

## International Trade: Lecture 1

### World Trade Facts and Patterns

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January 23, 2019

## Outline

- 1 Course Overview
  - 2 World Trade Patterns
  - 3 U.S. International Trade
  - 4 Global Value Chains

## Course logistics

Follow <https://sites.google.com/site/19bc3047> (web)

## ① Textbooks

- Feenstra and Talyor (2017) International Trade, 4e, Worth.

## ② Slides and readings

- Post and update every week on *Handouts* and *Readings*.

### ③ Evaluation

- Problem sets (20%): *Assignments*
  - Trade policy debates (10%): *Projects*
  - Midterm and final (each 35%)

## The subject of International Trade

International Economics is the extension of Economics in an open economy, consisting of International Trade and International Finance. International Trade follows the tradition of Microeconomics and International Finance Macroeconomics.

- ① International Trade studies flow of goods and services across countries.
    - Trade facts and history
    - Trade theories and models
    - Trade policies and institutions
  - ② International Finance examines flow of money across borders.
    - Balance of payment
    - Exchange rate determination
    - International monetary system

## What will be learned here?

- ① Trade facts, history, economic thought, and current issues
  - ② International trade theories and models (for free trade)
    - Classical theory by Smith (1776) and Ricardo (1800s)
    - Neoclassical theory by Heckscher and Ohlin (1920s)
    - Modern "new" trade theory by Krugman (1979)
    - International immigration and capital flows
  - ③ International trade policies (against free trade)
    - Benefit-cost welfare analysis
    - Tariff and non-tariff barriers
    - Rules, standards, and agreements

Readings: 2008 Nobel Prize in Economic Science: [1] [2]

## Basic concepts

## Trade balance

The difference between a country's total export and total import.

## Terms of trade

The ratio of an index of a country's export prices to import prices.

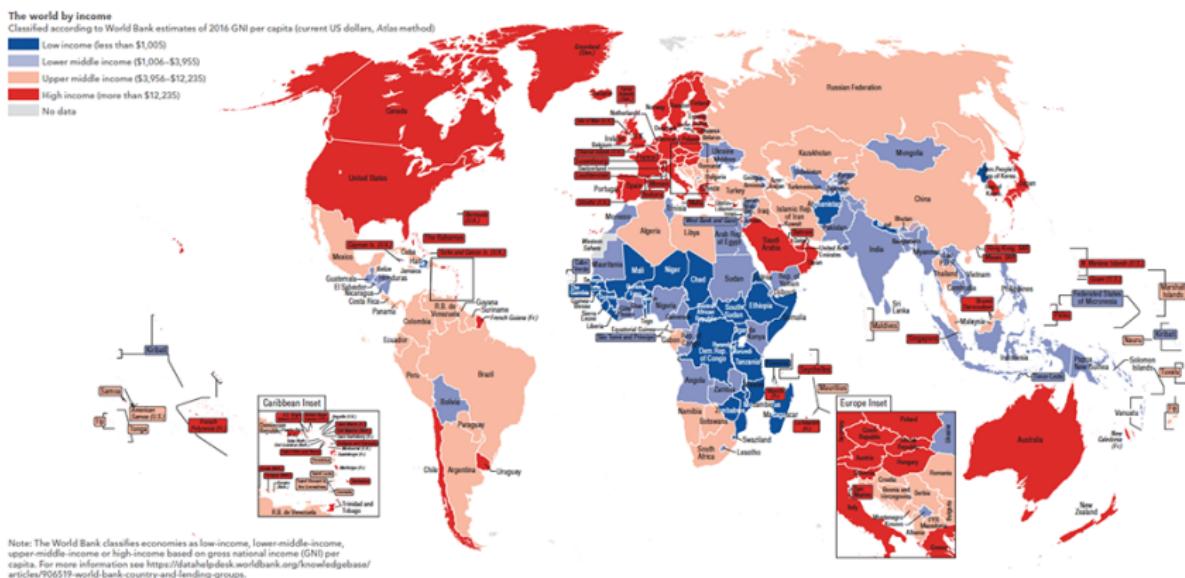
## Trade openness

The ratio of trade (goods and services) to Gross Domestic Product.

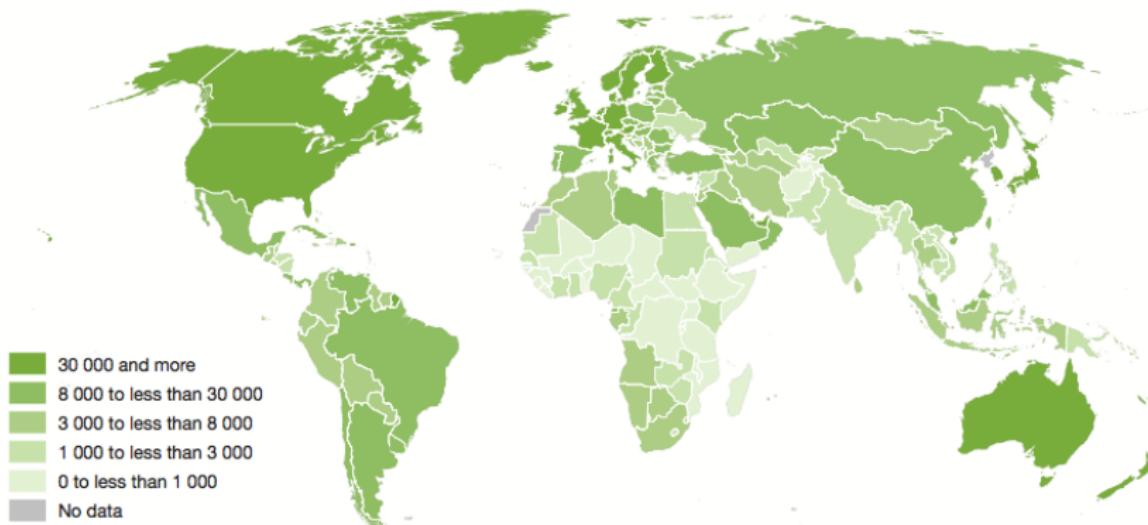
## Balance of payment

BOP records a country's international transactions. The U.S. BOP includes current account, financial account, and capital account.

The income of nations 2018 (w)



