

Merchandise trade and trade in commercial services

World merchandise exports fell by 3 per cent in 2016 in value terms. This decrease was mostly caused by the continuing decline in exports of fuels and mining products (-14 per cent in 2016). The marked decline in commodity prices in 2015 mostly halted in 2016, with the exception of energy prices. The export prices of all other major commodity groups, apart from food and beverages, decreased slightly but the decline was less than in 2015.

In 2016, world exports of commercial services were up by 0.4 per cent. Global transport exports continued to fall as subdued trade due to stagnating economic conditions and overcapacity hit the shipping and airline industries. Despite security, safety and health concerns in several locations around the world, global travel receipts rose by 2 per cent reflecting a 3.9 per cent increase in international tourist arrivals worldwide. Expanded intra-regional tourism lifted Asia's travel exports, with Chinese travellers playing a key role. Global exports of other commercial services increased by 1 per cent. Information and communication technology (ICT) services were the most dynamic sector but a digital divide regarding access to and use of ICT technologies hinders Africa's participation in this sector.

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Merchandise trade

World merchandise exports decreased by 3 per cent

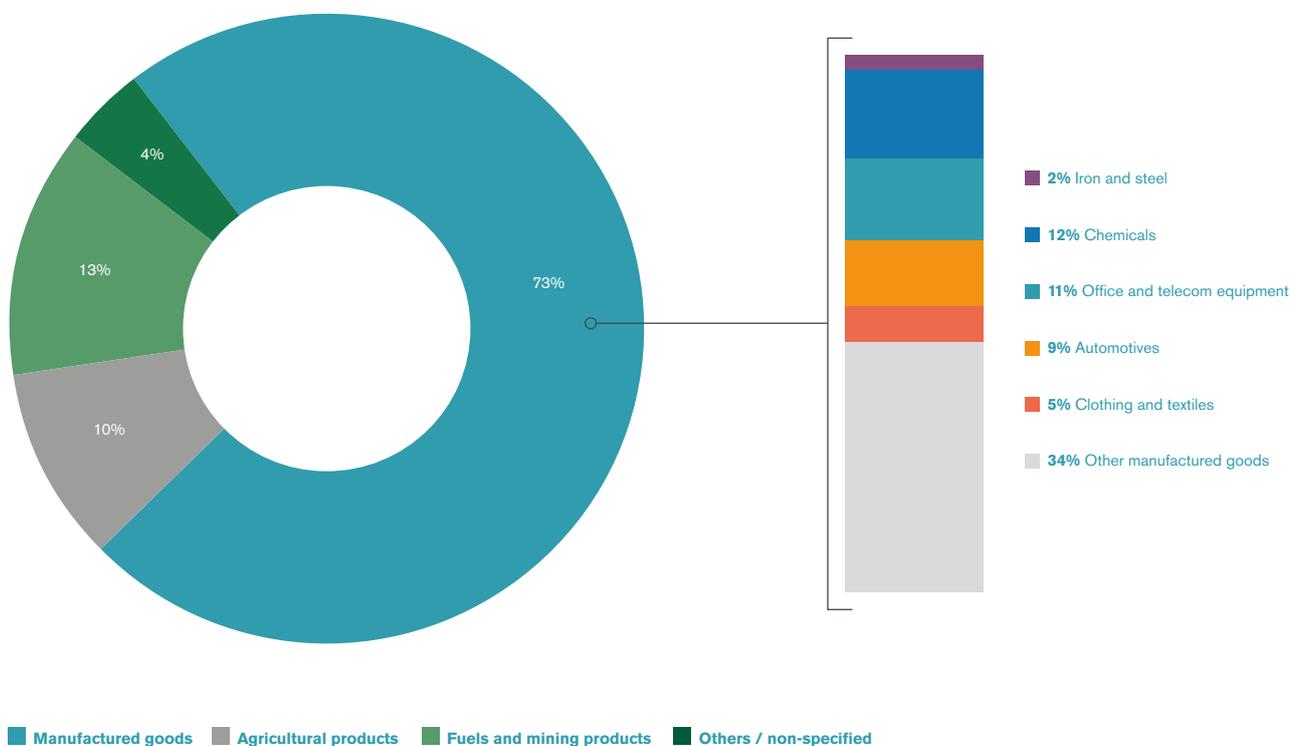
The 3 per cent decrease in value terms of world merchandise exports in 2016 was mostly caused by the strong decline in exports of fuels and mining products (-14 per cent in 2016). However, the decline for this category was less marked than in 2015 (-36 per cent). Exports of manufactured goods decreased slightly (-2 per cent) while exports of agricultural products registered a slight increase (+1 per cent). Exports of manufactured goods totalled US\$ 11.2 trillion in 2016, representing

more than 70 per cent of total world exports in 2016 (see Chart 4.1).

The steep decline in commodity prices recorded in 2015 mostly halted in 2016, with the exception of energy prices (see Chart 4.2). The export prices of all major commodity groups, apart from food and beverages, decreased slightly but on a much smaller scale than in 2015. Prices for food and beverages registered a small increase of 1 per cent. This was mostly due to unfavourable weather conditions in several parts of the world making many of these products more scarce.

The prices of minerals and non-ferrous metals decreased by 5 per cent in 2016 but there was an increase in prices for some commodities, such as tin (+12 per cent), zinc (+8 per cent), lead (+4 per cent) and iron ore (+4 per cent). A fall in prices, however, was recorded for uranium (-28 per cent), nickel (-19 per cent) and copper (-12 per cent). Energy prices fell by 18 per cent, with the highest decline registered by natural gas (-34 per cent). Prices for crude petroleum fell by 18 per cent but coal prices went up by 14 per cent.

Chart 4.1:
World merchandise exports by major product groups, 2016
(Share, %)



Source: WTO Secretariat.

European Union remains top exporter of agricultural products

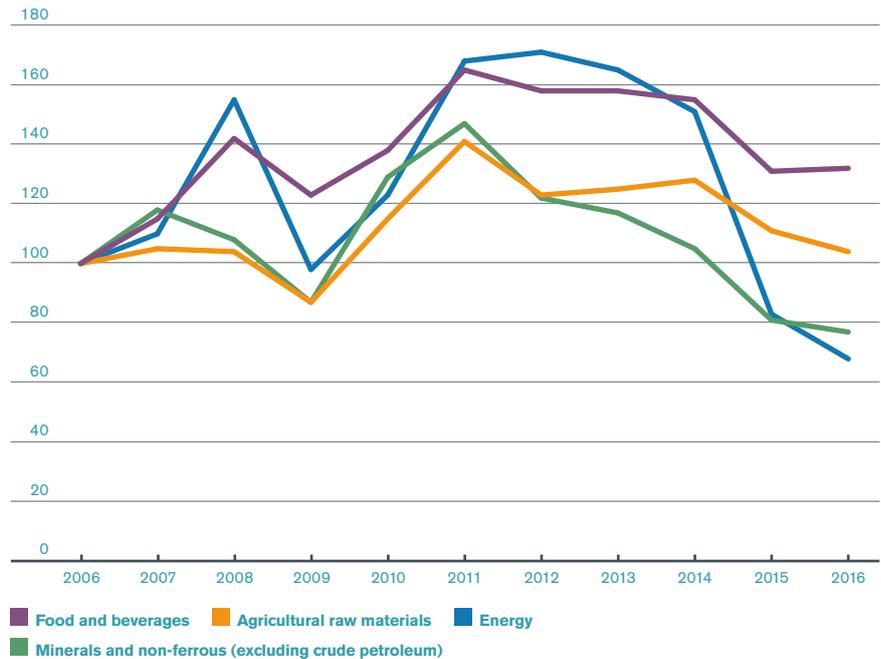
The top six exporters of agricultural products remained unchanged in 2016 (see Chart 4.3). The European Union remains the top exporter (38 per cent of the export market, +1 percentage point compared with 2015). Argentina climbed from tenth to seventh position in 2016. Thailand dropped by one position to eighth place, and Australia dropped from eighth to tenth position. India remained ninth largest exporter as in the previous year.

The top five exporters of agricultural products were also the top exporters of food in 2016 (see Table A15). Three of the top five are net exporters of food (European Union, Brazil and Canada) while two (United States and China) are net importers of food.

Five out of the top ten exporters of agricultural products increased their exports in 2016 compared with a decline in exports for all ten in 2015. The highest annual percentage change in 2016 was recorded by Argentina with an increase of 7 per cent, followed by China (+5 per cent). The greatest decline in exports was recorded by Australia (-6 per cent).

