INTERNATIONAL TRADE

CHAPTER 2:

WORLD TRADE: AN OVERVIEW

PREVIEW

- Who trade with whom?
- The changing composition of international trade
- International trade situation and prospect

Who trades with whom?

- The key trading partners in the market
- Using the gravity model
- Impediments to trade: barriers and borders

Key trading partners in the world

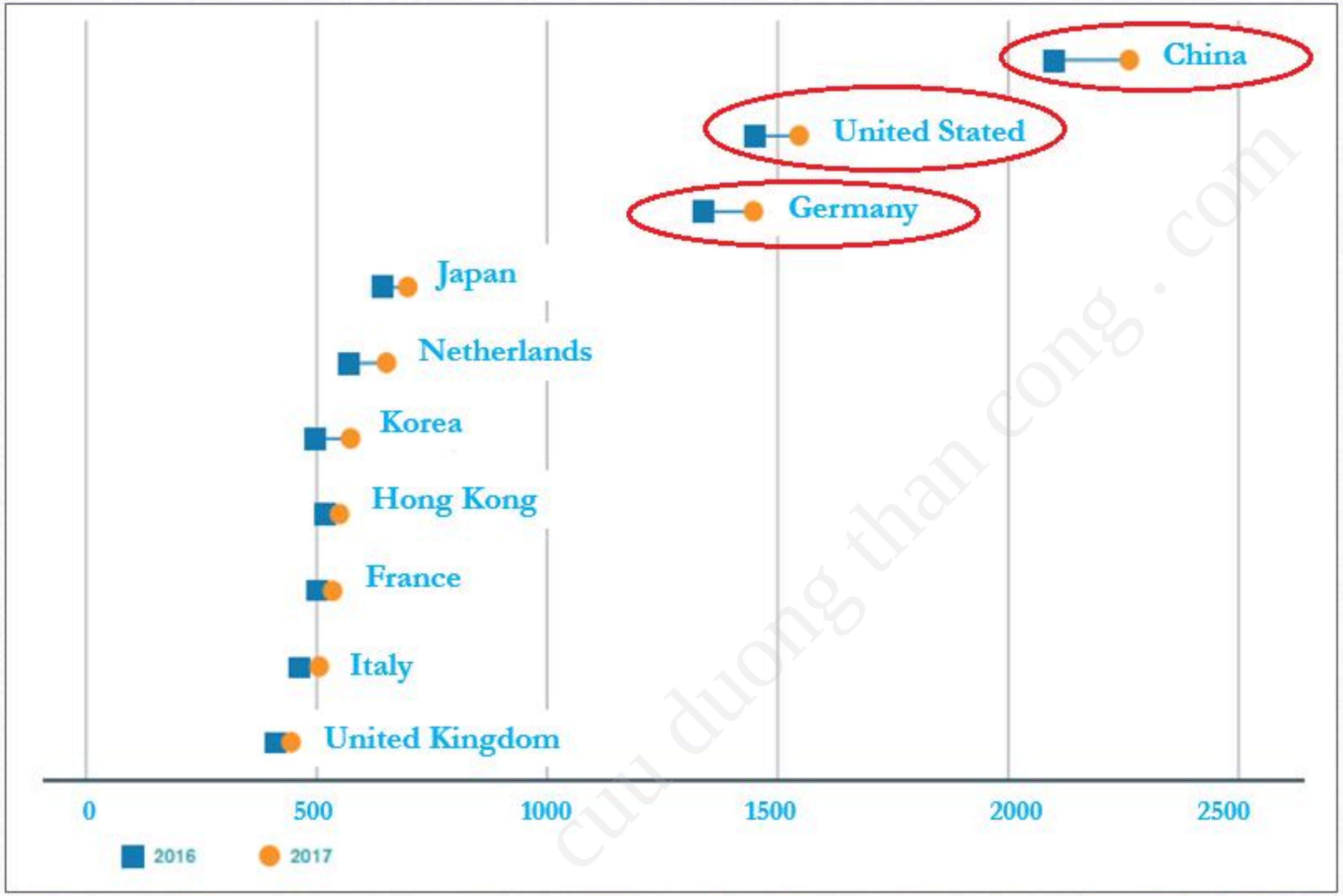


Figure 1: Top 10 exporters in world merchandise trade in 2016-2017 (US$ billion)
Source: WTO estimates

The top three merchandise traders were China, US and Germany in 2017 accounting for almost US$ 5,300 billion