## GDP per capita in dollars, 2017



## World trade size, 2017 (w)

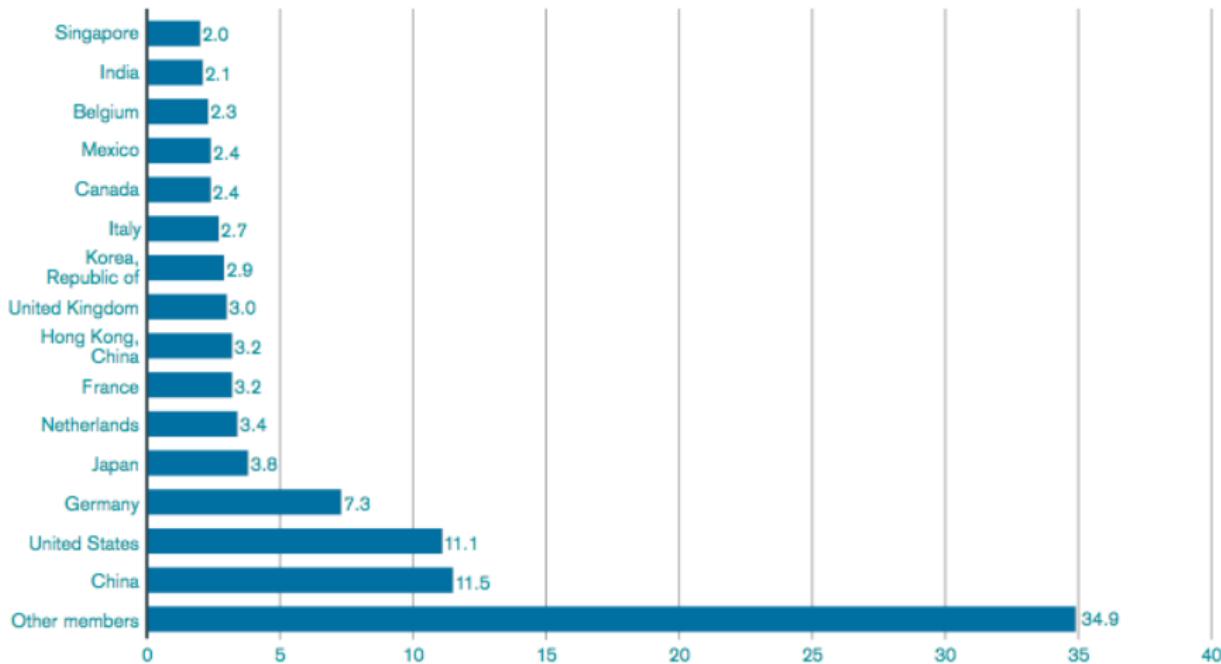


## World trade flows, 2017

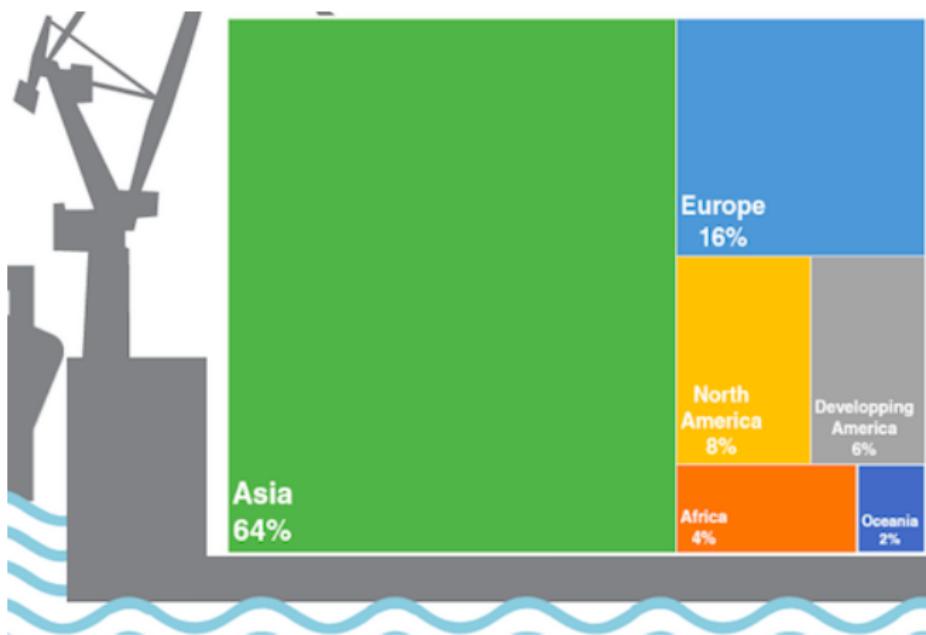


Note: Bilateral imports of US\$100 billion or more are shown.