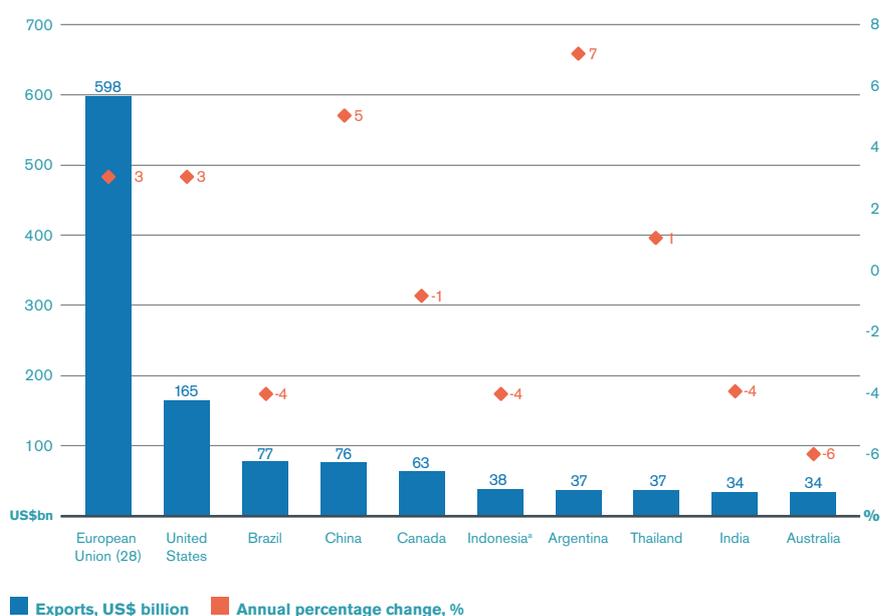
The top ten exporters collectively represented more than 73 per cent of world exports of agricultural exports in 2016.

Chart 4.2:
Fluctuations in international prices, 2006-2016
(Index 2006 = 100)



Source: IMF

Chart 4.3:
Top ten exporters of agricultural products, 2016
(US\$ billion and annual percentage change, %)



^a Includes Secretariat estimates.
Source: WTO Secretariat.

Russia and Qatar hit by decline in gas prices

The top exporters of fuels and mining products were hit by a decline in prices in 2016. However, the decline (in prices) of 18 per cent was not as marked as the 47 per cent decline recorded in 2015.

Nine out of the top ten exporters saw decreases in their exports of fuels and mining products, with the exception of Australia (+0.4 per cent) which profited from price increases, especially in iron ore and coal (see Chart 4.4). The biggest declines in exports were recorded by the Russian Federation (-33 per cent) and Qatar (-32 per cent) which are more dependent on exports of natural gas than the other top exporters.

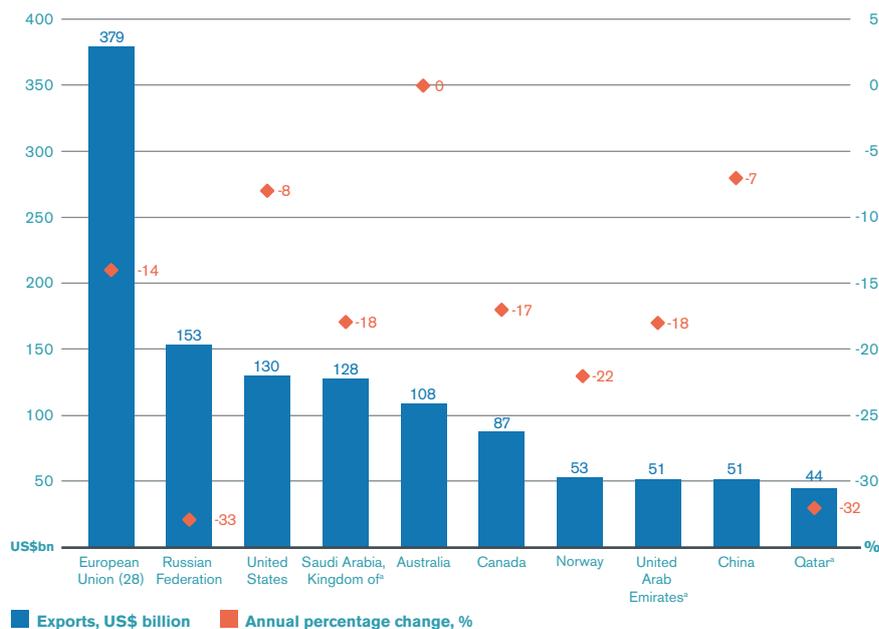
The United States became the third biggest exporter of fuels and mining products in 2016, with Saudi Arabia dropping from third to fourth position in 2016. Qatar fell from seventh to tenth place.

Export values of iron and steel drop sharply

The top exporters of iron and steel were hit by low export prices and sluggish demand in 2016. They all saw declines in their exports of iron and steel, ranging from -1 per cent (India) to -15 per cent (United States) (see Chart 4.5).

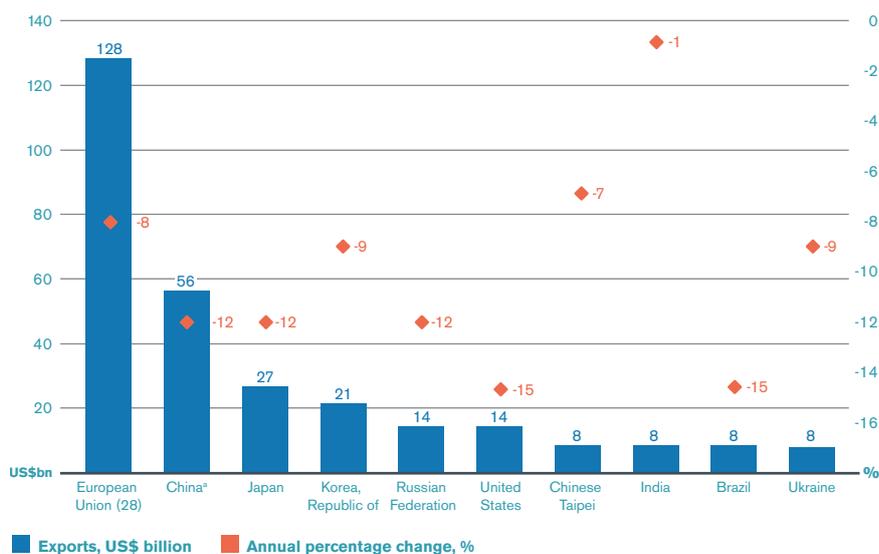
The European Union remained the top exporter with a 38 per cent share of world exports of iron and steel. The Russian Federation rose from sixth to fifth position in 2016, while India climbed from tenth to eighth place. The United States fell from fifth to sixth position, Brazil from seventh to ninth position and Ukraine from ninth to tenth place.

Chart 4.4:
Top ten exporters of fuels and mining products, 2016
(US\$ billion and annual percentage change, %)



^a Includes Secretariat estimates.
Source: WTO Secretariat.

Chart 4.5:
Top ten exporters of iron and steel, 2016
(US\$ billion and annual percentage change, %)



^a Includes significant shipments through processing zones.
Source: WTO Secretariat.

Swiss exports of chemicals increase by 9 per cent

The top ten exporters of chemicals remained mostly unchanged in 2016 (see Chart 4.6), with the exception of India (rising from ninth to eighth place) and Canada (falling from eighth to ninth position).

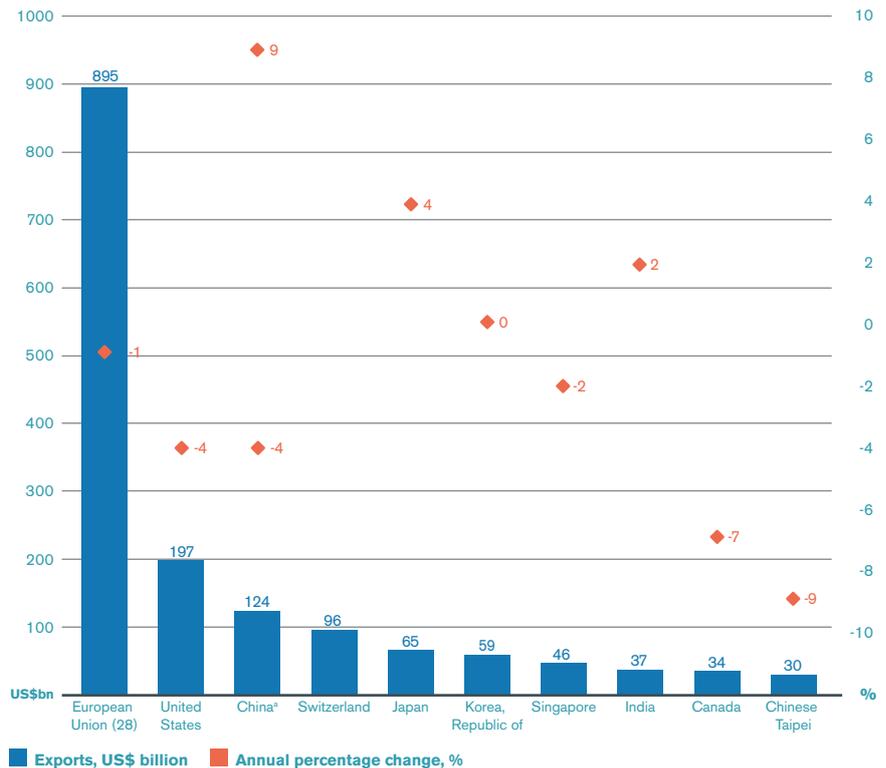
Three out of the top ten exporters of chemicals increased their export values, namely Switzerland (+9 per cent), Japan (+4 per cent) and India (+2 per cent). Exports from the Republic of Korea stagnated while exports declined for the other top ten exporters. The greatest decline was recorded by Chinese Taipei (-9 per cent) followed by Canada (-7 per cent).