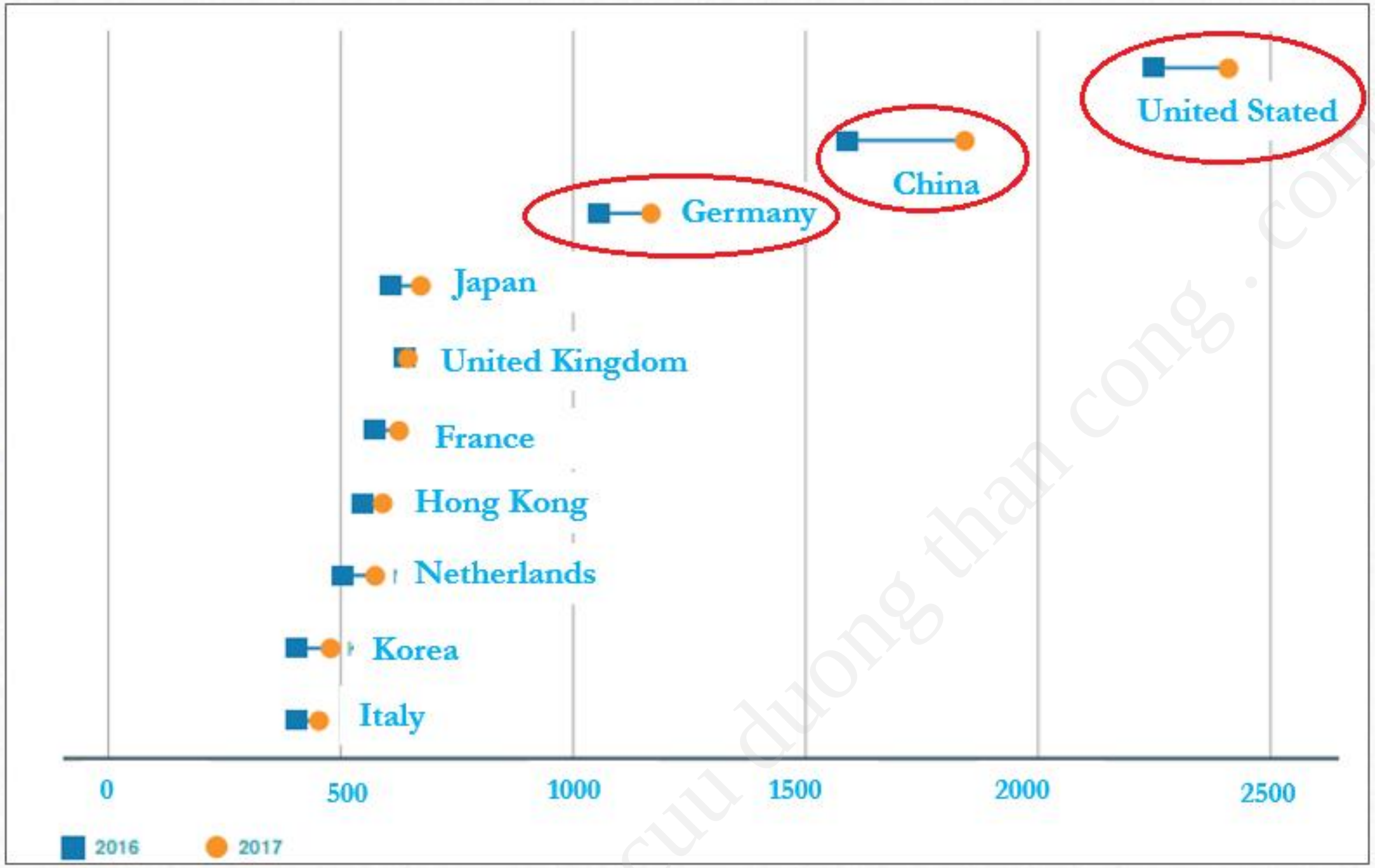


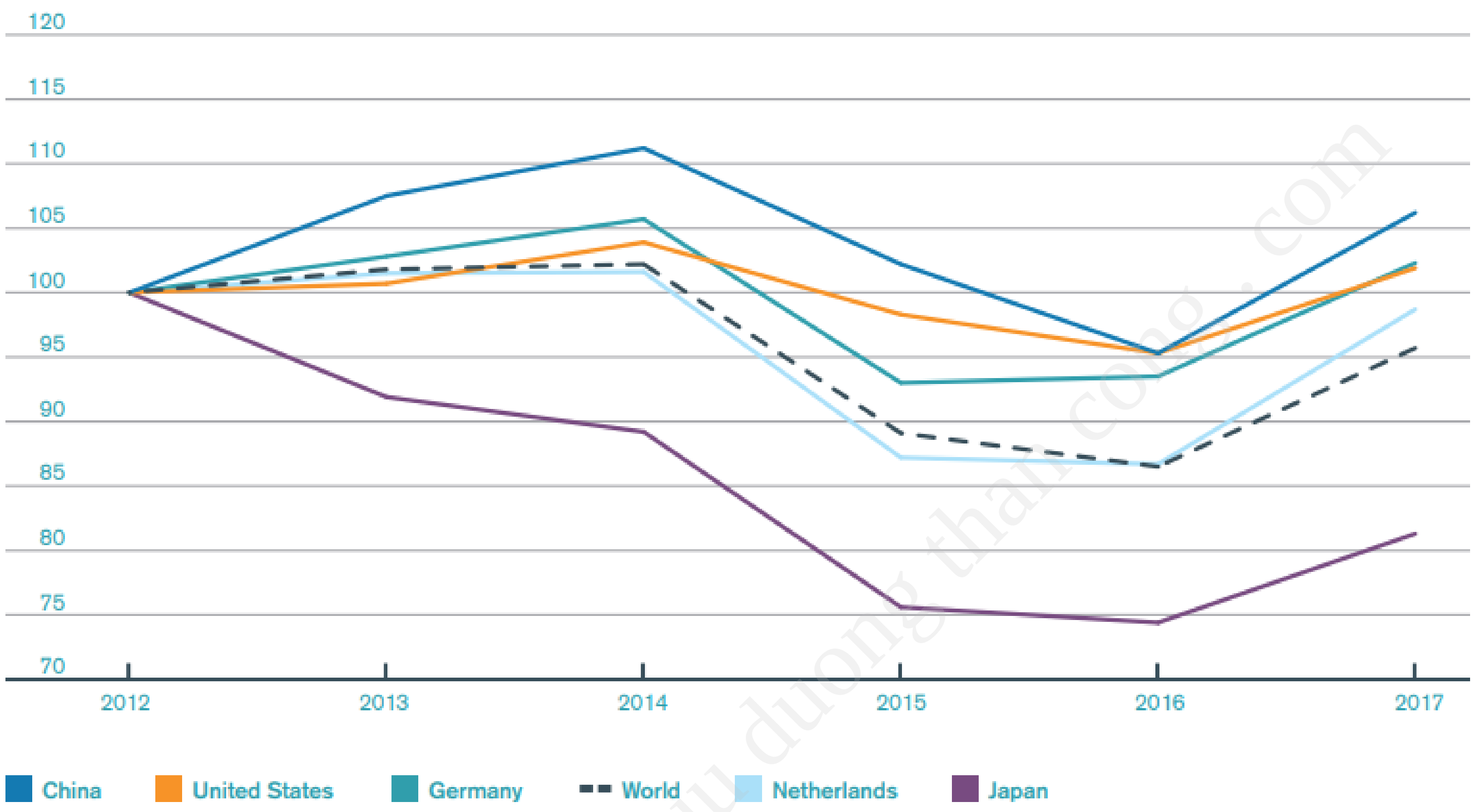
Figure 2: Top 10 importers in world merchandise trade in 2016-2017
Source: WTO-UNCTAD

The top three merchandise traders were China, US and Germany in 2017 accounting for almost US$ 5,300 billion

Key trading partners in the world

For the merchandise trade

- The top three merchandise traders were China, US and Germany in 2017 accounting for almost US$ 5,300 billion
- The top five traders accounted for more than one-third of world trade in 2017.



38%

The top five traders accounted for more than one-third of world trade in 2017

Figure 3: Total trade for the top five traders from 2012-2017
Source: WTO UNCTAD

The United Stated, United Kingdom and Germany were the top three commercial services exporters in 2017

Figure: Leading world exporters of commercial services 2016-2017 (US$ billion)
Source: WTO-UNCTAD-ITC

Figure: Leading importers in commercial service in 2016-2017
Source: WTO UNCTAD

The United Stated, China and Germany were the top three commercial services importers in 2017

Key trading partners in the world

- For the commercial service trade
- Overall, top 10 traders accounted for 53 per cent of global trade in commercial services.

Key trading partners of the US

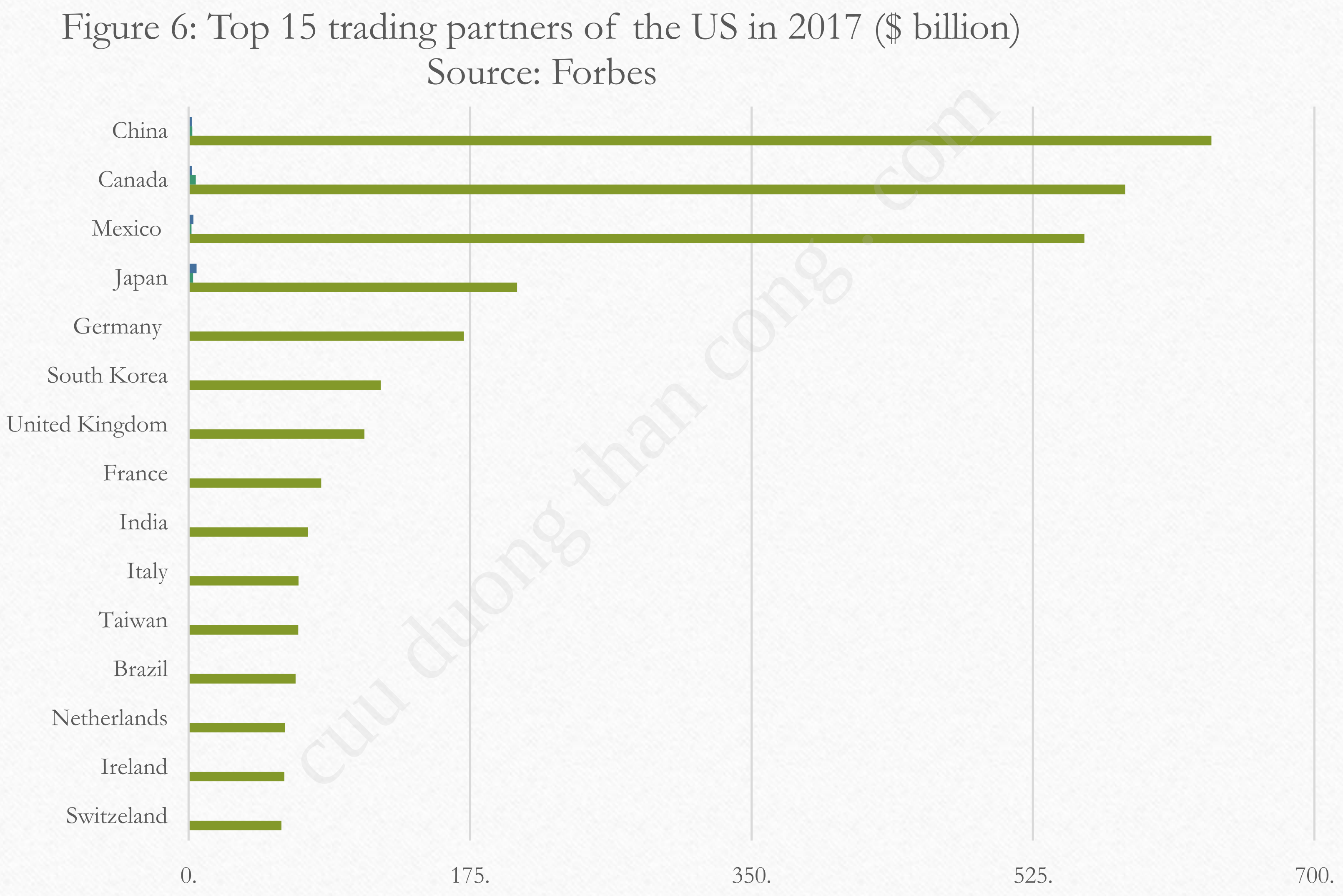


Figure 6: Top 15 trading partners of the US in 2017 ($ billion)
Source: Forbes
China
Canada
Mexico
Japan
Germany
South Korea
United Kingdom
France
India
Italy
Taiwan
Brazil
Netherlands
Ireland
Switzerland
0.
175.
350.
525.
700.

Key trading partners of the US

- The No.1 trading with the US is **China** with the value of trade over $600 billion
- EU would be the biggest U.S. trading partner by far with the total trade in goods and services more than $1.1 trillion in 2016 (the U.S. Census Bureau, 2017)

Why do big economies also present as the key trading partners in the world?

Why does the US trade mostly with these countries but not others?

The gravity model

- The gravity model postulates that, other things equal, the larger (and the more equal in size) and the closer the two countries are, the larger the volume of trade between them is expected to be.
- The volume of trade in goods and services **increases with the size** and **decreases with proximity** of trading partners.