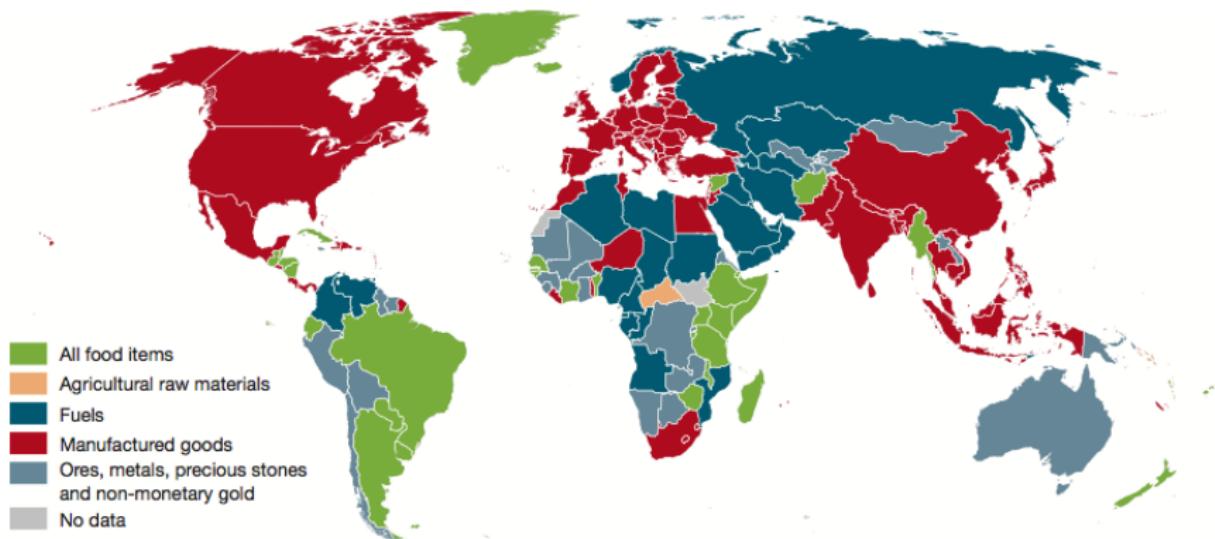
## World merchandise trade share, 2017



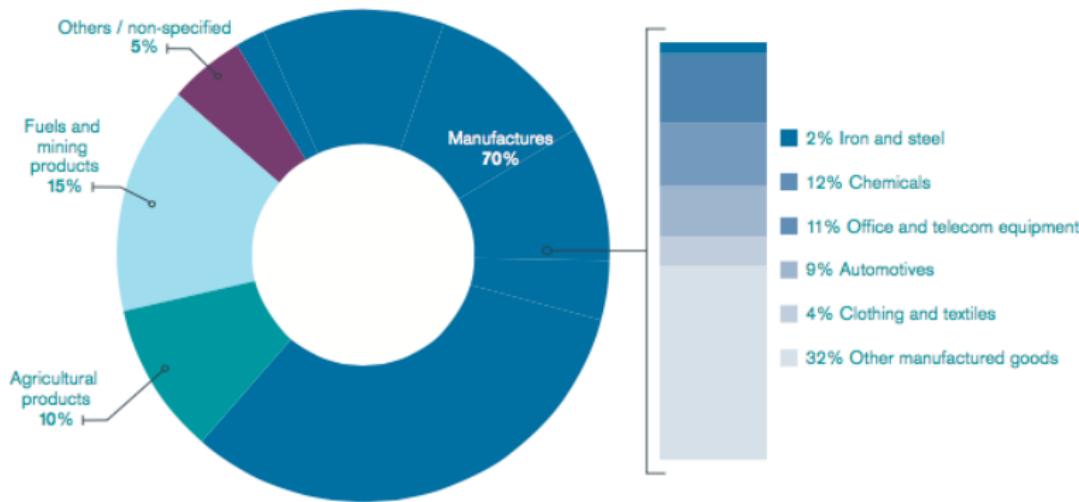
## Container activity by region, 2017



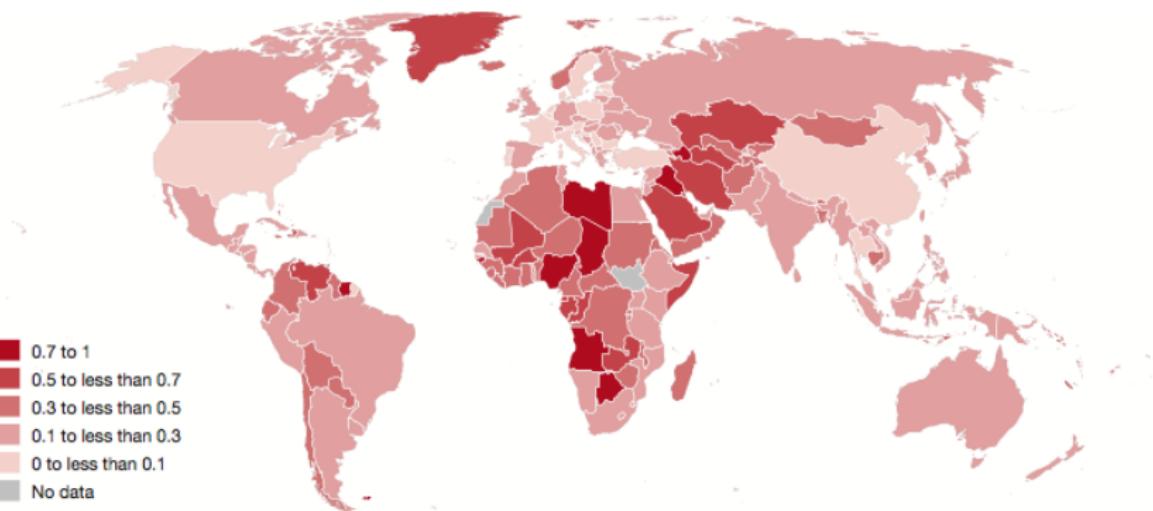
## World trade structure by product & country, 2017



## World merchandise exports by product share, 2017

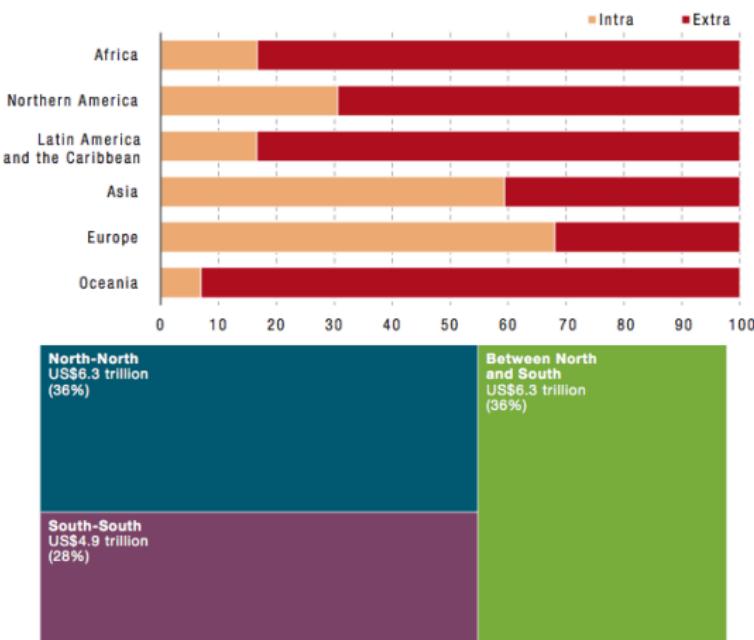


## Product concentration index of exports, 2017



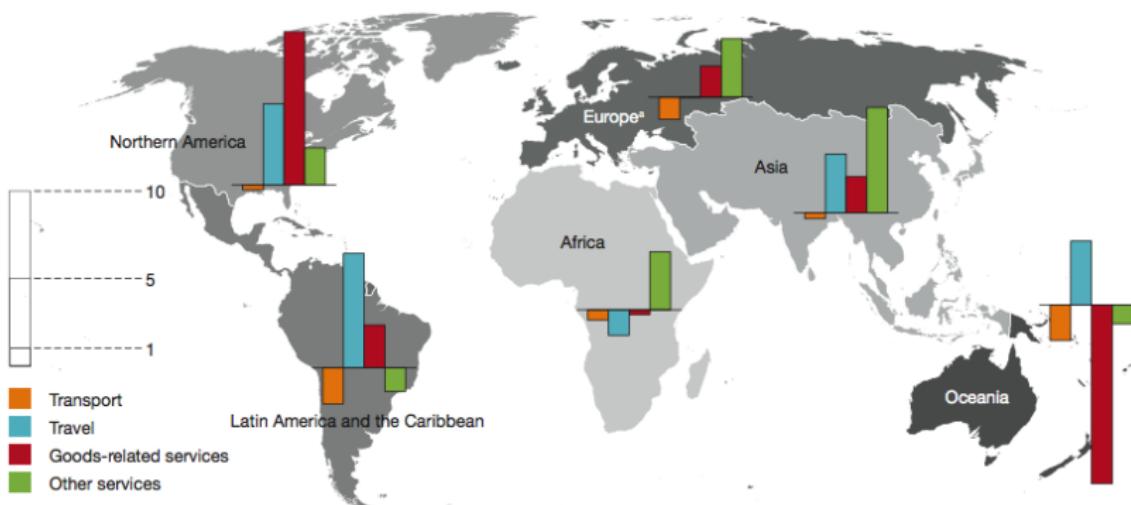
Note: This index measures the extent to which a large share of exports is accounted for by a small number of product groups. The index has a value of 1 when an economy exports only one group of products and a value of 0 if all product groups are equally represented.

## World trade structure by partner, 2017



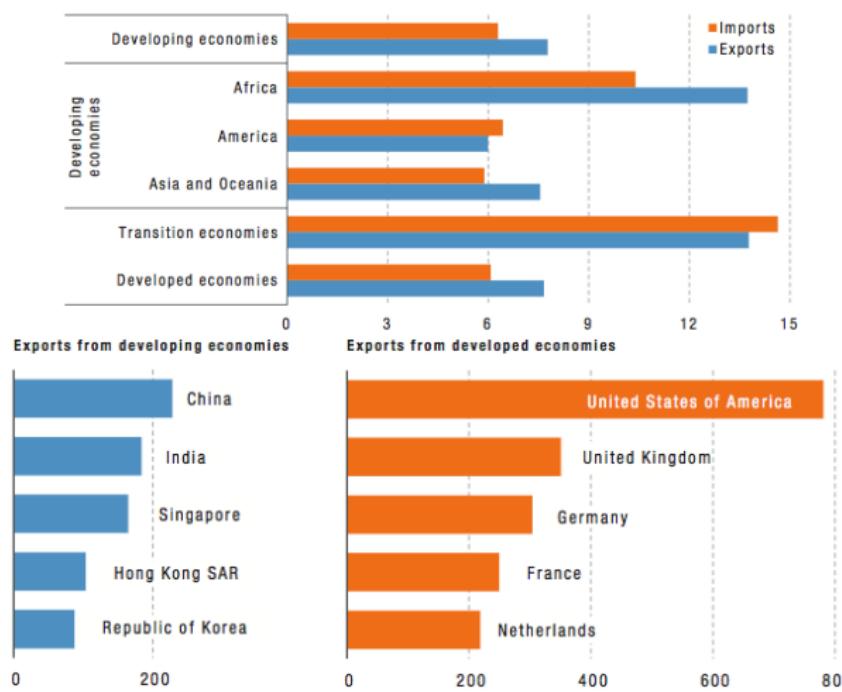
Note: North refers to developed economies; South, to developing and transition economies. Trade is measured from the export side.

