

International Trade and the Multinational Firm

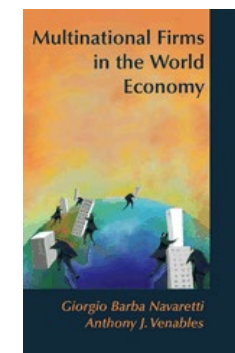
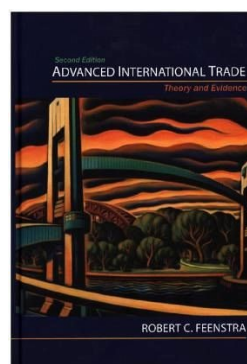
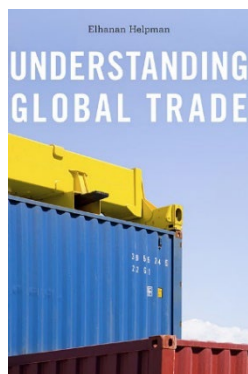
Lecture: Thursday, 12:15 – 13:45 Room 124 Start: October 17, 2024

Tutorial: Tuesday, 8:15 – 9:45 Room 308 Start: to be announced

Outline: The first part of the course covers trade theories based on comparative advantage (Ricardo and Heckscher-Ohlin) from standard specifications to recent extensions. The second part addresses theories based on monopolistic and oligopolistic competition to explain intra-industry trade. The final part covers firm heterogeneity and multinational firms, time permitting.

Examination Format: The examination format for this course comprehends a portfolio of examination types. Details are announced in the first lecture.

Resources The course material is successively announced and provided via WueCampus.



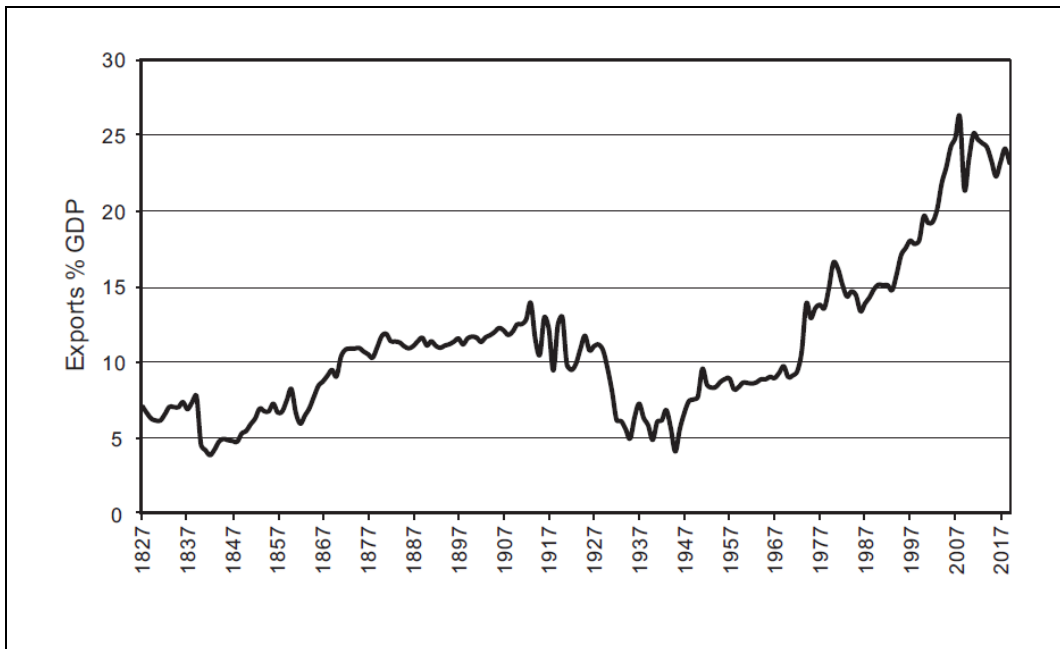
Structure of the Course

- I Ricardian Trade Theory
- II Heckscher-Ohlin Trade Theory
- III New Trade Theory: Intra-Industry Trade, Increasing Returns to Scale, Imperfect Competition
- IV Firm Heterogeneity, Trade and FDI
- V The Multinational Firm

