

"Trade in Value-Added and Global Value Chains" profiles

Explanatory notes

The "Trade in value-added and global value chains" statistical profiles provide insights on the actual contribution of foreign trade to an economy, the interconnection of national economies within global value chains (GVCs) and the impact of the services industry on trade. Other GVC-related topics are also covered such as "Trade in intermediates", "Trade facilitation" or "Foreign direct investment".

The indicators shown in the first three sections of the profiles are based on the online OECD-WTO Trade in Value-Added database (TiVA), see <http://oe.cd/tiva> or <http://www.wto.org/miwi>. TiVA indicators cover goods and services and are available for a set of 61 economies and 34 industries (from the International Standard Industrial Classification, ISIC Revision 3). Hence, the number of profiles available as well as the partners and industries shown in the tables reflect the current coverage of the TiVA database, which will be progressively extended in the future.

The Annexes present the lists of economies and industries available in TiVA as well as the definitions of economy and industry groups used in the profiles.

As a convention, the symbol "..." is applied whenever data are "not available or not reported".

The "Trade in value-added and global value chains" profiles are divided into the following sections:

VALUE ADDED CONTENT OF GROSS EXPORTS

The estimation of trade in value added terms leads to the decomposition of gross exports into their domestic and foreign value added contents.

The domestic value added content of exports is composed of the following three elements:

Domestic value added sent to consumer economy corresponds to the domestic value added embodied either in final or intermediate goods or services that is directly consumed by the importing economy.

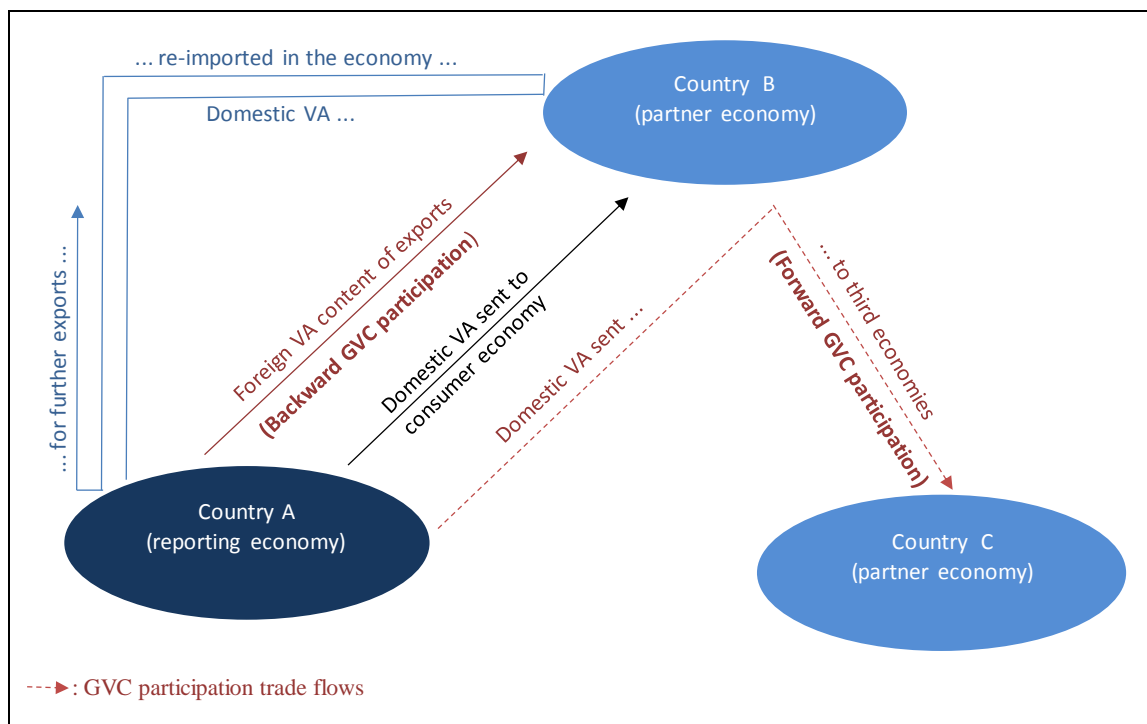
Domestic value added sent to third economies represents the domestic value added contained in intermediates (goods or services) exported to a first economy that re-exports them to a third economy as embodied in other goods or services. This illustrates the multiple value added exchanges taking place among GVCs and corresponds to the "Forward GVC participation" shown in the next section.

Domestic value added re-imported in the economy outlines the domestic value added of exported intermediates, or inputs, that is sent back to the economy of origin as embodied in other intermediates and used to produce exports. Such a value added round-trip between two (or more) economies highlights the domestic value added content present in an economy's imports.

Foreign value added content of exports is also referred to as vertical specialization. This indicator corresponds to the value added of inputs that were imported in order to produce intermediate or final goods/services to be exported. It corresponds to the "Backward GVC participation" shown in the next section.