## World trade in services by category, annual growth, 2012-17

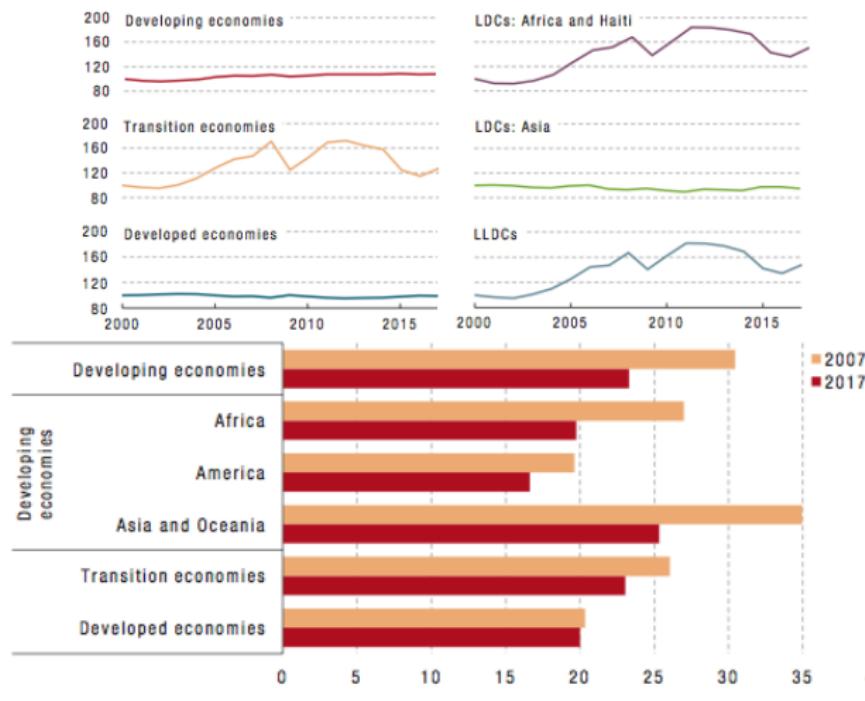


<sup>a</sup> Incl. the Russian Federation and the French overseas departments.

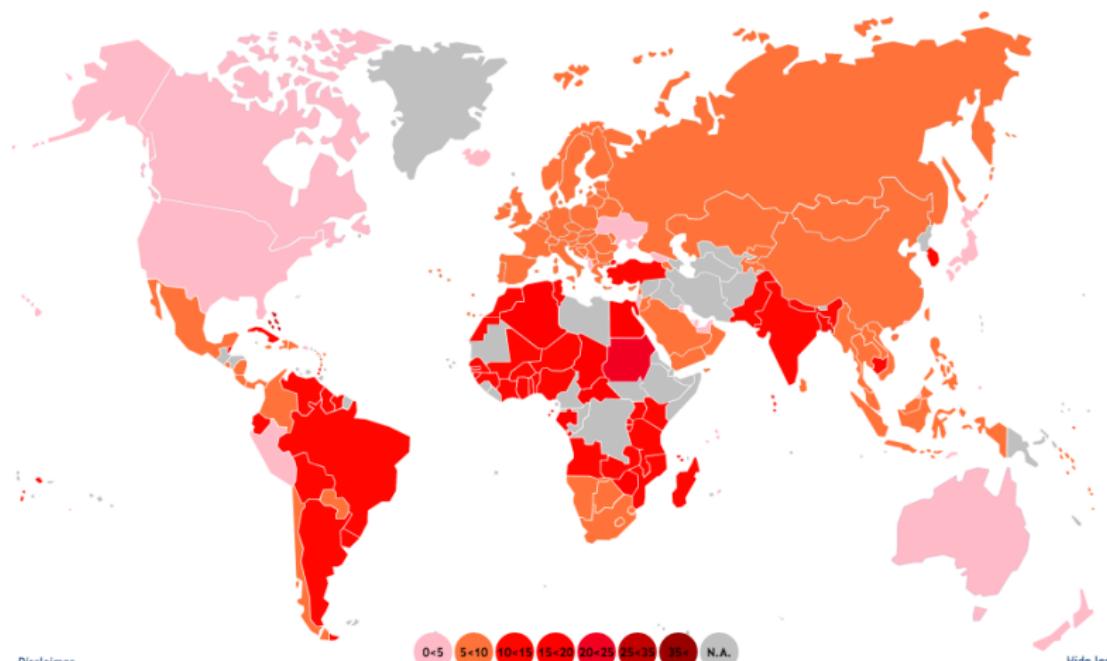
# World trade in services, growth and top exporters, 2017



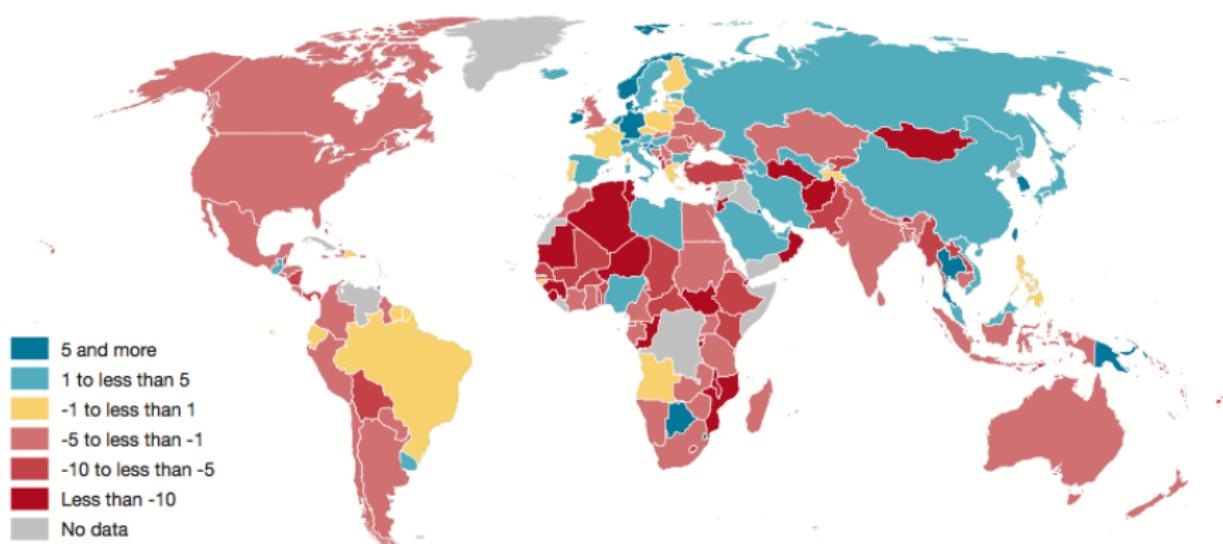
# Terms of trade and trade openness



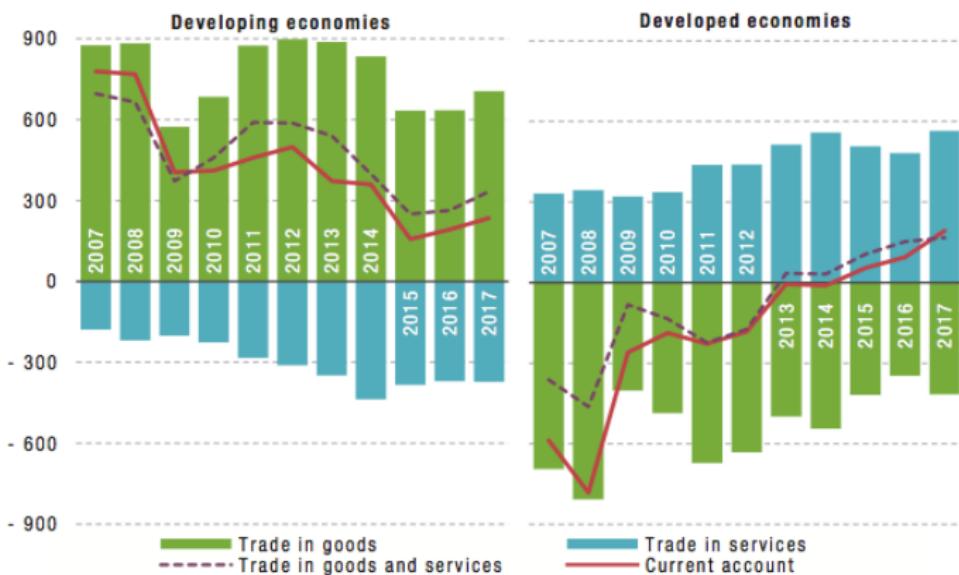
# Simple average applied MFN tariff, 2017