Using the gravity model

The gravity model's equation:

$T_{ij} = A \times Y_i \times Y_j / D_{ij}$

Where:

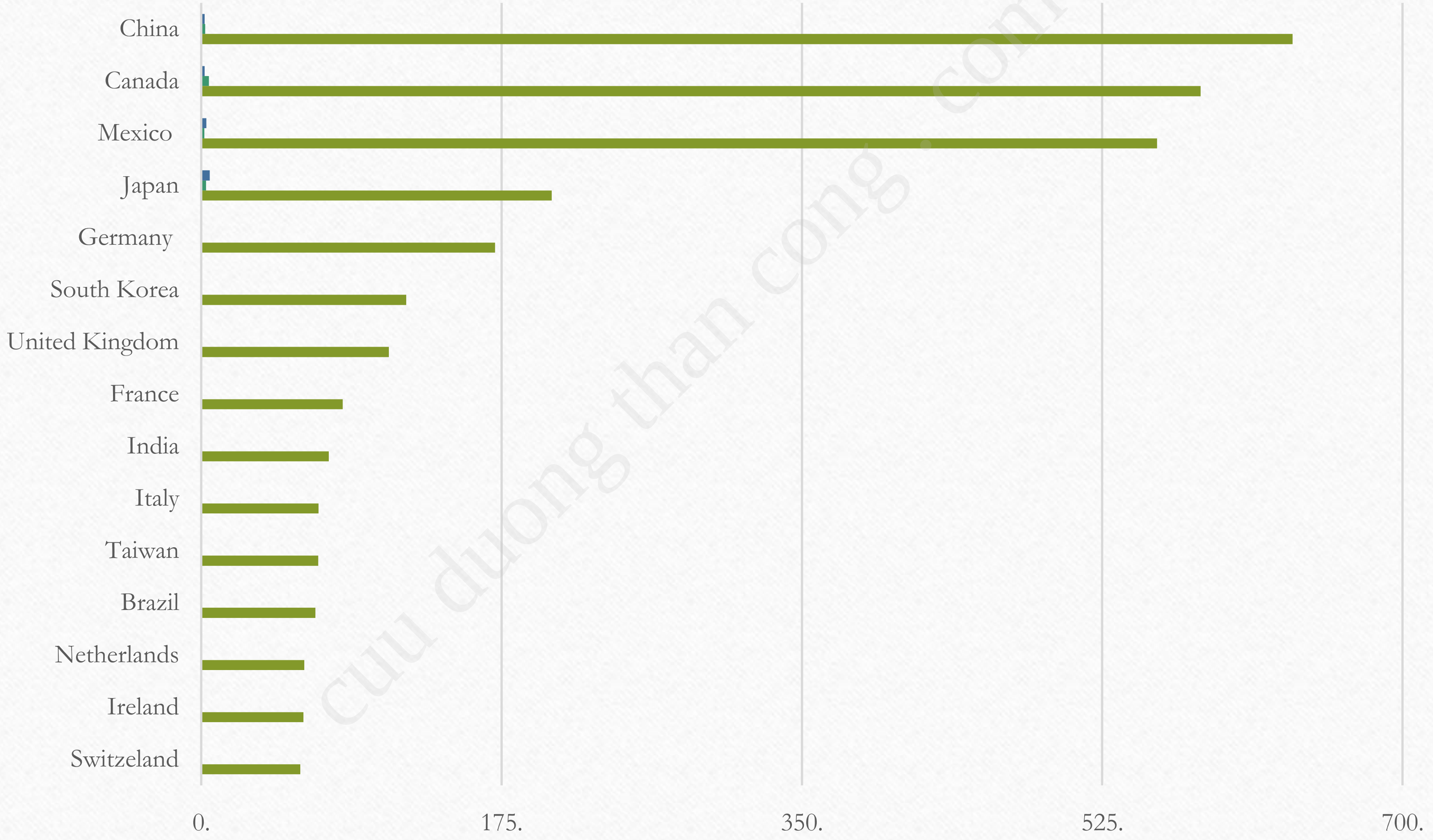
- T_{ij}: the value of trade between country i and country j
- A: the constant
- Y_i: the GDP of the country i
- Y_j: the GDP of the country j
- D_{ij}: the distance between country i and j

Using the Gravity model: Size matters

The size of an economy is directly related to the volume of imports and exports:

- Larger economies produce more goods and services, so they have more to sell in the export market
- Larger economies generate more income from the goods and services sold, so people are able to buy more imports.

Figure 6: Top 15 trading partners of the US in 2017 ($ billion)
Source: Forbes



Three of the top 10 trading partners with the US in 2017 figures were also the three largest European economies: Germany, UK and France

Using the Gravity model: Size matters

Why does the US trade most with these European countries and not other European countries?

Answer: These countries have the largest GDP in Europe

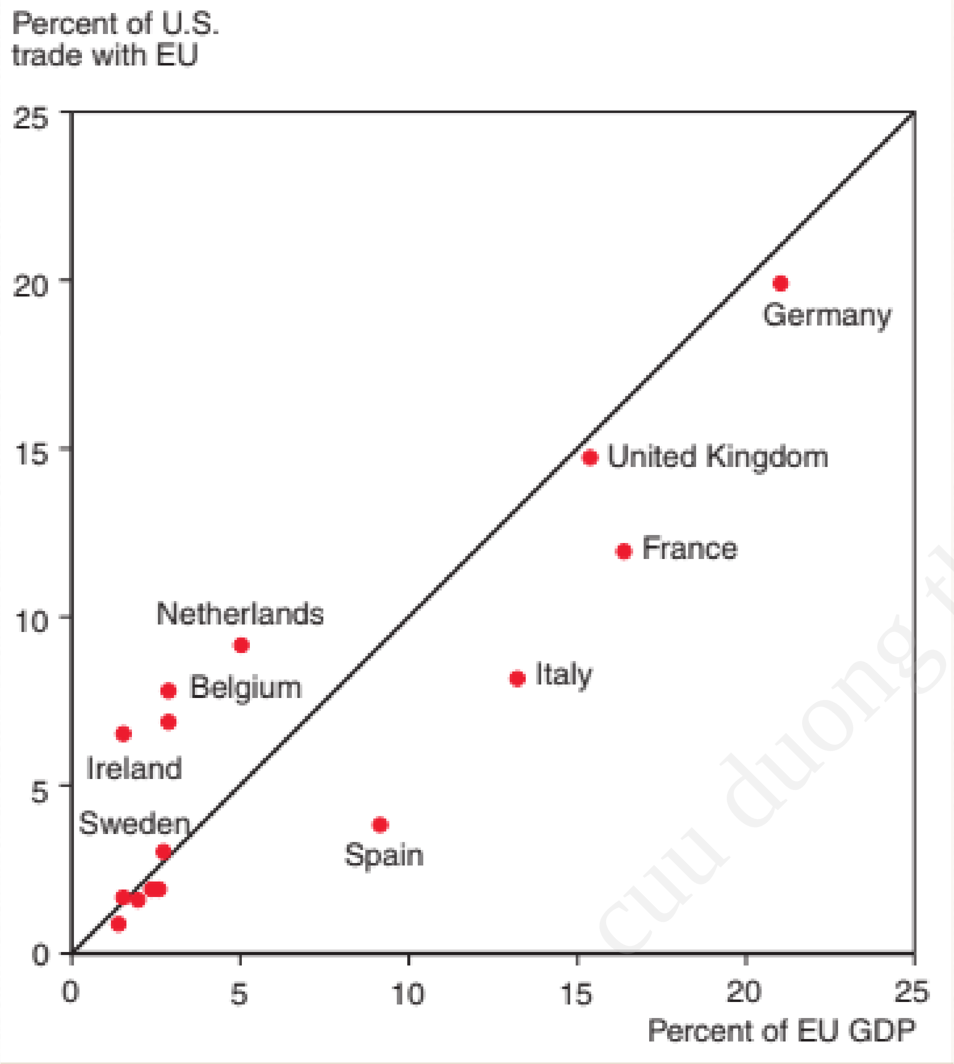


Figure 7: The size of European economies and the value of their trade with the US

Source: US Department of Commerce, European Commission

Using the Gravity model: Distance

- Distance between market influences transportation costs => cost of imports and exports
- Distance may also influence personal contact and communication, which may influence trade
- Estimates of the effect of distance of the gravity model predict that a 1% increase in the distance between countries is associated with a decrease in the volume of trade of 0.7% to 1%

