



Prof. Dr. Manfred Turban

**Trade Risks and Risk Management  
in a Changing World Trading System**

**Development and Structure of  
World Trade**

**mtr – 2-1**

# Development and Structure of World Trade

## Trends in World Trade and the International Trade of EU and Germany

- World Trade and International Economic Relations since 1950 with high dynamics and transformation processes
  - Major steps in the development of international trade and the structural change
  - Role of European Union and Germany in World Economy
- World economy highly interconnected via trade flows, international production, foreign direct investments and capital flows
- TEN POINTS to HIGHLIGHT MAJOR ASPECTS

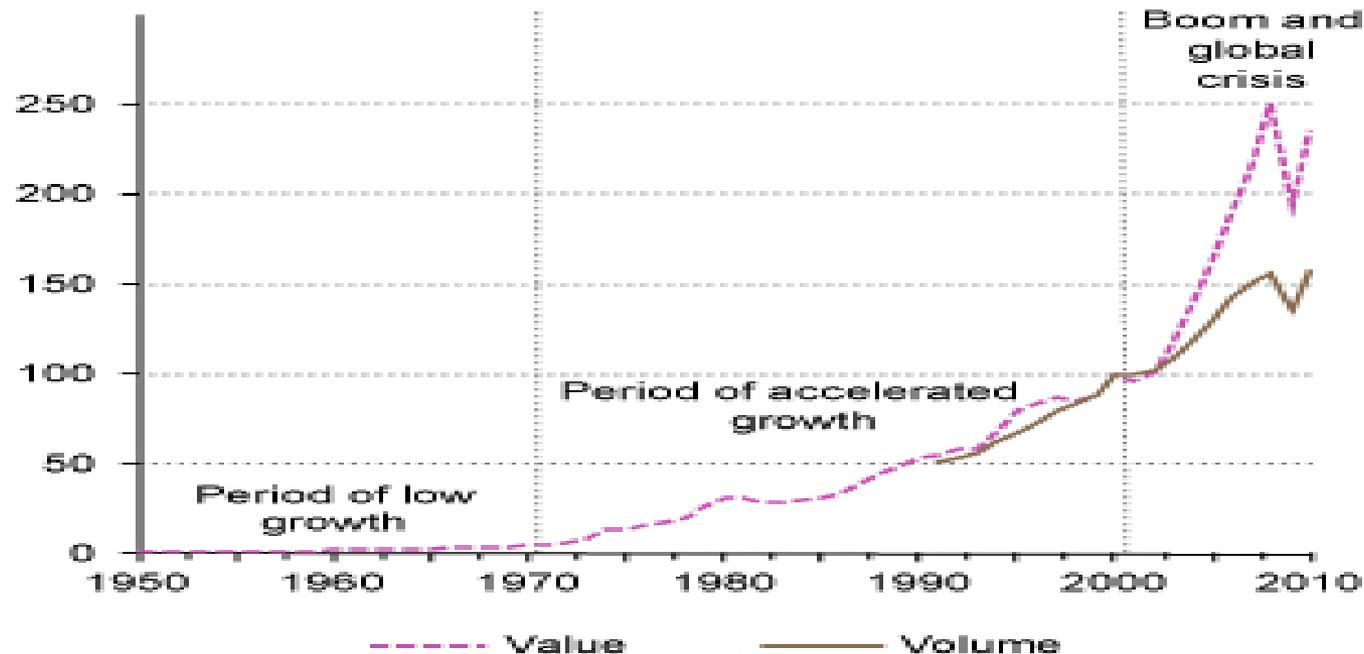
## Development and Structure of World Trade

### International trade as cross-border exchange of goods and commercial services

- World Trade in Goods and Commercial Services
- High growth rates / exceeding economic growth, World trade in **2018**: value 25.3 trillion US-\$
- Long-term upward development of trade starting at a low level at the end of WW2

#### Long-term trends in value and volume of merchandise exports, 1950-2010

(Index numbers, 2000=100)



Source: UNCTAD secretariat calculations, based on UNCTADstat and CPB Netherlands Bureau of Economic Policy Analysis, World trade database

## Development and Structure of World Trade

### Point 1: Striking Increase of Volume and Value of International Trade

#### Years after WW2 marked a **turning point in world trade**

- Preceded by 40 years of decay
- Initiating a long-term upward development between 1970 and 2008
  - moderate growth only between 1950 and 1970
  - acceleration of growth since the 1970s
  - boom between 2000 and 2008 (setback during world economic crisis)

#### **Surge resulting from various factors**, all contributing to fall of transaction cost

- liberalization in trade regulation
- technological process
- decreasing shipping cost

#### **Upward development was shaped by world economic crisis** of 2008-09

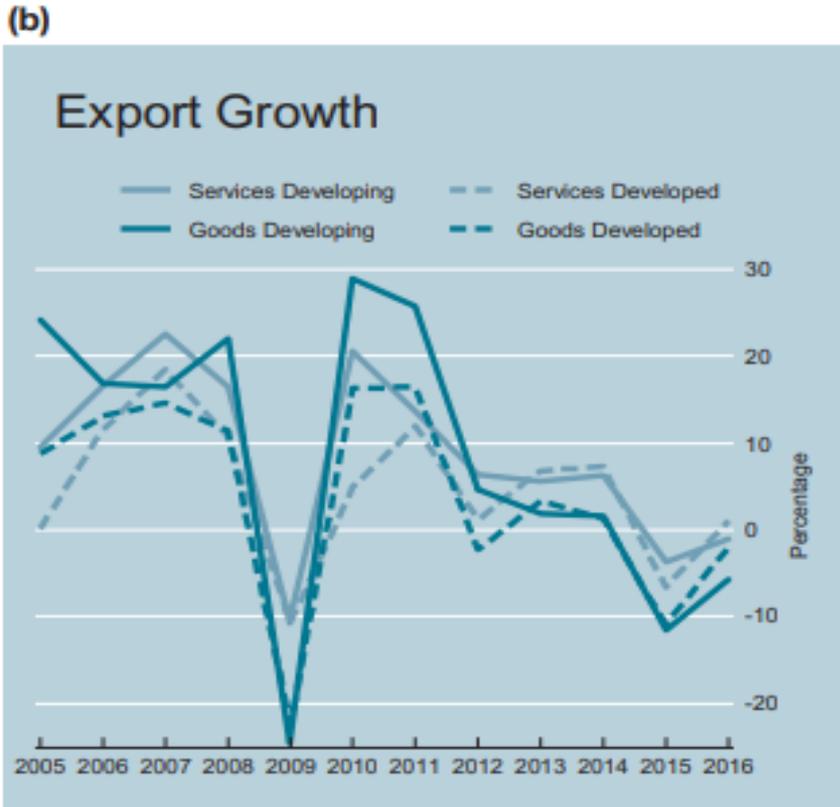
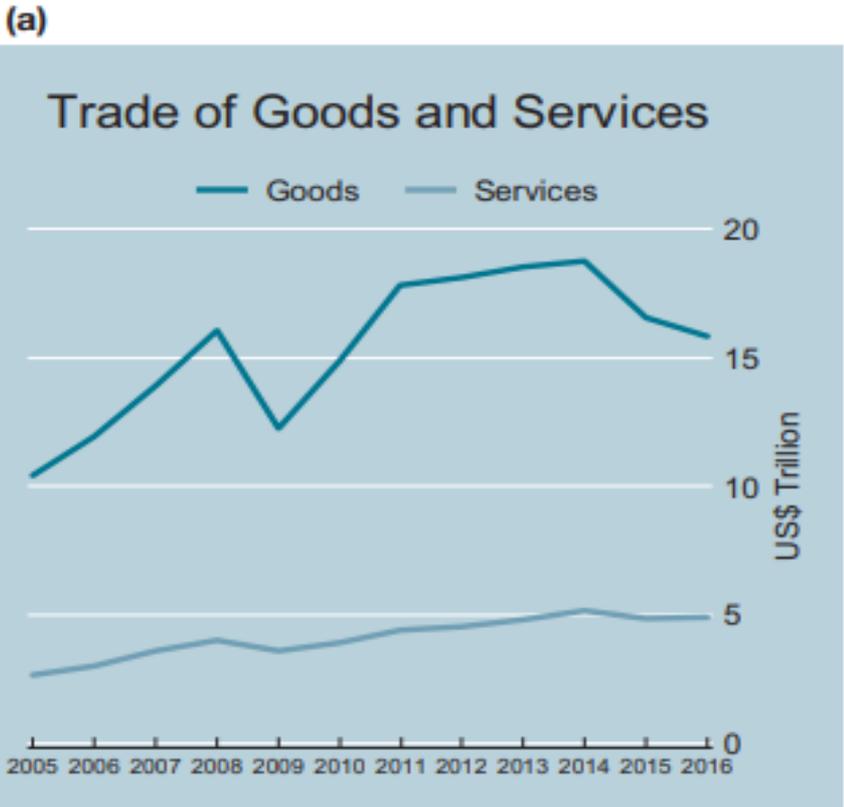
- Recovering swiftly because of coordinated efforts
- No return to the foregoing growth path
- Period of year-to-year fluctuations

#### **Shrinking trade volume since fall 2018**

- Slowdown not only cyclical, but structural because of external factors
- Growing insecurity about trade outlook

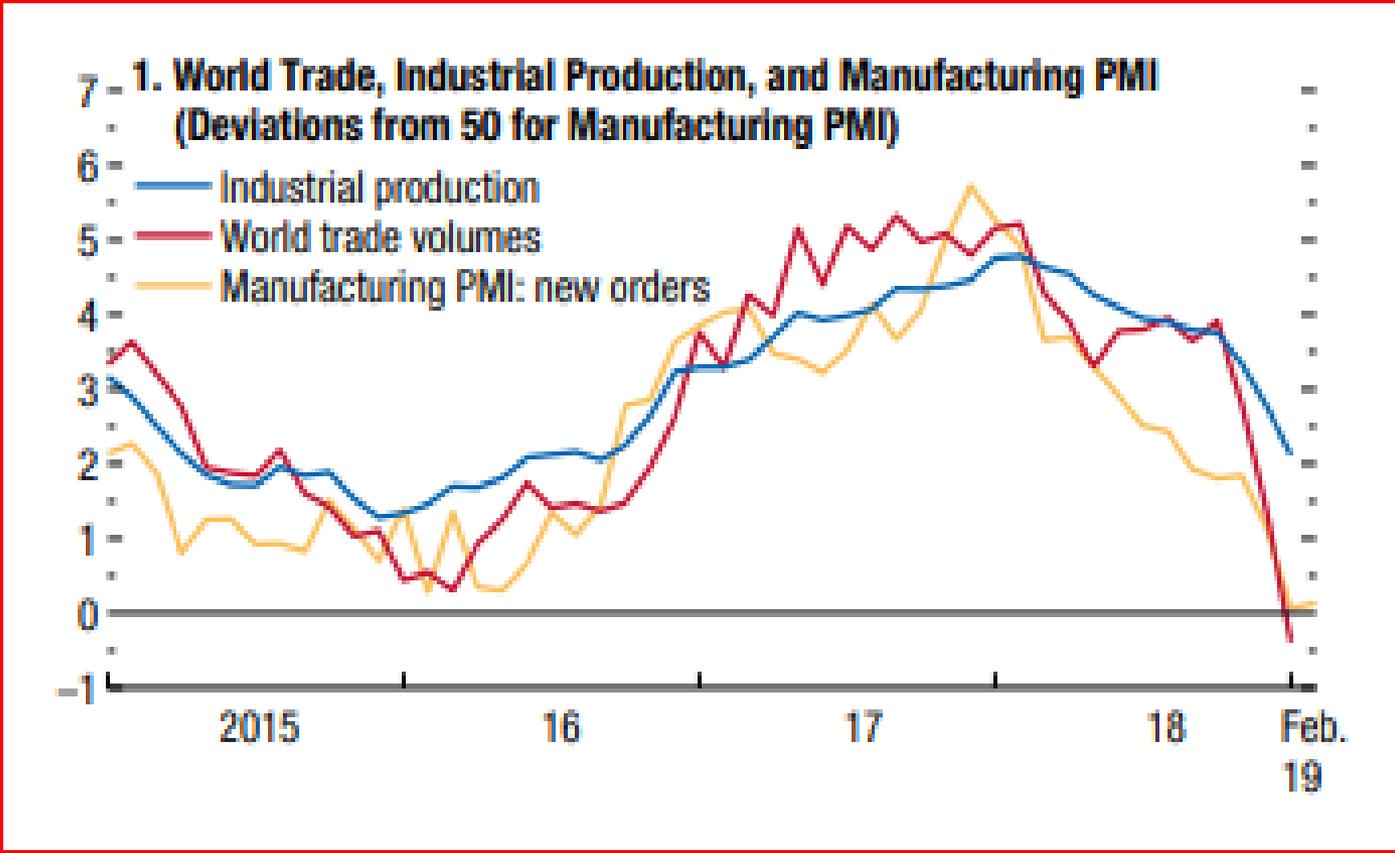
# World Trade in Goods and Services

**Figure 1**  
**Values and growth rates of world trade in goods and services**



Source: UNCTAD secretariat calculations based on COMTRADE data.

### Global Activity Indicators / April 2019, Source: IMF



## Development and Structure of World Trade

### Point 2: Shrinking Dynamics of World Trade leading to loss of its stimulating role in the development of productivity and welfare gains

#### High growth of trade normally accompanied by increasing ratio trade to GDP

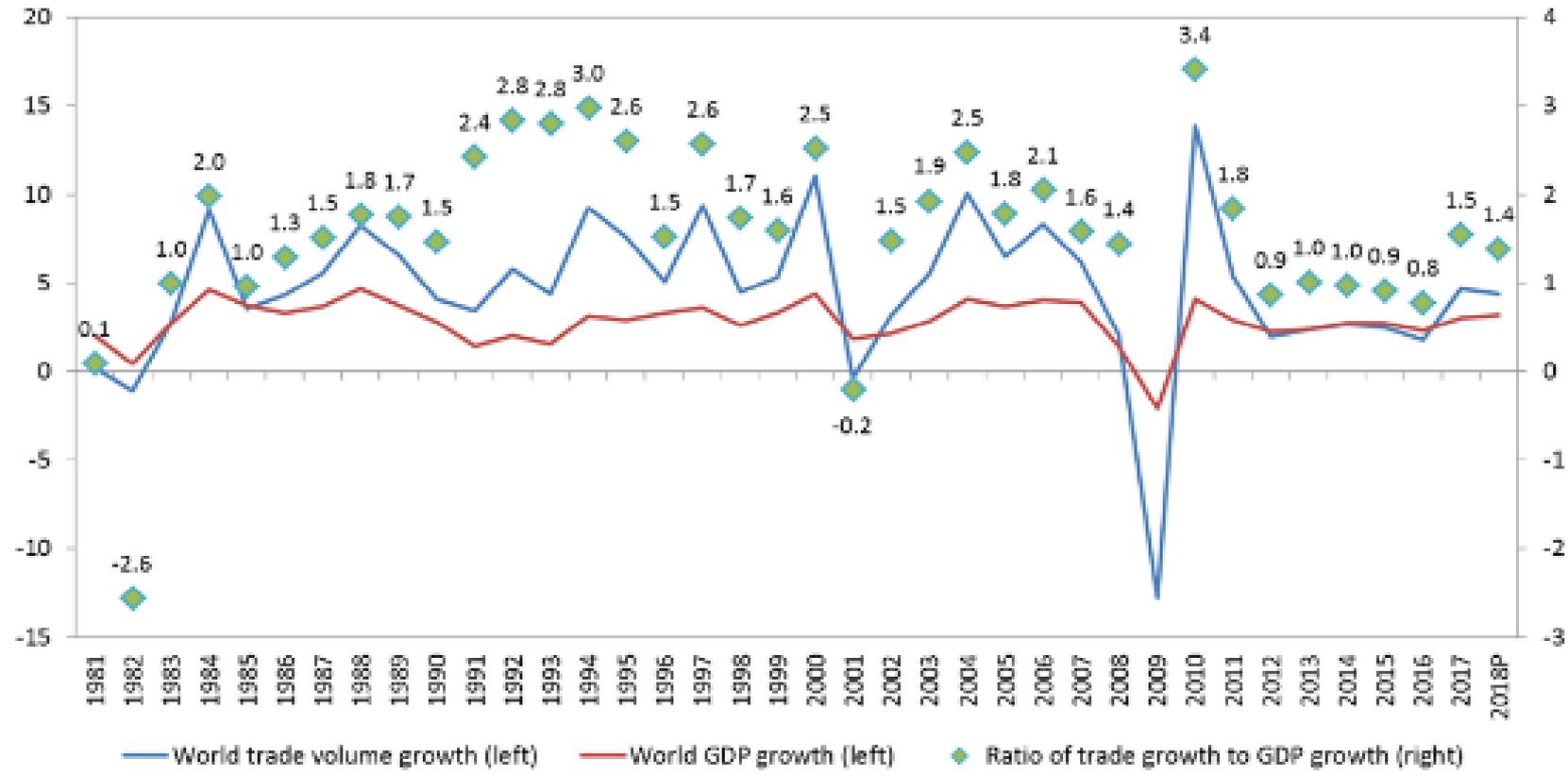
- ratio of world exports (or imports) growth to world GDP growth started to climb already in the 19<sup>th</sup> century (first climax in 1913),
  - after a long decline since 1950s international trade growth again faster than income growth
  - 2017: world exports represent 28.6 percent of world production
- **ratio international trade growth / GDP growth** indicates the development of the international division of labour
- ratio > 1 indicates increase of world productivity and world-wide welfare gains through trade

#### world trade growth has lost momentum since 2008

- World trade and world GDP growing only in tandem
- World trade growth has widely lost its lever function for increasing productivity and welfare
- in merchandise trade (without commercial services) shrinking trade volume

# Chart 2: Ratio of world merchandise trade volume growth to world real GDP growth, 1981-2018

% change and ratio

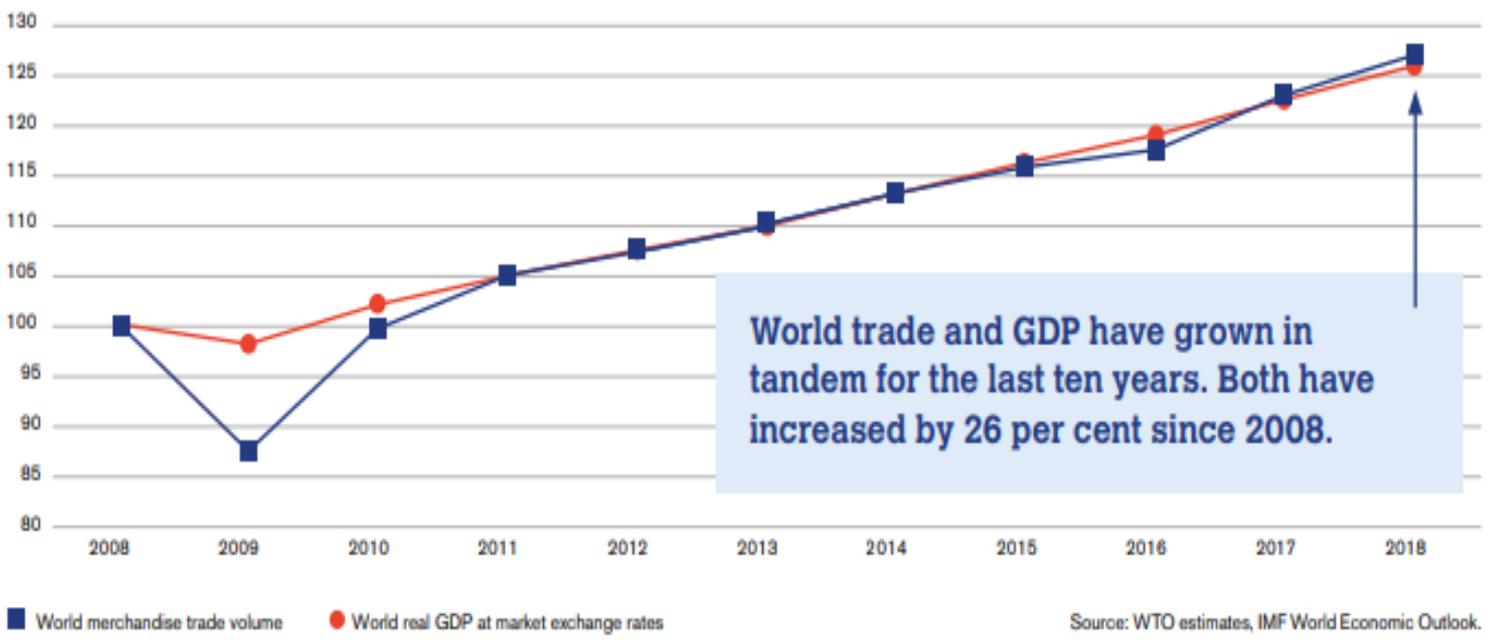


Source: WTO and UNCTAD for trade, consensus estimates for GDP.