China's exports of office and telecom equipment fall by 8 per cent

Among the top ten exporters of office and telecom equipment (see Chart 4.7), China recorded the biggest decline (-8 per cent) in 2016. However, it still represents about one-third of world exports of office and telecom equipment. Singapore's exports fell by 5 per cent while the exports of the Republic of Korea declined by 4 per cent. The exports of the European Union and the United States remained at about the same level as in 2015 while a slight increase in exports was recorded by Chinese Taipei (+2 per cent) and Japan (+1 per cent).

Chart 4.6:

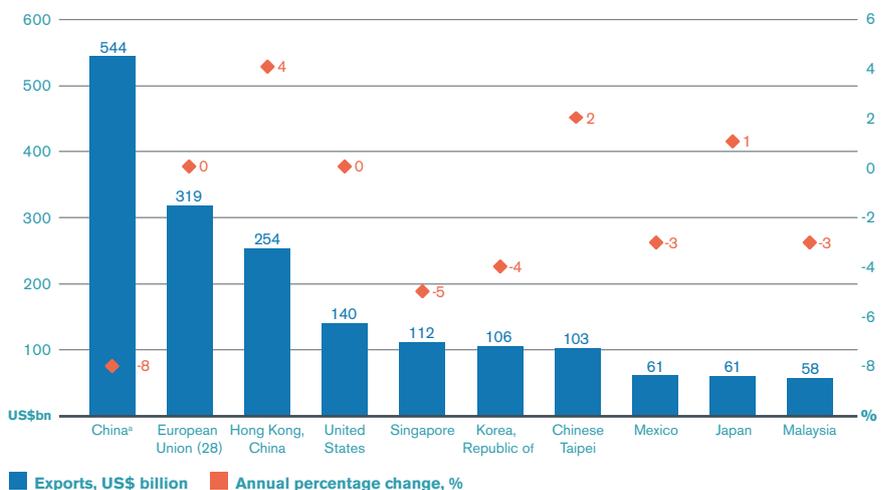
Top ten exporters of chemicals, 2016
(US\$ billion and annual percentage change, %)



* Includes significant shipments through processing zones.
Source: WTO Secretariat.

Chart 4.7:

Top ten exporters of office and telecom equipment, 2016
(US\$ billion and annual percentage change, %)



* Includes significant shipments through processing zones.
Source: WTO Secretariat.

EU regains 50 per cent share of world exports of automotive products

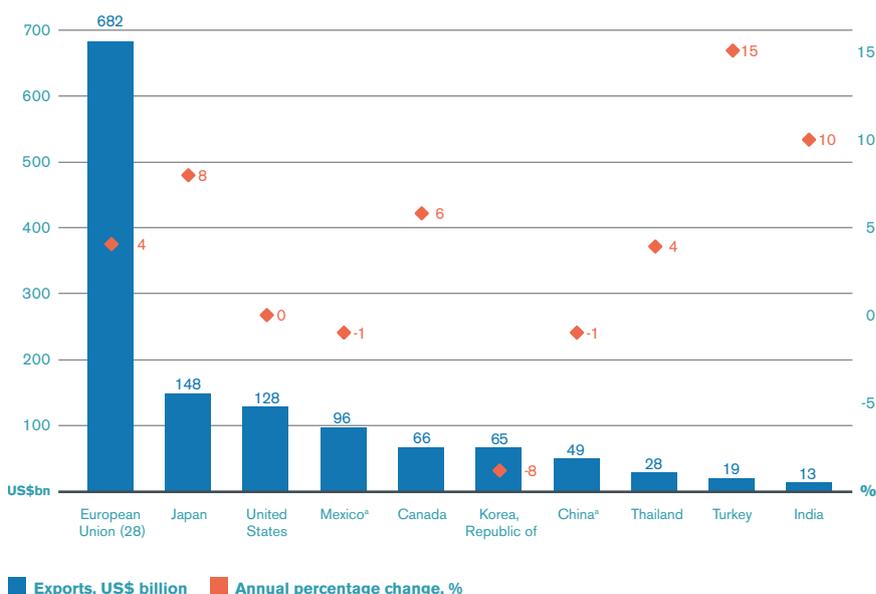
The European Union's exports of automotive products increased by 4 per cent in 2016 (see Chart 4.8), reaching a market share of 50 per cent, following a decline in its exports in 2015. Japan remained in second position (with an 11 per cent share of world exports; +8 per cent in 2016) followed by the United States (9 per cent share, -0.5 per cent).

The Republic of Korea fell from fifth to sixth position while Canada did the reverse (rising to fifth place). The ranking of the other top 10 exporters remained unchanged. The highest increases in exports were recorded by Turkey (+15 per cent) and India (+10 per cent) while exports from the Republic of Korea declined the most (-8 per cent).

Viet Nam breaks into top ten exporters of textiles

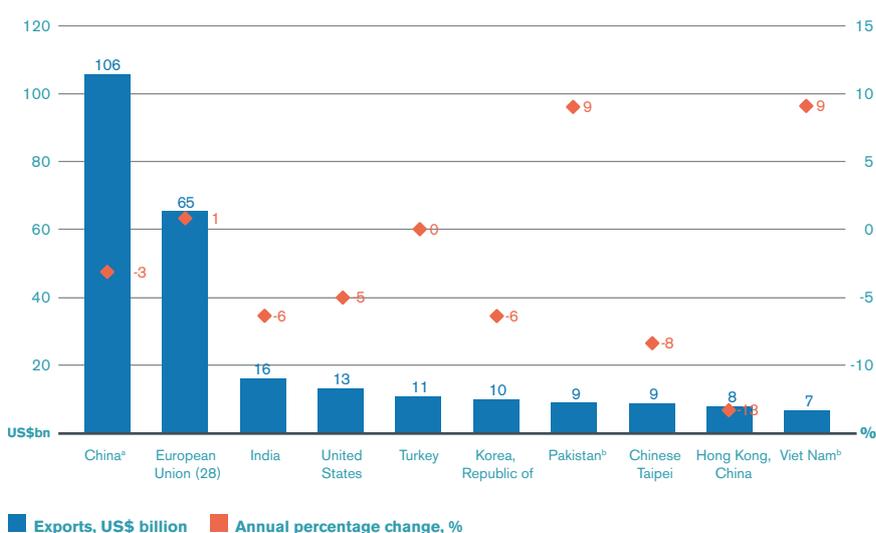
China remained the top exporter of textiles in 2016 (with a 37 per cent share of world exports) even though its exports declined by 3 per cent. The next biggest exporters were the European Union (23 per cent share; 1 per cent increase in 2016) and India (6 per cent share; -6 per cent) – see Chart 4.9. Pakistan rose from ninth to seventh position while Viet Nam entered the top ten for the first time (2 per cent share; +9 per cent).

Chart 4.8:
Top ten exporters of automotive products, 2016
(US\$ billion and annual percentage change, %)



^a Includes significant shipments through processing zones.
Source: WTO Secretariat.

Chart 4.9:
Top ten exporters of textiles, 2016
(US\$ billion and annual percentage change, %)



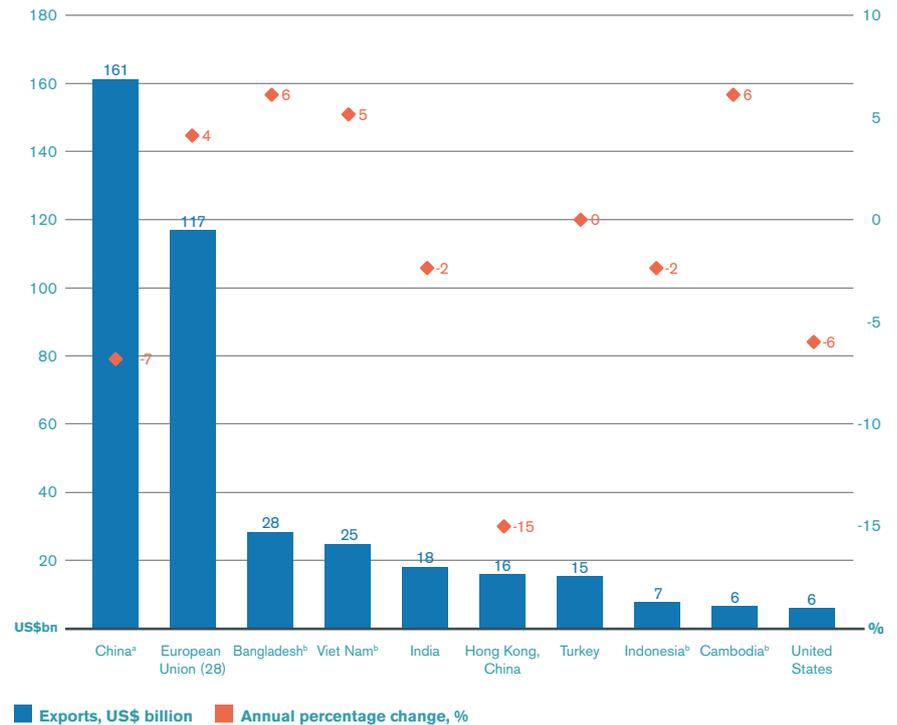
^a Includes significant shipments through processing zones.
^b Includes Secretariat estimates.
Source: WTO Secretariat.