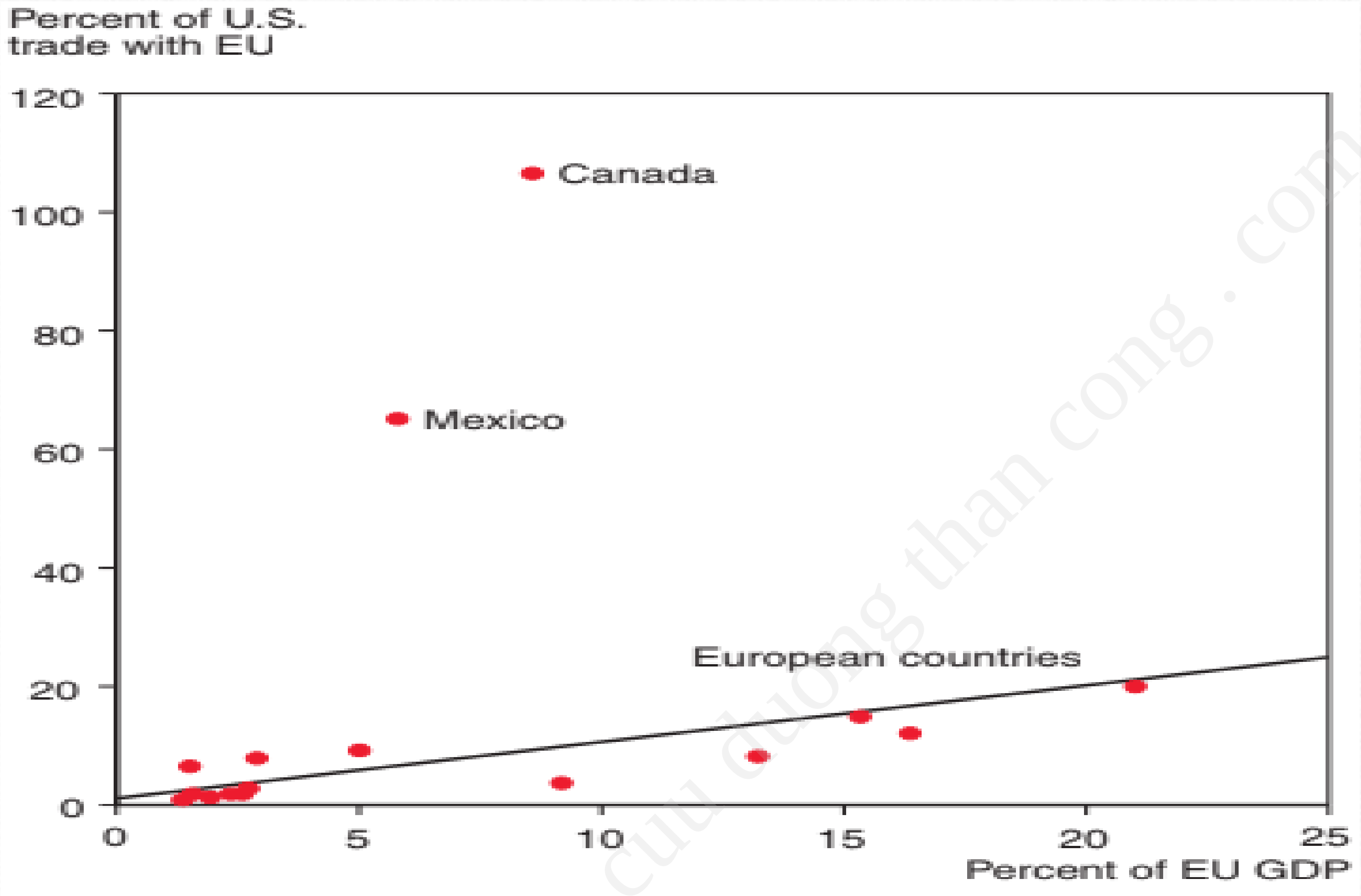


Figure 5: Economic Size and Trade with the US
Source: US Department of Commerce, European Commission

The United States does markedly more trade with its neighbors than it does with European economies of the same size

Using gravity model

- Cultural affinity
- Geography
- Multinational corporation

- Other things besides size matter for trade

Using gravity model

Cultural affinity

- If two countries have cultural ties, it is likely that they also have strong economic ties

- For example: The trade between Vietnam-China

Using gravity model: Cultural affinity

Market	Trade (US$ Million)	Partner share (%)
United Stated	38473	21.79
China	21950	12.43
Japan	14671	8.31
Korea	11406	646
Hong Kong	6099	345

Figure 8: Vietnam Top 5 Export Partners
Source: World Bank

Using gravity model: Cultural affinity

Market	Trade (US$ million)	Partner share (%)
Chinn	50038	28.60
Korea	32193	18.40
Japan	15098	8.63
Other Asia	11242	6.42
Thailand	8855	5.06

Figure 9: Vietnam Top 5 Import Partners
Source: World Bank

Using gravity model: Cultural affinity

- China is the biggest trading partners of Vietnam, reaching $US 106.7 billion and accounting for 22.2% of the total import-export value of the country in 2018
- Why are The top biggest trading partners of Vietnam mostly Asian countries?

Cultural affinity

Using gravity model: Cultural affinity

- Why are The top biggest trading partners of Vietnam mostly Asian countries?
- Reasons: Vietnam and China have a lot of similarities in culture and custom such as literature (Nôm- the old writing system), architecture, clothing, religion (Buddhism), food and holiday

Architecture

Holiday

Religion

Food

Using gravity model

- **Geography**: ocean harbors and a lack of mountain barriers make transportation and trade easier
- For example, **Netherlands** and **Belgium** have traditionally been the point of entry to much of northwestern Europe;

- Rotterdam in the Netherlands is the most important port in Europe, as measured by the tonnage handled
- Antwerp in Belgium ranks second.

Rank	Port	Country	Total Cargo Volume (Tons, 000s)
1	Rotterdam	Netherlands	466,363
2	Antwerp	Belgium	208,423
3	Hamburg	Germany	137,824
4	Marseilles	France	81,920
5	Botas	Turkey	78,093
6	Bremen/Bremerhaven	Germany	73,447
7	Novorossisk	Russia	73,328
8	Valencia	Spain	69,601
9	Le Havre	France	68,289
10	Izmit	Turkey	64,628

Figure 10: Top 10 busiest cargo ports in Europe
Source: Eurostat

Netherlands, Belgium and Germany are all big trading partners of the US

Figure 11: Port of Rotterdam, Netherlands
Source: the World Atlas

Port of Rotterdam handles about 466.4 million tons of cargo annually

Using gravity model

- Multinational corporations (MNCs) spread across different nations import and export many goods between their divisions
- Foreign affiliates of MNCs account for over one-third of the world exports
- More than 40% of total exports of China is done by MNCs (UNCTAD 2017)
- Surprisingly, Ireland plays a special role as host to many U.S.-based corporations