# World Merchandise Trade Volume and real GDP (2008-2018) Source: WTO / IMF 2019

## Trade and GDP

Chart 2.1  
World merchandise trade volume and real GDP at market exchange rates, 2008-2018  
(Indices, 2008=100)





growth of World Merchandise Trade and World GDP in 2018 decreasing (trade volume 2018: -0.3 percent), Source: WTO 2019

## Development and Structure of World Trade

### Point 3: Changing composition of the basket of goods and services in Cross-Border Trade

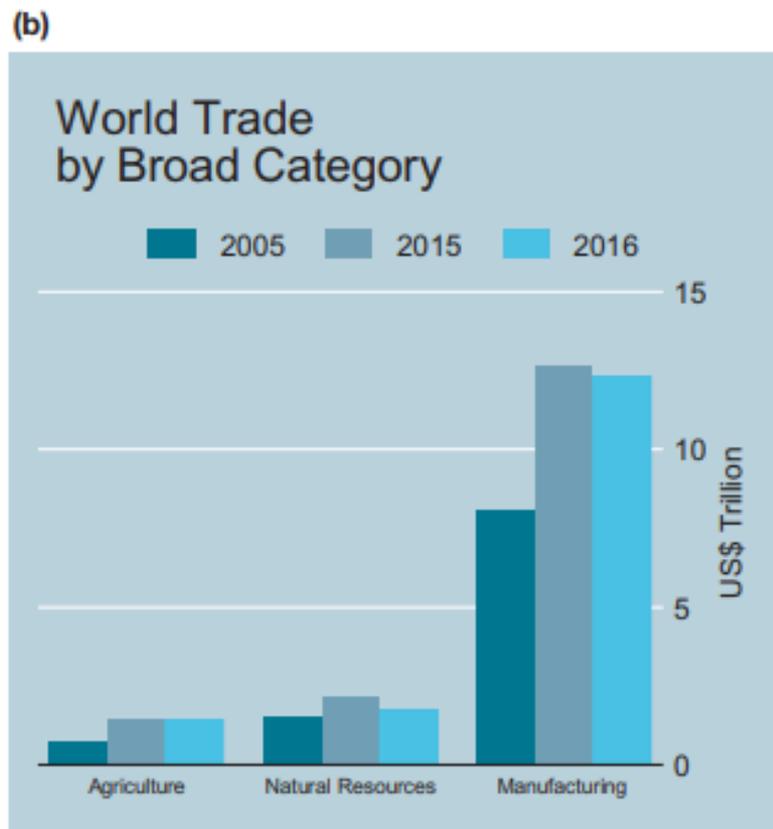
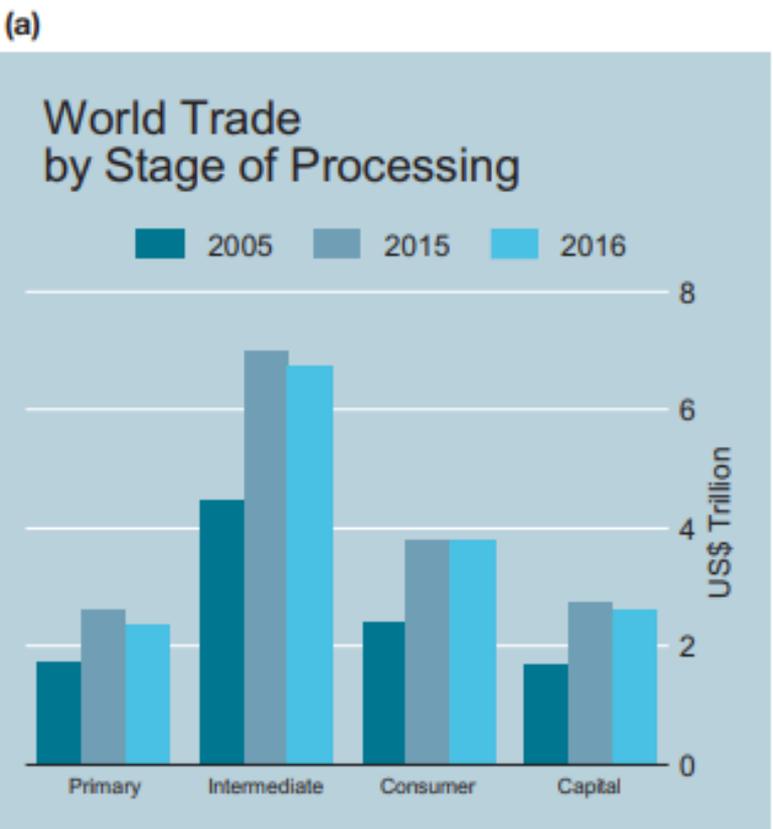
- **Merchandise Trade:** embraces trade with *manufactured products and primary products*
  - **World merchandise trade export growth rate 2008-2018 20 percent** (annual growth rate in value terms, 2.3 percent)
  - **Manufactured products consist of *finished and intermediate manufactures*:**
    - representing about 78 percent of world trade exports
    - traditionally in the center of attention of international trade theory
    - **Finished manufactured goods:**
      - products passed through the full cycle of processing
      - decreasing share in international trade
    - **Intermediate (or semi-finished) manufactured goods:**
      - products passed only through parts of the cycle of processing
      - share in international trade increasing significantly / triggered by development of value chains
  - **Primary Products:** raw materials
    - Strong price volatility
    - **Agricultural products:** strong value increase during last decade
    - **Fuels and Mining products:** shrinking value due to price decrease

## Development and Structure of World Trade

- **Commercial Service Trade**
  - **World commercial service export *growth 2008-2018 46 percent*** (in value terms, annual growth rate 4.3 percent)
  - Increasing share in world trade
  
- **Opposing developments of Merchandise and Commercial Service Trade**
  - **Merchandise trade** is losing market shares
  - **Commercial Service Trade** is gaining market shares

# World Trade by Stage of Processing and Broad Category

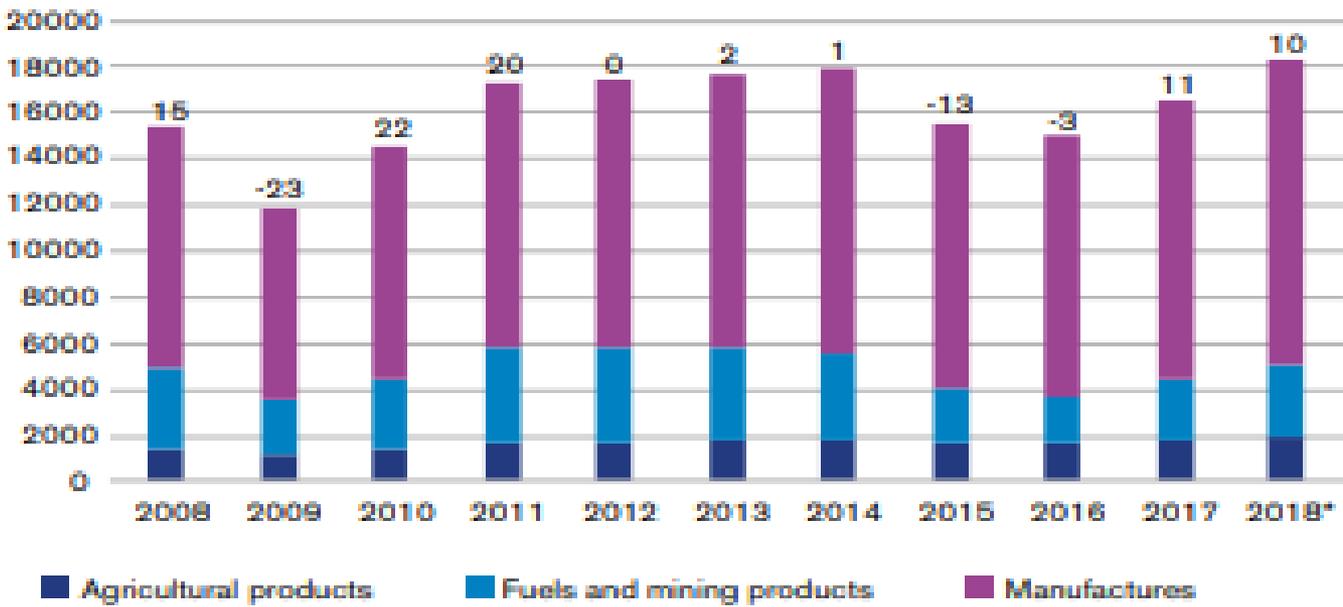
**Figure 6**  
**Values of world trade in goods by stage of processing and broad category**



Source: UNCTAD secretariat calculations based on COMTRADE data.

# Merchandise Trade: high share of manufactures

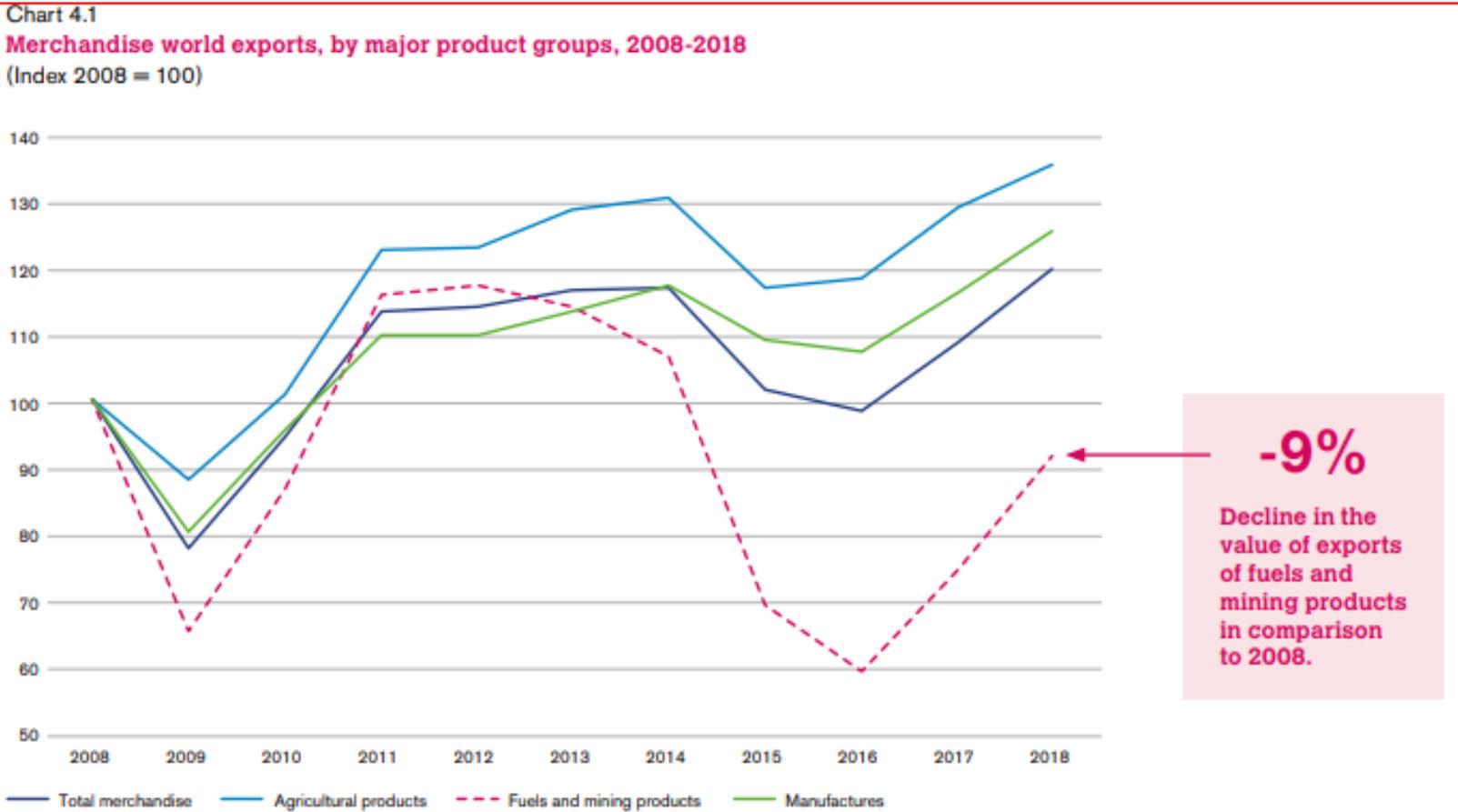
Chart 2.2  
World merchandise exports by product group  
and annual growth, 2008-2018  
(US\$ billion and average annual percentage change)



\* Provisional estimate.  
Source: WTO estimates.

**Merchandise Export Volume**  
with moderate growth rates  
2018: 3,0 percent,  
Source: WTO

# Merchandise world exports (by major product groups)



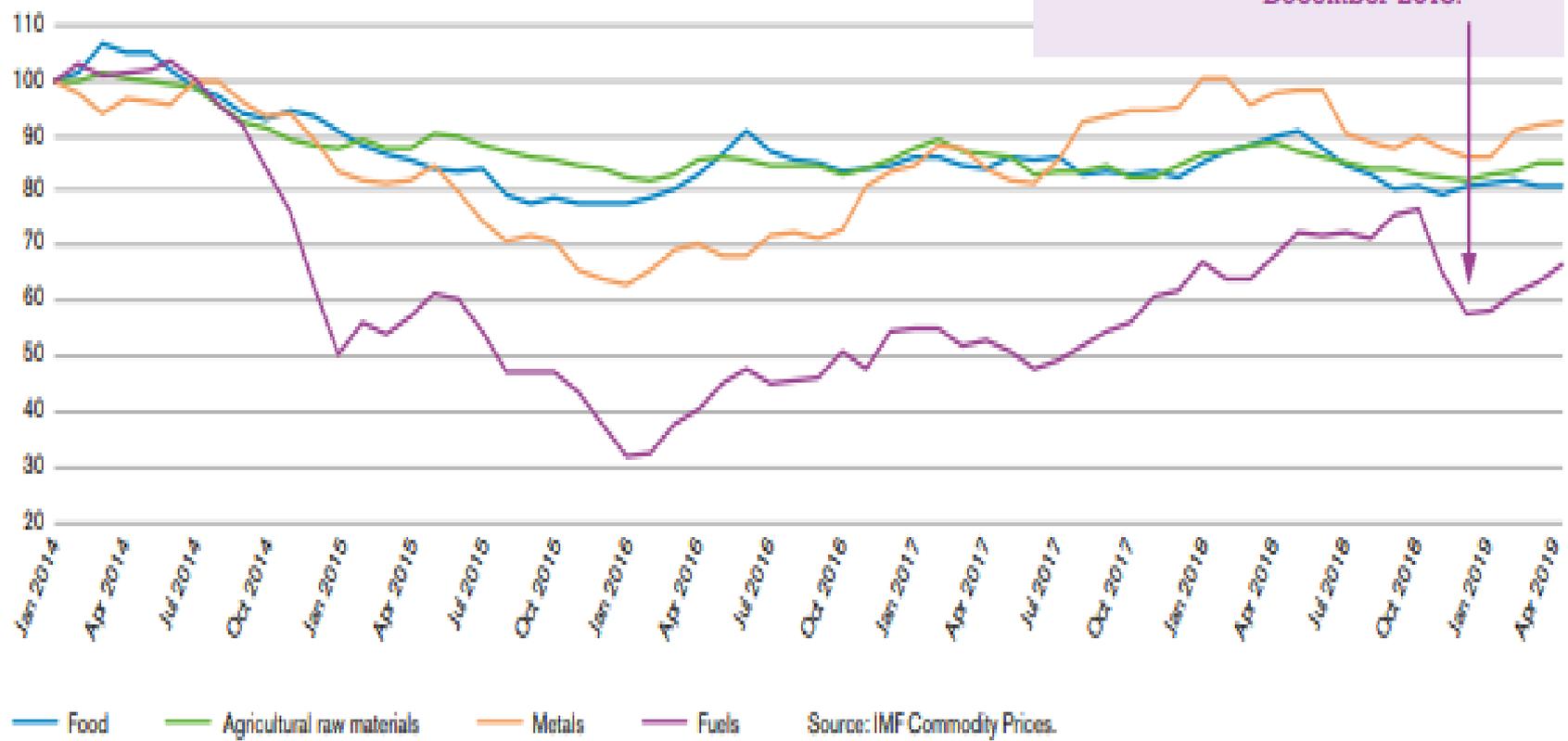
Source:  
WTO  
Statistical  
Review  
2019

**-9%**  
Decline in the value of exports of fuels and mining products in comparison to 2008.

Source: WTO estimates.

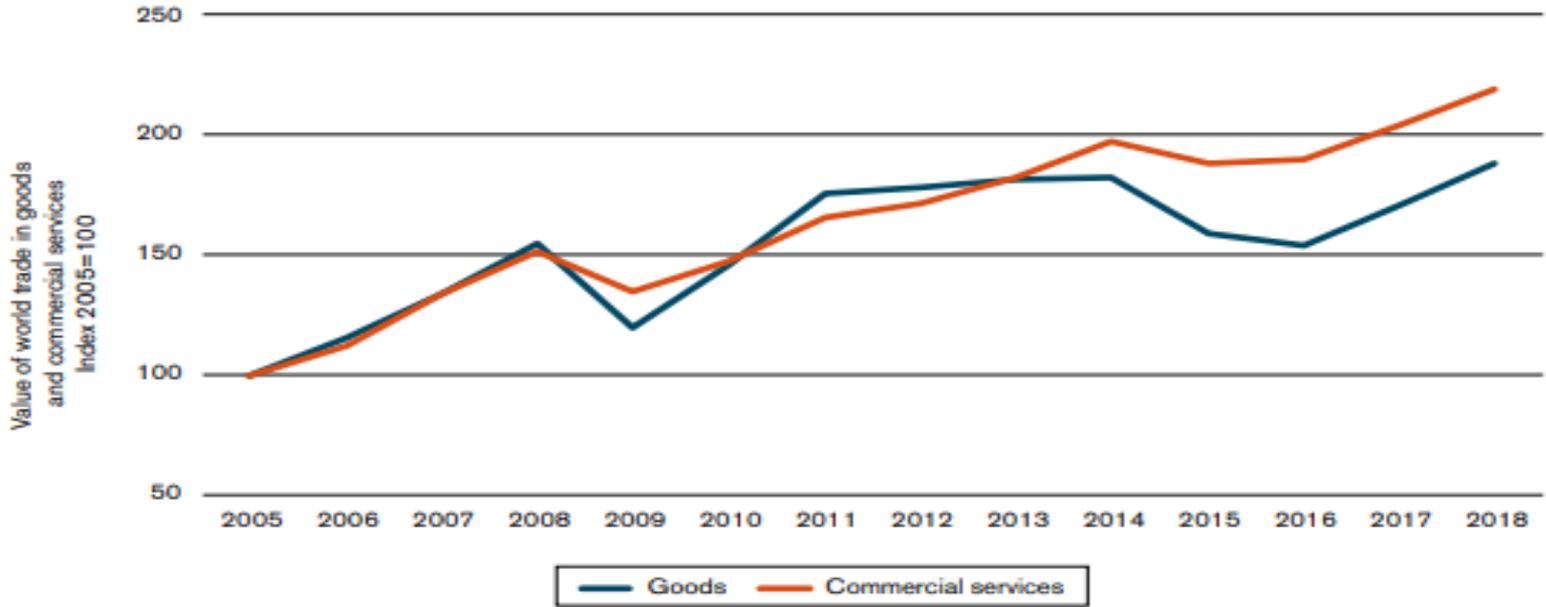
# Price decline of fuel

Chart 3.4  
Prices of primary commodities, January 2014 - April 2019  
(US\$ price indices, January 2014=100)



# Trade in Goods and Commercial Services Source: WTO Trade Report 2019

**Figure A.1: Trade in goods has grown more slowly than trade in commercial services**  
Growth of world trade in goods and commercial services

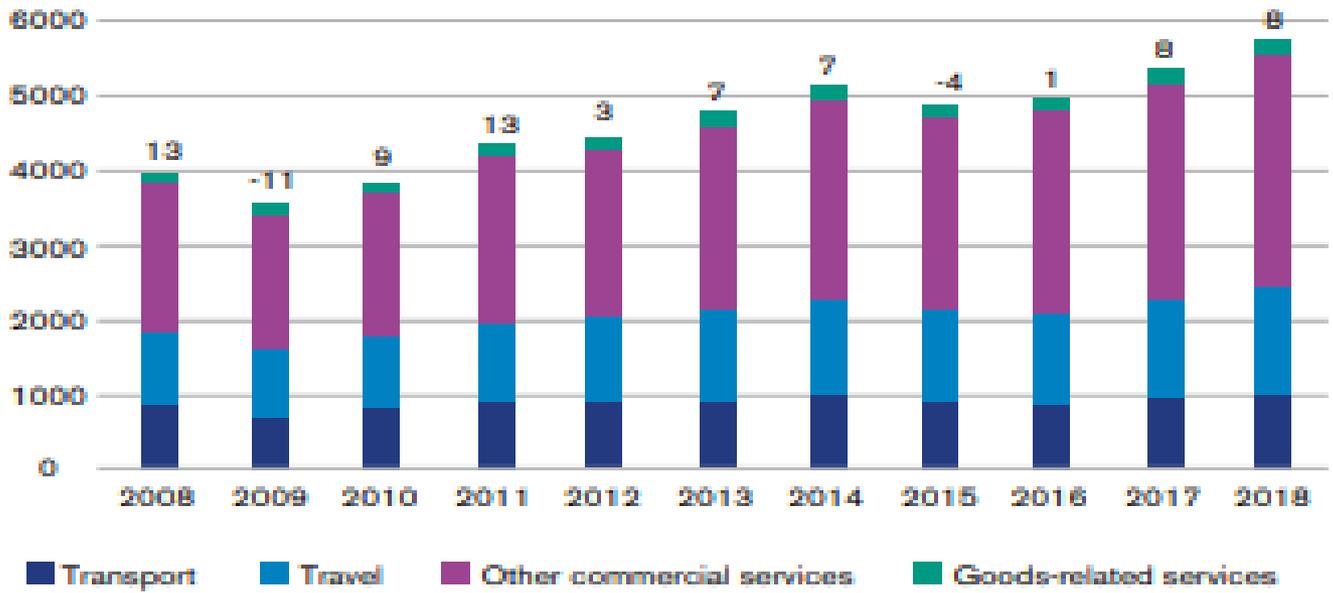


Source: WTO-UNCTAD-ITC estimates.

Note: World trade is calculated as the average of world exports and world imports.

# Trade in Commercial Services (in bill. US \$): on the rise

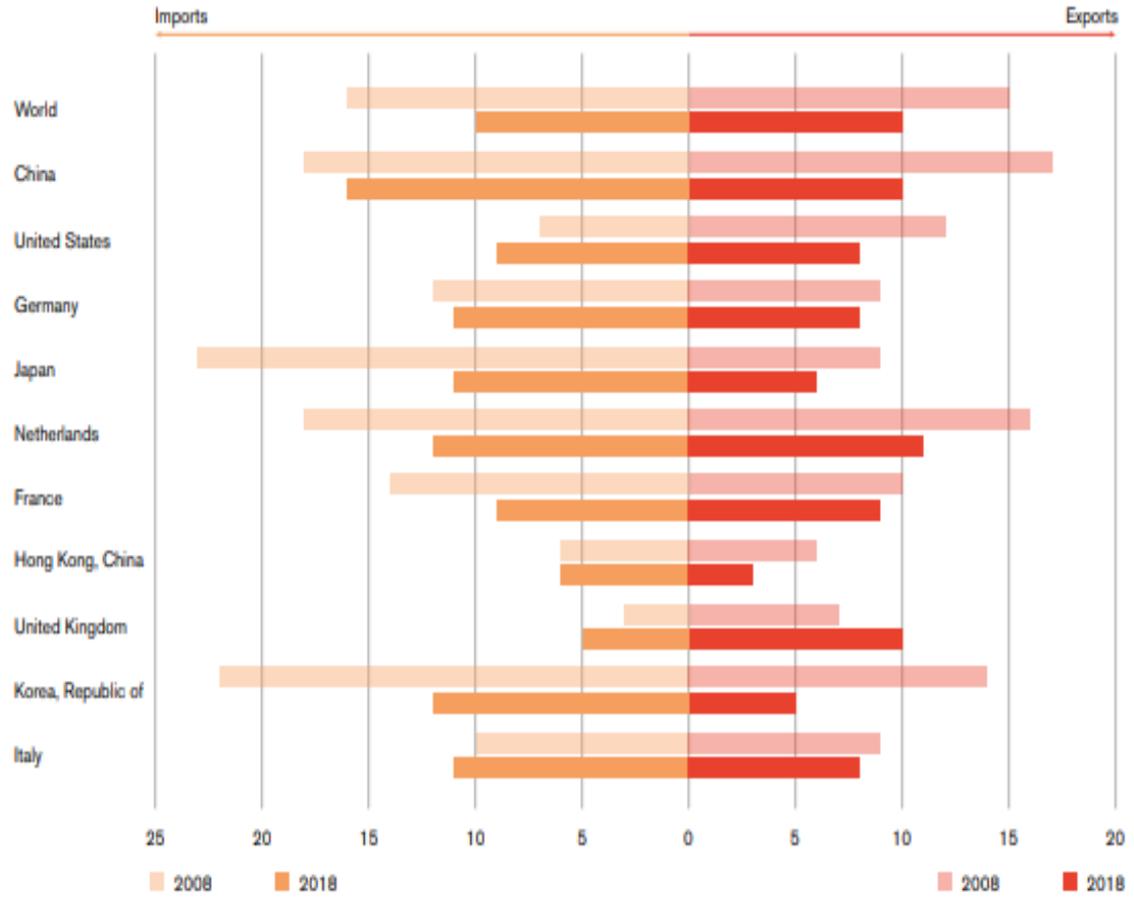
**Chart 2.3**  
**World exports in commercial services by sector and annual growth, 2008-2018**  
(US\$ billion and average annual percentage change)



Source:  
WTO  
Statistical  
Review  
2019

Source: WTO-UNCTAD-ITC estimates.