Source: OECD-WTO TiVA Database

A visualization of the value added components of gross exports and GVC trade flows



PARTICIPATION IN GLOBAL VALUE CHAINS (GVCs)

The GVC participation index is composed of two components reflecting the upstream and downstream links in the chain. Basically, individual economies participate in global value chains by importing foreign inputs to produce the goods and services they export (backward GVC participation) and also by exporting domestically produced inputs to partners in charge of downstream production stages (forward GVC participation). See above diagram.

The GVC participation index can be broken down in two components related to backward and forward linkages of an economy with its foreign partners.

Forward participation to GVCs corresponds to the indicator "Domestic value added sent to third economies" presented in the previous section. It captures the domestic value added contained in inputs sent to third economies for further processing and export through the value chain. This is the 'seller-related' measure or supply side in the GVC participation index.

Backward participation to GVCs refers to the "Foreign value added content of exports" (see definition in previous Section). This is the 'Buyer' perspective or sourcing side in GVCs, where an economy imports intermediates to produce exports.

Source: OECD-WTO TiVA Database

ROLE OF SERVICES VALUE ADDED IN EXPORTS

The compilation of trade in value added terms enables to break down the value added of trade flows by sector and to estimate, more accurately than with traditional statistics, the actual contribution of services in the value added exported by an economy.

This section provides insights on the role of services in exports of manufactures, where firms combine goods and services into product packages, as well as in total exports.

The "Top services industries contributions to exports" figures include both domestic and foreign origins.

Source: OECD-WTO TiVA Database

TRADE IN INTERMEDIATES

Intermediate goods and services are tangible and intangible products utilized as inputs in production, excluding fixed assets.

Merchandise exports/imports in intermediates

The definition of intermediate goods relies upon the United Nations' Broad Economic Categories (BEC) classification, which groups commodities by main end-use, distinguishing between consumption, capital and intermediate goods. The following (sub-)categories are included:

- 111: primary food and beverages, mainly for industry
- 121: processed food and beverages, mainly for industry
- 2: Industrial supplies not elsewhere specified
- 42: parts and accessories for capital goods
- 53: parts and accessories for transport equipment

Oil is excluded from the calculations.

Source: UN Comtrade Database

Intermediate commercial services exports

The definition applied in the profile combines both "Other business services" and "Information and communications technology (ICT) services" as a proxy of intermediate commercial services.

Other business services include:

(i) Research and development services, which consist of services that are associated with basic and applied research, and experimental development of new products and processes. (ii) Professional and management consulting services, including: (a) legal services, accounting, management consulting, managerial services, and public relations services; and (b) advertising, market research, and public opinion polling services. (iii) Technical, trade-related, and other business services, including: (a) architectural, engineering, and other technical services; (b) waste treatment and depollution, agricultural, and mining services; (c) operating leasing services; (d) trade-related services; and (e) other business services n.i.e.

Information and communications technology (ICT) services cover:

(i) Telecommunications services, which encompass the broadcast or transmission of sound, images, data, or other information by telephone, telex, telegram, radio and television cable transmission, radio and television satellite, electronic mail, facsimile, and so forth, including business network services, teleconferencing, and support services; (ii) Computer services consisting of hardware- and software-related services and data-processing services; (iii) Information services including news agency services, such as the provision of news, photographs, and feature articles to the media as well as database services.

Source: WTO Statistics Database

TRADE FACILITATION

The ability of enterprises and of economies to join GVCs is heavily affected by the efficiency of border processes and customs' practices. The indicators present the cost and time involved in exporting and importing as well as the number of official documents required to complete international trade. World figures are based on a simple arithmetic average of available economies.

Source: World Bank, Doing Business Database

FOREIGN DIRECT INVESTMENT (FDI)

FDI contributes to the structural and geographical diversification of multinational enterprises. Its principal aims are to "slice up" the production process and seize the comparative advantages particular to each participant in the supply chain, but also to gain access to foreign markets and sell directly to clients.

FDI is defined as investment in foreign assets through joint venture, merger and acquisition, with a long term perspective. It usually involves an active participation in management from the foreign investor.

For this set of indicators, the reference year is specified whenever it is not 2013.

Source UNCTAD, UNCTADstat database

ANNEXES:

List of economies' names and codes

Name	Code
Argentina	AR
Australia	AU
Austria	AT
Belgium	BE
Brazil	BR
Brunei Darussalam	BN
Bulgaria	BG
Cambodia	KH
Canada	CA
Chile	CL
China	CN
Colombia	CO
Costa Rica	CR
Croatia	HR
Cyprus	CY
Czech Republic	CZ
Denmark	DK
Estonia	EE
Finland	FI
France	FR
Germany	DE
Greece	GR
Hong Kong, China	HK
Hungary	HU
Iceland	IS
India	IN
Indonesia	ID
Ireland	IE
Israel	IL
Italy	IT
Japan	JP
Korea, Republic of	KR
Latvia	LV
Lithuania	LT
Luxembourg	LU
Malaysia	MY
Malta	MT
Mexico	MX
Netherlands	NL
New Zealand	NZ
Norway	NO
Philippines	PH
Poland	PL
Portugal	PT
Romania	RO
Russian Federation	RU
Saudi Arabia, Kingdom of	SA
Singapore	SG
Slovak Republic	SK
Slovenia	SI
South Africa	ZA
Spain	ES
Sweden	SE
Switzerland	CH
Chinese Taipei	TW
Thailand	TH
Tunisia	TN
Turkey	TR
United Kingdom	GB
United States	US
Viet Nam	VN