Over a third of the world trade happens inside MNCs

Figure 12: Multination corporations: Global map
Source: UNCTAD

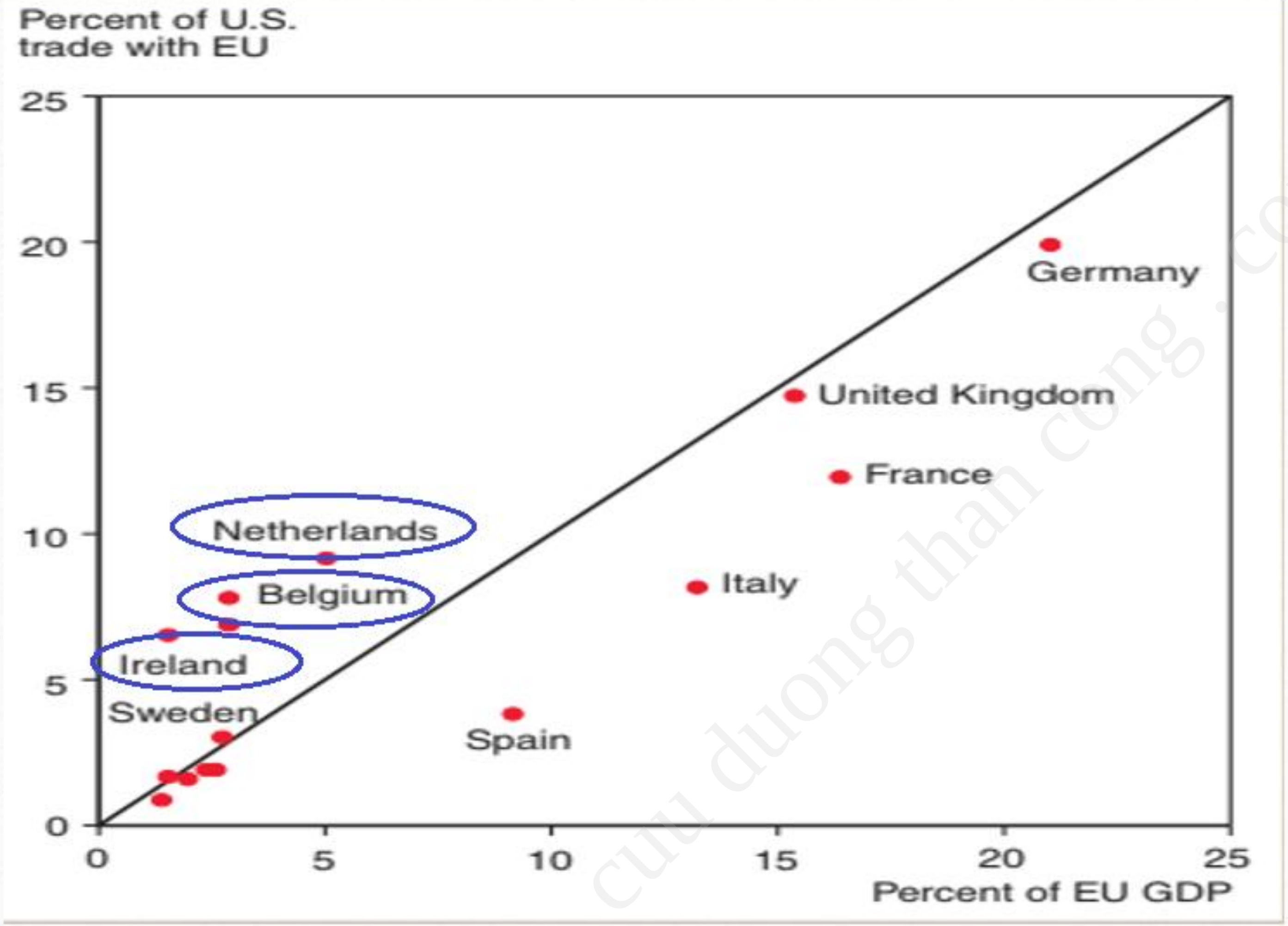


Figure 4: The size of European economies and their trade value with the US
Source: US Department of Commerce, European Commission

Netherlands, Belgium, and Ireland trade considerably more with the United States than a gravity model would have predicted.

Impediments to trade: barriers and border

Barriers

- Trade agreements between countries are intended to reduce the formalities and tariffs needed to cross borders, and therefore increase trade
- The gravity model can assess the effect of trade agreements on trade: does a trade agreement lead to significantly more trade among its partners than one would otherwise predict given their GDPs and distance from one another?

Impediments to trade: barriers and border

Example

- The US has signed a free trade agreement with Mexico and Canada in 1994, the North American Free Trade Agreement (NAFTA).
- Because of NAFTA and because Mexico and Canada are close to the US, the amount of trade between the US and its northern and southern neighbors as a fraction of GDP is larger than between the US and European countries

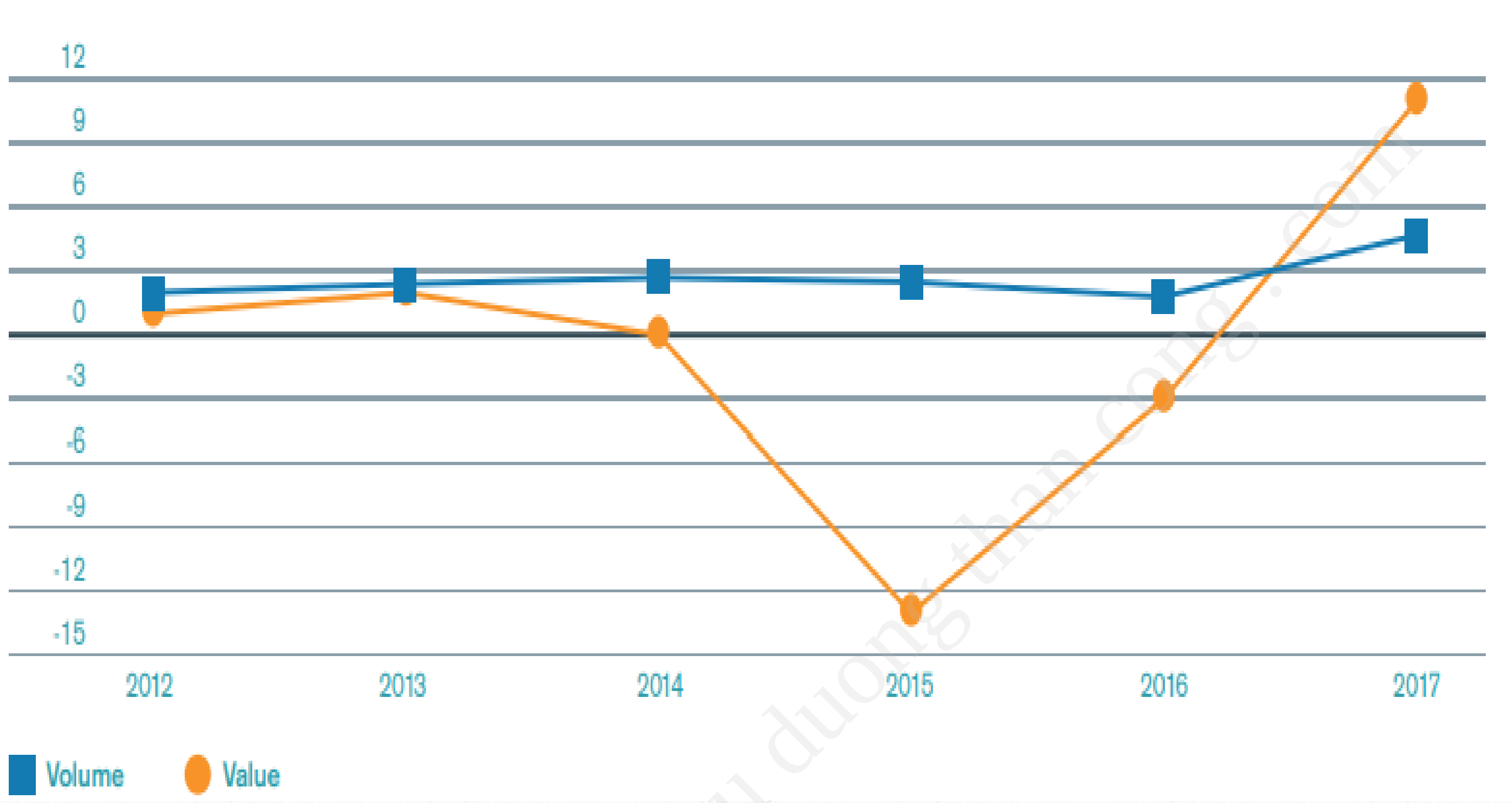
Impediments to trade: barriers and borders

Border increase the cost and time need to trade

- These implicit and explicit costs reduce trade
- The existence of borders may also indicate the existence of difference languages or different currencies, either of which may impede trade more

Changing composition of trade

- Volume and growth rate of international trade
- What do we trade: changes in trade structure



In 2017, merchandise trade grew by 4.7% in volume and 11% in value, its strongest growth in 6 years

Figure 13: Value and volume of world merchandise trade in 2012-2017
Source: WTO-UNCTAD

All regions recorded merchandise trade growth in volume terms in 2017 apart from the Middle East.

Asia recorded the highest increase in trade volume with growth of 8.1%

Figure 14: Merchandise trade grow by region in 2017
Source: WTO-UNCTAD

	2014	2015	2016	2017
Volume of world merchandise trade[a]	2.7	2.5	1.8	4.7
Exports				
Developed economies	2.1	2.3	1.1	3.5
Developing and emerging economies[b]	2.7	2.4	2.3	5.7
North America	4.6	0.8	0.6	4.2
South and Central America and the Caribbean	-2.1	1.8	1.9	2.9
Europe	1.6	2.9	1.1	3.5
Asia	4.5	1.5	2.3	6.7
Other regions[c]	-1.0	5.5	2.6	2.3
Imports				
Developed economies	3.4	4.3	2.0	3.1
Developing and emerging economies[b]	2.4	0.6	1.9	7.2
North America	4.3	5.4	0.1	4.0
South and Central America and the Caribbean	-2.7	-6.4	-6.8	4.0
Europe	3.0	3.7	3.1	2.5
Asia	3.7	4.0	3.5	9.6
Other regions [c]	0.5	-5.6	0.2	0.9

Figure 15: Volume of the world merchandise trade in 2014-2017
Source: WTO-UNCTAD

Growth in merchandise trade volume was strongest in developing economies in 2017, besides trade volume of developed economies also strengthened during 2016-2017

Has the world got smaller?

Volume and growth rate of international trade

- The negative effect of distance has grown smaller over time due to modern transportation and communication
- Telegraph, steam power, automobiles, telephones, airplanes, computers, tax machines, internet, fiber optics…are technologies that have increase trade
- But history has shown that political factors, such as wars, can change trade patterns much more than innovations in transportation and communication.

Volume and growth rate of international trade

- There were two waves of globalization

- 1840-1914: economies relies on steam power, railroads, telegraph, telephones. Globalization interrupted and reversed by wars and depression.