**Chart 5.1**  
**Leading merchandise traders, 2008 and 2018**  
 (Annual percentage change in trade growth)



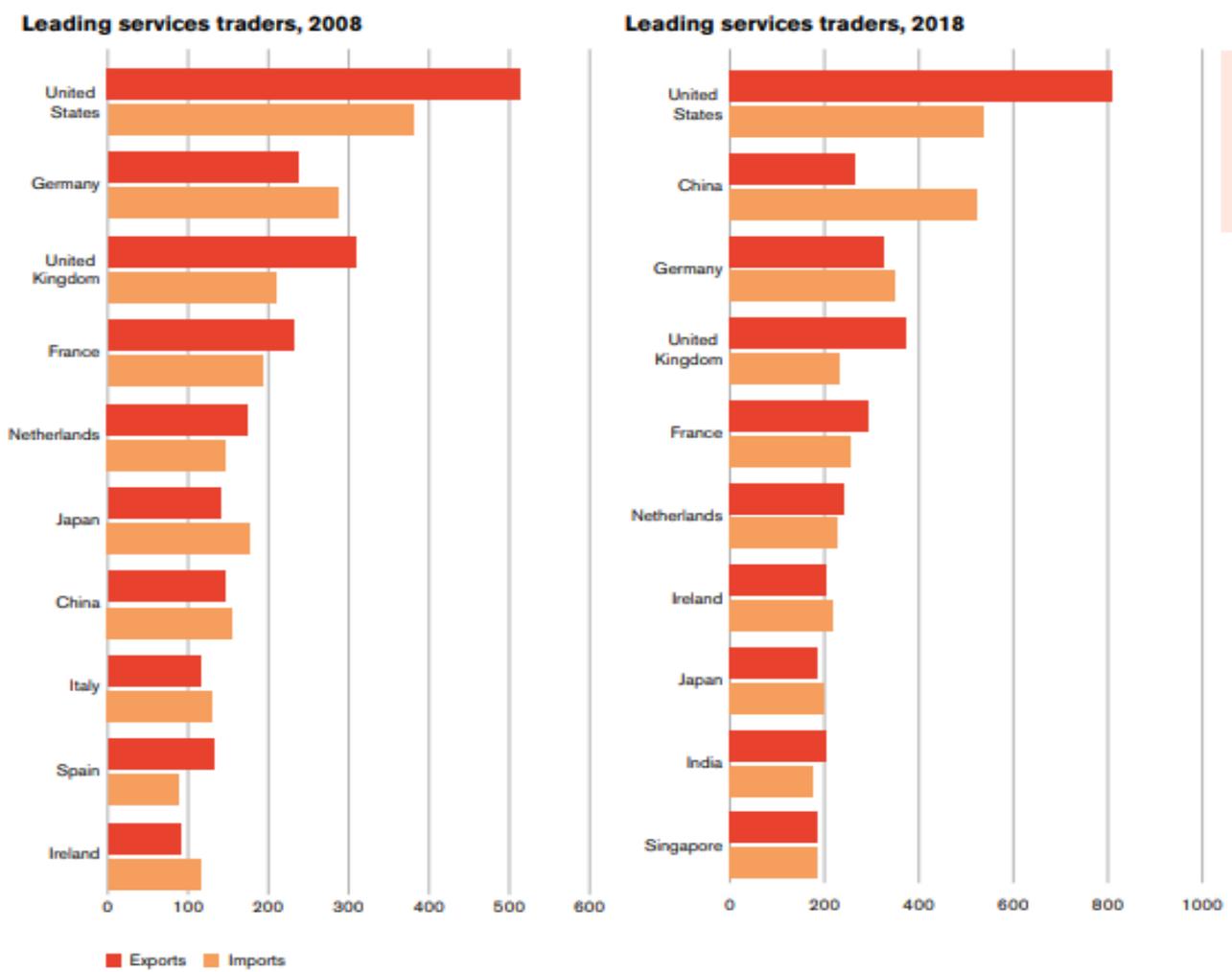
**9/10**  
 Trade growth for nine out of the top ten traders is below their 2008 pre-crisis levels.

**Leading countries in merchandise trade 2008 and 2018**

*Shrinking growth rates*

Source: WTO-UNCTAD estimates.  
 Note: The traders are shown in the order of their world ranking in 2018. Ranking is based on total trade, calculated as the sum of exports and imports.

Chart 5.3  
Leading traders of commercial services, 2008 and 2018  
(US\$ billion)



The United States has been the leading services trader of the past decade.

Leading Traders in Commercial Services (by country)

*rising growth rates*

Source: WTO-UNCTAD-ITC estimates.  
Note: The order in the chart reflects the economies' ranking in total trade in commercial services (exports plus imports) in the respective year.

## Development and Structure of World Trade

### Point 4: Participation rates of world regions and countries in international trade

#### Main Players in international trade by world regions

- South and East Asia
- Europe
- North America

#### leading countries in merchandise trade

- China, USA and Germany
- China since 2009 leading country in merchandise exports
- Structural change leading to enhanced multipolarity in international trade

#### Export / GDP ratios increasing in most countries

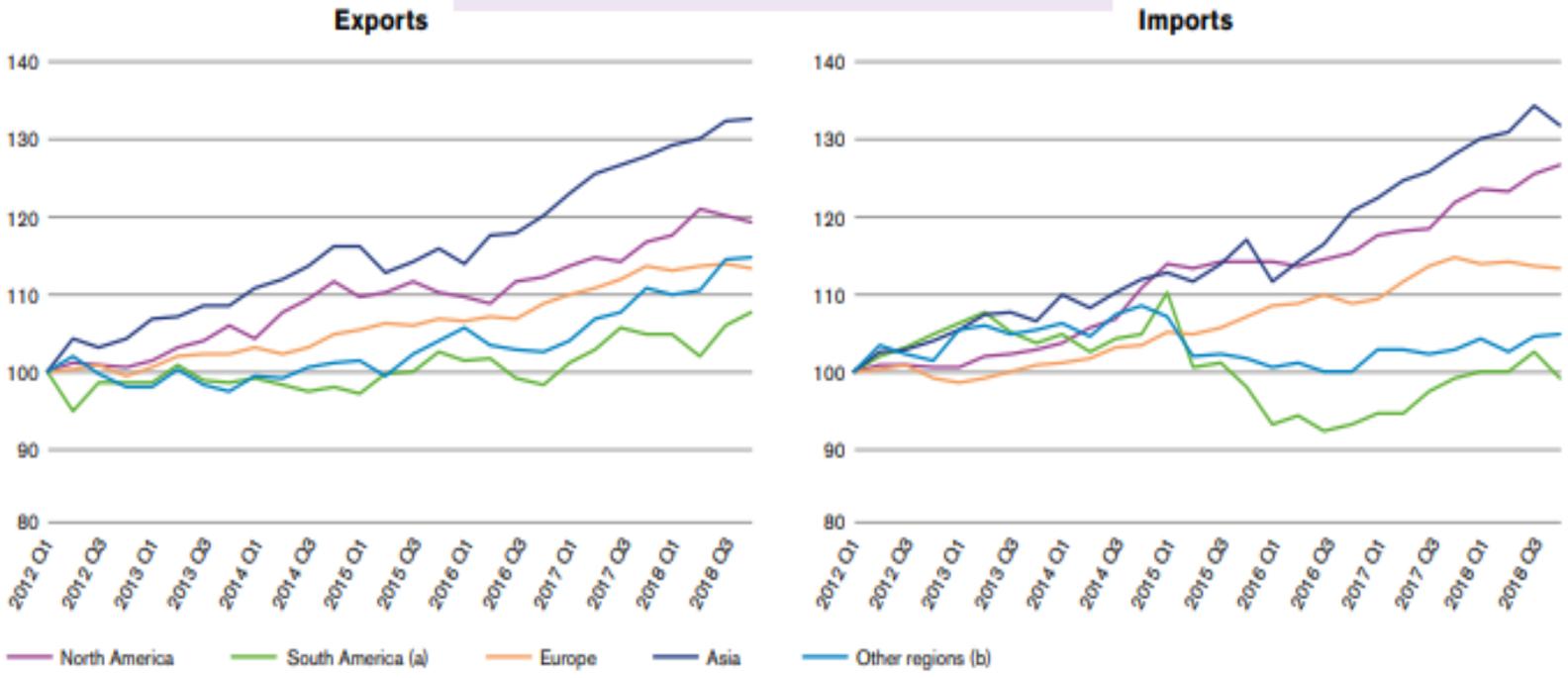
- **USA: 1960** 4 percent, **2016:** 15 percent

| Export / GDP<br>2016 | In percent |
|----------------------|------------|
| <b>China</b>         | 20         |
| <b>Germany</b>       | 46         |
| <b>EU</b>            | 44         |
| <b>Netherlands</b>   | 80         |

# World trade by world regions

Chart 3.3  
Merchandise exports and imports by region, 2012 Q1 to 2018 Q4  
(Volume index, 2012 Q1=100)

**-1.9%** Decline in Asian merchandise imports in Q4 of 2018 in volume terms.



(a) Refers to South and Central America and the Caribbean. (b) Other regions comprise Africa, the Middle East and the Commonwealth of Independent States (CIS), including associate and former member states.  
Source: WTO-UNCTAD estimates.

- Source: WTO World Statistical Report 2018

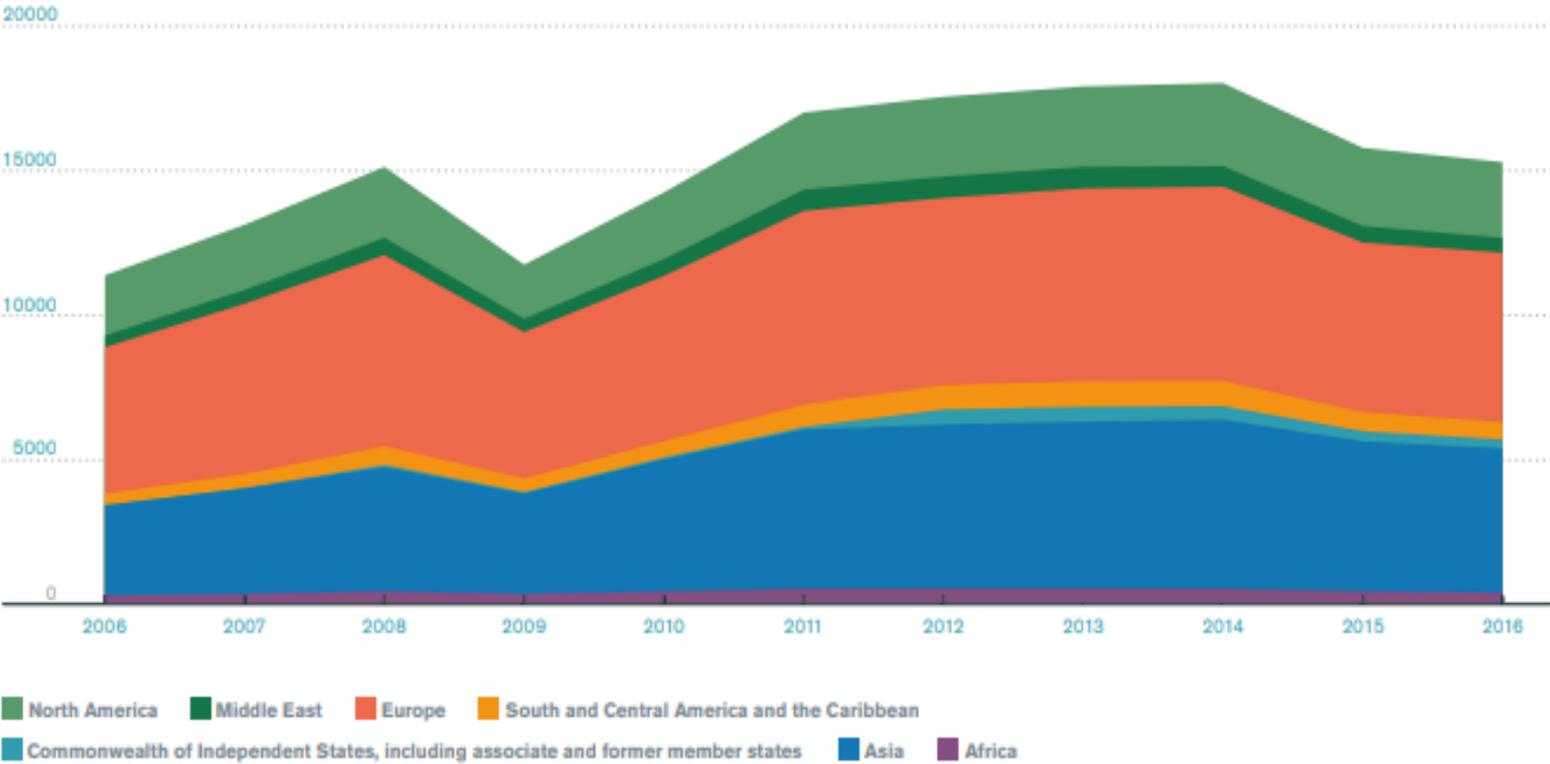
# Share in World Trade by Regions

(value, in %) Source: WTO

| Merchandise exports in % of world exports | 1948 | 1953 | 1963 | 1973 | 1983 | 1993 | 2003 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|
| North Amerika                             | 28.1 | 24.8 | 19.9 | 17.3 | 16.8 | 17.9 | 15.8 | 13.5 | 14.4 | 14.3 | 13.8 | 13.6 |
| South and Central Amerika                 | 11,3 | 9,7  | 6,4  | 4,3  | 4,5  | 3,0  | 3,0  | 3,8  | 3,4  | 3,3  | 3.4  | 3.4  |
| Europe                                    | 35.1 | 39.4 | 47.8 | 50.9 | 43.5 | 45.3 | 45.9 | 36.8 | 37.3 | 38.4 | 37.8 | 37.7 |
| CiS                                       |      |      |      |      |      | 1,5  | 2,8  | 4,0  | 3.1  | 2,7  | 3.0  | 3.4  |
| Afrika                                    | 7,3  | 6,5  | 5,7  | 4,8  | 4,5  | 2,5  | 2,4  | 3,0  | 2,4  | 2,2  | 2.4  | 2.5  |
| Middle East                               | 2,0  | 2,7  | 3,2  | 4,1  | 6,7  | 3,5  | 4,1  | 7,0  | 5,3  | 5,0  | 5.7  | 6.0  |
| Asia                                      | 14.0 | 13.4 | 12.5 | 14.9 | 19.1 | 26.0 | 26.1 | 32,0 | 34.2 | 34.0 | 34.0 | 33.6 |

Merchandise trade of WTO members has increased to US\$ 15.4 trillion, up from US\$ 11.7 trillion in 2006.

World merchandise trade of WTO members, 2006-2016 (US\$ billion)

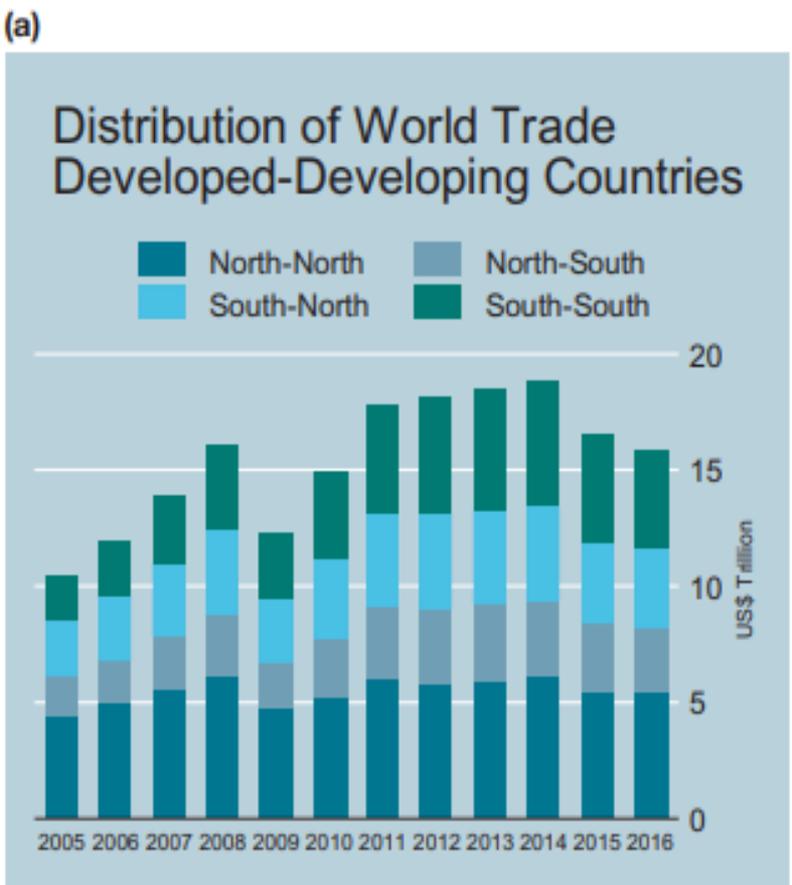


Value data

Source: WTO Statistical Review 2017

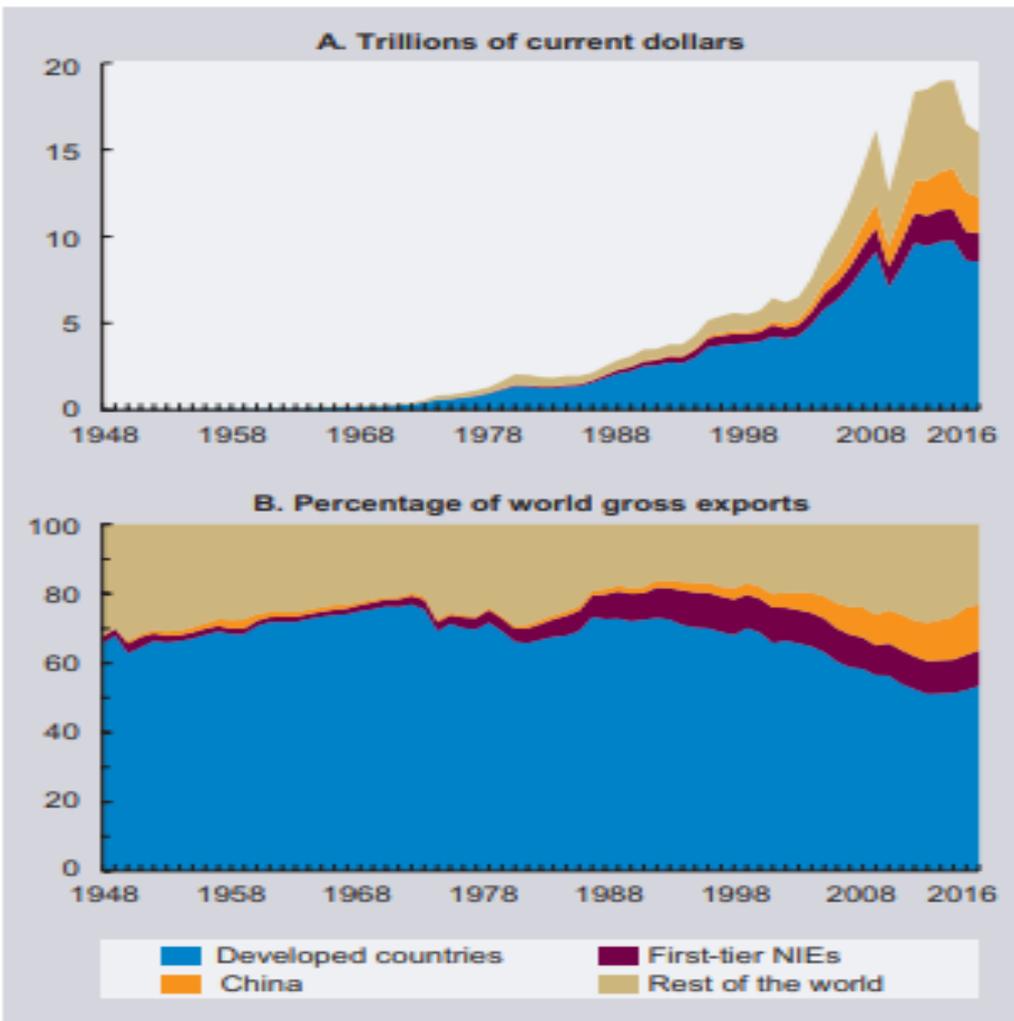
Note: World trade is calculated as an average of exports and imports of merchandise trade.

Figure 5 Trade in goods between/within developed and developing countries



Source: UNCTAD secretariat calculations based on COMTRADE data.

**FIGURE 2.4 Total gross exports, selected country groups and China, 1948–2016**



Source: UNCTAD secretariat calculations, based on UNCTADstat.