Clothing exports of Cambodia and Bangladesh increase by 6 per cent

The top ten exporters of clothing in 2016 remained unchanged. However, Hong Kong (China) fell from fifth to sixth position and India did the reverse, rising to fifth place – see Chart 4.10. China's exports of clothing fell by 7 per cent but it still stayed in top position, representing 36 per cent of world exports of clothing in 2016.

EU exports of clothing increased by 4 per cent in 2016, reaching a market share of 26 per cent. The highest increases were recorded by Cambodia and Bangladesh (+6 per cent for both countries). Exports of China and the United States declined the most (-7 per cent and -6 per cent respectively).

Chart 4.10:
Top ten exporters of clothing, 2016
(US\$ billion and annual percentage change, %)



^a Includes significant shipments through processing zones.

^b Includes Secretariat estimates

Source: WTO Secretariat.

Trade in commercial services

Overcapacity in transport sector leads to decline in exports but recovery is under way

Global exports of transport services continued to decline in 2016, falling by 4 per cent, to US\$ 853 billion, with the largest declines in Africa (-9 per cent) and Asia (-7 per cent). The Middle East was the only region with positive growth, boosted by thriving air transport exports (see Chart 4.11).

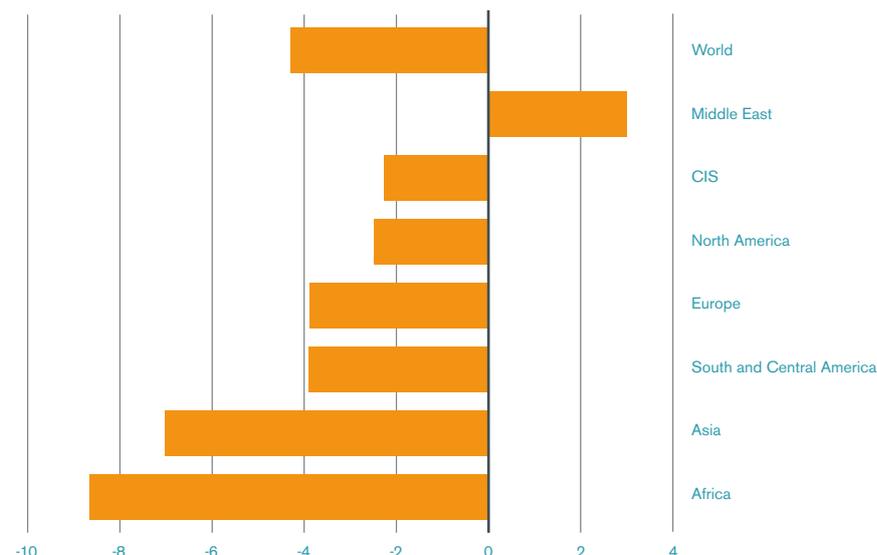
World exports of freight transport by sea plummeted by 13 per cent in 2016 (see Chart 4.12). This was due to overcapacity in the shipping industry and weak demand as a result of stagnating economic conditions. In particular, dry bulk shipping recorded its worst year ever. The prices for freight shipping remained exceptionally low before recovering in the last quarter of 2016 due to increased demand. Prices for container shipping followed a similar pattern, improving at the end of the year as the sector started to deal with over-supply.

Subdued trade led to oversupply in the airline industry as well despite a 3.8 per cent rise in airfreight volumes.¹ Overcapacity pushed the prices of airfreight transport downwards. As a result, world exports of freight transport by air contracted by 3 per cent in 2016, similar to the declines recorded for other modes of freight transport, such as railways and roads. More than half of global transport exports relate to international freight transport, largely by sea.²

Growth in international air passenger transport remained strong in 2016 as international routes multiplied (see Chart 4.13). The Middle East posted the highest growth in international

Chart 4.11:

World exports of transport services by region, 2016
(Annual percentage change, %)



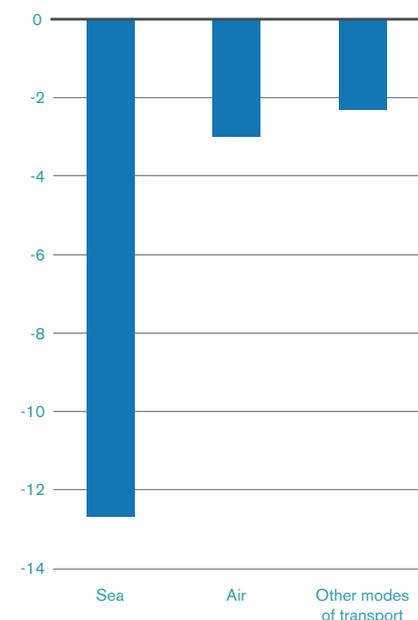
Source: WTO-UNCTAD-ITC estimates.

passenger traffic, at 11.8 per cent, almost twice as high as the world average. Commercial airlines recorded international passenger “load factors” – the percentage of seats filled per flight – of almost 80 per cent worldwide, with a peak in Europe of 82.8 per cent. However lower prices, due to increased competition, affected air passenger revenue, which continued to decline in a similar way to cargo revenue.³

Passenger transport receipts account for the largest share of air transport exports. But despite rising international air passenger traffic, world exports of air transport services declined by 2 per cent in 2016.

Chart 4.12:

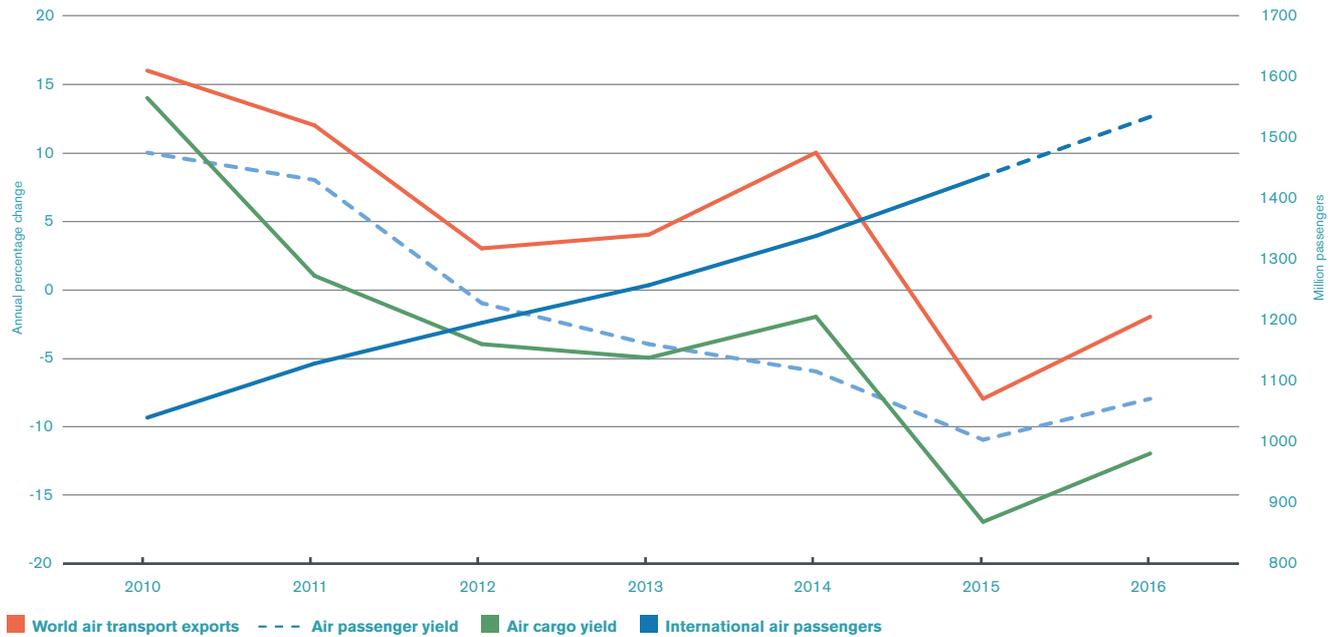
World exports of freight transport by mode of transport, 2016
(Annual percentage change, %)



Source: WTO estimates.