## Current account balance as a ratio to GDP, 2017

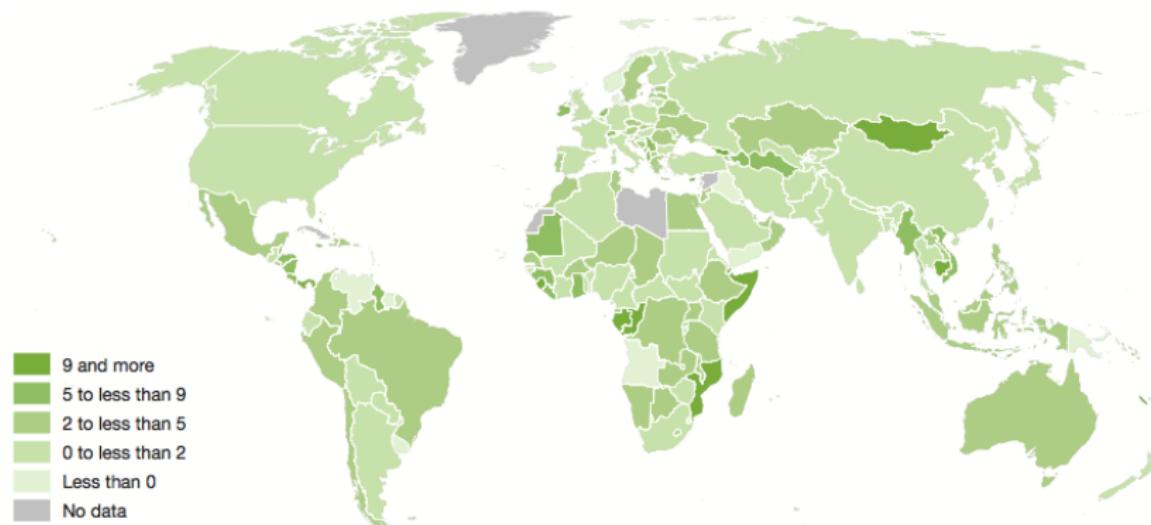


# Current account balances, 2017 (in B\$)

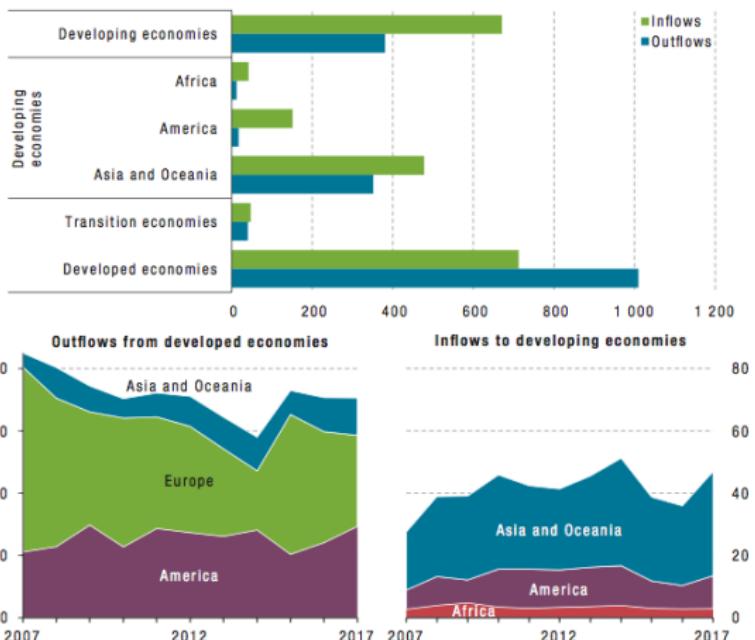


Note: Current account deficits and surpluses do not add up to zero at the world level, due to imperfect geographic coverage and cross-country differences in compilation methods.

# Foreign direct investment inflows as a ratio to GDP, 2017



# FDI by region and direction, 2017



Note: Excluding financial centres in the Caribbean (see note, UNCTAD Handbook of Statistics 2018, table 3.3.1).

# World trade summary, 2017



2018 world trade report: digitalization

- Digital technologies are reshaping consumer habits by shifting purchases online through the widespread use of internet-enabled devices which provide consumers with direct access to online markets. It is estimated that, in 2016, the value of e-commerce transactions totaled US\$ 27.7 trillion, of which US\$ 23.9 trillion was business-to-business e-commerce transactions.
  - On the supply side, digital technologies allow for easier entry and increased product diversity, making it easier for firms to produce, promote and distribute their products at a lower cost.. The benefits of digital technologies notwithstanding, they are also giving rise to a number of concerns, including market concentration, loss of privacy and security threats, the digital divide, and the question of whether digital technologies have really increased productivity.

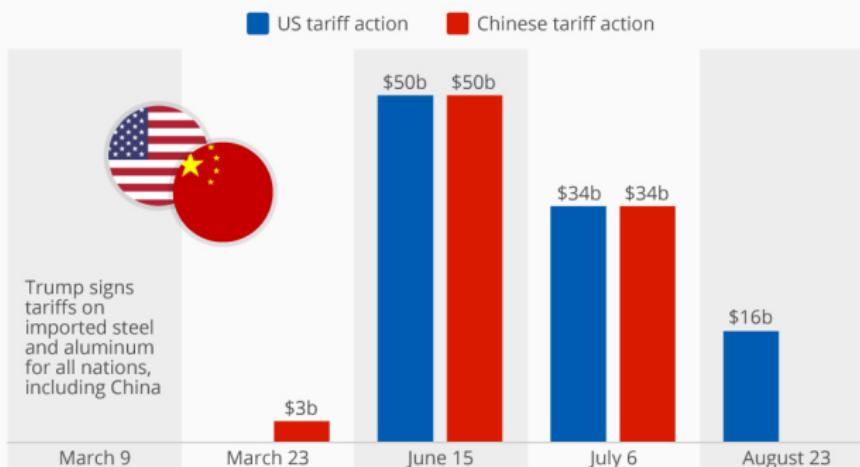
2018 world trade report: digitalization

- International trade costs declined by 15 per cent between 1996 and 2014. New technologies will help to further reduce trade costs.
  - The wide adoption of digital technologies changes the composition of trade in services and goods, and redefines intellectual property rights in trade. Trade in information technology products has tripled in the past two decades, reaching US\$ 1.6 trillion in 2016. The importance of services in the composition of trade is expected to increase. We predict the share of services trade to grow from 21 per cent to 25 per cent by 2030.
  - Regulation of intellectual property rights, data flows, and privacy as well as the quality of digital infrastructure are likely to emerge as new sources of comparative advantage.

# Headlines: U.S. - China Trade War [\(web\)](#)

## US/Chinese Trade War Escalates

Tariffs imposed in US/China trade war in 2018, by total value of affected imports\*



\* as of August 23, 2018.