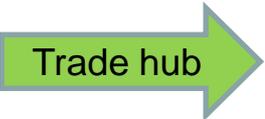
### Share of Total Gross Exports, selected country groups and China (1948-2016)

increasing share of Chinese and NIE's exports at the expense of developed countries

Source: Unctad

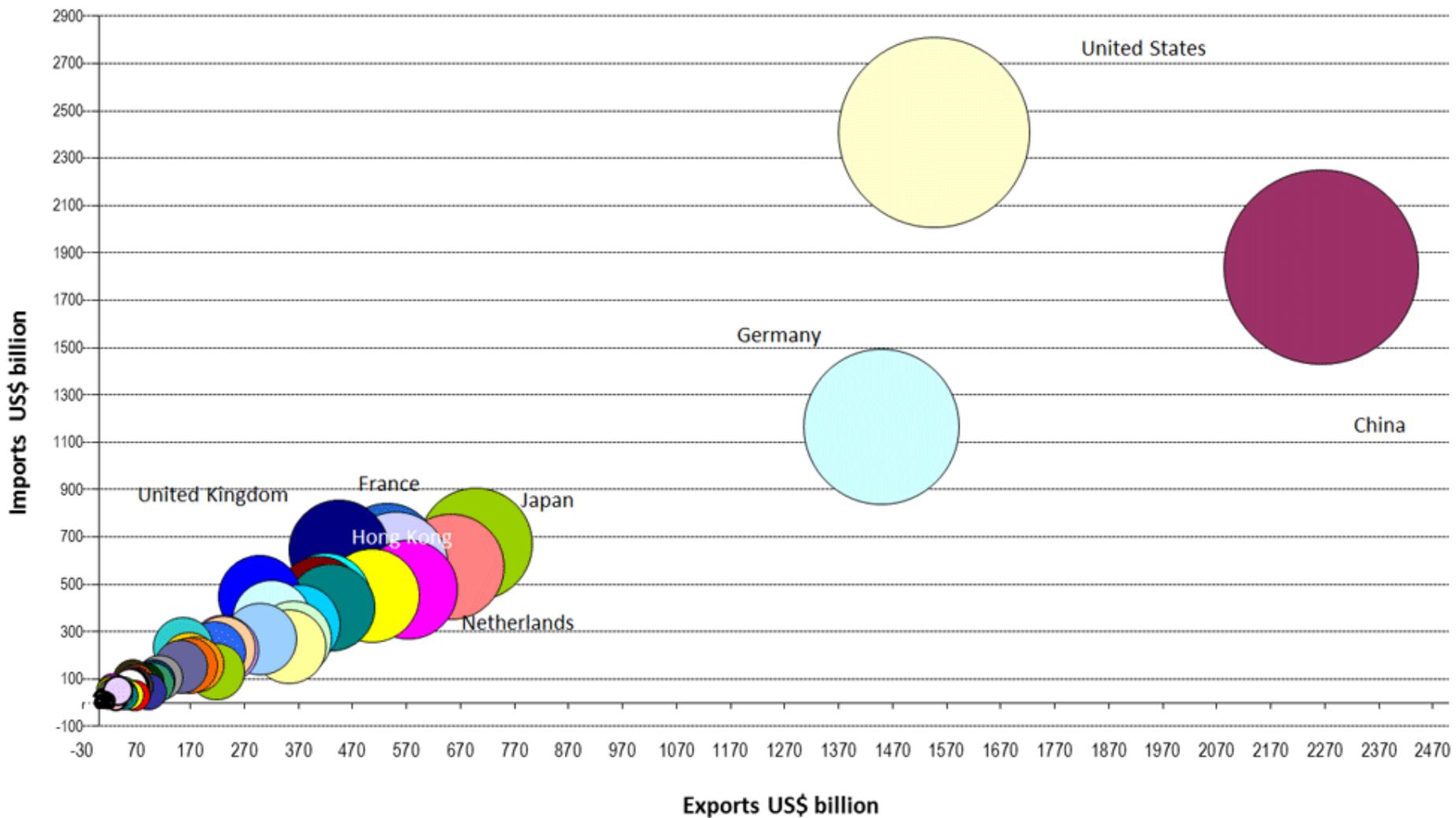
## Leading Countries in Merchandise Exports (Merchandise Trade in Current Prices) Source: WTO Statistical Report

| Share in World Exports in % (value) | 1996 | 2000 | 2005 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1. China                            | 2.9  | 3,9  | 7,3  | 8,9  | 9.6  | 10.4 | 10.4 | 11.1 | 11.7 | 12.3 | 13.8 | 13.2 | 12.8 | 12.8 |
| 2. USA                              | 11,8 | 12,3 | 8,7  | 8,1  | 8,5  | 8,4  | 8,1  | 8,4  | 8,4  | 8,5  | 9.1  | 9.1  | 8.7  | 8.5  |
| 3. Germany                          | 9,9  | 8,7  | 9,3  | 9,1  | 9,0  | 8,3  | 8,1  | 7,6  | 7,7  | 7,9  | 8,1  | 8.4  | 8.2  | 8.0  |
| 4. Japan                            | 7,8  | 7,5  | 5,7  | 4,9  | 4,7  | 5,1  | 4,5  | 4,3  | 3,8  | 3,6  | 3,8  | 4.0  | 3.9  | 3.8  |
| 5. Netherlands                      | 3,7  | 3,3  | 3,9  | 3,9  | 4,0  | 3,8  | 3,6  | 3,6  | 3,6  | 3,5  | 3,4  | 3.6  | 3.7  | 3.7  |
| 6. Korea                            | 3,3  | 2,7  | 2,3  | 2,6  | 2,9  | 3,1  | 3,0  | 3,0  | 3,0  | 3,0  | 3,2  | 3,1  | 3.2  | 3.1  |
| 7. France                           | 5,5  | 4,7  | 4,4  | 3,8  | 3,8  | 3,4  | 3,3  | 3,1  | 3,1  | 3,1  | 3,1  | 3,1  | 3.0  | 3.0  |
| 8. Hong Kong                        | 4,6  | 3,2  | 1,4  | 2,3  | 2,6  | 2,6  | 2,5  | 2,7  | 2,8  | 2,8  | 3,1  | 3,1  | 3,1  | 2.9  |
| 9. Italy                            | 4,8  | 3,7  | 3,5  | 3,3  | 3,2  | 2,9  | 2,9  | 2,7  | 2,7  | 2,8  | 2,8  | 2,9  | 2,9  | 2.8  |
| 10. UK                              | 5,0  | 4,4  | 3,7  | 2,8  | 2,7  | 2,6  | 2,5  | 2,6  | 2,9  | 2,7  | 2,8  | 2,6  | 2.5  | 2.5  |
| 11. Belgium                         | 3,2  | 2,6  | 3,1  | 3,0  | 2,7  | 2,6  | 3,2  | 2,4  | 2,5  | 2,5  | 2,4  | 2,6  | 2.4  | 2.4  |
| 12. Mexico                          | 2,1  | 2,7  | 2,1  | 1,8  | 1,9  | 2,0  | 2,4  | 2,0  | 2,0  | 2,1  | 2,1  | 2,3  | 2.3  | 2.3  |
| 13. Canada                          | 3,8  | 4,4  | 3,5  | 2,8  | 2,5  | 2,5  | 2,5  | 2,5  | 2,4  | 2,5  | 2,5  | 2,4  | 2.4  | 2.3  |
| 14. Russian Fed.                    |      | 2.1  | 3,1  | 3.9  | 2.4  | 2.6  | 2.9  | 2.9  | 2.8  | 2.6  | 2.1  | 1.8  | 2.0  | 2.3  |
| 15. Singapore                       |      | 2,2  | 3.0  | 2.8  | 2,2  | 2,3  | 2,2  | 2,2  | 2,2  | 2,2  | 2.3  | 2.1  | 2.1  | 2.1  |
| 16. UAE                             |      | 0.8  | 1.5  | 1.9  | 1.4  | 1.4  | 1.6  | 1.9  | 2.0  | 1.9  | 1.6  | 1.7  | 2.0  | 1.9  |



Trade hub

### Leading economies of merchandise trade, 2017

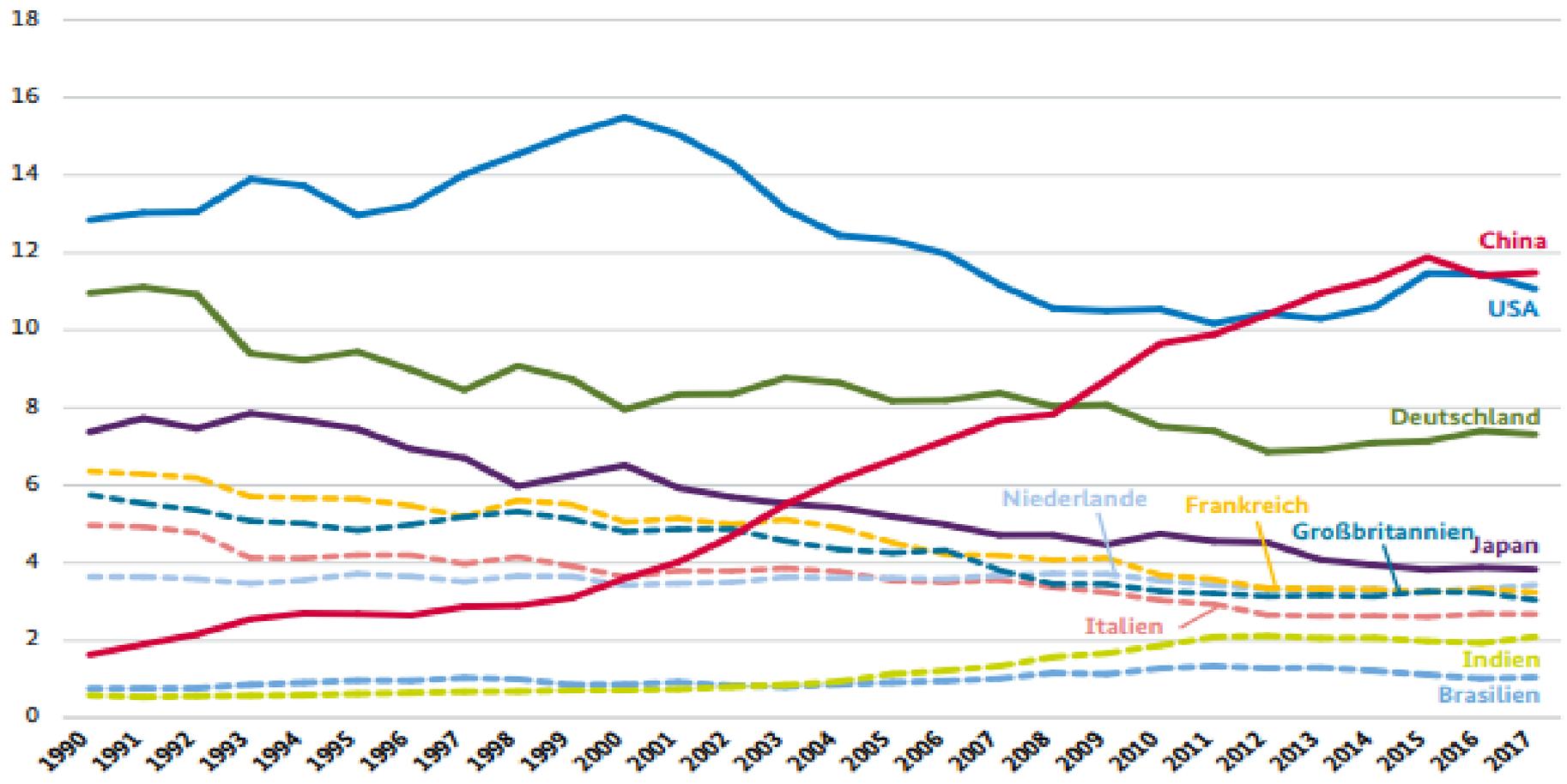


Source: WTO 2018  
[https://www.wto.org/english/news\\_e/pres18\\_e/pr820\\_e.htm](https://www.wto.org/english/news_e/pres18_e/pr820_e.htm)

# Share in World Merchandise Trade (export and import sales) by major countries

Source: German Ministry of Economic Affairs

Abbildung 1: Anteile am Welthandel (Waren) – Exporte und Importe auf US-Dollar-Basis  
in Prozent des Welthandels



Quelle: WTO; eigene Berechnungen

## Development and Structure of World Trade

### Point 5: Multinational Corporations (MNEs) and the Surge of Foreign Direct Investments (FDI) in World Trade

- *FDI* is an *investment made by a firm or individual of one country into business interests located in another country.*
  - investor establishes foreign business operations or acquires foreign business assets, including establishing ownership or controlling interest in a foreign company
  - FDI distinguished from portfolio investments in which an investor merely purchases equities of foreign-based companies”
- **Multinational Corporations** (also MNEs) shifted part of their production abroad
  - MNEs set up **manufacturing subsidiaries** mainly in countries which provide **cost advantaged** relative to the country of origin
    - Emergence of MNEs as **leap forward** in economic globalization
- **fragmentation of production processes** as precondition of re-organization of production processes into physically and geographically separated locations across firms and countries
  - development of new technologies, mainly in the field of information and communication as well as production technology
  - options created to shift labour-intensive stages of production to low-cost countries which provided competitive advantages and triggered new types of trade flows

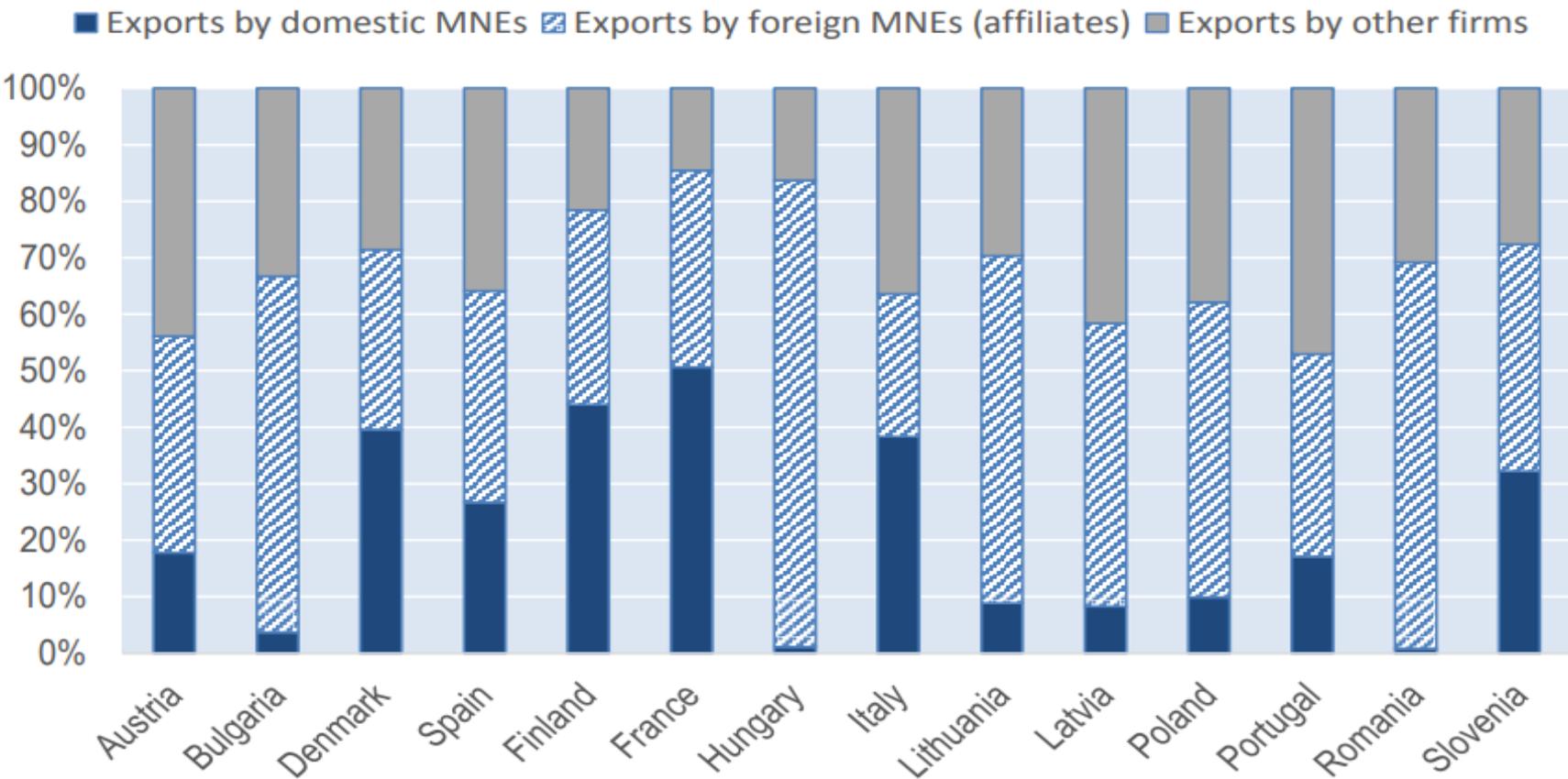
## Development and Structure of World Trade

**FDI: investments by a firm into business interests located in another country**

- Globalization by FDI
- Alternative mode of entry in international markets
- **Two types of FDI**
  - **Horizontal FDI**: direct investment in host country identical with activities of parent company at home (subsidiaries as integrated plants)
    - substitute for exports
    - market proximity considerations, circumvention of protection barriers,
    - FDI and trade flows interdependent
  - **Vertical FDI**: direct investment in host country different to activities of parent company at home
    - different stages of production in different countries
    - processing mainly labor-intensive intermediate products which are re-imported to the country of origin to be integrated in the production of final products of the parent company
    - shift of production is taking advantage of lower cost in the host country.
- MNEs frequently ***using vertical and horizontal FDI simultaneously***

### Importance of MNEs in World Trade (Year 2014) Source: Cadestin / OECD, 2018

**Figure 13. Gross exports decomposition, latest year available**



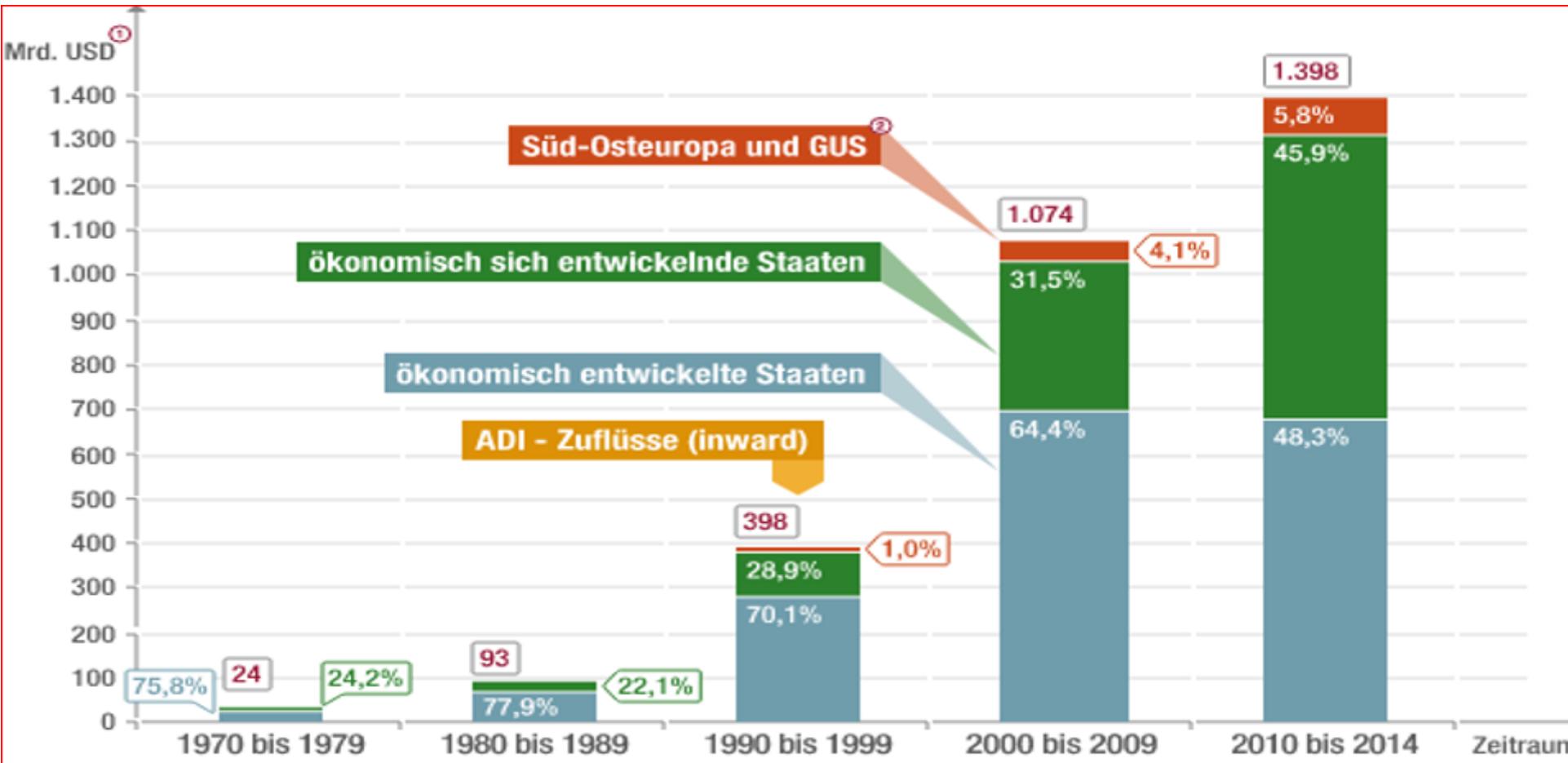
## Development and Structure of World Trade

### Development of Foreign Direct Investment (FDI)

- **FDI rather insignificant before 1980**
- **Strong growth since 1990 continuing till 2010**
  - Emergence with **vertical FDI**
  - MNEs conducted ***cross-border shifts in production***, mainly to countries with relatively low production cost
  - MNE setting-up internal ***international value chains*** (aimed at cost reduction and other types of advantages)
- **Stepwise development of MNE activities in different target areas**
  - Vertical FDI in neighbor countries
  - Vertical FDI in emerging and developing countries
  - Vertical FDI in transformation countries
  - Offshoring in further country groups with specialization in branches
  - FDI from emerging countries to low-cost countries
- **Inward FDI of multinationals stimulated by emerging countries through creation of free trade zones (*export processing zones*)**
  - free trade zones provide free trade conditions, a liberal regulating regime and tax reductions for defined periods
  - Investments from advanced economies attracted
  - Vertical FDI accelerated industrialization processes in emerging countries
  - Initially mainly export-oriented, later-on also serving local markets

