International trade, foreign direct investment and global value chains



CANADA

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.

Almost one-quarter (24% in 2014) of economic activity (GDP) in Canada depends on foreign markets, around the same as in the United Kingdom and Italy. Foreign-owned firms play a significant role in driving exports, accounting for one-half of Canada's gross exports. Canada's outward investment (equivalent to 80% of GDP in 2016) has grown faster than inward investment in recent years (equivalent to 62% GDP in 2016). A broader notion of international orientation, which captures the impact on national income of exports and sales through foreign affiliates, shows that Canada's international orientation was equivalent to nearly one-quarter (23%) of GDP in 2010. Were more recent data available, it is likely that this would be larger reflecting Canada's increased outward investment position.

Although the United States is Canada's main trading partner, gross trade figures overstate this relationship. In contrast, trade in value added data indicate Japan is a more important partner than the gross trade data indicate.

The top manufacturing exporting industries in Canada are motor vehicles (MTR) and basic metals (MET). In the former, inward investment plays an important role in GVC integration, with foreign owned firms accounting for three-quarters of value added, while in the latter, 80% of value added meets foreign final demand, a strong export orientation. Canada has one of the lower services content in its exports of OECD countries at 45%, and this is correlated with a relatively low share of its inward investment going to the services sector.

Trade and investment in Canada

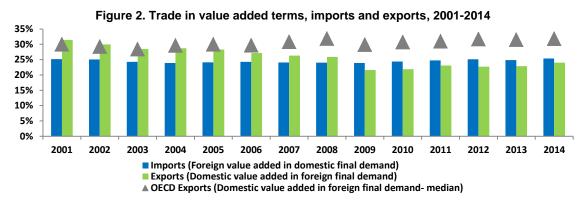
Growth in trade had recovered since the global crisis but slowed in 2016

Like many OECD economies, Canadian trade contracted significantly at the height of the global crisis and again noticeably during the euro crisis. Canadian export growth was below the OECD average in the precrisis years but has moved closer with OECD rates since then. However, in 2016, export growth dropped to 1.1%.

Figure 1. Growth rates of trade and GDP for the OECD and Canada, 2001-2016 20 15 **Growth Rates** 10 5 0 2002 2003 2004 2005 2006 2007 2010 2011 2012 2013 2014 2015 2016 -5 -10 -15 Canada GDP **OECD GDP** Canada Exports OFCD Exports **OECD Imports** Canada Imports

Source: OECD SNA

Gross exports amounted to USD 490 billion in 2015, (34% of GDP), and gross imports to USD 527 billion (36% of GDP). Gross trade figures, however, overstate the 'real' contribution of trade to the economy. In value-added terms, exports contributed 24% of total GDP in 2014, the highest value post-crisis but still below the 2001 high of 31% and the OECD median (grey diamond). The contribution of direct and indirect imports to domestic final demand reached a new high in 2014 of 25%.



Source: OECD-WTO Trade in Value Added Data

Investment is more outward than inward

Although outward and inward FDI stocks tracked each other until 2012, outward FDI stocks have been growing faster, resulting in Canadian FDI becoming more outward orientated (Figure 3). In 2015, Canada's share of the OECD total outward FDI stock (5.6%) was almost double its share of GDP (3%), and its share in inward stock was 4.7% of the OECD total, also higher than its share of GDP (Figure 4).

Figure 3. FDI stocks and income as a share of GDP 90 3 80 2.5 70 60 50 40 30 20 0.5 10 2009 2010 2011 2012 2013 2014 2015 2016 2008 **Inward FDI stock Outward FDI Stock** Income payments Income receipts

share of OECD total, 2015 6.0% 5.0% 4.0% 3.0%

Figure 4. FDI stocks and GDP as a

Source: OECD FDI Statistics (BMD4)

Inward

Outward

Source: OECD FDI Statistics (BMD4)

Foreign owned firms directly sustained 12% of jobs in the private sector in 2010....

Despite the relatively large inward investment compared to other OECD economies, foreignowned enterprises accounted for just 12% of jobs in the private sector in 2010 and 18% of private sector value added produced in Canada, excluding the agriculture and finance sectors.

...and their export intensity is close to the **OECD** median

Foreign-owned firms in Canada are as export intensive (share of exports in turnover) as the OECD median. The import intensity of foreignowned firms in Canada (share of imports in purchases) is slightly above the OECD median.