@StatistaCharts

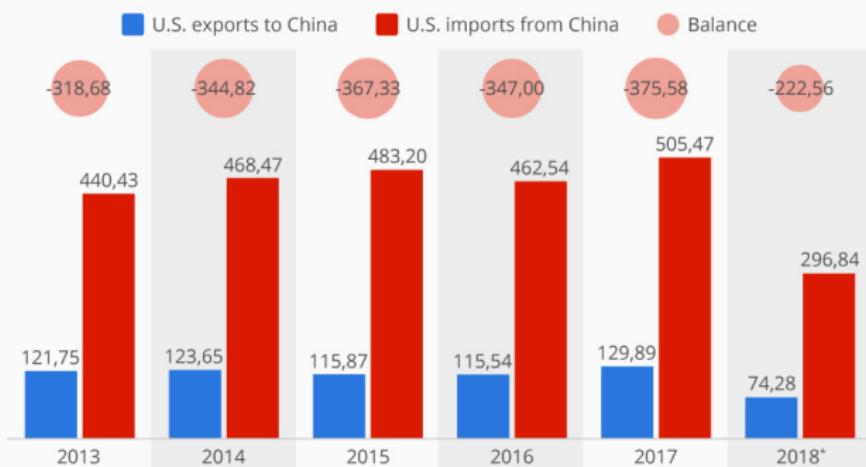
Sources: Bloomberg, CNN

statista

# Headlines: U.S. - China Trade War [\(web\)](#)

## U.S. trade deficit with China grows as the trade war heats up

U.S. trade balance with China from 2013 to July 2018 (in billion U.S. dollars)



\* Up to July 2018

@StatistaCharts

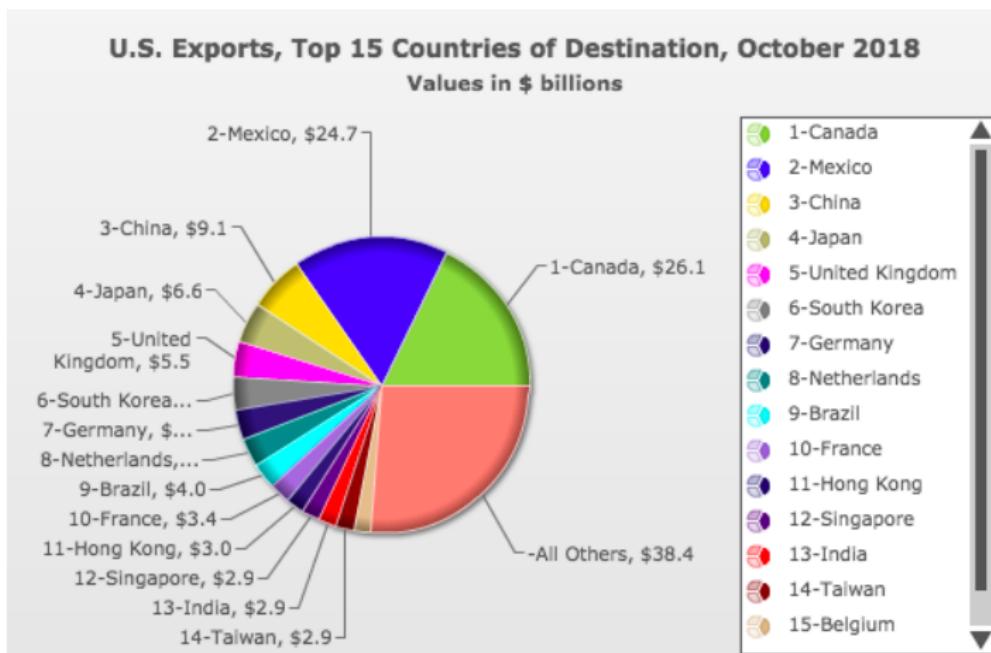
Sources: United States Census Bureau

statista

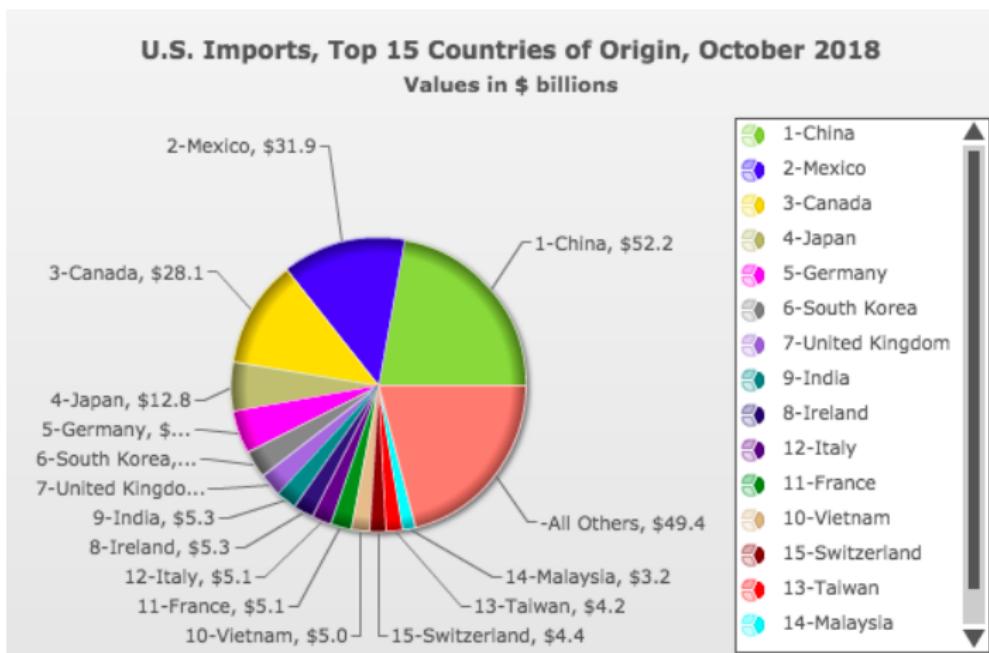
U.S. - China Talk: White House Statement 2019.01.31 (web)

- ① the ways in which United States companies are pressured to transfer technology to Chinese companies
- ② the need for stronger protection and enforcement of intellectual property rights in China
- ③ the numerous tariff and non-tariff barriers faced by United States companies in China
- ④ the harm resulting from China's cyber-theft of United States commercial property
- ⑤ how market-distorting forces, including subsidies and state-owned enterprises, can lead to excess capacity
- ⑥ the need to remove market barriers and tariffs that limit US sales of manufactured goods, services, and agriculture to China
- ⑦ the role of currencies in the United States-China trading relationship

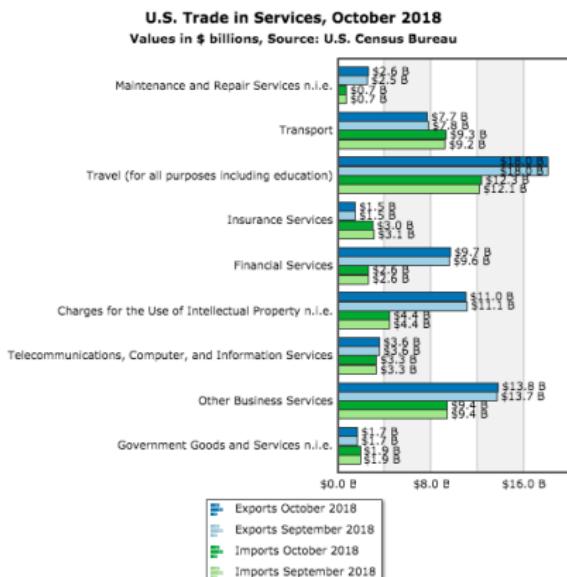
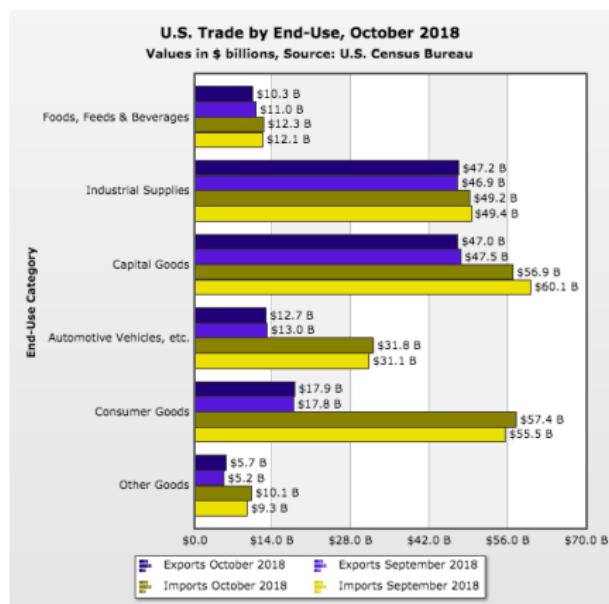
## U.S. top trading partners, export, Oct. 2018