# FDI per year

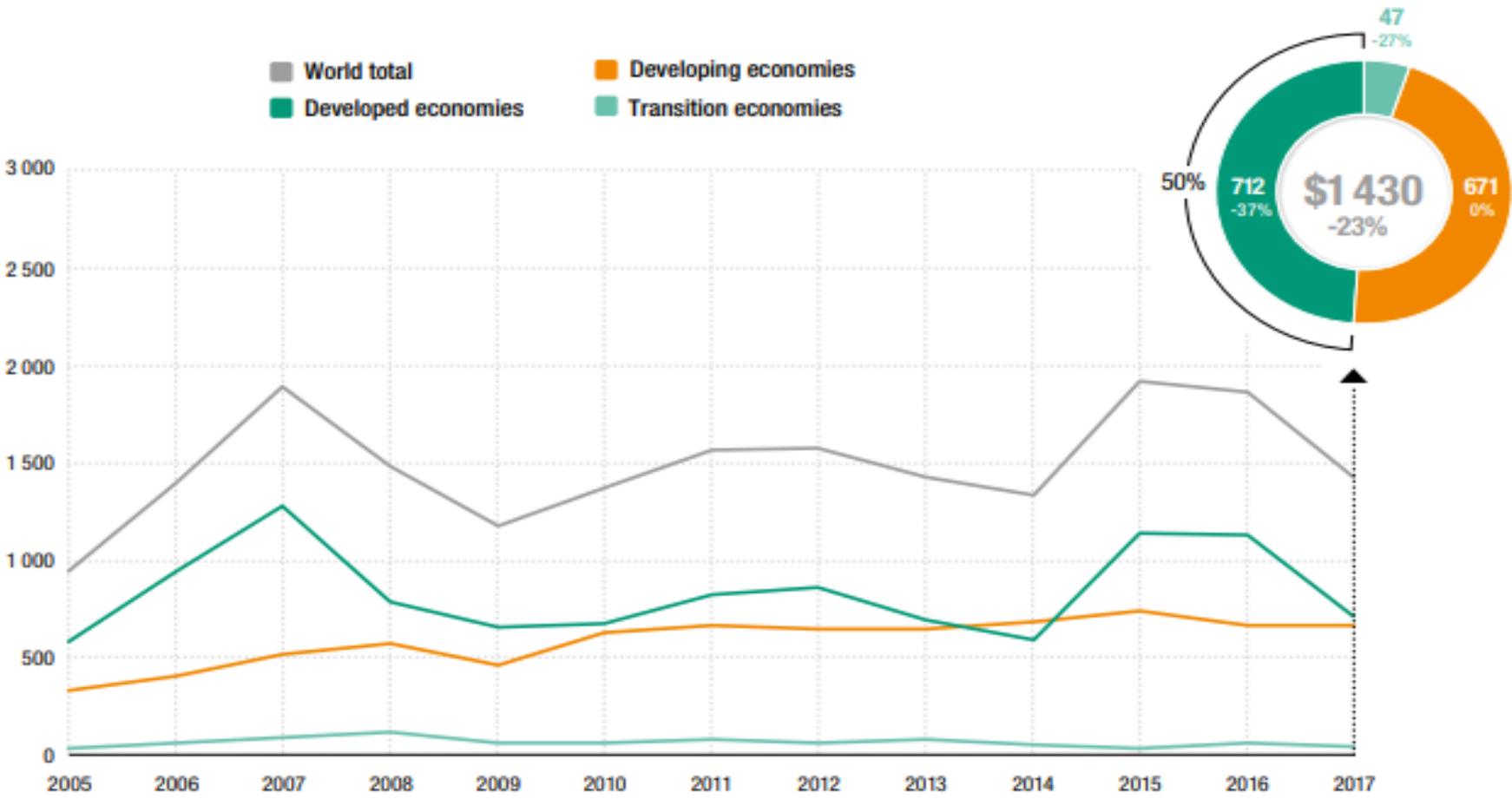
(in absolute numbers, share in pc, 1970-2014)



Quelle: United Nations Conference on Trade and Development (UNCTAD): Online-Datenbank: UNCTADstat (Stand: Januar 2016)

Lizenz: cc by-nc-nd/3.0/de/

Figure I.1. FDI inflows, global and by group of economies, 2005–2017 (Billions of dollars and per cent)



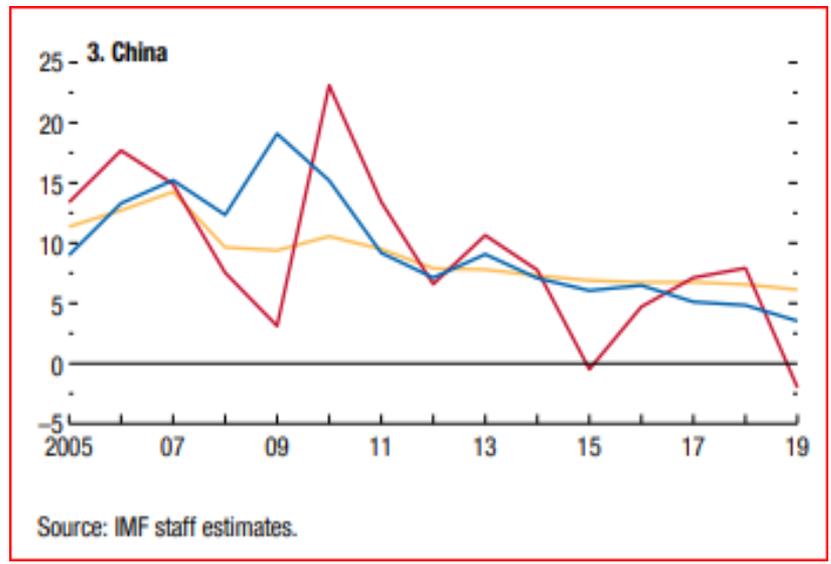
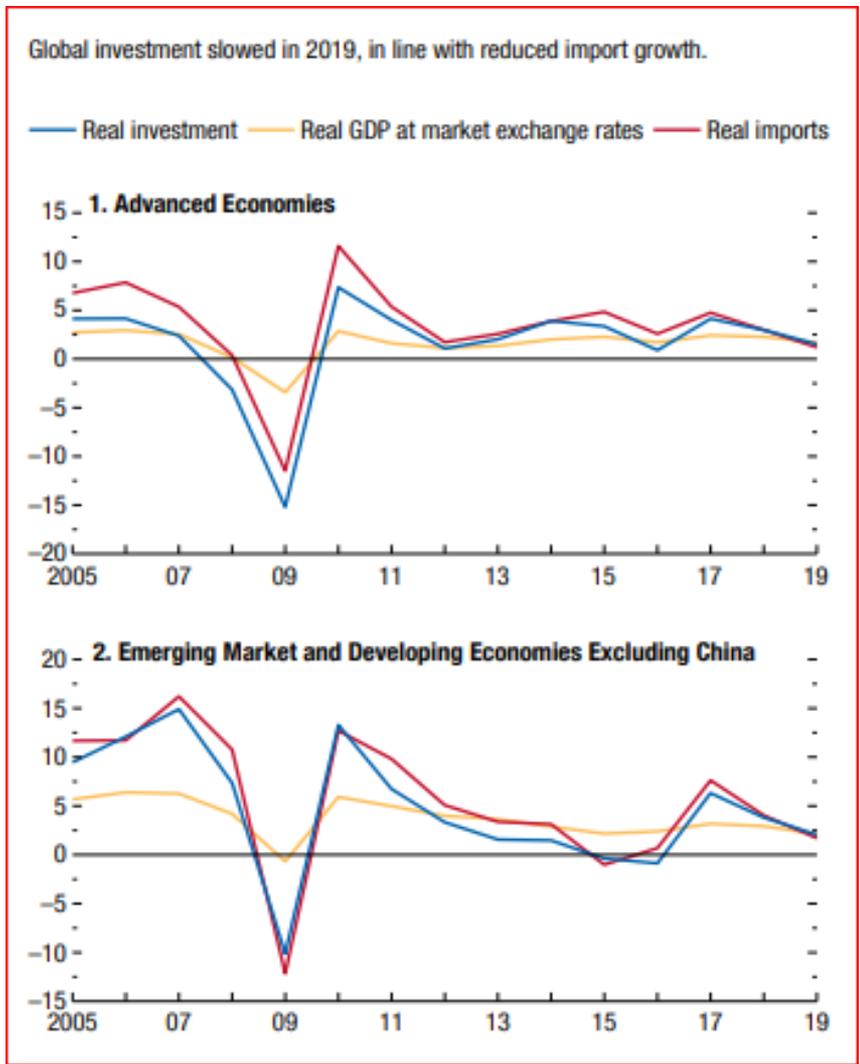
Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

**Box figure I.1.1 | Global capital flows, 2002–2017** (Per cent of GDP)



Source: UNCTAD, based on IMF World Economic Outlook database. Includes only the 115 countries for which the breakdown of portfolio flows into debt and equity is available.

# Global Investment and Trade Source: IMF World Economic Outlook, October 2019



## Development and Structure of World Trade

- **Vertical FDI triggered technological and economic catch-up processes in emerging countries**
  - Local companies sprang up or extended operations
  - Acceleration of industrialization processes in emerging countries
  - Settings in manufacturing industry, occasionally focused in electronics and communication branches
  - Features of emerging economies resemble increasingly to advanced economies
  - Far-reaching reversal in trade relations induced
  
- **Surge in world-wide FDI peaked in 2007**
  - After downturn of 2008-09 shrinking growth rates
  - since 2015 **decrease of FDI, 2017 stark reduction** (mainly in advanced economies)
  - **Reasons of downturn:** rates of return strongly diminishing / growing instability in trade relations / stricter investment control regimes for takeovers

## Development and Structure of World Trade

### Point 6: Development of Global Value Chains (GVC)

**Global Value Chains (GVC)** describe production processes where the different stages are located ***across different countries***

- closely connected with vertical FDI
- Stages: product development, processing, marketing and distribution

#### **GVC strongly shaping international trade flows**

- Strong trend towards international dispersion of value chain activities
- Restructuring operations and optimizing of processes by ***outsourcing and offshoring of activities***
- Optimizing processes by locating individual or multiple stages across different site

#### **GVCs emerging as internal supply chain networks of MNEs**

- Established between controlled manufacturing facilities in different countries
- International production in part offshored to overseas countries with lower production cost
- **Offshoring as shifting of entire stages of production** for manufacturing of goods and components from an affiliated subsidiary
- **International dispersion of value chains** embracing production, design, marketing and distribution activities
- Vertical FDI enables **cost advantages and use of further competencies**

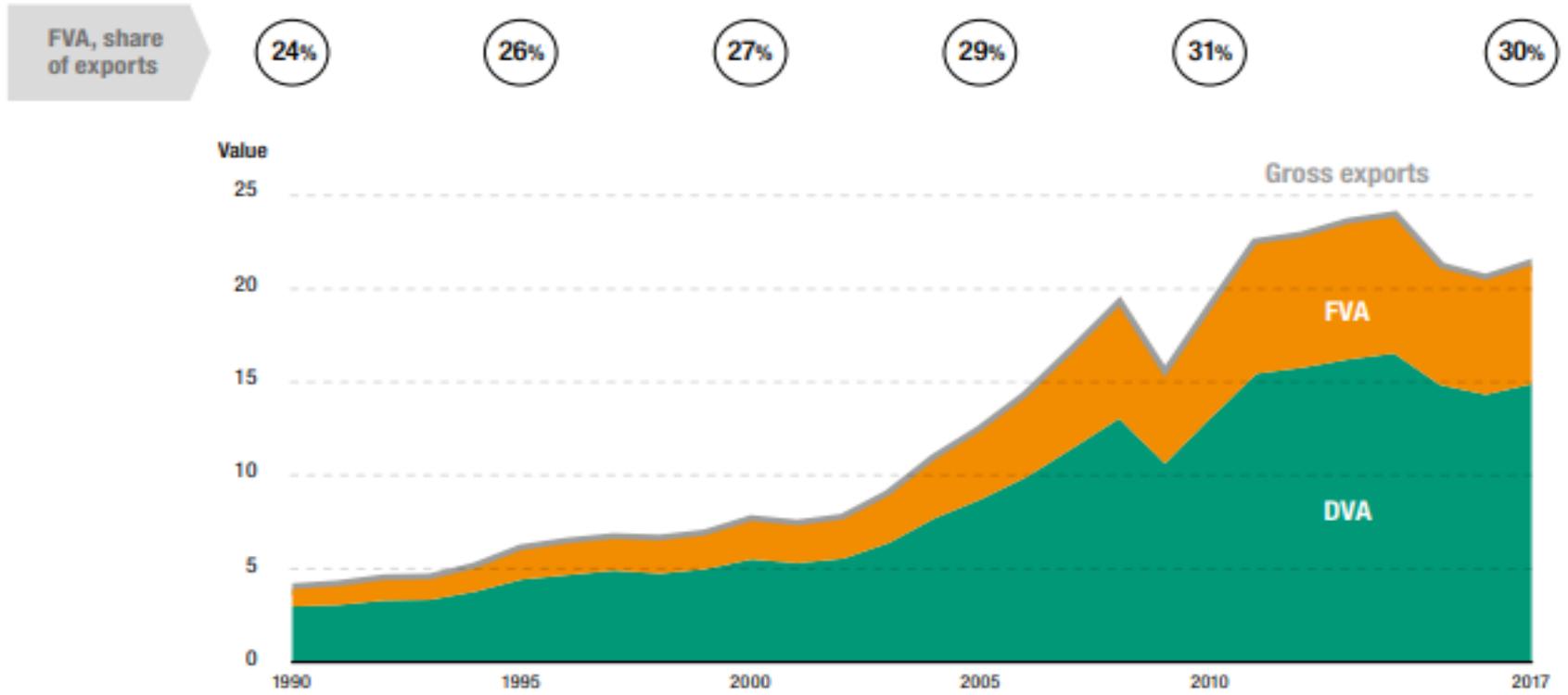
## Development and Structure of World Trade

### Development of internal GVCs

- **Strong increase of internal cross-border trade flows of MNEs in international trade**
- **Productivity gains of MNEs**, growth of sales and value added of MNE foreign affiliates
- **since 2011 growth rate fell significantly**
  - growth of internal GVC coming to an end
  - loss of momentum in long-term FDI trend

# Development of Foreign Value Added (FVA) compared to Domestic Value Added (DVA) as growth indicator of Global Value Chains (GVC)

**Figure I.14.** Global trade: long-term trends in value added terms, 1990–2017 (Trillions of dollars and per cent)

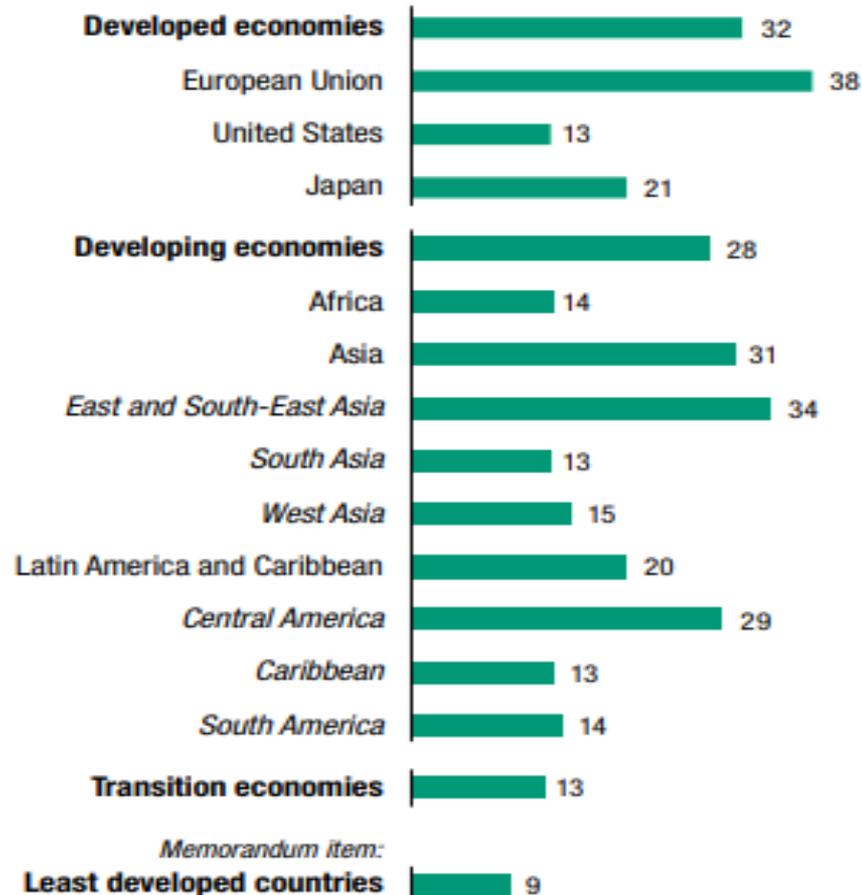


Source: UNCTAD; based on data from the UNCTAD-EORA GVC database.

## Foreign Value Added (FVA)

Figure I.15.

Share of foreign value added in exports, by region, 2017 (Per cent)



Source: UNCTAD; based on data from the UNCTAD-EOBR GVC database

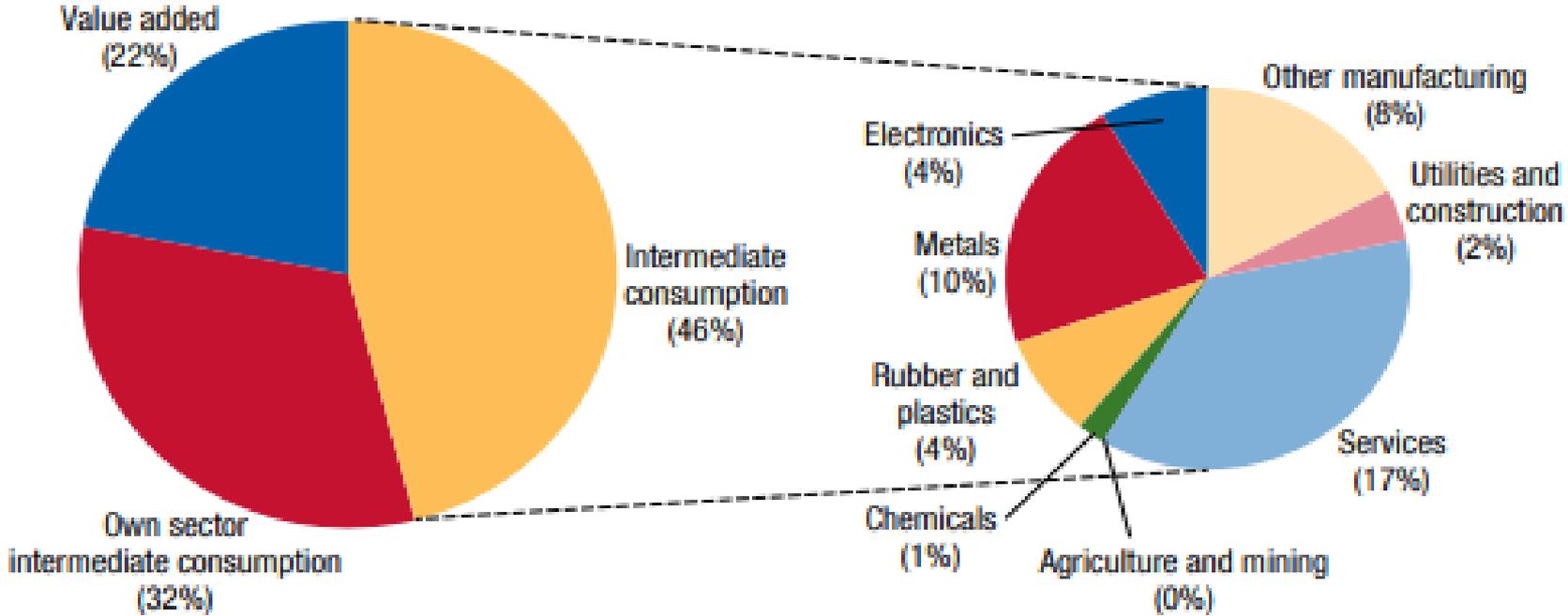
EU with highest FVA share in exports (38pc), while in USA share relatively low (13pc)

- Europe is using cost advantages of foreign production by informal networks more than other regions (leading to competitive advantages)
- East and South-East-Asian countries also very advanced

# Global Value Chains in the World Automobile Industry 2014

Source: IMF, World Economic Outlook October 2019.

**Figure 1.1.2. Global Vehicle Industry: Structure of Production, 2014**



Sources: World Input-Output Database; and IMF staff calculations.

## Development and Structure of World Trade

### Point 7: Contractual Forms of Global Value Chains (networks)

- **GVCs not based on FDI but on contractual forms of cooperation**
- **Shift of international production from tangible to intangible value chains**
  - Intangible value chains based on cooperation within informal network structures
  - arms length-contracts with independent partners
- **Advantages:** flexibility, investment load and risks decentralized
- **Outsourcing and offshoring of activities**
  - **Outsourcing** as acquisition of parts and components processed by an unaffiliated party
  - **Offshoring** as sourcing of finished and semi-finished goods from an unaffiliated supplier by shifting entire stages of production abroad
- **Development of informal GVCs**
  - high rates of growth contributed to expanding trade
  - **“asset light” international production** trend by flexible informal networks
- **Indicators of development**
  - **Increase of Foreign Value Added (FVA)**
    - FVA = value of imported goods and services incorporated in a country's exports
    - **FVA to Gross Exports** 1990-2010 gradually rising relative to domestic value added, peaking in 2010-12, with subsequent stagnation
  - **Relative high growth rates of royalties and licensing fees compared to trade in goods**

## Development and Structure of World Trade

### Types of GVCs participation:

- **Upstream integration:** capture value added from previous and production related stages of the value chain and procure inputs from other countries (components, intermediary products)
  - Important role in all international value chains
  - Degree of inclusion differs strongly among country groups (relatively high in EU and East- and South–East Asia)
- **Downstream integration:** capture value added from distribution and marketing-related stages of the value chain and delivering inputs to other countries' exports
  - Degree of inclusion differing by country groups

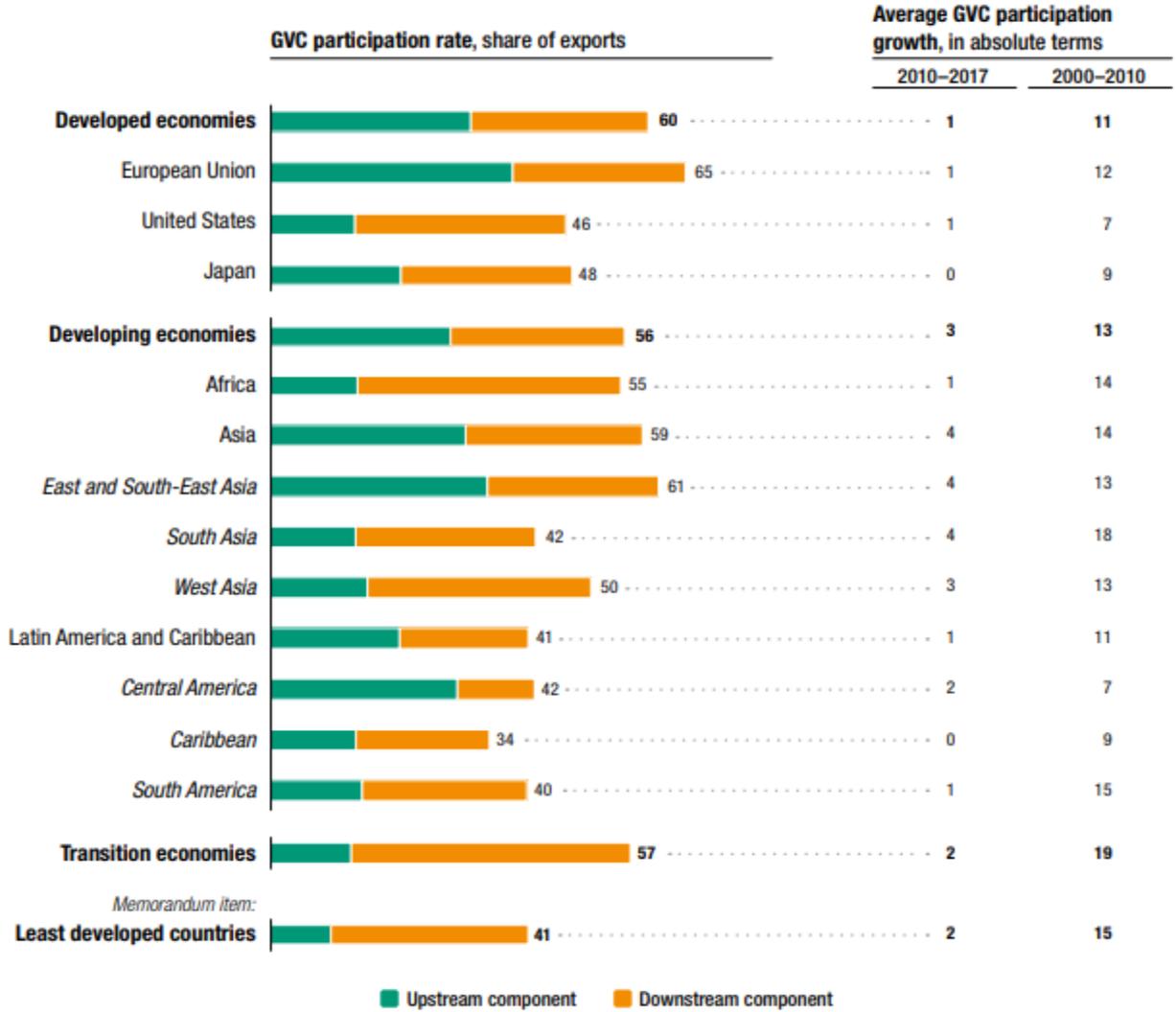
### Development of GVC participation growth rate