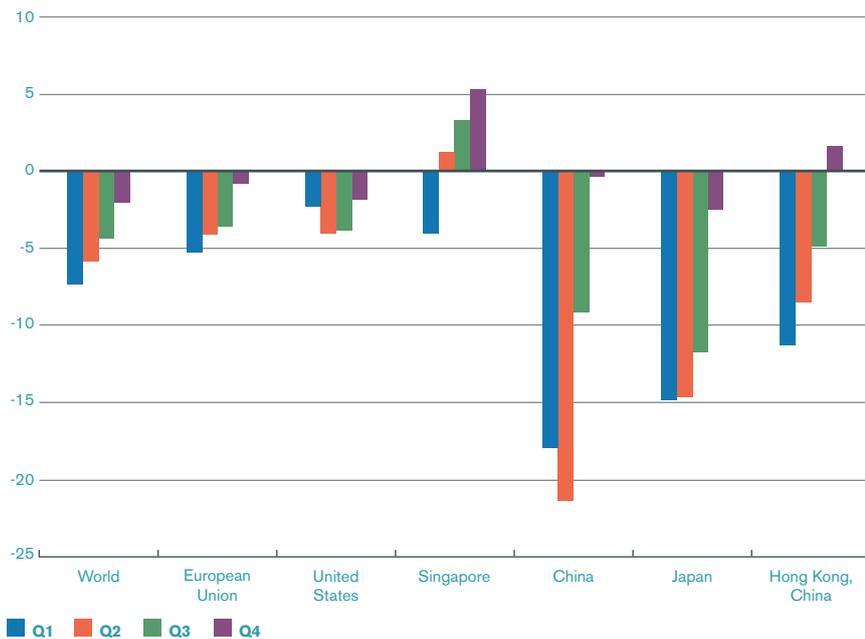
¹ IATA "Air freight market analysis". ² WTO World Trade Statistical Review 2016. ³ IATA "Air passenger market analysis".

Chart 4.13:
World exports of air transport services, air cargo and air passenger yields, 2010-2016
(Annual percentage change and million passengers)



Source: WTO estimates, IATA and ICAO. The number of international air passengers in 2016 is estimated by the WTO Secretariat (see dotted line)

Chart 4.14:
Quarterly exports of transport services, world and selected leading traders, Q1 2016 – Q4 2016
(Percentage change, year-on-year)



Source: WTO-UNCTAD-ITC estimates.

Overall, 2016 was a challenging year for the transport sector worldwide. However, as global demand and trade recovered in the last months of the year, world exports of transport services gradually bounced back (see Chart 4.14). Data for the first quarter of 2017 from the shipping and airline industries point to robust growth. The index for container shipping throughput of major ports continued to rise as well as international air passenger transport (+7.1 per cent) and air freight transport (+10.9 per cent). Short-term statistics on exports of transport services in leading economies suggest that recovery is under way.

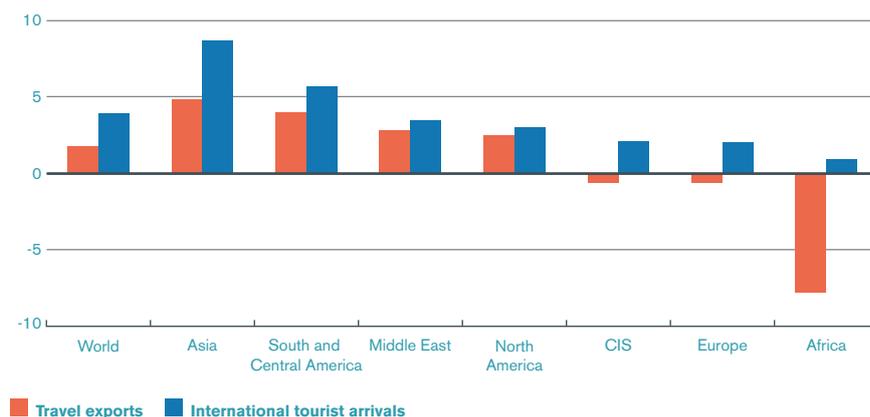
Asia records highest growth in travel earnings

World exports of travel rose by 2 per cent in 2016, reaching US\$ 1,205 billion (see Chart 4.15). These exports measure travellers' expenditure in goods and services during their stay abroad. The increase in 2016 reflected a 3.9 per cent increase in the number of international tourist arrivals worldwide. Although security and health concerns remained an issue in several parts of the world, international tourist arrivals reached 1,235 million in 2016.⁴

Asian economies recorded the highest growth in international tourist arrivals, largely from passengers travelling within the region. This growth was fuelled by enhanced air connectivity and cheaper airfares. Expanded tourism within Asia boosted the region's travel exports, which increased by 5 per cent, the largest rise among all regions. Several leading and emerging Asian exporters saw robust growth rates. Japan's travel receipts rose by 25 per cent, the third consecutive year of double-digit growth. Australia, Thailand and India also recorded strong increases, reflecting a surge in international tourists (see Chart 4.16).

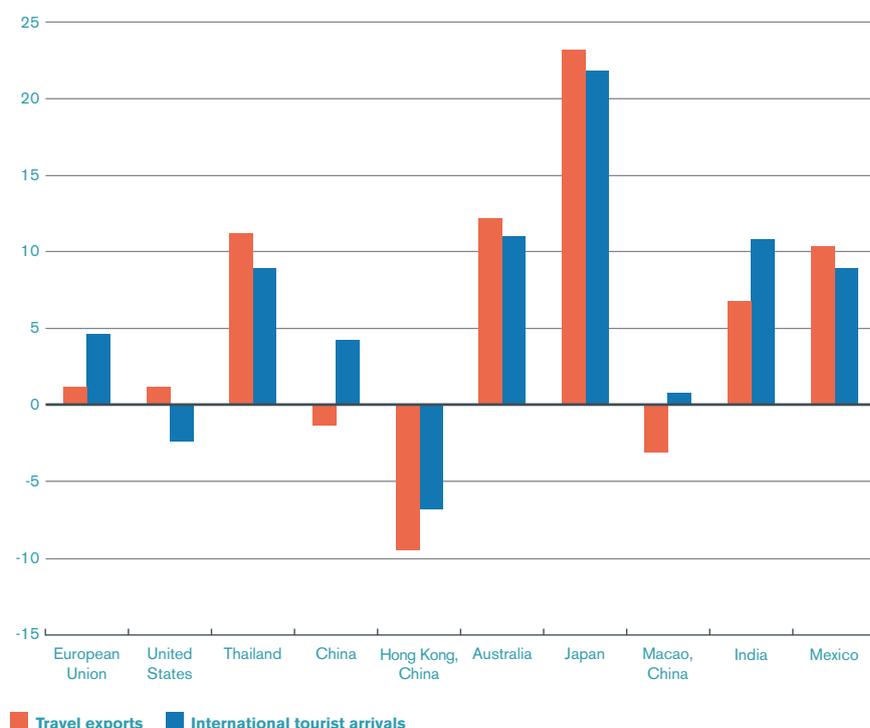
China played a key role in neighbouring economies' tourism growth in 2016. Chinese travellers targeted destinations within Asia, preferring short trips over long-haul travel. China accounted for some 15 per cent of international tourist arrivals in Australia, more than a quarter in Thailand and Japan, close to a half in the Republic of Korea and two-thirds in Macao, China and Hong Kong, China. However, in Hong Kong, China and Macao, China arrivals from China and average expenditure contracted. This translated into a decline in travel

Chart 4.15:
World exports of travel and international tourist arrivals by region, 2016
(Annual percentage change, %)



Note: Regional aggregates for international tourist arrivals were calculated by the WTO Secretariat on the basis of UNWTO data. Source: WTO-UNCTAD-ITC estimates.

Chart 4.16:
Leading exporters of travel and international tourist arrivals, 2016
(Annual percentage change, %)



Note: For the United States, international tourist arrivals growth covers January-August. Source: WTO-UNCTAD-ITC estimates, UNWTO and national data.

⁴ UN World Tourism Organization, "World Tourism Barometer", March 2017.

exports for both economies. In 2016, China held a 21.8 per cent share of world payments for overseas travel. Despite a recent downward revision of its travel statistics, it remained the second global travel spender behind the European Union.

Other regions benefited from rising numbers of foreign tourists. South and Central America's travel receipts rose by 4 per cent in 2016 sustained by increasing numbers of travellers from the United States despite concerns caused by the outbreak of the Zika virus in several countries. In the Middle East, exports of travel expanded by 3 per cent while the European Union's travel exports rose by 1 per cent as exchange rate fluctuations stabilized following volatility in 2015.

By contrast, Africa's travel receipts fell by 8 per cent due to a slowdown in international tourist arrivals. This was largely the result of a sharp drop in foreign tourists in Egypt following terrorist attacks, with the country's travel receipts contracting by more than a half. In Sub-Saharan Africa, however, growth remained positive. In 2016, travel accounted for almost 40 per cent of Africa's total exports of commercial services.