Some Background

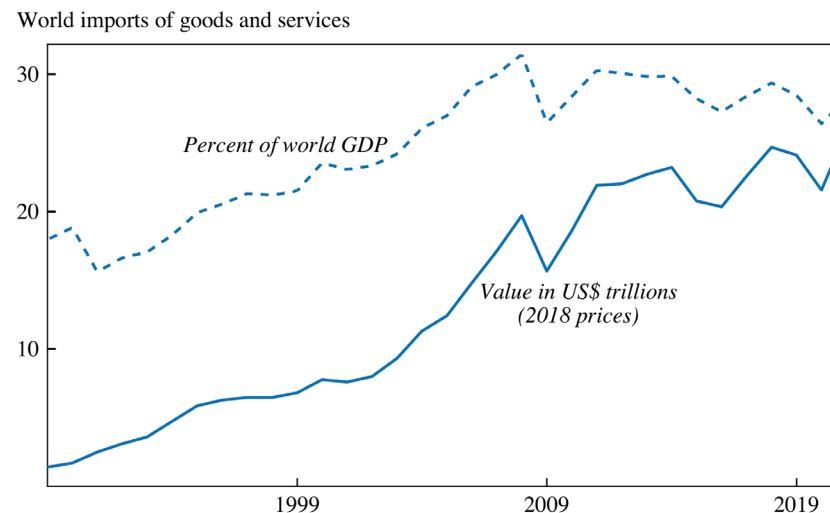
- The Evolution of World Trade
- The Sectoral Composition of World Trade
- World Merchandise Trade – Regional Shares
- The Changing Nature of World Trade – Paul Krugman (2008)
- Classification and Overview of Trade Theories provided by the WTO

The Evolution of World Trade



The age of globalization: World exports as percentage of GDP, 1827–2019.
 Source: Data from 1827 to 2014 from Michel Fouquin and Jules Hugot, “Two Centuries of Bilateral Trade and Gravity Data: 1827–2014” (CEPII Working Paper No. 2016–14, May 2016), http://www.cepii.fr/pdf_pub/wp/2016/wp2016-14.pdf. Data from 2015 to 2019 extends Fouquin and Hugot, “Two Centuries of Bilateral Trade and Gravity Data,” using the author’s estimates derived from World Bank, “Exports of Goods and Services (% of GDP),” World Bank Group, accessed July 25, 2022, <https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS>.

Figure 1. Trade Is Growing, but Has Declined as a Percentage of World GDP since the Global Financial Crisis



Sources: COMTRADE; World Trade Organization; and World Bank.
 Note: Nominal value of goods imports is from COMTRADE, and nominal value of services trade is from the World Trade Organization, both reported in US dollars. The sum of nominal trade values is divided by world GDP in US dollars at market exchange rates (NY.GDP.MKTP.CD GDP in the World Bank Development Indicators). Nominal trade values are converted to 2018 prices using the GDP deflator (NY.GDP.DEFL.ZS) for the United States.

Sources: Goldberg, P. (2023). The Unequal Effects of Globalization. MIT-Press. (Left); Goldberg, P. and T. Reed (2023). Is the Global Economy Deglobalizing? If so, why? What is next? Brookings Papers on Economic Activity. Spring, 347-396 (Right).

The Sectoral Composition of World Trade

 <p>International Trade Statistics 2015</p>  <p>World exports 2014</p> <ul style="list-style-type: none"> TOTAL MERCHANDISE: 18,494 US\$ billion TOTAL COMMERCIAL SERVICES: 4,940 US\$ billion AGRICULTURE: 1,765 US\$ billion MANUFACTURES: 12,250 US\$ billion FUELS & MINING PRODUCTS: 3,783 US\$ billion Other commercial services: 2,585 US\$ billion Travel: 1,240 US\$ billion Transport: 955 US\$ billion Food: 1,486 US\$ billion Machinery and transport equipment: 6,087 US\$ billion Chemicals: 2,057 US\$ billion Other manufactures: 1,623 US\$ billion Other services manufactures: 1,196 US\$ billion Clothing: 503 US\$ billion Goods related services: 160 US\$ billion 	<p><u>Breakdown of World Exports 2015*</u></p> <table border="0"> <tr> <td>Merchandise Trade</td> <td>79%</td> </tr> <tr> <td>Trade in Services</td> <td>21%</td> </tr> </table> <p><u>Breakdown of World Exports 2023**</u></p> <table border="0"> <tr> <td>Merchandise Trade</td> <td>76,6%</td> </tr> <tr> <td>Trade in Services</td> <td>23,4 %</td> </tr> </table>	Merchandise Trade	79%	Trade in Services	21%	Merchandise Trade	76,6%	Trade in Services	23,4 %
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<p>Source: WTO (2015). International Trade Statistics.</p>	<p>*data from left-hand side **data from WTO-World Statistical Review 2024, own calculation.</p>								

World Merchandise Trade – Regional Shares

Intra- and inter-regional merchandise trade, 2014

Origin	Destination							
	North America	South and Central America	Europe	CIS	Africa	Middle East	Asia	World
Share of regional trade flows in world merchandise exports								
World	17.3	4.0	36.7	2.8	3.5	4.2	29.7	100.0
North America	6.8	1.2	2.0	0.1	0.2	0.4	2.7	13.5
South and Central America	0.9	1.0	0.6	0.1	0.1	0.1	0.9	3.8
Europe	2.9	0.6	25.2	1.2	1.2	1.2	4.0	36.8
Commonwealth of Independent States (CIS)	0.2	0.0	2.1	0.7	0.1	0.1	0.7	4.0
Africa	0.2	0.2	1.1	0.0	0.5	0.1	0.8	3.0
Middle East	0.5	0.1	0.8	0.0	0.2	0.6	3.8	7.0
Asia	5.8	1.0	4.9	0.7	1.1	1.6	16.7	32.0