- Rising in the first decade of millennium (2000-12)
  - Subsequent stagnation
- **MNEs responsible for 50 percent of world's exports** (19 percent domestic MNEs / 31 percent by foreign affiliates)

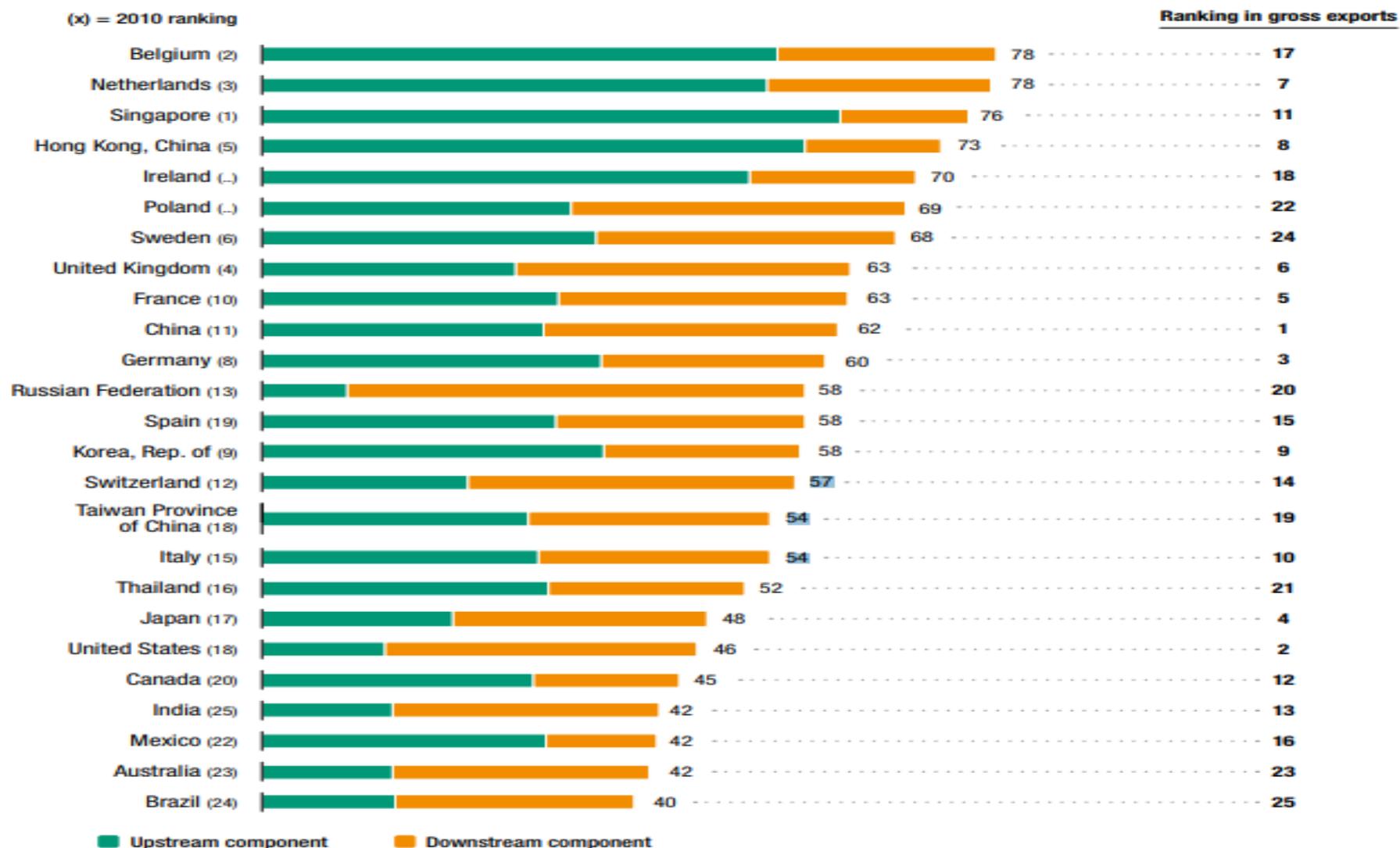
**GVC participation:**

- **Highest shares** (mainly capturing upstream components)
  - EU
  - East and South-East Asia
- **Lowest shares** (mainly capturing downstream components)
  - USA
  - Africa
  - Transition economies
  - Least developed countries
- Participation growth diminishing

**Figure I.16. | GVC participation rate, by region, 2017 and growth rates, 2010–2017 and 2000–2010 (Per cent)**



Source: UNCTAD; based on data from UNCTAD-EORA GVC database.

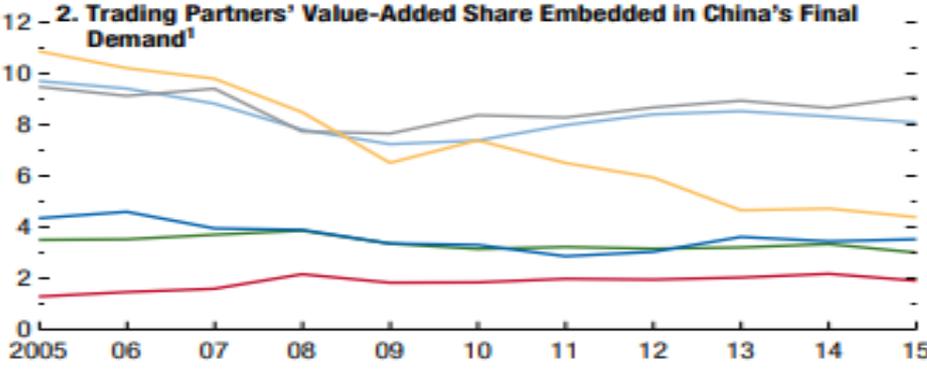
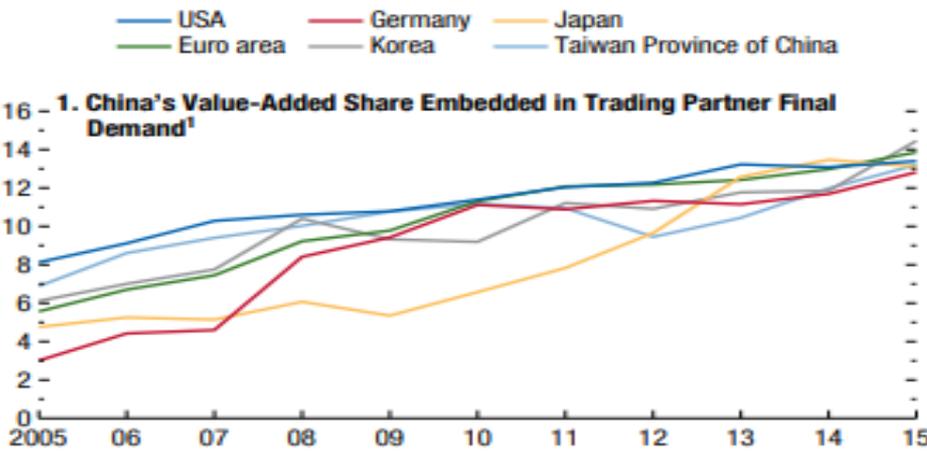
**Figure I.17. | Top 25 exporting economies by GVC participation rate, 2017 (Per cent)**

Source: UNCTAD; based on data from UNCTAD-EORA GVC database.

Note: Ranking excludes predominantly oil-exporting countries. The symbol (.) identifies countries that were not in the list of top 25 exporters in 2010.

**Figure 1.20. Tech Hardware Supply Chains**  
(Percent)

Input-output linkages point to ever-more-interrelated technology, including the US technology sector's increasing dependence on imports of value added from Chinese producers.



Source: Organisation for Economic Co-operation and Development, Trade in Value Added database.  
<sup>1</sup>Computers, electronics, and electrical equipment.

# Tech Hardware Supply Chains Input-Output Linkages

## China and its Trade Partners

Source: IMF  
World Economic Outlook  
October 2019

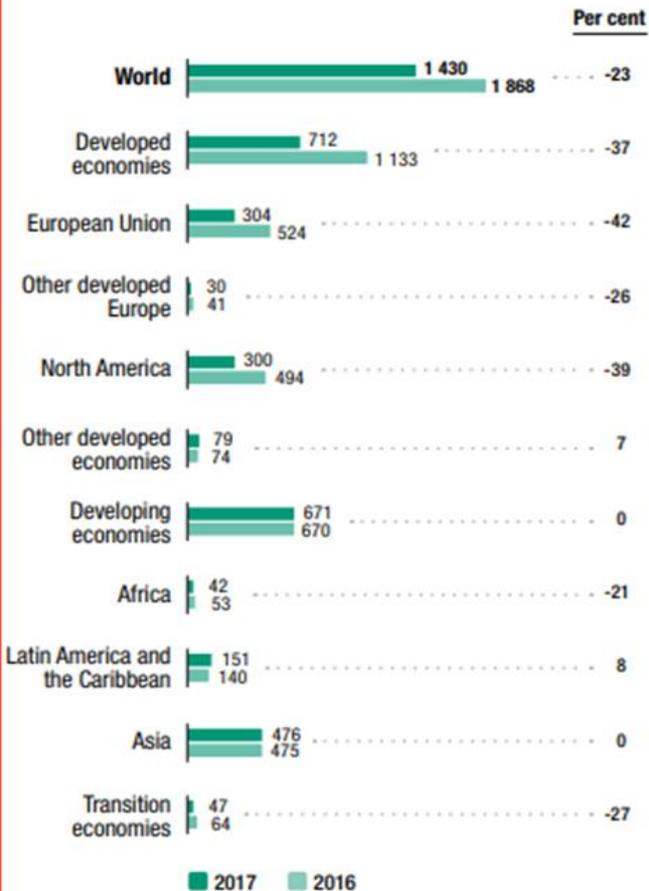
## Development and Structure of International Trade

### Point 8: Growing Multipolarity of International Investment

#### Directions of FDI flows by target regions

- Initially mainly **horizontal FDI in advanced economies** (mainly transatlantic)
- From 1980s onwards predominantly **vertical outward investments by corporations from advanced economies towards other advanced economies**
  - after fall of “iron curtain” in Europe Eastern Europe as target countries for vertical FDI
- after 2000 **strong increase of outward FDI from advanced economies to emerging markets and developing economies**
- meanwhile also **FDI from emerging markets to other emerging markets and advanced economies (USA: strong inward and outward investment flows)**
- **New trends emerging:**
  - **Increasing multipolarity of inward and outward direct investments**
  - **Leading role of USA in both directions**
  - **outward and inward FDI flows**
    - Outflows of FDI from capital-rich advanced economies, but also from emerging markets
    - Inflows directed mainly to emerging countries, but also to advanced economies
    - 2017: ***total inward FDI in developing and transition countries nearly equal to FDI inflow in advanced economies***
  - Number of participating countries increasing: FDI growingly dispersed world-wide, both on the inflow as to the outflow side

**Figure I.2. FDI inflows, by region, 2016–2017**  
(Billions of dollars and per cent)



Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

**Table I.1. Inward FDI rates of return, 2012–2017 (Per cent)**

| Region                          | 2012        | 2013        | 2014        | 2015        | 2016        | 2017        |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>World</b>                    | <b>8.1</b>  | <b>7.8</b>  | <b>7.9</b>  | <b>6.8</b>  | <b>7.0</b>  | <b>6.7</b>  |
| <b>Developed economies</b>      | <b>6.7</b>  | <b>6.3</b>  | <b>6.6</b>  | <b>5.7</b>  | <b>6.2</b>  | <b>5.7</b>  |
| <b>Developing economies</b>     | <b>10.0</b> | <b>9.8</b>  | <b>9.5</b>  | <b>8.5</b>  | <b>8.1</b>  | <b>8.0</b>  |
| Africa                          | 12.3        | 12.4        | 10.6        | 7.1         | 5.4         | 6.3         |
| Asia                            | 10.5        | 10.8        | 10.6        | 9.9         | 9.5         | 9.1         |
| East and South-East Asia        | 11.5        | 11.8        | 11.7        | 11.0        | 10.3        | 10.1        |
| South Asia                      | 7.2         | 6.7         | 6.1         | 5.5         | 6.4         | 5.7         |
| West Asia                       | 5.5         | 5.4         | 4.9         | 4.6         | 4.6         | 3.4         |
| Latin America and the Caribbean | 7.9         | 6.7         | 6.6         | 5.2         | 5.3         | 5.6         |
| <b>Transition economies</b>     | <b>14.4</b> | <b>13.9</b> | <b>14.6</b> | <b>10.2</b> | <b>11.1</b> | <b>11.8</b> |

Source: UNCTAD based on data from IMF Balance of Payments database.

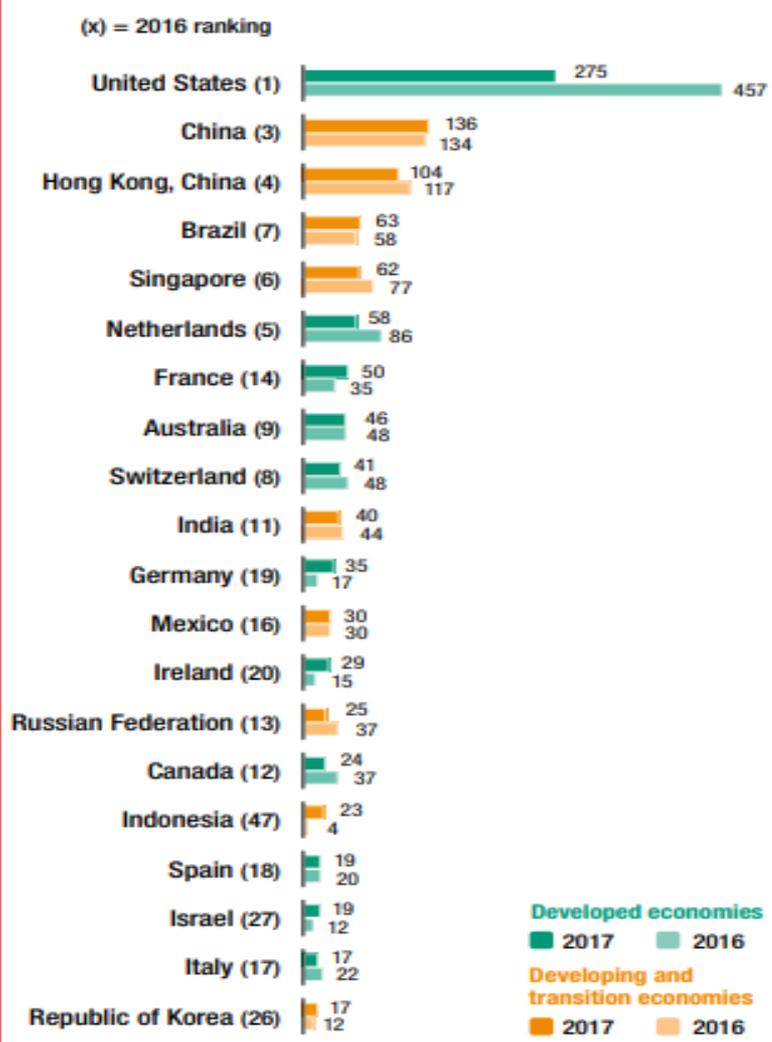
Note: Annual rates of return are measured as annual FDI income for year  $t$  divided by the average of the end-of-year FDI positions for years  $t$  and  $t-1$  at book values.

Increased FDI inflows in developing countries, relatively higher rate of return  
Source: UNCTAD

# FDI inflows and outflows by country

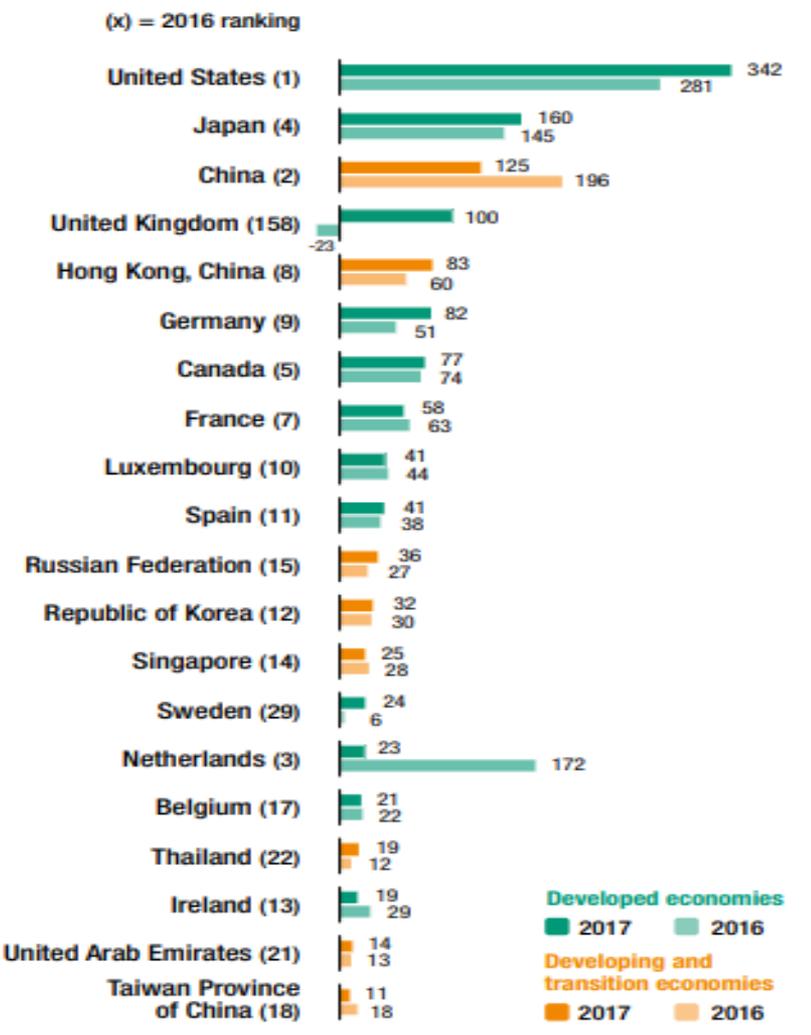
Source: UNCTAD World Investment Report 2018

**Figure I.3. FDI inflows, top 20 host economies, 2016 and 2017 (Billions of dollars)**



Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

**Figure I.6. FDI outflows, top 20 home economies, 2016 and 2017 (Billions of dollars)**



Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

## Development and Structure of World Trade

### Point 9: Redirection of Trade Flows in World Trade

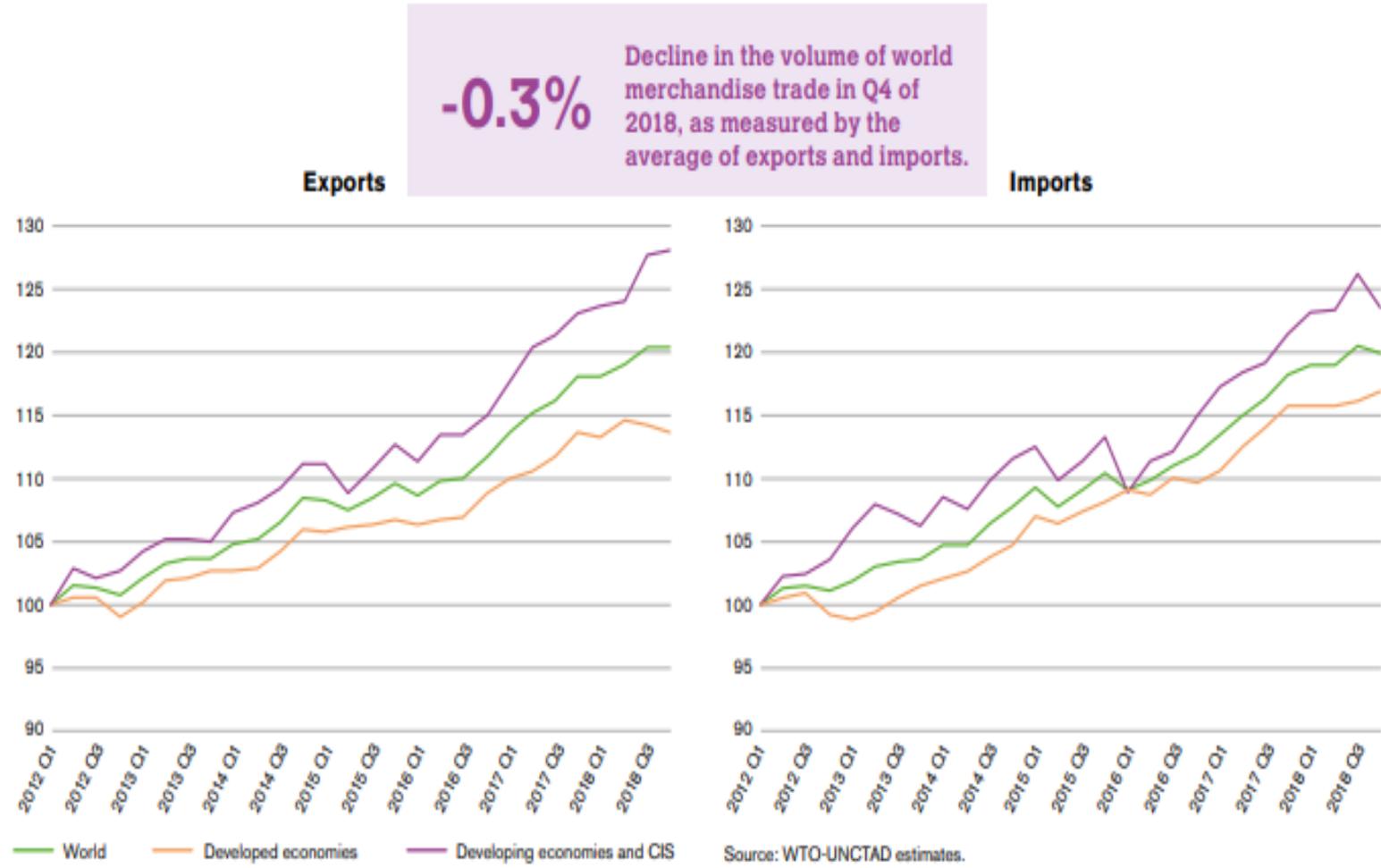
- **International Trade Exchange between countries**
  - based on comparative advantages between countries resulting from availability of natural resources specific climate conditions
  - Countries specialize by offering country specific products due to specific conditions, special competences and qualifications or cost differences
    - Specific forms of trade exchange between advanced and developing countries
- **Traditional international trade exchange:**
  - **Advanced economies' industries** exporting mainly manufactured goods to developing countries in exchange to **Developing countries** exporting raw materials to advanced economies
  - since industrial revolution overwhelming part of trade exchange carried out **among advanced economies** and **consisting primarily of manufactured goods** (similar but slightly different products traded, intra-industry trade, "North-North-Trade")
- **Substantial differences of labor and production cost as major motivation for trade exchange between advanced and emerging economies**
  - diminishing shipping and other transaction cost
  - cost advantages by relocation of production through FDI
  - **Exports from emerging and developing countries to advanced economies stimulated ("South-Nord-Trade")**
  - **Exports from emerging countries to other emerging or developing economies stimulated ("South-Nord-Trade")**