- 1945-present: economies rely on telephones, airplanes, computers, internet, fiber optics…

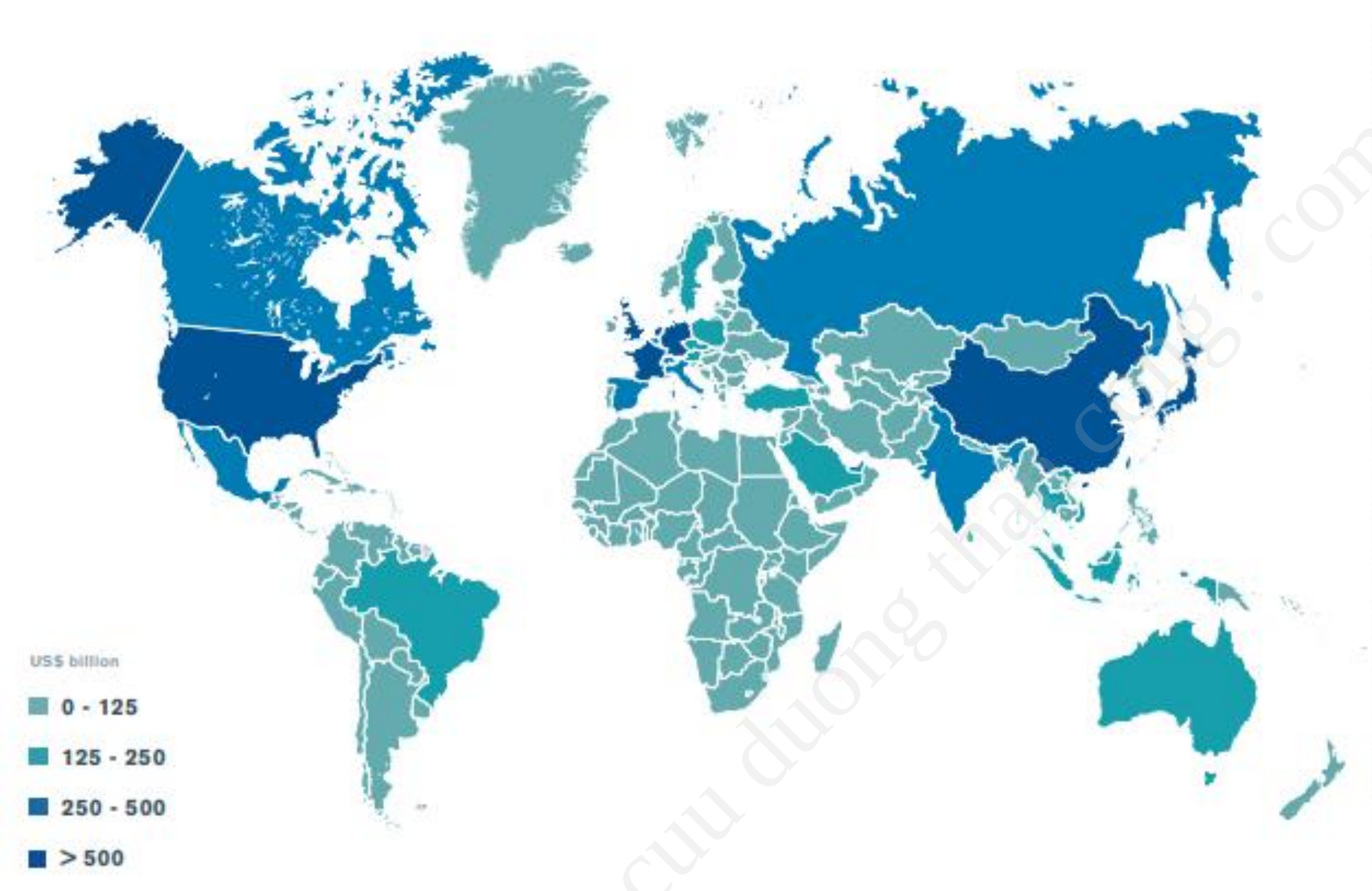


Figure 16: Economies by size of merchandise trade in 2017 (US$ billion)
Source: WTO

$17.43 billion

52%

44%

$17.43 billion

WTO members' merchandiser exports totaled US$17.43 trillion in 2017

52%

The top 10 merchandise traders account for 52% of the world total

44%

Developing countries had a 44% share of world merchandise trade in 2017

The changing composition of the trade

- In the past, a large fraction of the volume of trade came from agricultural and mineral products
- In 1910, Britain mainly imported agricultural and mineral products, although manufactured products still represented most of the volume of exports.
- In 1910, the US mainly imported and exported agricultural products and mineral products
- In 2002, manufactured products made up most of the volume of imports and exports for both countries

Changing composition of Trade

- Today, most of the volume of trade is in manufactured products such as automobiles, computers, clothing and machinery
- Agricultural only account for 10% of the volume of the trade.
- Mineral products (e.g. petroleum, coal, copper) and fuel products are a relatively small part of trade