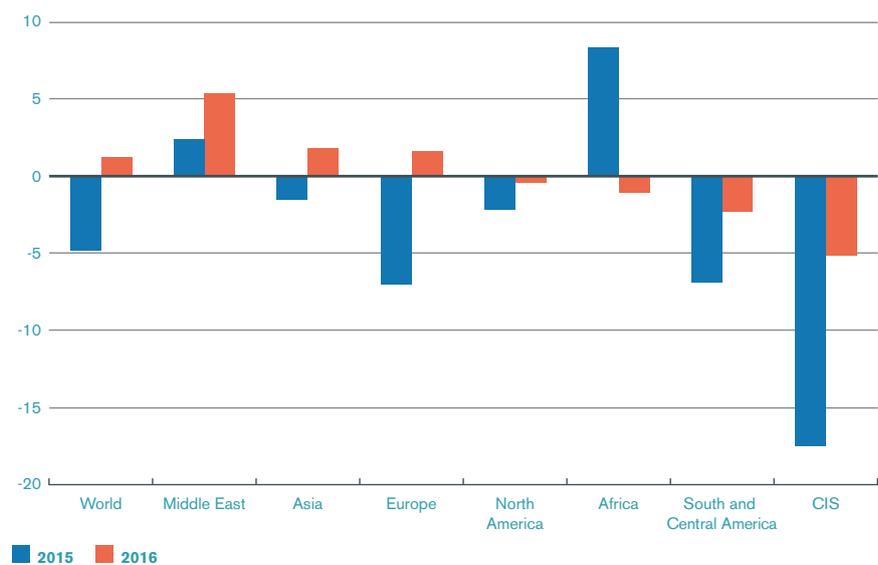
According to the UN's World Tourism Organization, international tourist arrivals are projected to rise by 3 to 4 per cent in 2017.

High-tech services lead growth in other commercial services in Asia and Middle East

World exports of other commercial services (a category which includes financial services) increased by 1 per cent in 2016, reaching US\$ 2,584 billion, following a 5 per cent drop in 2015 (see Chart 4.17). However, export performance was uneven

among regions. While the Commonwealth of Independent States and South and Central America continued to record significant declines, other regions recorded positive growth. The Middle East was the fastest growing region in 2016 (+5 per cent), boosted by Israel's expanding exports of computer services and research and development (R&D) services.

Chart 4.17:
World exports of other commercial services by region, 2016
(Annual percentage change, %)

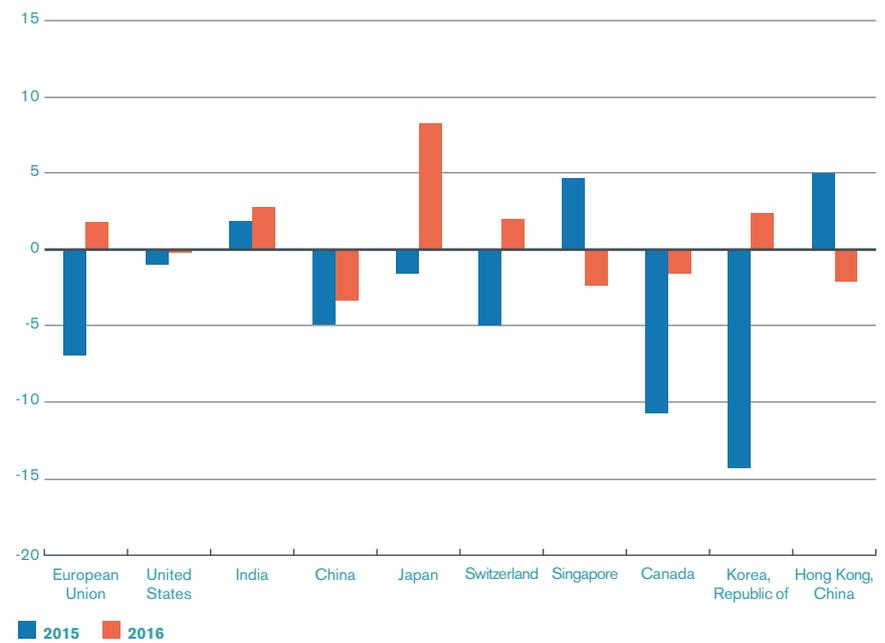


Note: "Other commercial services" covers: construction; insurance and pension services; financial services; charges for the use of intellectual property not included elsewhere; telecommunications, computer and information services; other business services; and personal, cultural and recreational services.
Source: WTO-UNCTAD-ITC estimates.

Highly-skilled, knowledge-based services contributed to exports growth in Asia. Receipts of intellectual property charges, financial services, R&D services, and technical and scientific services boosted Japan's exports (see Chart 4.18). In 2016, the country recorded the most rapid growth among leading exporters of other commercial services. In other leading economies in the region, such as India, exports of R&D services increased by 52 per cent while in the Republic of Korea, licence fees for the use of outcomes of R&D rose by 13 per cent.

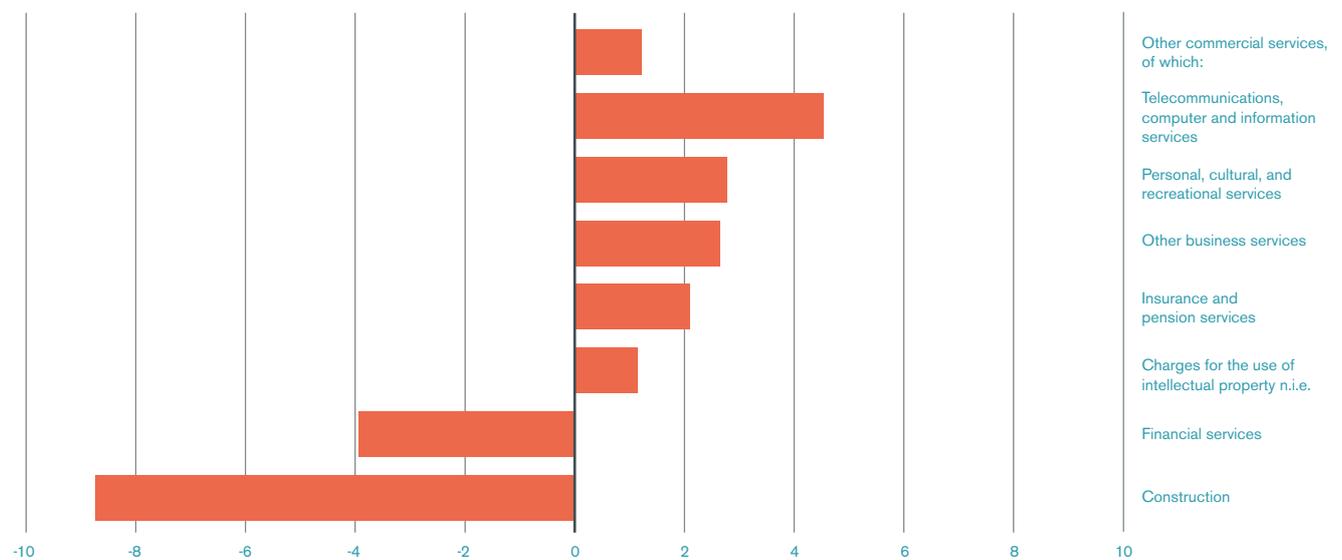
Information and communication technology (ICT) services was the most dynamic sector among other commercial services in 2016 (see Chart 4.19), growing by 4 per cent to US\$ 493 billion, thanks to 5 per cent growth in the European Union.

Chart 4.18:
Leading exporters of other commercial services, 2016
(Annual percentage change, %)



Source: WTO-UNCTAD-ITC estimates.

Chart 4.19:
World exports of other commercial services by main category, 2016
(Annual percentage change, %)

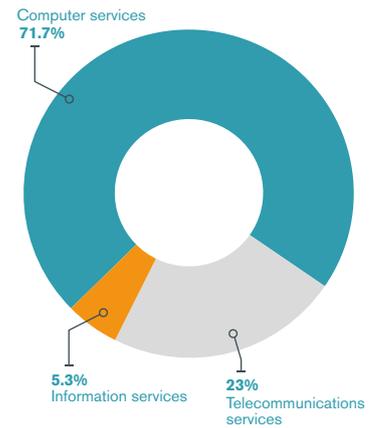


Source: WTO-UNCTAD-ITC estimates.

Computer services (consisting of hardware- and software-related services and data processing services) represented around 72 per cent of ICT services exports, or US\$ 353 billion, in 2016 according to WTO Secretariat estimates (see Chart 4.20). Telecommunications services (including mobile telecommunications, Internet backbone services and the provision of Internet access) were estimated at 23 per cent of ICT exports. Information services (including database services, such as conception, storage, and dissemination, and news agency services) only accounted for 5 per cent of total ICT exports.

