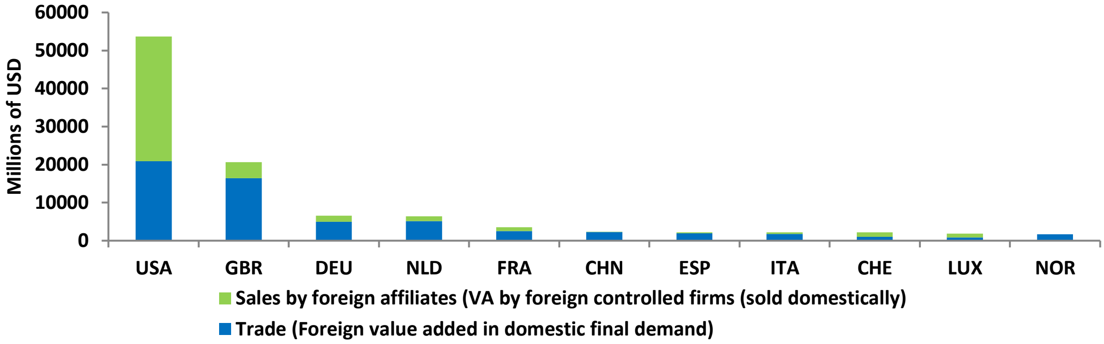


Source: OECD-WTO TiVA Data

…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 Irish market. For example, while most partner countries supply Irish consumers mainly through trade, for the United States, Switzerland and Luxembourg sales by foreign affiliates offer a crucial channel to the Irish market. Furthermore, considering both trade and investment, the United Kingdom is a distant second to the United States; this is not evident when looking at trade data alone.

Figure 14. Supplying the Irish market via trade and investment: Top 10 partner countries, 2012

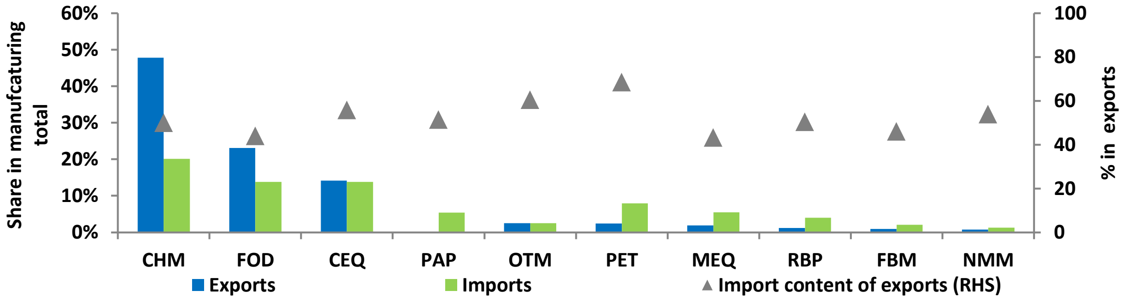


Source: OECD-WTO TiVA Data and OECD AMNE statistics

Trade and investment by industry

The top manufacturing exporting industries in Ireland are chemicals and chemical products (CHM), food and beverages (FOD) and CEQ (computer, electronic and optical products). 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.

Figure 15. Top exporting manufacturing industries in Ireland, 2012

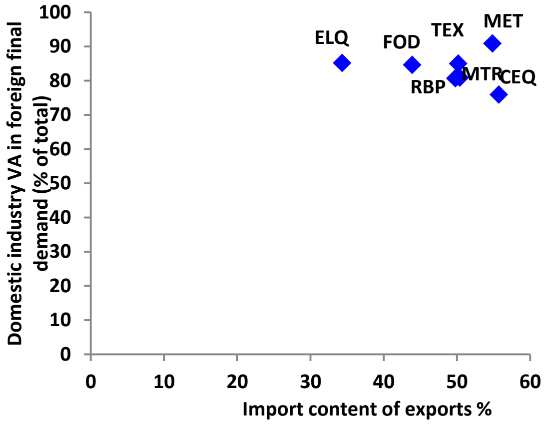


Source: OECD-WTO Trade in Value Added Data and OECD AMNE statistics. See page 10 for a description of industry codes.