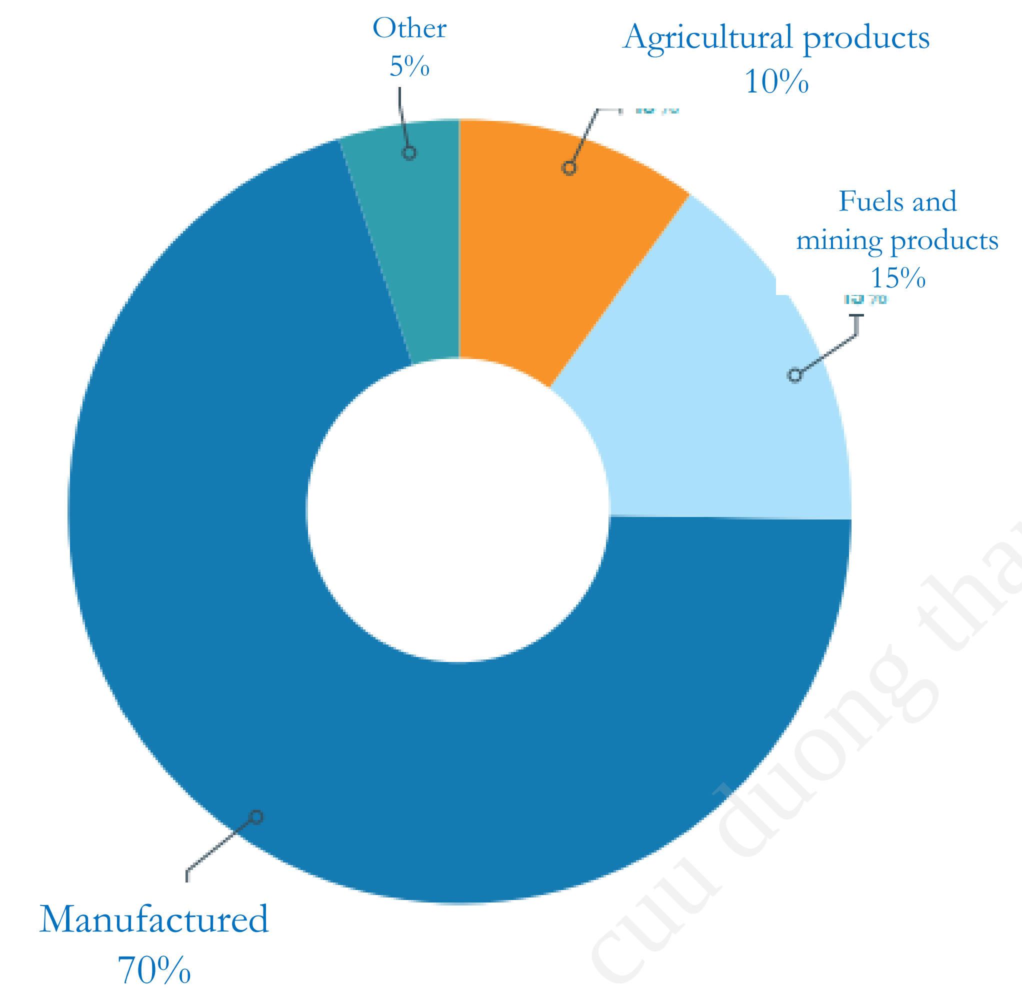


Figure 17: Merchandise exports by product group in 2017
Source: WTO

Over 70% percent of merchandise exports are manufactured goods

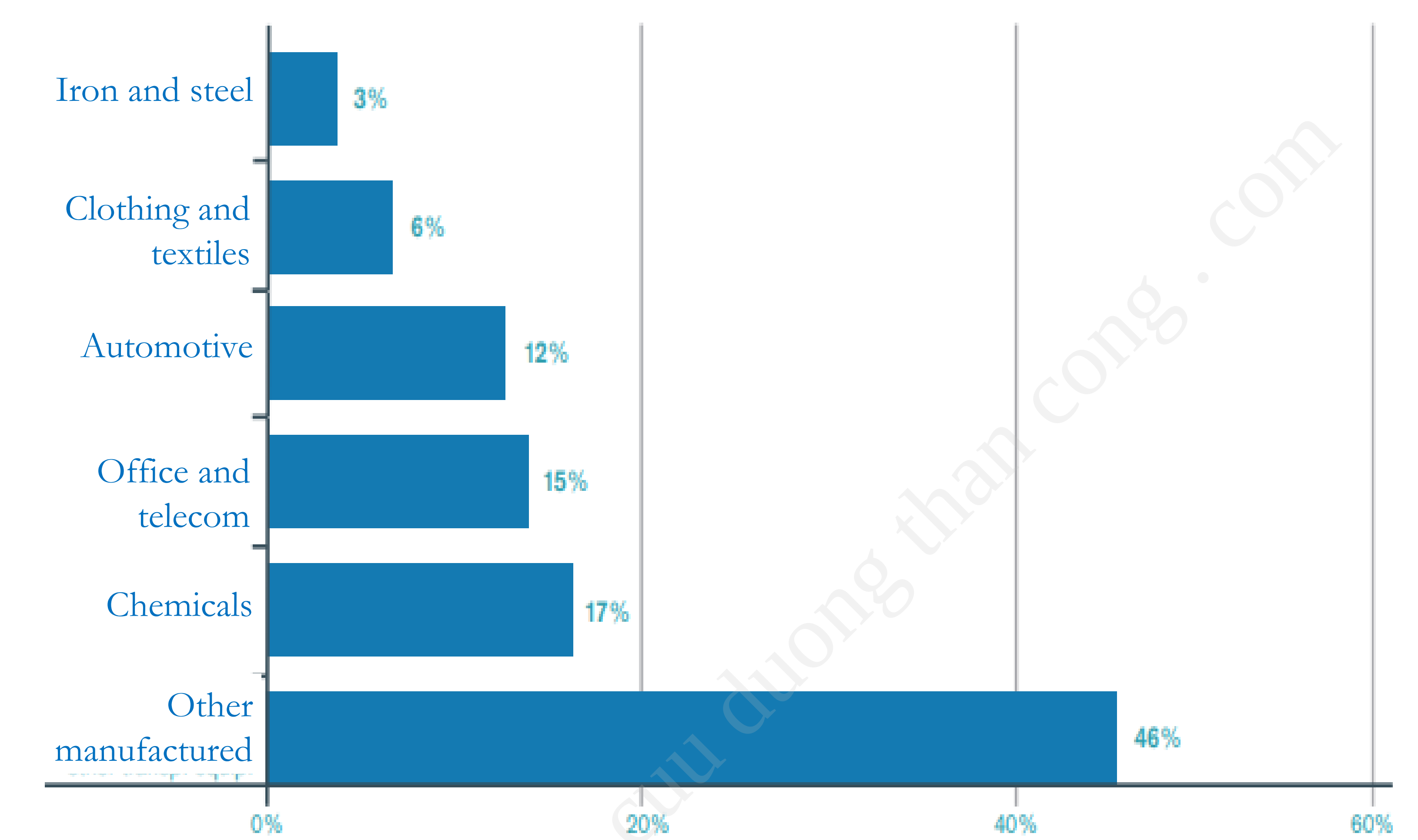


Figure 18: World exports of manufactured goods in 2017
Source: WTO estimates

Chemical products, office and telecom; and automotive products accounted for 44% of exports of manufactured goods in 2017

The changing composition of trade

- Developing countries, or low and middle income countries, have also changed the composition of the trade
- In 1960, about 58% exports from developing countries were agricultural products and only 12% of exports were manufactured products.
- In 2017, about 65% of exports from developing countries were manufactured products, and only 10% of exports were agricultural products

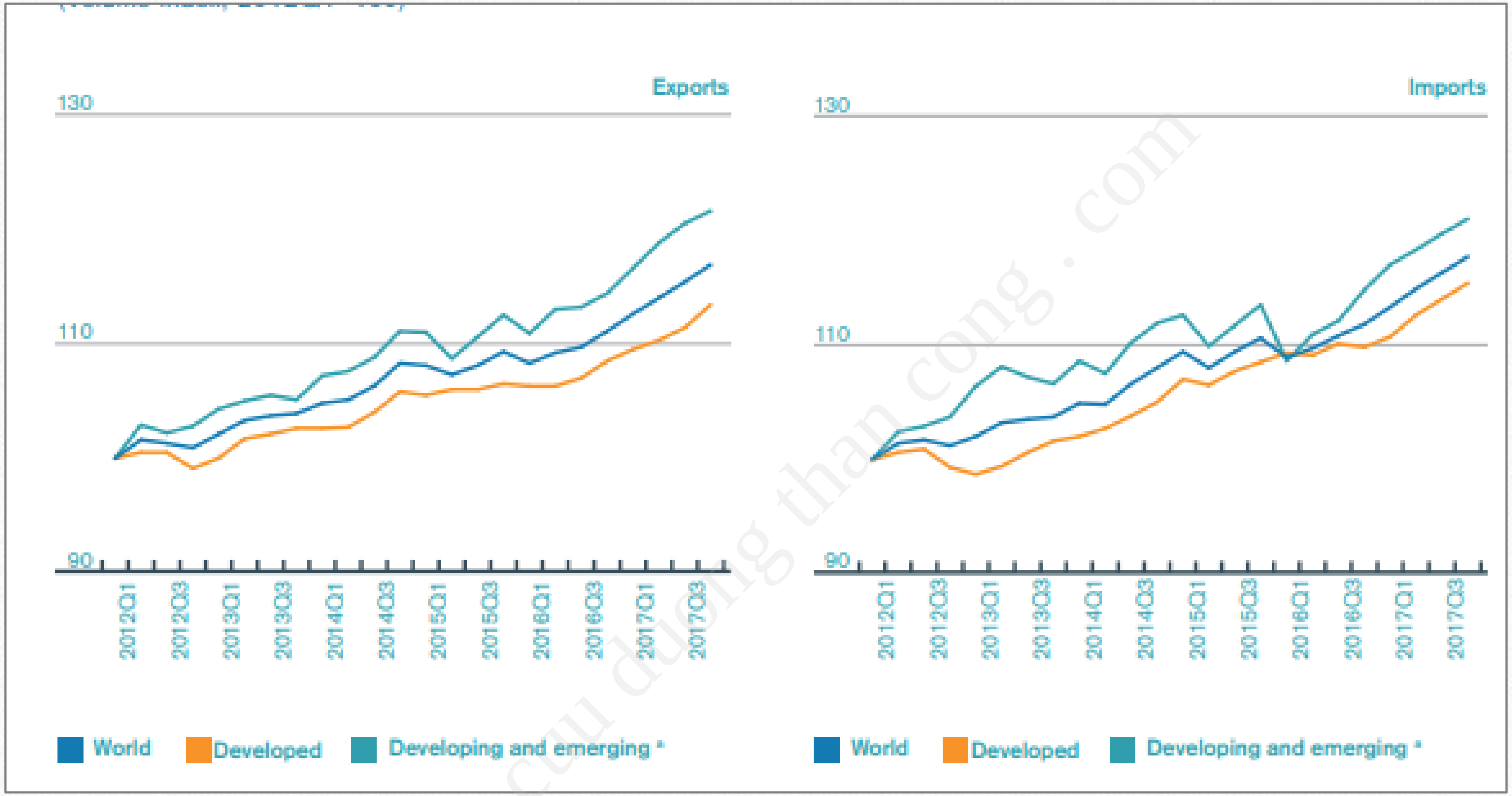


Figure 19: World merchandise exports and imports by level of development in 2012-2017
Source: WTO-UNCTAD