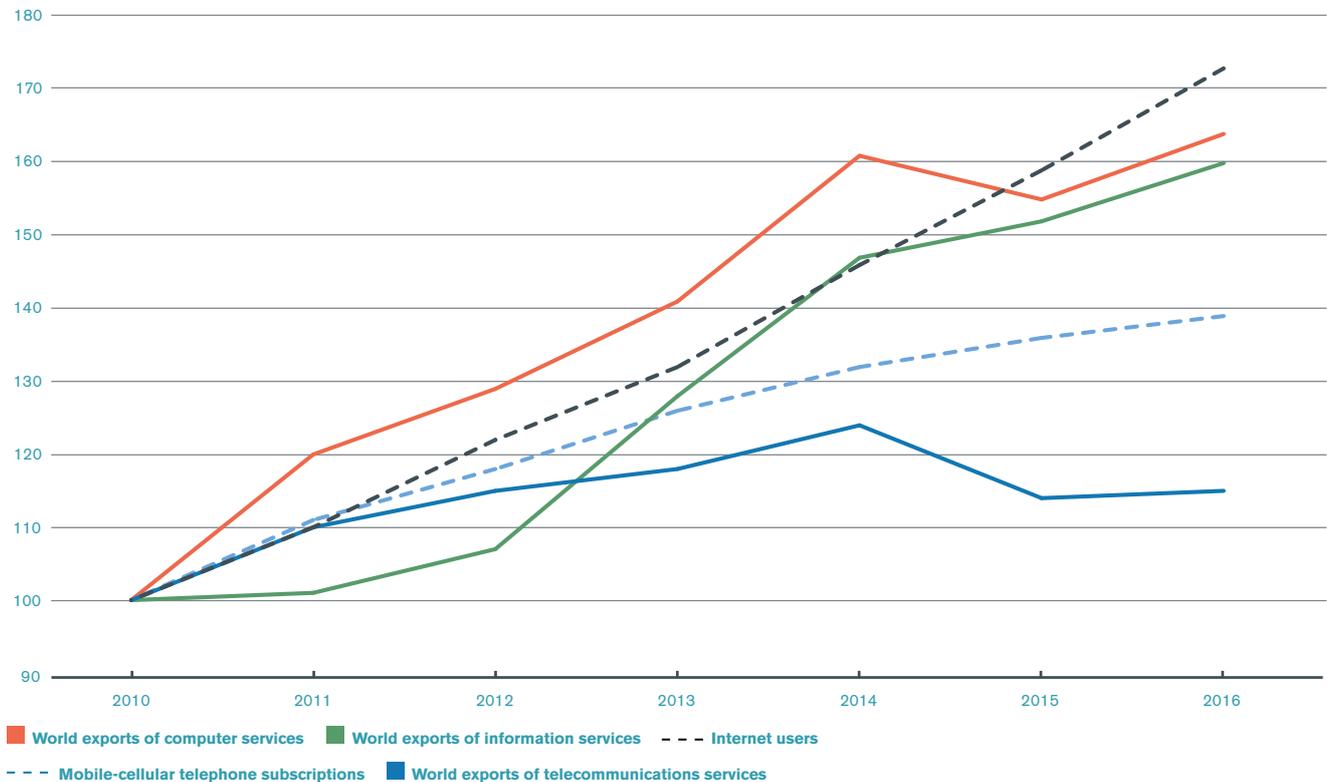
Remarkable technological progress and improved connectivity over recent years have fostered the development of ICT services. Mobile-cellular telephone subscriptions have surged, with virtually everyone in the world having a mobile telephone subscription (99.7 per 100 inhabitants in 2016). The number of Internet users has continued to rise while the prices for telecommunications services, in particular for mobile-broadband, have continued to fall. Technological advances have translated into escalating global exports of ICT services, in particular computer services and information services (see Chart 4.21).

Chart 4.20:
World exports of telecommunications, computer and information services, 2016
(Percentage, %)



Source: WTO-UNCTAD-ITC estimates.

Chart 4.21:
World exports of ICT services, Internet users, and mobile-cellular telephone subscriptions
(Index 2010 = 100)



Source: WTO-UNCTAD-ITC estimates and ITU.

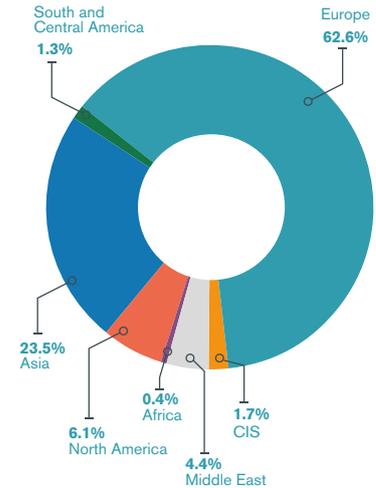
A digital divide hinders Africa's participation in exports of ICT services

World exports of computer services remained very concentrated in certain regions in 2016. Europe, mainly the European Union, accounted for 62.6 per cent of global exports, followed by Asia with 23.5 per cent. Less than 1 per cent of world exports of computer services originated from Africa (see Chart 4.22).

Infrastructural constraints, low rates of access to the Internet and poor

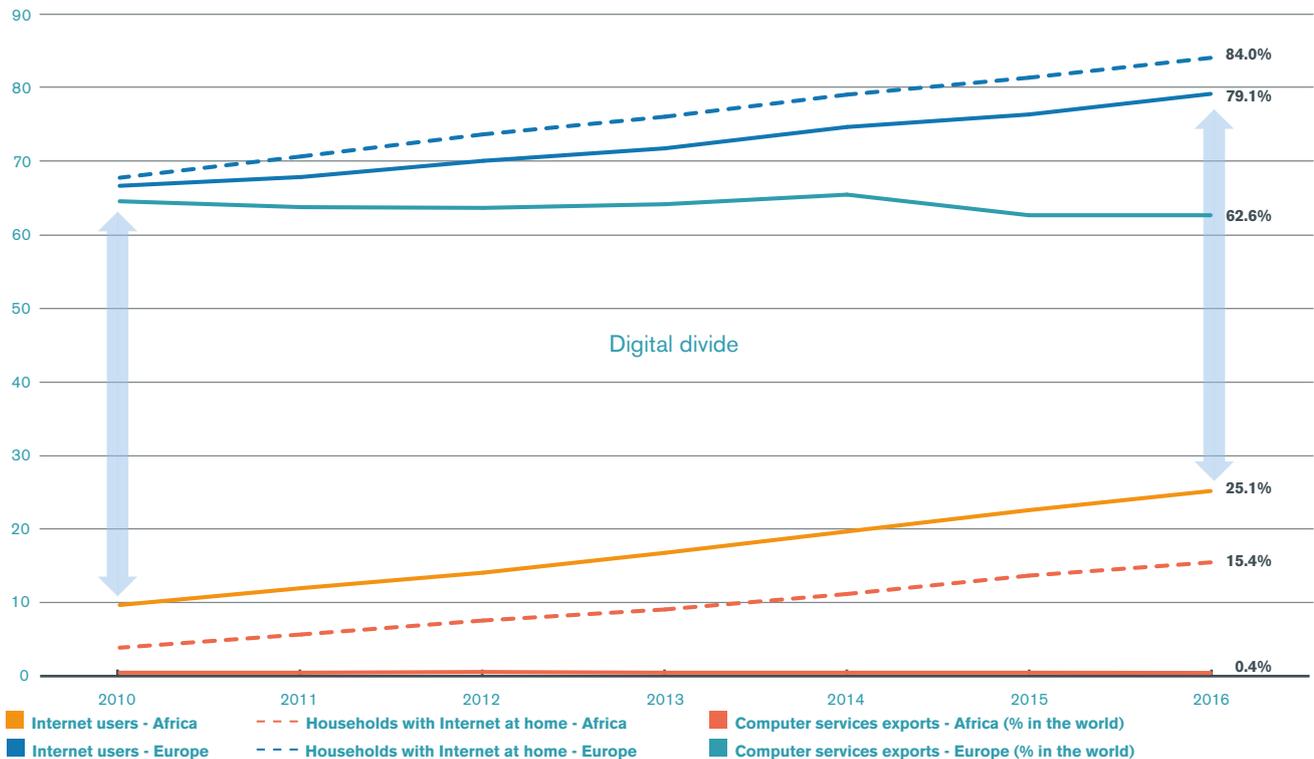
connectivity as well as lack of technological knowledge has hindered the participation of African economies in the most dynamic segment of services trade (see Chart 4.23). A digital divide regarding access to and use of ICT technologies persists between developed and developing regions. As a result developing economies have been marginalized in world trade in services, preventing them from entering fully into new ways of trading goods and services, such as e-commerce and participation in global value chains.

Chart 4.22:
World exports of computer services by region, 2016
(Percentage, %)



Source: WTO-UNCTAD-ITC estimates.

Chart 4.23:
Internet household access, Internet users, and participation in world exports of computer services in Africa and Europe, 2010-2016
(Per 100 inhabitants and percentage, %)



Source: WTO-UNCTAD-ITC estimates and ITU.

Trade in value added terms

What is the origin of “value added” in agro-industry supply chains?

Global value chains (GVCs) have contributed to the international fragmentation of production, especially in the manufacturing sector where countries and industries specialize in tasks and the production of inputs to a final product. The agro-food sector creates opportunities for developing economies to join GVCs through the production and exchange of agricultural products. Agro-food production chains allow small and medium-sized enterprises (SMEs) to link up with smallholder farms – the core of business networks in emerging economies - so that they can reach out to international markets.