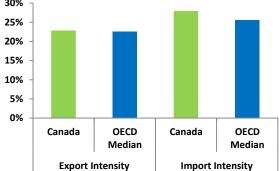
igure 5. Export and import intensity of domestic and foreign-owned enterprises 30%

GDP

2.0%

1.0%

0.0%



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

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

In 2015, Canada received USD 41 billion in income from its outward investment, equivalent to approximately 2.6% of GDP. Canada's rate of return at 3.8% (green bar) on its outward FDI is just below the OECD median, but below 2011 (see chart insert). On the other hand, the return to foreign investors in Canada was 4.4% in 2015, at the OECD median.

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

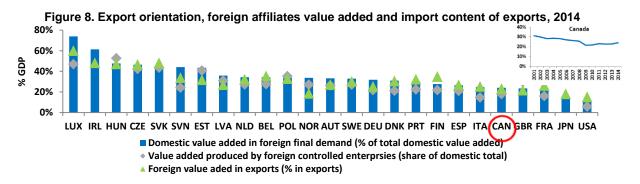
Looking across a selection of European economies, MNEs play a significant role in GVC integration. In some countries it is through the activity of MNE parents, while for other it is foreign-owned firms. In each country with available data, at least half of all goods exports are conducted by MNEs.

Figure 7. Goods Exports by firm type, the role of MNEs 100% 80% % Goods exports 60% 40% 20% 0% AUT DNK FIN FRA HUN ITA POL ■ Foreign-owned firms Domestic MNEs ■ Domestic firms

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

Source: OECD TEC statistics (2011)

Exports (in value added terms) contribute around 24% of Canadian GDP, this is relatively low compared to other OECD economies, but comparable with Italy and Spain. Canada's integration in GVCs as measured by its import content of exports may, in part, reflect the levels of inward investment and their average export intensity (compared to foreign affiliates operating in other countries). Canadian export orientation has yet to recover to pre-crisis levels (see insert chart).



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

* Canada data refers to 2010 (latest available).

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, Canadian exports contain 23% of value-added that remains in the economy. So, only 4% of Canada's exported domestic value added represents profits by foreign-owned firms.

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

80%

40%

LUX SVN CZE EST SVK HUN BEL AUT LVA NLD SWE NOR DEU DNK POL PRT FIN ESP ITA CAN GRC FRA GBR

VA that could be repatriated

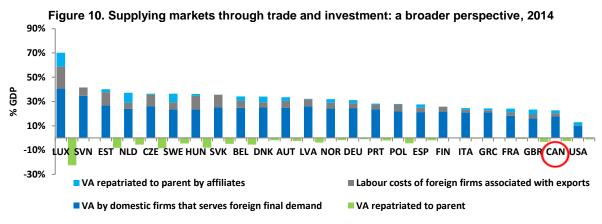
Labour costs of foreign firms

Value added by domestic firms

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 domestic 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 Canada this broader measure (23%) is lower than the export orientation measure from TiVA (24%) because in 2010 Canada was a net recipient of FDI. Canada remains at the lower end of OECD countries using this measure. However, given the faster growth in Canadian outward FDI than inward FDI, it is likely that this measure has increased since 2010.

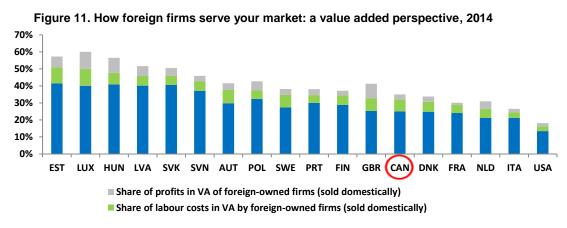


Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD FDI (BMD4) statistics * Canada data refers to 2010 (latest available).

^{*} Canada data refers to 2010 (latest available).

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

Foreign producers supplied products and services for Canadian final consumption equivalent to 35% of GDP in 2010, the majority is through trade (foreign value added in Canadian final demand equals approximately 25% of GDP), but value added generated by foreign affiliates in Canada for domestic (non-export) sales (Figure 11) accounts for a not insignificant 10% of GDP. Although some of this value added can be repatriated to parents, the share that can be repatriated to foreign parents is similar to other OECD economies (grey bar).



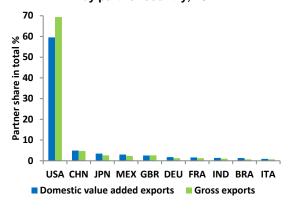
Source: OECD-WTO Trade in Value Added Data, OECD AMNE and OECD TEC statistics * Canada data refers to 2010 (latest available).