## Development and Structure of World Trade

- **Current international trade exchange patterns**
  - ***Part of Emerging and Developing countries turned into industrialized countries*** exporting increasingly manufactured goods to all economies
    - ***MNE (multinational enterprises) created subsidiaries in emerging countries*** based on fragmentation of production processes
    - ***Stimulation of industrialization of emerging countries*** which provide increasingly similar features to advanced economies
  - ***Evolution of GVC effect trade flows and extend trade volumes further*** by enhancing the international *division of labor through trade of intermediated products*

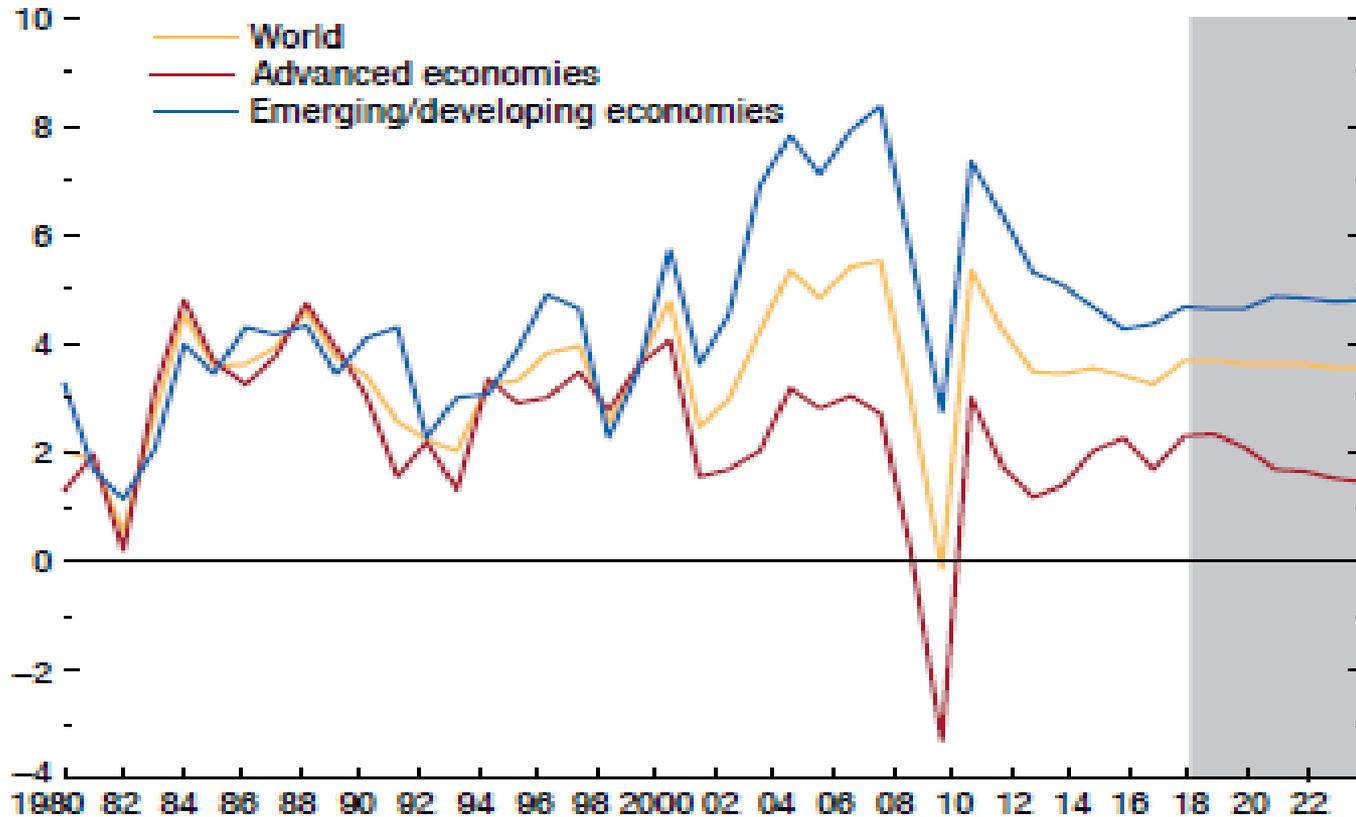
# World merchandise exports by level of development (volume index)

Chart 3.2  
World merchandise exports and imports by level of development, 2012 Q1 to 2018 Q4  
(Volume index, 2012 Q1=100)



- Source: WTO

**Figure 1. Real GDP Growth, by Country Group**  
(Year over year)

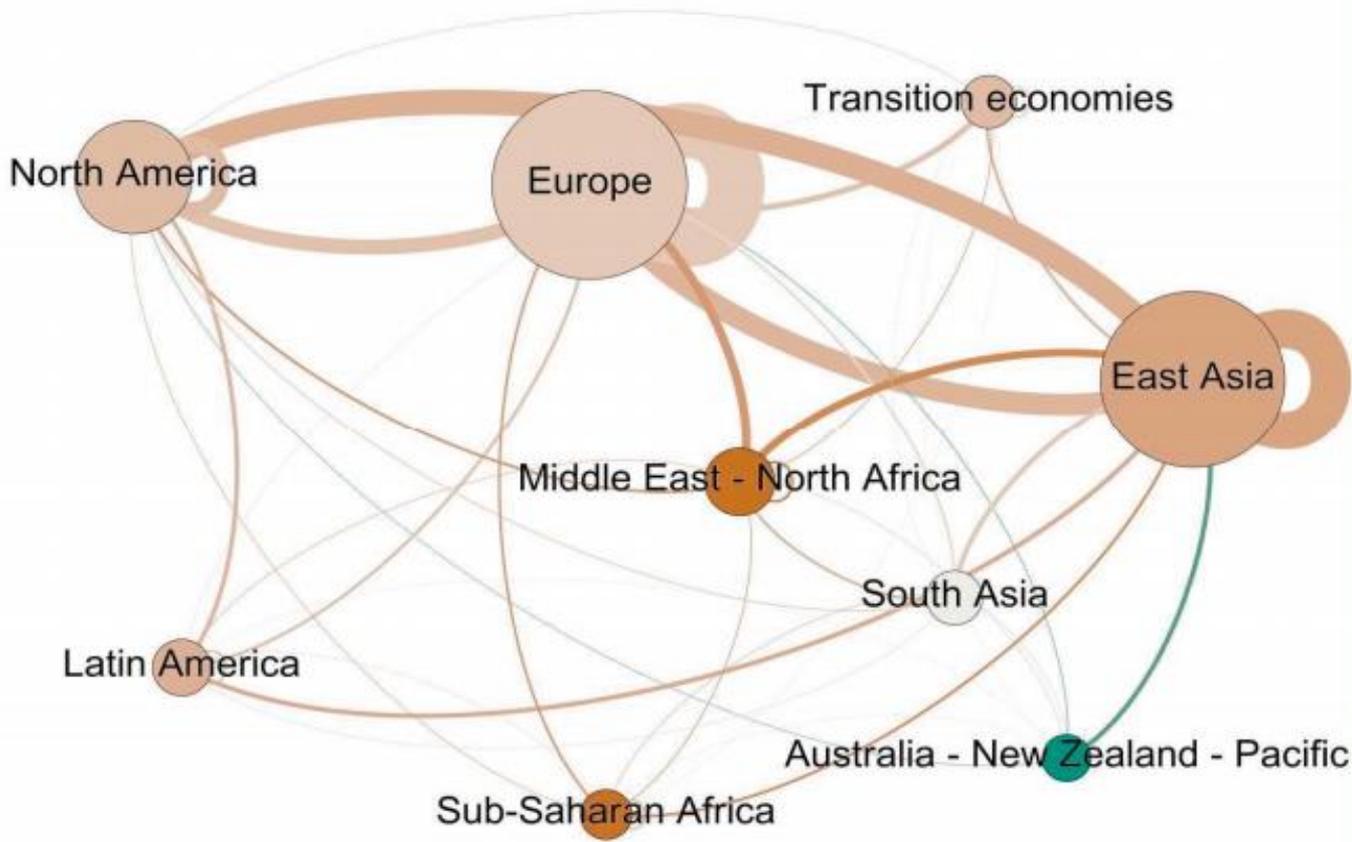


GDP growth  
(Emerging  
economies in  
advance of  
Advanced  
economies)

Source: IMF, *World Economic Outlook*, October 2018.

Note: Grey area denotes projections.

Figure 4  
Trade flows across regions and change between 2015 and 2016



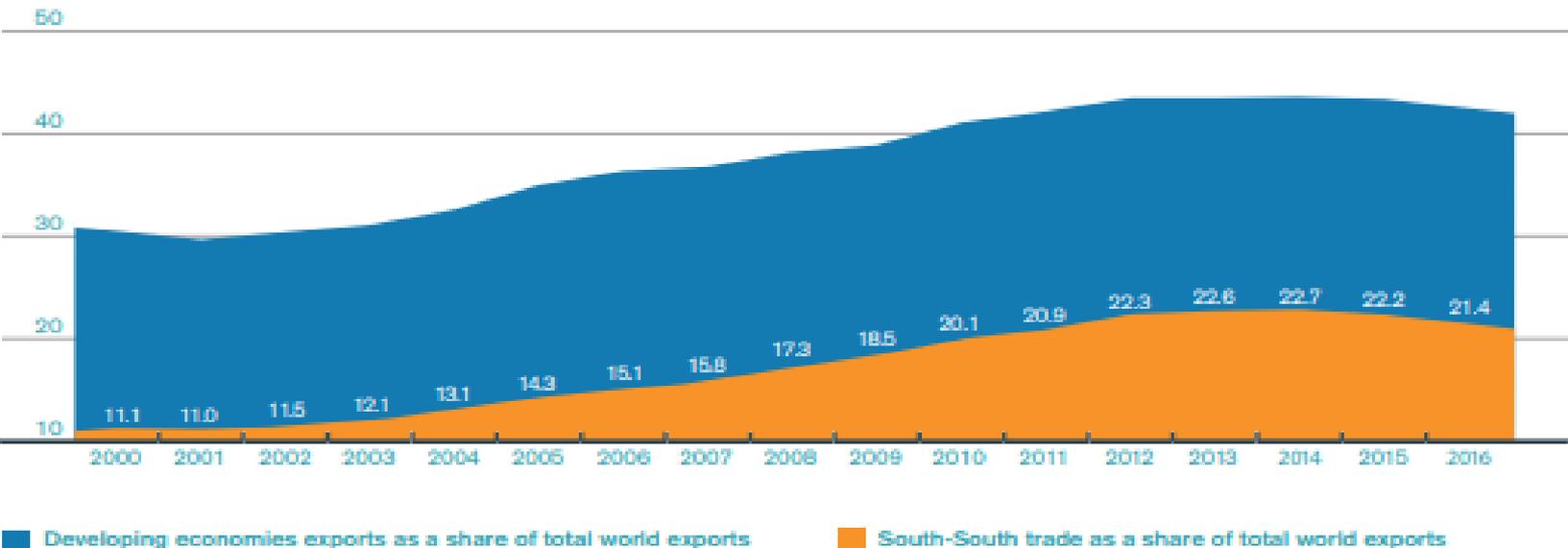
### Trade Flows across Regions 2015-16

Source: UNCTAD secretariat calculations based on COMTRADE data.

Developing economies exported 43 per cent of world merchandise exports in 2016 and 2017.

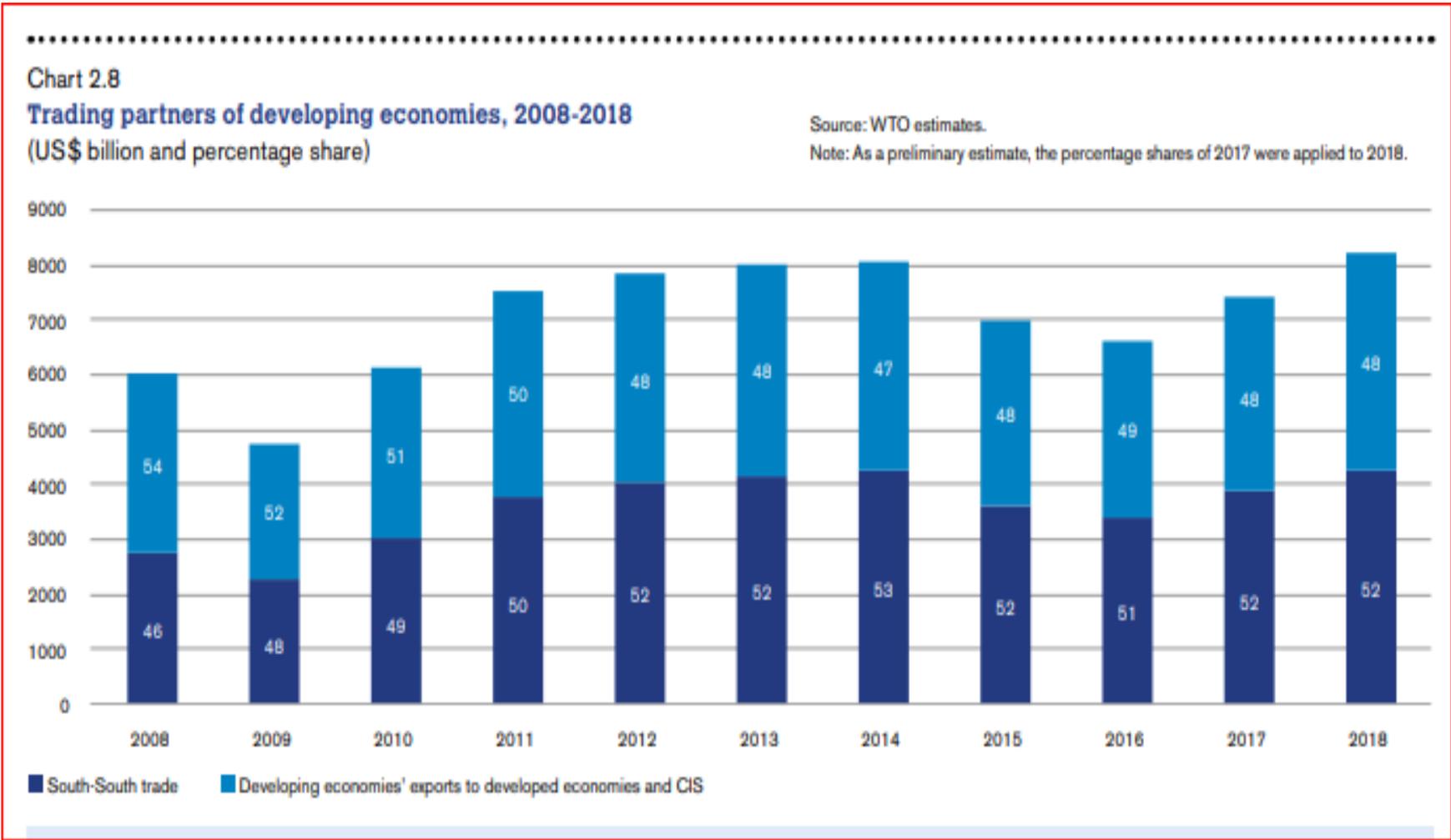
Chart 2.15  
**Share of developing economies in world exports, 2000-2016**

(Percentage share)



Note: 2017 data of South-South trade to be available in October 2018.  
Source: WTO estimates.

# International Trade of Developing Economies (WTO, World Trade Statistical Review 2019)



## Development and Structure of World Trade

- ***Changing patterns of trade flows*** result from **diversity of procurement strategies at the firm level** in cross-border business
  - Operation as **exporters** or entering foreign markets via **integrated foreign subsidiaries** or **offshoring** part of the value chain
  - Offshoring companies rely on affiliated suppliers or cooperate with arm's length suppliers
  - Outsourcing production of components while others integrate (at home or abroad)
- **Choice of option highly influenced by specific regulation**

## Cross-border organizational options of supply chains of manufacturing companies in a globalizing world economy (selection!)

- *Product development and processing in country of origin (coo) → **export of final product***
- *Product development and processing in coo → **export to sales platform → sale of final product within importing country and export to third countries***
- *Product development in coo and processing in coo and in third country likewise (outsourcing of steps of value chain to subsidiary) → **export of final product to all countries including coo***
- *Product development in coo and processing completely in third country (outsourcing to subsidiary) → **sale of final product by export to all countries including coo***
- *Product development in coo and processing completely by a foreign firm in third country (international production through licensing or contract manufacturing) → **export to all countries including coo***
- Combinations of different options
- Outsourcing and internalization options
- Costs and benefits of both options

## Development and Structure of World Trade

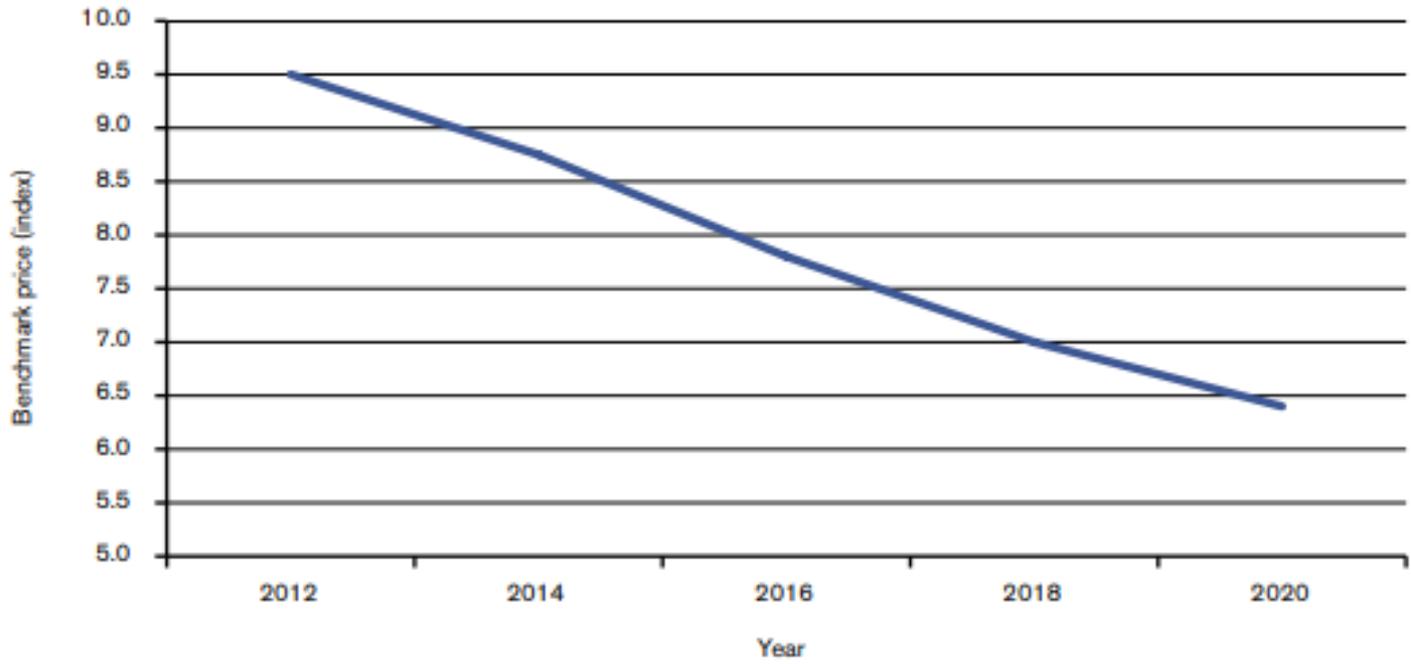
### Point 10: Disintegration of global trade and growing integration on a regional level (“Regionalization”)

#### Two developments in parallel:

- **Increased disintegration of global trade** leads to de-globalization
- **Growing integration of a regional level** leads to economic regionalization
- **trade growth outside of the *same region* and the *same Trade Bloc*** compromised
- **Present development of world trade is reversing economic globalization in merchandise trade**
  - ratio trade growth to income growth declining
  - merchandise trade in volume diminishing
  - retreating trend concerns all elements of international trade and investment
    - Globalization provides significant signs of stagnation and decline
- **Globalization in commercial services** still advancing
- **Reasons of downward development of global merchandise trade**
  - **Global differences of labor and production cost less significant** (comparative cost advantages of emerging market countries shrinking)
  - **new technologies emerging in advanced countries** substitute labor intensive processes and facilitate application-specific local prototype processing (e.g. *3D-Printer technology available at diminishing cost*)

# Digital technologies in international trade Source: WTO-Trade-Report 2018

Figure B.8: 3D printer benchmark prices



Source: WTO Secretariat computations based on data from research by IBISWorld (benchmark prices).