Exports and imports go hand in hand…

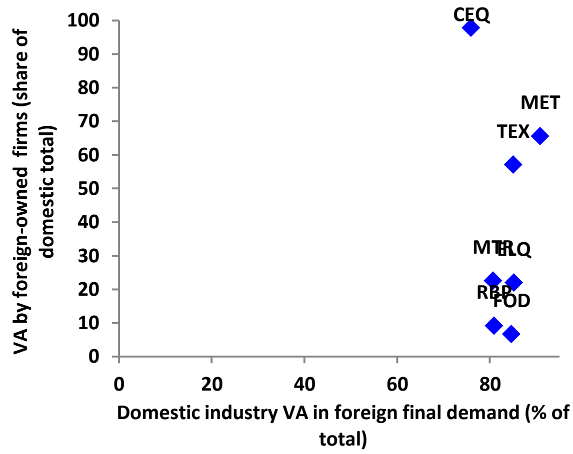
Across most industries in OECD countries there is a strong correlation between higher import content of exports and a higher share of their domestic value-added being exported (export orientation) illustrating the strong complementarity of exports and imports. This is less obvious in the Irish case as most industries (with available data) have a high export orientation and high import content of exports (Figure 16).

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

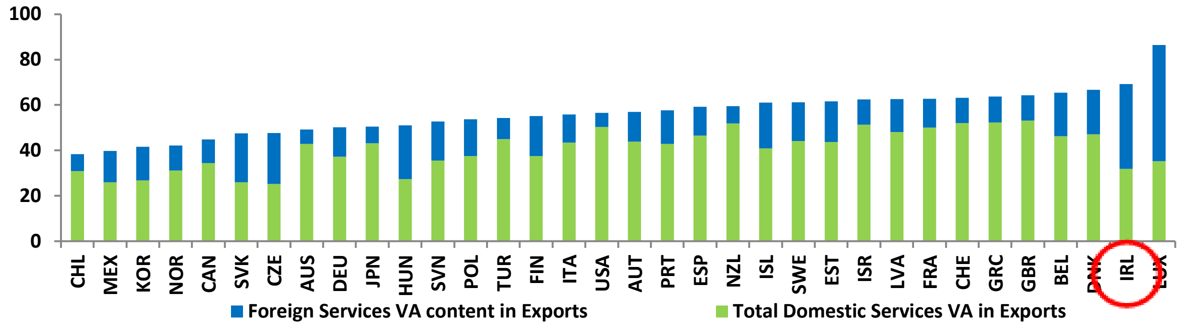
At the same time, strong complementarities can exist between inward investment and import content of exports (Figure 17). Given the high export orientation of most manufacturing industries in Ireland, there is less evidence of foreign-owned firms facilitating GVC integration; for example, the food and beverages industry has very little inward investment but is highly export orientated, while the value added by the computer and electrical industry is almost totally by foreign-owned firms and is also extremely export orientated.

Figure 18, goods trade by enterprise ownership and by industry, cannot be produced for Ireland 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 Ireland's total exports of goods and services was 69% in 2014 (Figure 19), significantly above the OECD median of 57%. Considering the services content of manufactured goods alone, nearly 40% of manufacturing exports reflects services value added, above the OECD average of 36%. Of the total services value added embodied in Ireland's exports nearly half (49%) reflected foreign content, significantly above the OECD average (22%).

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

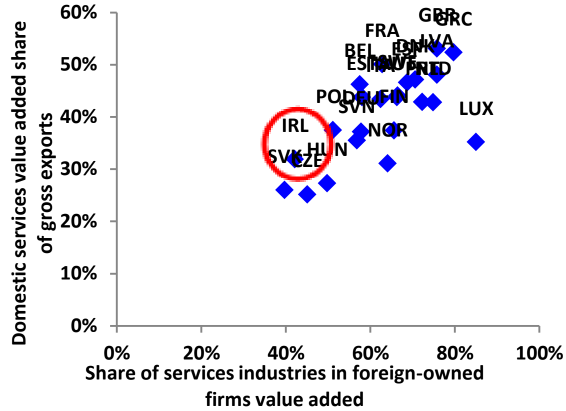


Source: OECD-WTO TiVA Data

…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 Ireland, the share of investment in services is at the lower end for OECD economies which could contribute to the relatively low domestic 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

To make this note as informative as those of other OECD countries some additional data on Irish trade and investment are needed. In the main Figures 8, 9, 10, 12, 2012 data are used for Ireland as it is the latest available year in the AMNE database. If more recent (2014) data were available further comparisons could be made with other countries. Although some data on value added by foreign-owned are published at the industry detail, additional data would enhance the analysis in Figures 16 and 17. Figure 18 on goods trade by firm ownership and industry could be produced if Trade by Enterprise Characteristics (TEC) data were available for domestic MNEs and domestic non-MNEs at the industry level, Figure 7 could be produced if this data were available at the aggregate 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