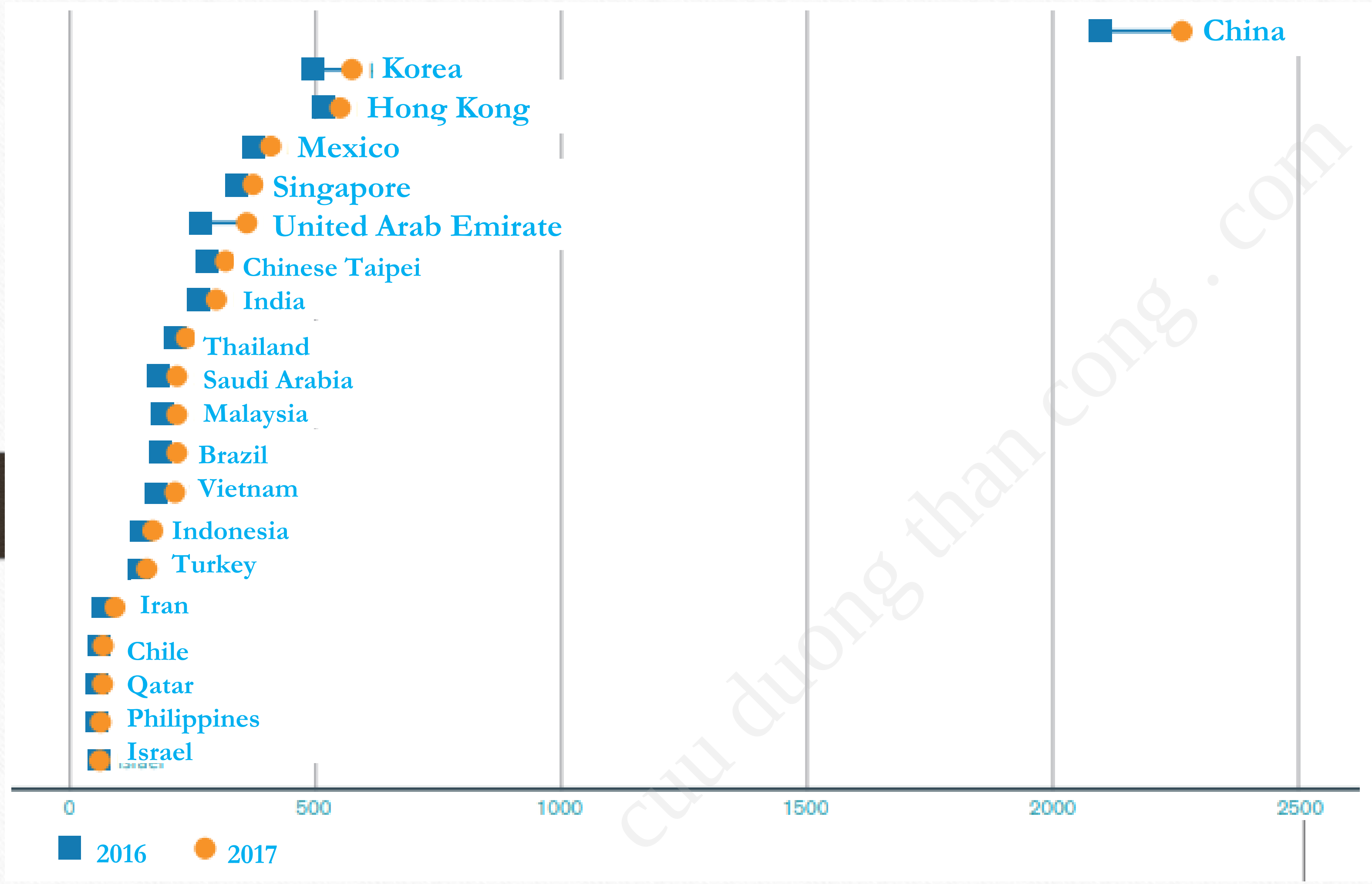


Figure 20: Leading developing economy exporters in 2016-2017 (US$ billion)
Source: WTO-UNCTAD

Among developing economies, China, Republic of Korea and Hong Kong were the leading merchandise traders in 2017, accounting for US$ 3400 billion

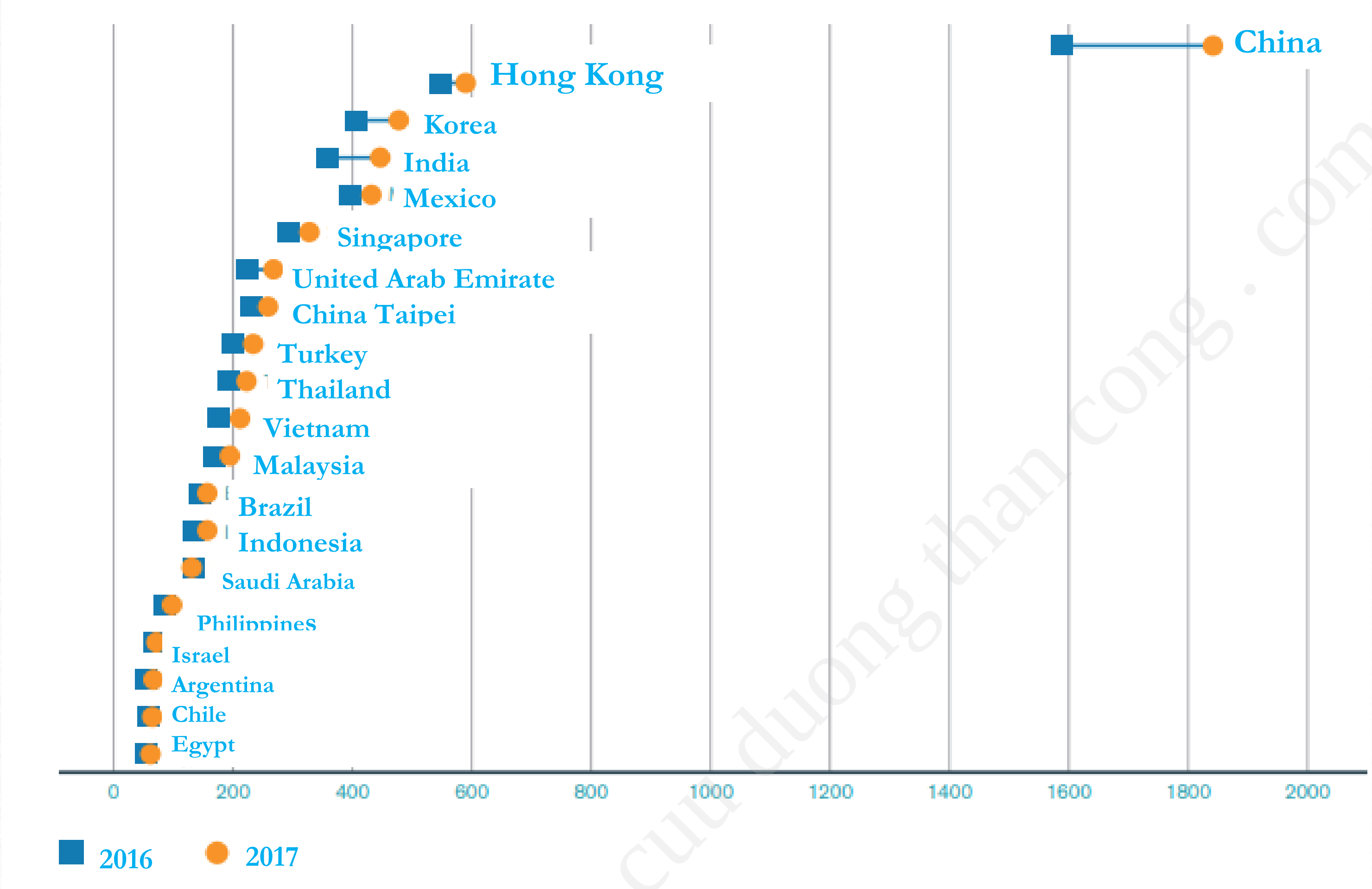


Figure 21: Leading developing economy importers (US$ billion)
Source: WTO-UNCTAD

Among developing economies, China, Republic of Korea and Hong Kong were the leading merchandise traders in 2017, accounting for US$ 3400 billion

International trade situation and prospects

- Some tendencies of the world development
- Multicultural corporations
- Outsourcing
- Impacts of those tendencies on the world trade

Some tendencies of the world development

Multinational corporation:

- Before 1945, multinational corporations played a small role world trade
- But today about one third of all US exports and 42% of all US imports are sales from one division of a multinational corporation to another.

Some tendencies of the world development

- Outsourcing

- Outsourcing occurs when a firm moves business operations out of the domestic country

- The operations could be run by a subsidiary of a multinational corporation or they could be subcontracted to a foreign firm

- Outsourcing of either type increases the amount of trade

Impacts of world development trend on international trade

- Boundaries between countries
- Ecommerce
- Trademark
- Changing in trade structure: oil, gas, agricultural products, manufactured goods
- Changes in competition

Summary

1. Who trade with whom?

- The 5 largest trading partner with the US are China, Canada, Mexico, Japan and Germany
- The largest economies in the EU undertake the largest fraction of the total trade between the EU and the US
- The gravity model predicts that the volume of trade is directly related to the GDP of each trading partner and is inversely related to the distance between them

Summary

- Besides GDP and distance: culture, geography. Multinational corporations and existence of borders influence trade
- Modern transportation and communication have increased trade, but political factors have influenced trade more in history

2. Today, most trade is in manufactured goods, while historically, agricultural and mineral products made up most of trade

3. The expansion of MNCs and their trade activities devotes to the rapid growth of international trade

Reference

- Krugman, P. R. (2008). International economics: Theory and policy, 8/E. Pearson Education India.
- WTO report: World trade statistical review in 2018 https://www.wto.org/english/res_e/statis_e/wts2018_e/wts2018_e.pdf