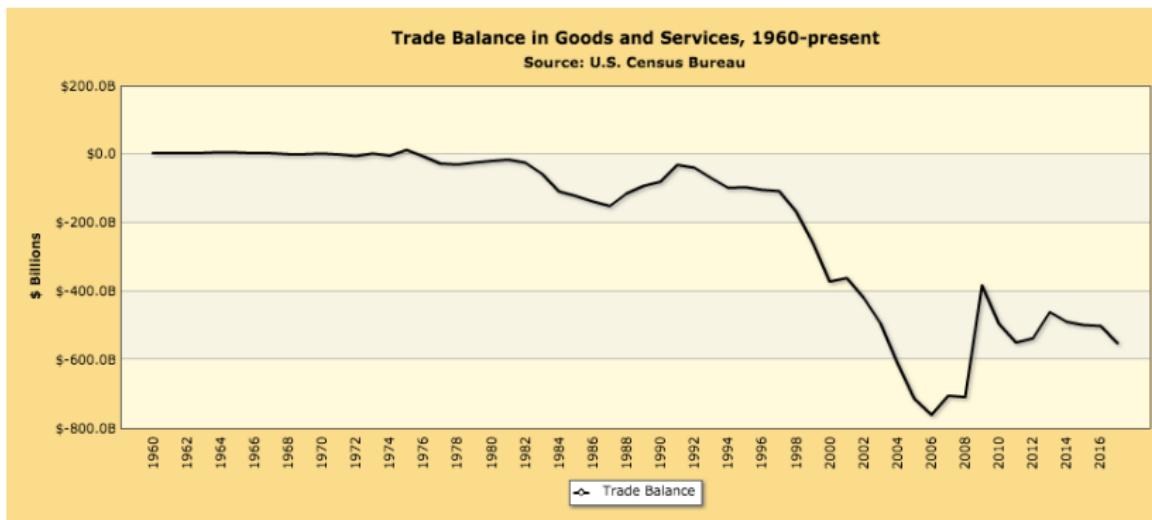
## U.S. top trading partners, import, Oct. 2018