## Development and Structure of World Trade

- **Lower production cost in emerging countries no longer offset shipping cost in international trade**
- **Distant locations in manufacturing conduct to increased competitive disadvantages because of inflexibilities in delivery**
- **World-wide aggravating protectionism** particularly felt in merchandise trade
- **Consumer demand tends to prefer local and regional products for ecological reasons**

### From Global to Regional Integration in international trade:

- **Cost-driven comparative advantages of international trade** with emerging market countries **recurrent** and losing ground in merchandise trade
- **regional trade** within major trading blocs increasingly supported by **economic factors**
- Cross-border value chains favor increasingly **geographical proximity** and **binding agreements of trade blocs**
- **Three major regional trading blocs:** EU, NAFTA / USMCA, ASEAN (SEA)
- Trade Blocs **for smaller economies** particularly relevant since they can **compensate disadvantages in relation to big economies** which capture trade-related value added domestically
- GVC in regional trade blocs mainly **steered by companies from advanced economies through trade hubs** (highest share of **FVA in exports**)

## Development and Structure of World Trade

### Major Trading Blocs

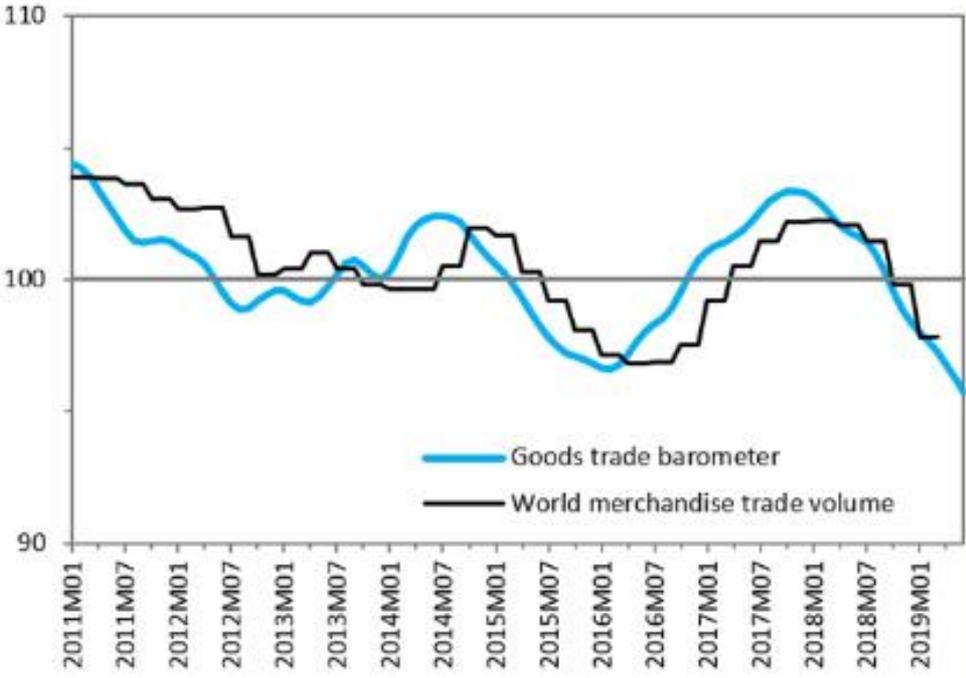
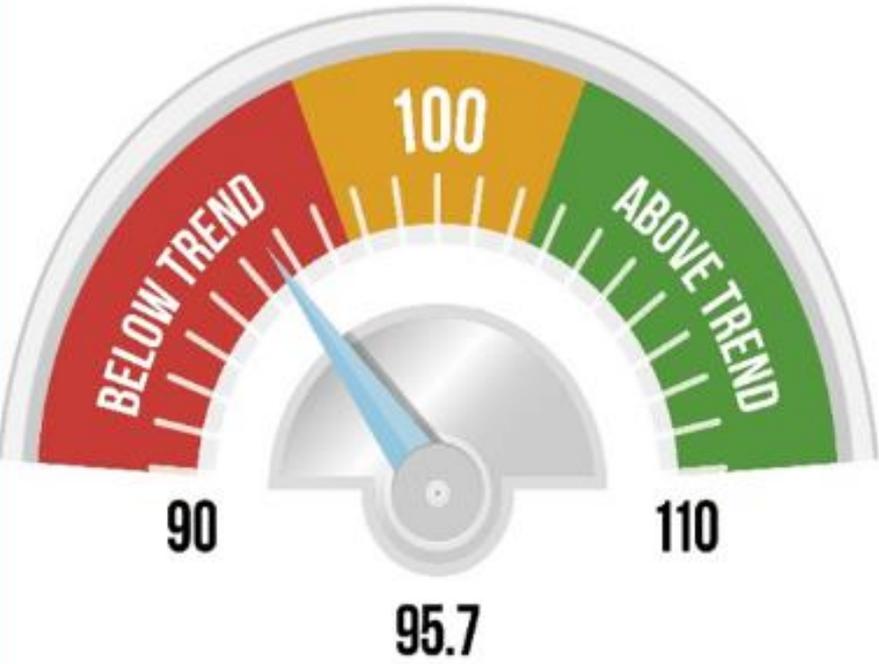
- European Union:
  - Highly integrated markets and shared institutional settings
  - Strong regional value chains with high FVA share (38pc)
- NAFSA / USCMA
- Integration in East and South-East Asia (ASEAN)
  - Rising regionalization
  - Singapore and Hongkong as trade-hubs

### Short-term development determined by further slow-down of world trade growth

- Further retreat of merchandise trade
- **Determining risk factors in world trade:**
  - Geopolitical risks
  - Growing trade tensions
  - Economic instability and macroeconomic risks
- Trade and Investment climate determined by a general atmosphere of uncertainty in international trade operations
- **Regionalization envisaged as Second-Best Option to achieve gains in trade**

### Recent development of world trade (Source: WTO, WTO Trade Barometer)

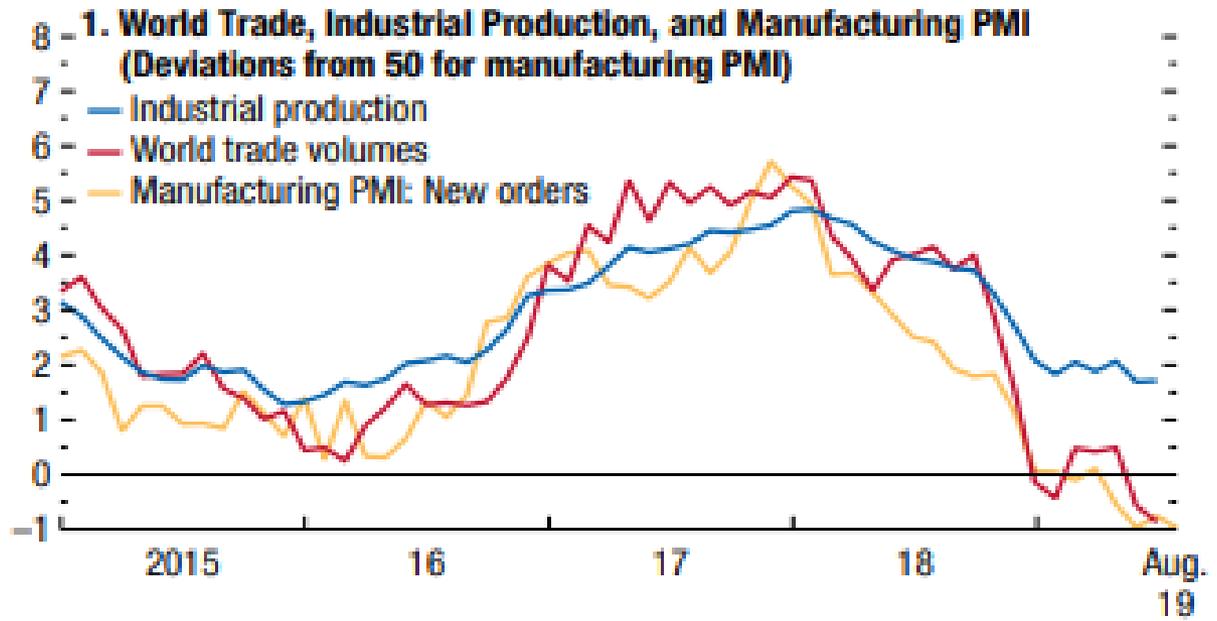
WTO Trade Barometer



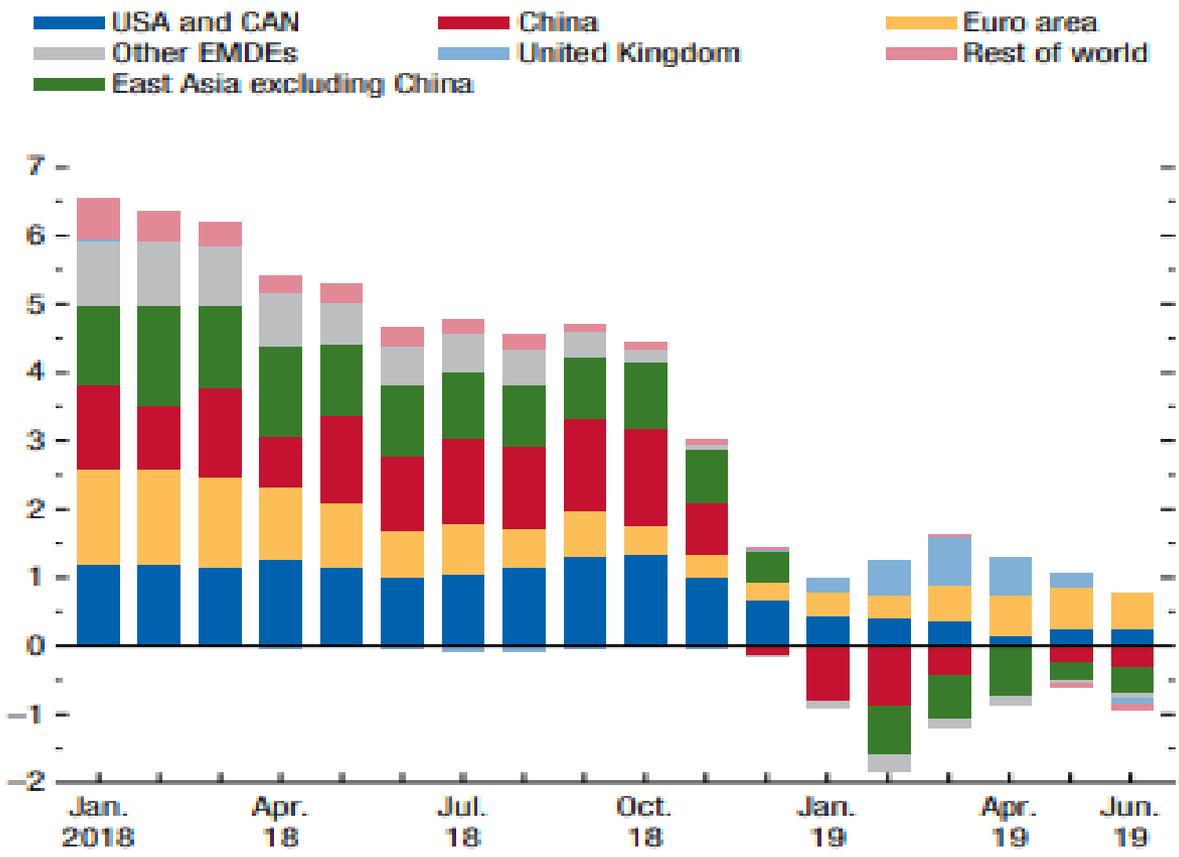
### Figure 1.1. Global Activity Indicators

*(Three-month moving average; year-over-year percent change, unless noted otherwise)*

Over the past 12 months there has been a geographically broad-based, notable slowdown in industrial output.



In the first half of 2019, the volume of global trade stood just 1 percent above its value one year ago—the slowest pace of growth for any six-month period since 2012.



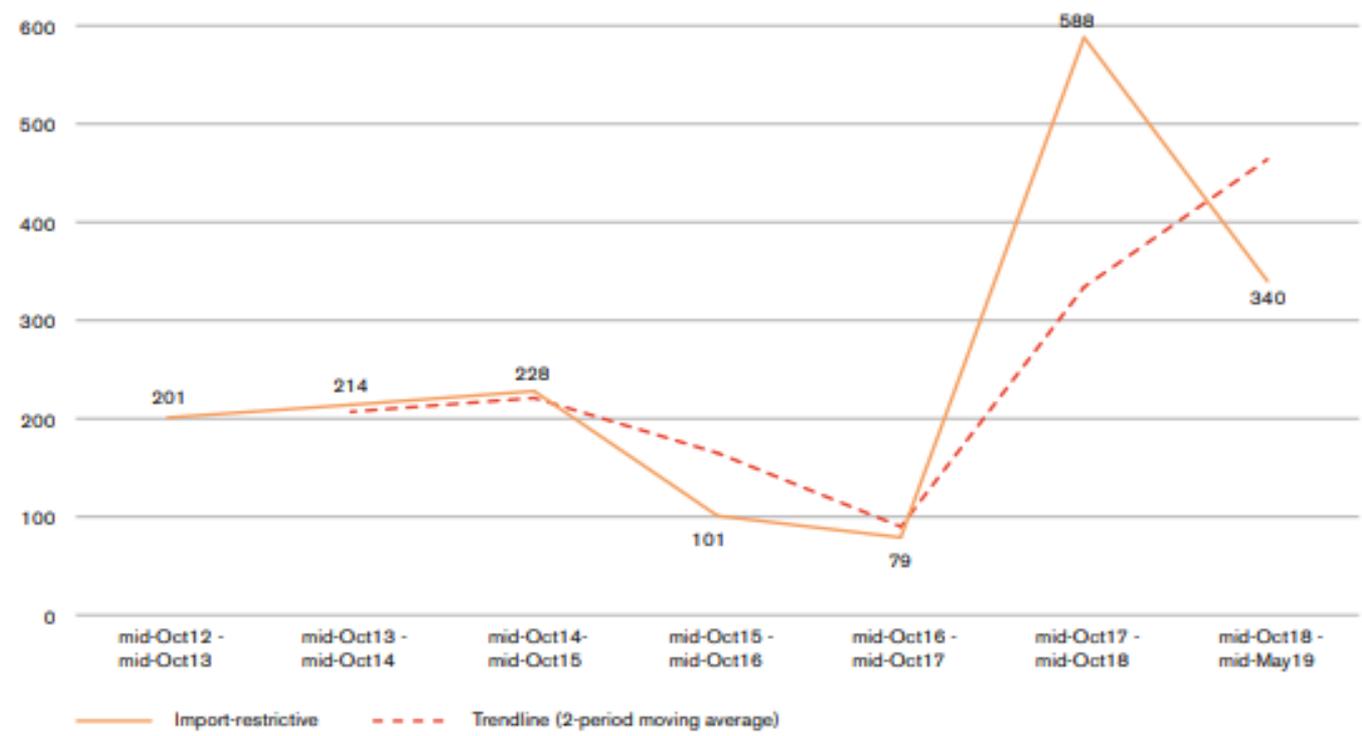
Source: IMF staff calculations.  
Note: CAN = Canada; EMDEs = emerging market and developing economies; USA = United States.

# Contributions to world imports

Source: IMF World Economic Outlook October 2019

# Trade coverage of new import-restrictive measures per period

Chart 6.1  
Trade coverage of new import-restrictive measures in each reporting period (not cumulative)  
(US\$ billion)



**US\$ 339.5 billion**

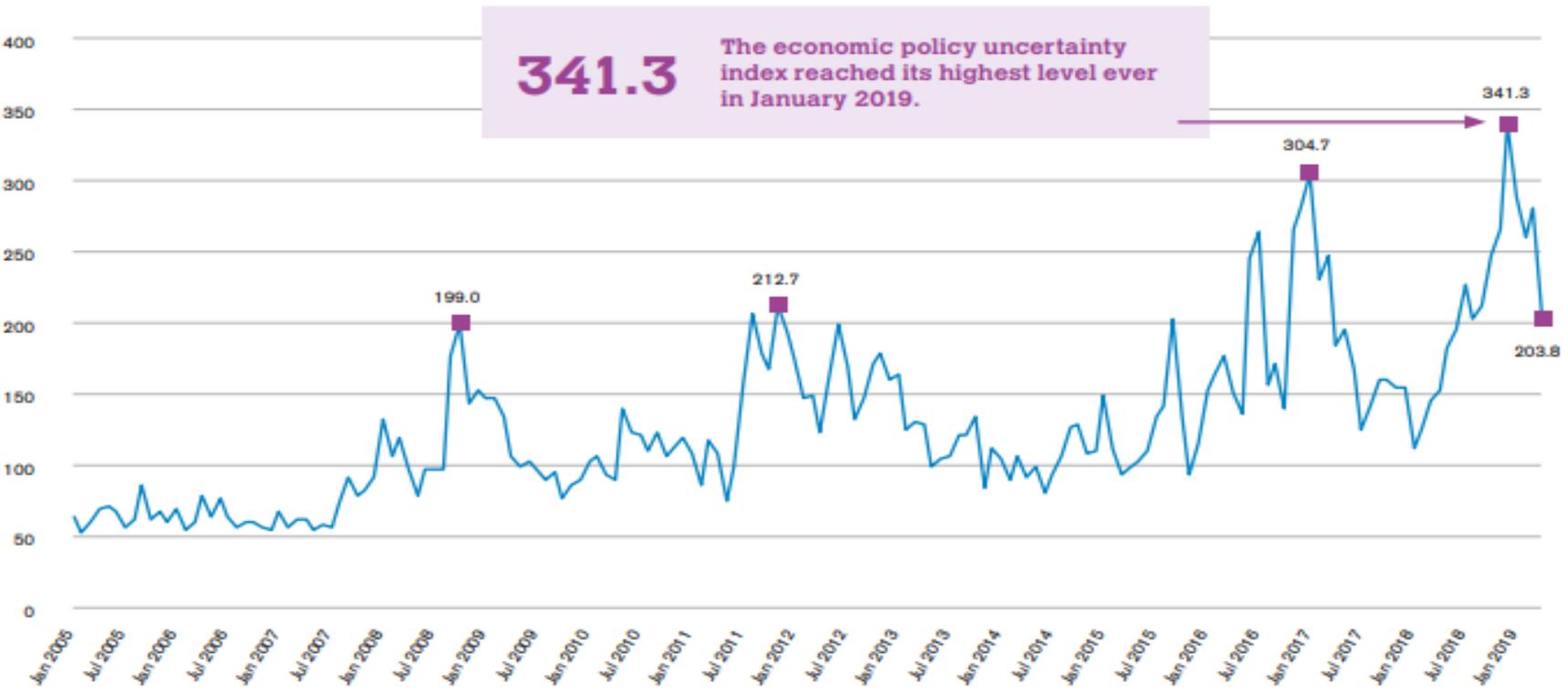
The trade coverage of import-restrictive measures implemented from mid-October 2018 to mid-May 2019, the second-highest figure on record.

Note: These figures are estimates and represent the trade coverage of the measures (i.e. annual imports of the products concerned from economies affected by the measures) introduced during each reporting period and not the impact of the trade measures. The chart provides a snapshot of the new measures introduced in each period, not the cumulative impact of the measures introduced over time.  
Source: WTO Secretariat.

# Global Economic Policy Uncertainty Index

(based on the frequency of phrases related to uncertainty in press accounts), Source: WTO Statistical Review 2019)

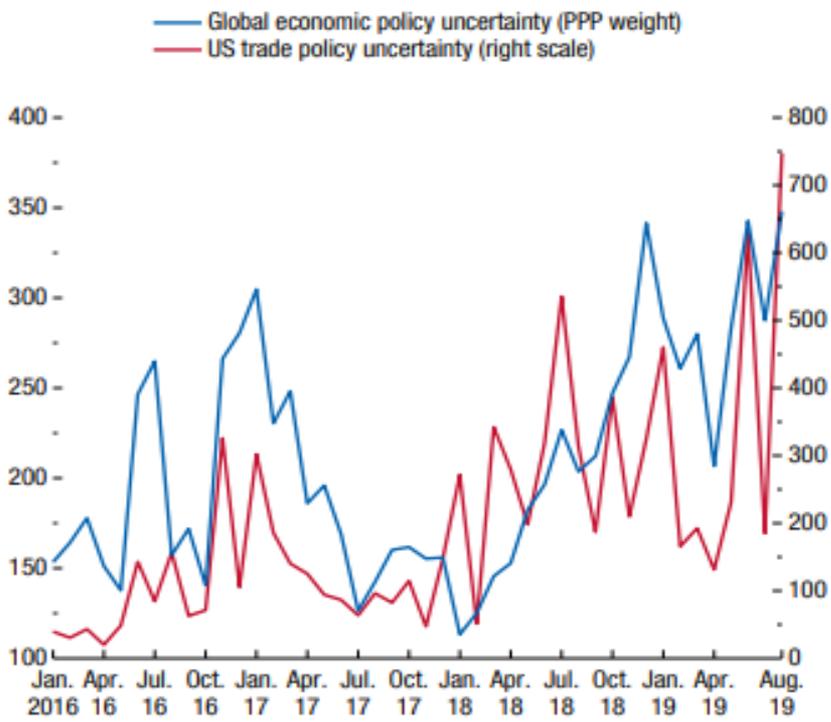
Chart 3.10  
Global economic policy uncertainty, January 2005 – April 2019  
(Index, average 1997-2015=100)



Source: PolicyUncertainty.com

**Figure 1.21. Policy Uncertainty and Trade Tensions**  
(Index)

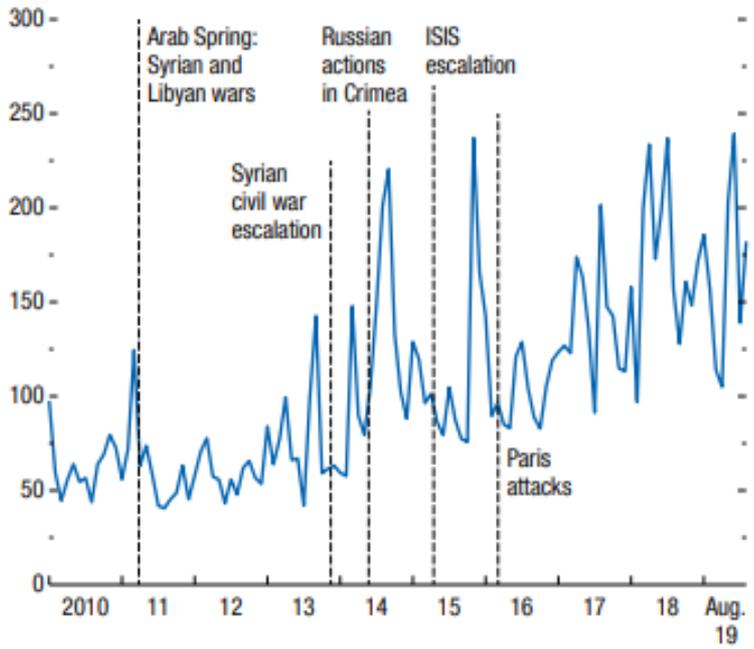
Global economic policy uncertainty remains elevated.



Source: Baker, Bloom, and Davis (2016).  
 Note: Baker Bloom Davis Index of Global Economic Policy Uncertainty (GEPU) is a GDP-weighted average of national EPU indices for 20 countries: Australia, Brazil, Canada, Chile, China, France, Germany, Greece, India, Ireland, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Spain, Sweden, the United Kingdom, and the United States. Mean of global economic policy uncertainty index from 1997 to 2015 = 100; mean of US trade policy uncertainty index from 1985 to 2010 = 100. PPP = purchasing power parity.

**Figure 1.22. Geopolitical Risk Index**  
(Index)

High geopolitical tension raises the risk of severe humanitarian costs and intensifying economic strains in some regions.



Source: Caldara and Iacoviello (2018).  
 Note: The Caldara and Iacoviello Geopolitical Risk (GPR) index reflects automated text-search results of the electronic archives of 11 national and international newspapers. The index is calculated by counting the number of articles related to geopolitical risk in each newspaper for each month (as a share of the total number of news articles) and normalized to average a value of 100 in the 2000–09 decade. ISIS = Islamic State.

**Policy Uncertainty, Trade Tensions and Increasing Geopolitical Risks**

**Source: IMF WEO Oct 2019**

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