The OECD-WTO Trade in Value Added (TiVA) database provides insights into the origin of the value added contained in gross exports and sheds light on the trade flows that take

place within GVCs. TiVA data rely on the International Standard Industrial Classification (ISIC) that covers all sectors of the economy, including primary products, manufactured goods and services. The ISIC definition for “agro-industry” mainly includes the production, processing and preservation of food products and beverages as well as tobacco products.

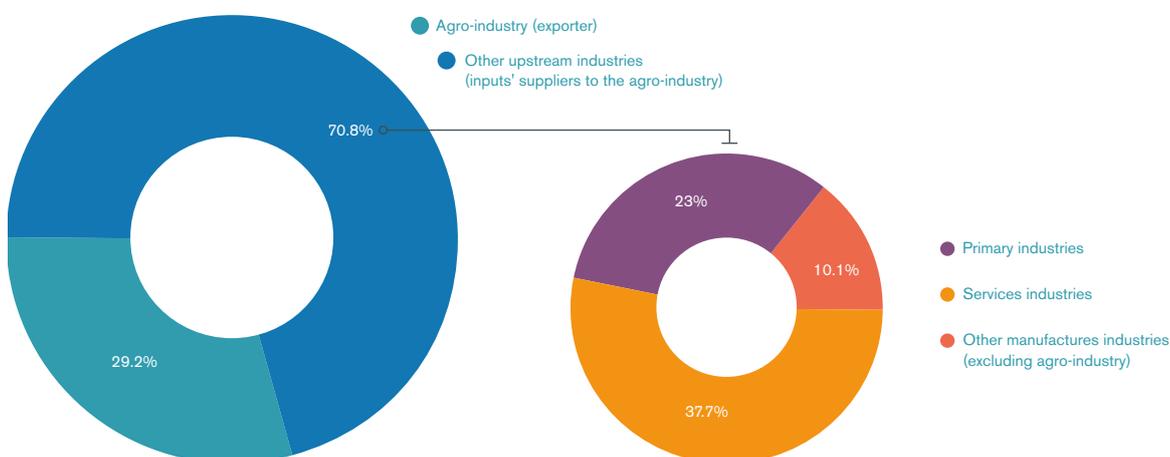
Around 70 per cent of the value added in agro-industrial exports in 2011 originated from industries supplying inputs to agricultural firms to produce their exports (see Chart 4.24), according to TiVA estimates. Intermediate products from primary industries, mainly consisting of agricultural inputs, represented 23 per cent of the overall value added in the sector's exports. Inputs from other manufacturing industries such as fertilizers, pesticides, tools and agricultural machinery, represented 10 per cent of this total.

Furthermore, the share of services in the overall value added in agro-industry exports was highly significant, reaching 38 per cent of the total value added in 2011, much more than the value added by the agro-food sector itself (29 per cent). The increasing “servicification” of the agro-industry is due to the fact that services allow the various production units in the value chain to be connected with each other.

Measuring trade in terms of value added highlights the importance of logistics services in food supply chains. This is especially true for supply chains dealing with perishable goods, which are extremely dependent on efficient logistics systems and reliable connections to GVCs. In 2011, the share of transportation and distribution services (including wholesale and retail trade) in world agro-industry exports was estimated at 18.5 per cent while “research and development and other business services” totalled 7.5 per cent.

Chart 4.24:

World exports of agro-industry products – sectoral origin of value added, 2011
(% share in gross exports of agro-industry)



Source: OECD-WTO TiVA database.

Table 4.1:**Geographic value added in agro-industry exports, selected regions and economies, 2011**

(% share in economies' total exports)

Exporter	Value added origin of exports									
	EU28	South America	South-East Asia	United States	Canada	Mexico	Japan	China	Other	Total
EU28	86	1	1	3	0	0	0	1	7	100
South America	2	91	1	2	0	0	0	1	3	100
South-East Asia	3	1	82	2	0	0	2	2	8	100
United States	3	1	1	86	2	1	1	1	4	100
Canada	2	1	1	10	79	1	0	1	4	100
Mexico	1	0	1	10	1	83	0	1	2	100
Japan	1	1	2	2	1	0	87	1	4	100
China	3	3	5	4	1	0	1	75	8	100

Intra-regional or domestic value added origin in agro-industry exports

Source: OECD-WTO TIVA database.

Note: South America includes Argentina, Brazil, Colombia, Costa Rica and Peru.

South East Asia includes Brunei, Cambodia, Hong Kong (China), Indonesia, Republic of Korea, Malaysia, the Philippines, Singapore, Chinese Taipei and Thailand.

The regional groups shown in Table 4.1 illustrate that agro-industry value chains are mainly organized at the regional level. The shares of intra-regional value added in total exports for the European Union, Central and South America and South East Asia were close to or over 90 per cent in 2011.

The United States and the European Union are core suppliers to agro GVCs. This may be partly due to the predominance of US and European multinational enterprises in this sector

and intensive exchanges within their networks of operating subsidiaries. The United States dedicates a large part of its exports of agro products to its regional partners, with Canadian and Mexican exports of agro-industrial products, including around 10 per cent of US value added in 2011.

China tends to be an importer of inputs rather than a supplier of inputs within agro-industry GVCs. Imported inputs represented 25 per cent of China's value added exports from

the agro-industry in 2011. South East Asia alone contributed to more than 5 per cent of the value added in China's agro exports. Food and agribusiness is of increasing importance to South-East Asian economies. For instance, Malaysia, Thailand and Indonesia are among the top exporters of food products in the world, producing and exporting semi-processed agricultural products, such as palm oil, to GVC partners for further processing.

⁵ UN World Tourism Organization, "World Tourism Barometer", March 2017".

The challenge of measuring digital trade

A report on the digital economy commissioned by the UK government in March 2016 suggests that the UK's gross domestic product (GDP) would have grown on average 0.4 to 0.7 percentage points faster in the last decade if the benefits of the digital economy had been fully realised.⁵

New business models and advances in technology have helped to create new ways of achieving efficiency and reducing trade costs for both goods and services. The challenge is to find a way of capturing this digital element in measurements of domestic and cross-border activity.

Terms such as ICT, e-commerce, digital trade and the digital economy are often used interchangeably as the scope of each concept is not fully defined. However, to quantify the impact of each of these concepts it is important to define its scope.

In addition, governments regard these technological advances – or “digitalisation” – as the way of increasing their participation in international trade. Digitalisation is widely seen as a means of helping small and medium-sized enterprises (SMEs) participate more in international trade and facilitating the participation of women in trade. It is often cited when discussing the future prospects of trade and economic growth, and it is central to discussions on automation and to what extent robots or artificial intelligence will affect employment in the future.

Statistics are needed to measure and interpret the impact of digitalisation. Currently, national accounts provide information on the structure and size of an economy in value added terms while international trade statistics on goods and services trade measure trade flows in gross terms. In addition, global supply-use tables link production with trade to measure international trade flows in value added terms.

However, new technology enabling e-commerce or more generally digital trade has an impact on production, domestic trade and international trade. The challenge for the international statistical community is to find a way of capturing these transactions in international trade statistics and subsequently in macroeconomic aggregates. For example, what is the frontier between goods and services for digitised products? Would the General Agreement on Tariffs and Trade (GATT) or the General Agreement on Trade in Services (GATS) be applicable? And how should they be classified in a statistical context? Technology in the form of Internet access has brought an additional layer of complexity to the measurement of international trade. Digital trade allows SMEs to access distant markets and to buy cutting-edge products. It also helps to reduce trade costs by increasing the efficiency of global value chains.

When measuring digital trade flows, it is helpful to categorize them in order to determine how statistical measurement of this activity needs to be developed.

To improve the statistics on digital trade, a number of initiatives are advancing in parallel. However, for the time being, these are mostly concerned with conceptualizing the different aspects of this trade. Although the concept of digital trade has only recently become a prime consideration of the statistical community, a number of related efforts are already proceeding. The Inter-Agency Task Force on International Trade Statistics (TFITS) will coordinate these efforts to seek to avoid duplication and to ensure a common approach within the broader economic accounting framework. Notable initiatives currently under way include collaboration between the OECD and the International Monetary Fund to better measure digitalisation within GDP and productivity measurements, and work being conducted by the United Nations Conference on Trade and Development (UNCTAD), the Universal Postal Union, the OECD and the WTO to measure cross-border e-commerce transactions. Other efforts that the TFITS will build upon include using a definition of ICT-enabled services developed by UNCTAD to help derive data on the value of services delivered electronically across borders.⁶ The TFITS, chaired by the OECD and the WTO and reporting to the UN Statistical Commission, has taken the lead in pursuing how to respond to the challenge of measuring digital trade.

⁶ In March 2016, the UN Statistical Commission endorsed a definition of ICT-enabled services developed by UNCTAD in collaboration with other international organizations.