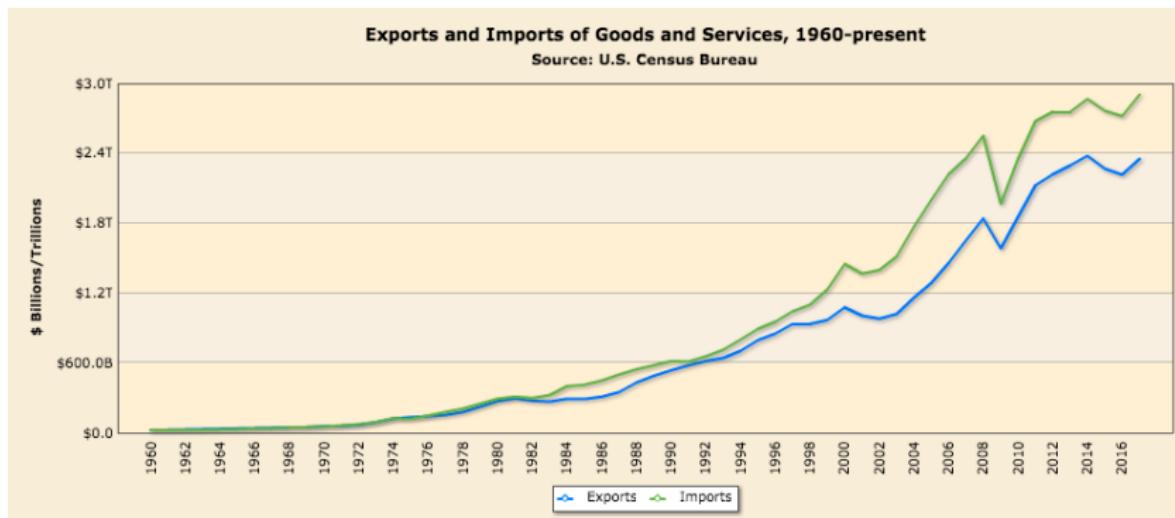
U.S. trade structure, Oct. 2018



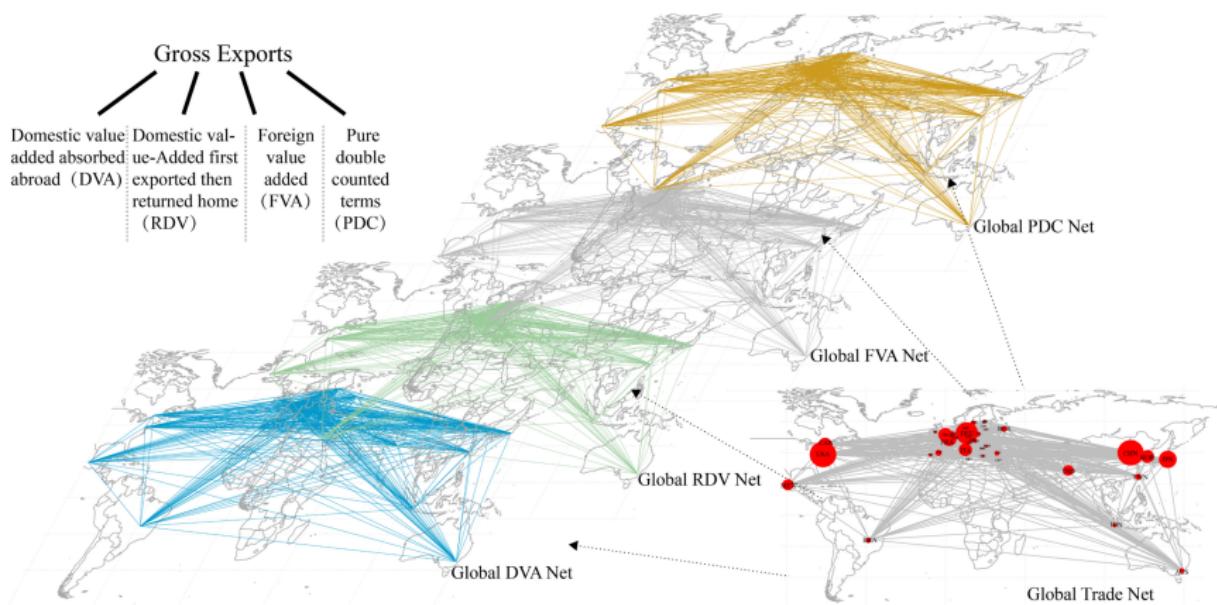
## U.S. trade balance, 1960 - 2018



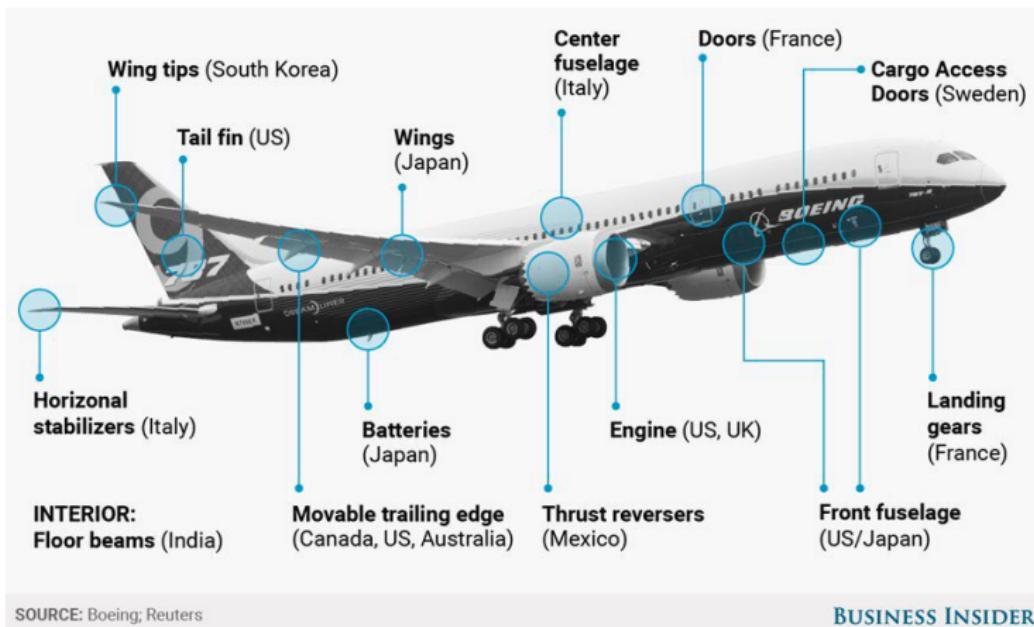
## U.S. trade trends, 1960 - 2018



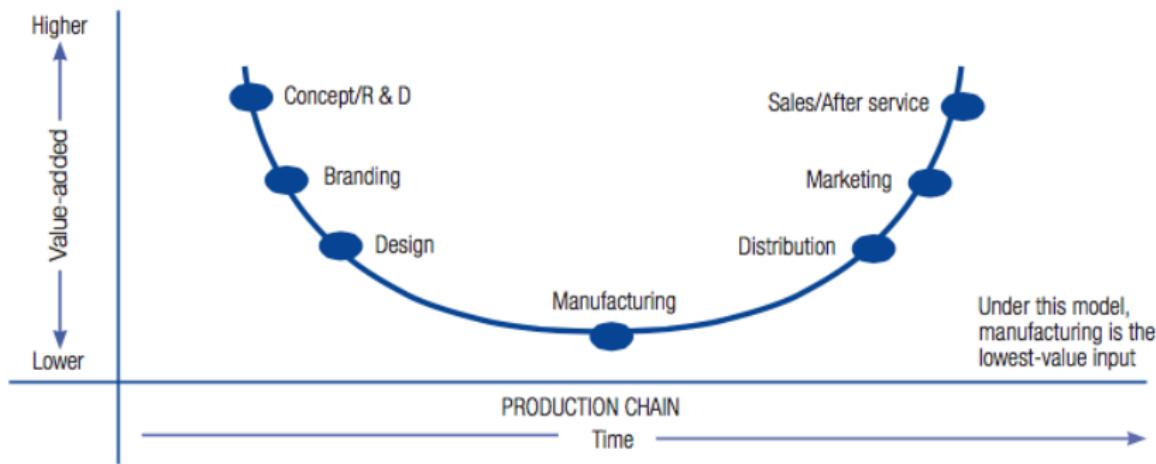
## Global trade networks



## Global production of the Boeing Dreamliner



## Global value chains: the smiling curve



## Component cost of iPhone5

## Inside the iPhone 5

The new model is estimated to cost Apple about \$9 more than the predecessor, due to the larger display and added wireless technology.



**IPHONE 5  
16 GB  
VERSION**

#### IPHONE 4S

## **TOTAL COST OF COMPONENTS**

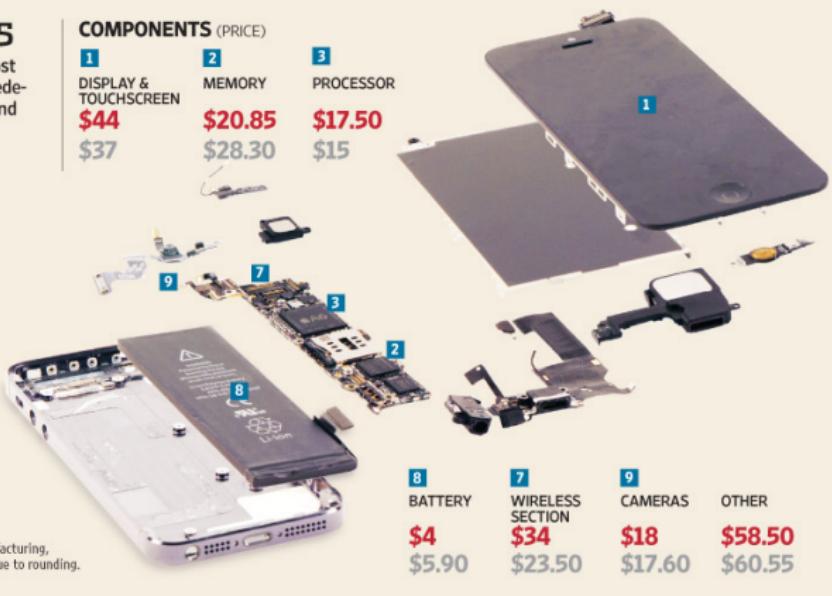
**\$197** **\$188**

**\$649**   **\$649**

## RETAIL PRICE

Note: Cost of materials doesn't include manufacturing, software or royalties. Numbers do not total due to rounding.  
Source and photos: IHS iSuppli Research

COMPONENTS (PRICE)		
1	2	3
DISPLAY & TOUCHSCREEN	MEMORY	PROCESSOR
\$44	\$20.85	\$17.50
\$37	\$28.30	\$15

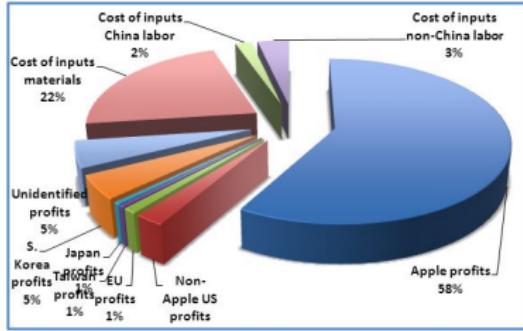


## Global value chains of iPhone

## Distribution of value for Iphone



Source: Kraemer et al 2011



- GVCs require high quality services embodied in production & increasingly outsourced
  - US (Apple) captures 58.5% of Iphone sales price
  - Korea: 5%
  - Japan: 0.5%; China: 1.8%
  - Most value: product design, software development, product management, marketing & other high wage functions kept by Apple
  - Trend: dispersion of functions

## References

- [1] Robert Feenstra and Alan Taylor, 2017, International Trade, 4th Edition, Worth Macmillan.
  - [2] World Trade Statistical Review 2018 - Highlights of world trade. (w)
  - [3] UNCTAD Handbook of Statistics 2018. (w)
  - [4] WTO World Trade Report 2018. The Future of Trade. (w)
  - [5] U.S. Census Bureau Foreign Trade Data Interactive Graphs. (w)