Definitions of developed and developing economies

Name	Code	Economic group
Australia	AU	Developed economies
Austria	AT	Developed economies
Belgium	BE	Developed economies
Bulgaria	BG	Developed economies
Canada	CA	Developed economies
Croatia	HR	Developed economies
Cyprus	CY	Developed economies
Czech Republic	CZ	Developed economies
Denmark	DK	Developed economies
Estonia	EE	Developed economies
Finland	FI	Developed economies
France	FR	Developed economies
Germany	DE	Developed economies
Greece	GR	Developed economies
Hungary	HU	Developed economies
Iceland	IS	Developed economies
Ireland	IE	Developed economies
Italy	IT	Developed economies
Japan	JP	Developed economies
Latvia	LV	Developed economies
Lithuania	LT	Developed economies
Luxembourg	LU	Developed economies
Malta	MT	Developed economies
Netherlands	NL	Developed economies
New Zealand	NZ	Developed economies
Norway	NO	Developed economies
Poland	PL	Developed economies
Portugal	PT	Developed economies
Romania	RO	Developed economies
Slovak Republic	SK	Developed economies
Slovenia	SI	Developed economies
Spain	ES	Developed economies
Sweden	SE	Developed economies
Switzerland	CH	Developed economies
United Kingdom	GB	Developed economies
United States	US	Developed economies
Argentina	AR	Developing economies
Brazil	BR	Developing economies
Brunei Darussalam	BN	Developing economies
Cambodia	KH	Developing economies
Chile	CL	Developing economies
China	CN	Developing economies
Colombia	CO	Developing economies
Costa Rica	CR	Developing economies
Hong Kong, China	HK	Developing economies
India	IN	Developing economies
Indonesia	ID	Developing economies
Israel	IL	Developing economies
Korea, Republic of	KR	Developing economies
Malaysia	MY	Developing economies
Mexico	MX	Developing economies
Philippines	PH	Developing economies
Saudi Arabia, Kingdom of	SA	Developing economies
Singapore	SG	Developing economies
South Africa	ZA	Developing economies
Chinese Taipei	TW	Developing economies
Thailand	TH	Developing economies
Tunisia	TN	Developing economies
Turkey	TR	Developing economies
Viet Nam	VN	Developing economies

List of industries' names and codes

ISIC Rev. 3 code	Short name (applied in the profile)	Long name (more coverage details)	Main industry categories
01 to 05	Agriculture	Agriculture, hunting, forestry and fishing	Primary products
10 to 14	Mining	Mining and quarrying	Primary products
15 to 16	Food and beverages	Food products, beverages and tobacco	Manufactures
17 to 19	Textiles	Textiles, textile products, leather and footwear	Manufactures
20	Wood products	Wood and products of wood and cork	Manufactures
21 to 22	Paper products	Pulp, paper, paper products, printing and publishing	Manufactures
23	Petroleum products	Coke, refined petroleum products and nuclear fuel	Manufactures
24	Chemical products	Chemicals and chemical products	Manufactures
25	Plastic products	Rubber and plastics products	Manufactures
26	Other mineral products	Other non-metallic mineral products	Manufactures
27	Basic metals	Basic metals	Manufactures
28	Metal products	Fabricated metal products	Manufactures
29	Machinery and equipment	Machinery and equipment, nec	Manufactures
30 to 33 (excl. 31)	Computer and electronic	Computer, Electronic and optical equipment	Manufactures
31	Electrical machinery	Electrical machinery and apparatus, nec	Manufactures
34	Motor vehicles	Motor vehicles, trailers and semi-trailers	Manufactures
35	Other transport equipment	Other transport equipment	Manufactures
36 to 37	Manufacturing nec	Manufacturing nec; recycling	Manufactures
40 to 41	Electricity gas water	Electricity, gas and water supply	Manufactures
45	Construction	Construction	Services
50 to 52	Wholesale and retail trade	Wholesale and retail trade; repairs	Services
55	Hotels and restaurants	Hotels and restaurants	Services
60 to 63	Transport and storage	Transport and storage	Services
64	Post and telecommunications	Post and telecommunications	Services
65 to 67	Financial intermediation	Financial intermediation	Services
70	Real estate activities	Real estate activities	Services
71	Renting of machinery and equipment	Renting of machinery and equipment	Services
72	Computer activities	Computer and related activities	Services
73 to 74	Other business services	R&D and other business activities	Services
75	Public admin	Public admin. and defence; compulsory social security	Services
80	Education	Education	Services
85	Health and social work	Health and social work	Services
90 to 93	Other community and social services	Other community, social and personal services	Services
95	Private households	Private households with employed persons	Services