Trade and investment by partner country

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

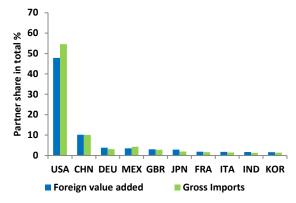
Gross bilateral trade figures can disguise the true nature of interdependencies, particularly in relation to final consumers in one country and producers at upstream parts of the value chain. This is evident for the bilateral relationship with Japan; gross trade figures under represent bilateral trade, while for the United States, gross trade figures overstate the relationship.

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



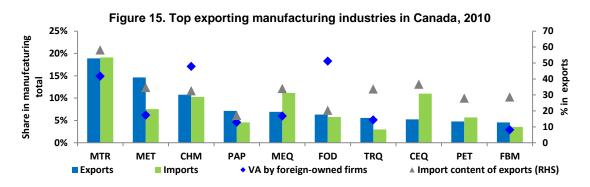
Source: OECD-WTO TiVA Data

Figure 14 cannot be produced due to a lack of data on the value added of foreign-owned firms in Canada.

Trade and investment by industry

Inward investment helps shape Canada's GVC integration

The top manufacturing exporting industries in Canada are motor vehicles (MTR), basic metals (MET) and chemical and chemical products (CHM). 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 differs across Canadian industry, reflecting Canada's own comparative advantages and specialisation of its MNEs as well as the importance of foreign investment in certain 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 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, 2010

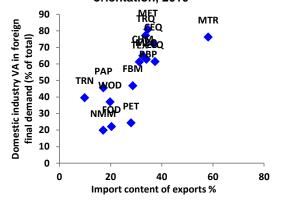
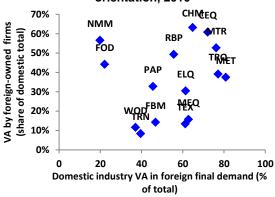


Figure 17. Foreign-owned firms and export orientation, 2010



Source: OECD-WTO TiVA Data and OECD AMNE statistics

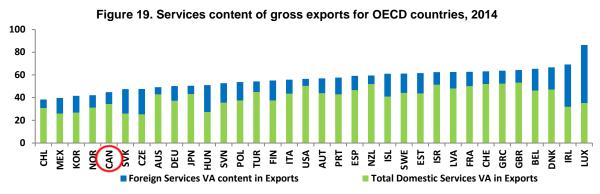
Source: OECD-WTO TiVA Data and OECD AMNE statistics

...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 Canada, the industries where foreign-owned firms produce more of the value added are also those that have a higher export orientation. An exception is the food product industry, where there is high value added by foreign owned firms and low export orientation, likely reflecting market seeking by foreign firms. Figure 18, gross trade in goods by enterprise ownership and industry, cannot be calculated for Canada 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 Canada's total exports of goods and services was 45% in 2014 (Figure 19), below the OECD median of 57%. Considering the services content of manufactured goods alone, 34% of manufacturing exports reflects services value added, just below the OECD average of 36%.

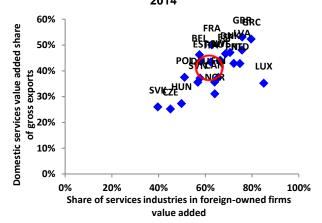


Source: OECD-WTO TiVA Data

...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 Canada, the share of investment in services is just below the median of OECD economies, consistent with its relatively low services content in exports.

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



Source: OECD-WTO TiVA Data and OECD AMNE statistics * Canada data refers to 2010 (latest available)

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, more detailed data about Canadian trade and investment are required.

Primarily, more recent data on foreign-owned firms or inward FATS/ AMNE statistics (value added, turnover) at the aggregate, industry and partner level. Currently the main charts (Figures 8-11) use 2014 data for OECD countries, however 2010 is used for Canada due to data availability. Although the information is mainly structural and unlikely to change substantially it is difficult to make meaningful comparisons with other OECD countries.

Secondly, data on Trade by Enterprise Characteristics (TEC) would benefit the analysis, specifically the trading enterprise by ownership, foreign, domestic MNE or domestic non-MNE. Although data are available on the domestic and foreign trade split, having the domestic MNE or non-MNE enables analysis on whether a country (industry) integrates in GVCs through outward investment.

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
	СНМ	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
	нтн	Health and social work
	OTS	Other community, social and personal services
	PVH	Private households with employed persons

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