- the ‚triad‘ consisting of North-America, Europe and Asia dominates world trade
- the bulk of trade of these regions takes place within these regions

Source: WTO (2015). International Trade Statistics. Table 1.4. Note that from 2016 on the WTO replaced the “International Trade Statistics” (used as source here) by a publication with the title “World Statistical Review” (which no longer publishes this matrix).

The Changing Nature of World Trade

Once upon a time, comparative advantage looked pretty good as a description of trade ...



Source: Krugman (2008) – Nobel Lecture Slides

... but over time it got hard to see much difference between what countries exported and what they imported



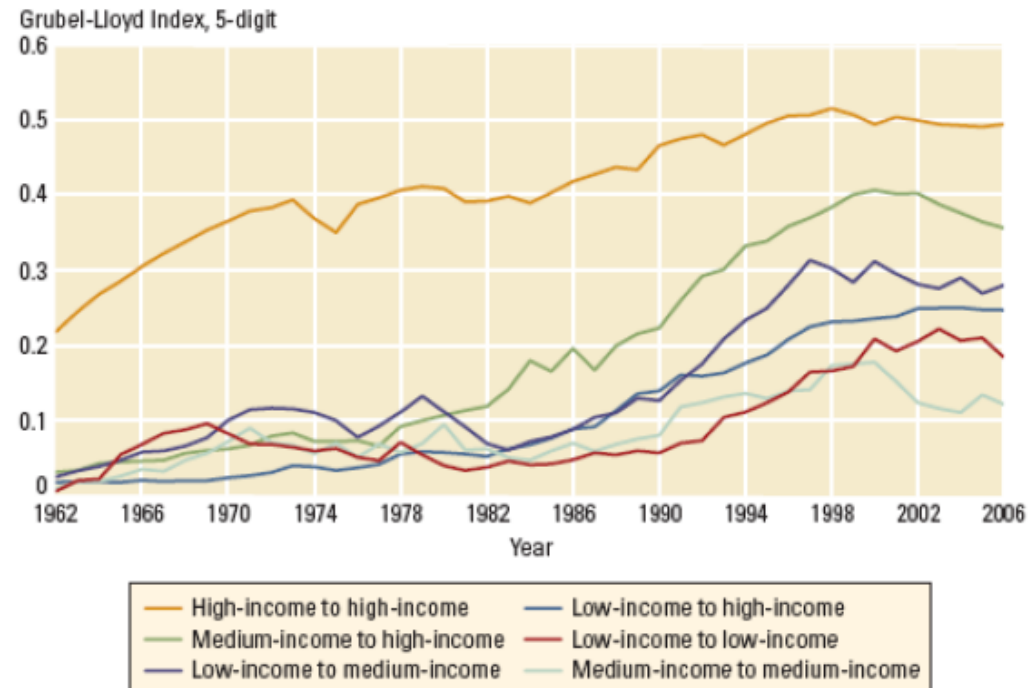
Source: Krugman (2008) – Nobel Lecture Slides

Furthermore, trade increasingly seemed to be between similar countries.



Source: Krugman (2008) – Nobel Lecture Slides

More broadly, rise of intraindustry trade



Source: Brühlhart 2008 for this Report.

Note: The Grubel-Lloyd index is the fraction of total trade that is accounted for by intraindustry trade.

Source: Krugman (2008) – Nobel Lecture Slides

Classification and Overview of Trade Theories provided by the WTO

Trade theories

	Traditional trade theory Ricardo, Heckscher-Ohlin	"New" trade theory Krugman(1980)	Heterogeneous firms models Melitz (2003)
Gains from trade (causes)			
Specialization	Yes	No	No
Economies of scale	No	Yes	Yes
Pro-competitive	No	Yes	No
Variety	No	Yes	No ¹
Aggregate productivity (through selection/ reallocation)	No	No ²	Yes
Trade patterns			
Inter-industry	Yes	No	No
Intra-industry	No	Yes	Yes
Exporters and non-exporters within industries	No	No	Yes
Distribution			
Trade liberalization affects relative factor rewards	Yes	No	No

¹ Variety effects are ambiguous. See Section C.3.

² In the Krugman model, "productivity" in the integrated market also increases in the sense that the same total amount is produced at lower average cost due to exploitation of scale economies. However, the Krugman model is silent about which firms remain in business, since it does not include differences among firms. Once firms are distinguished according to their productivity level, as in the Melitz model, the exit of less productive firms itself leads to improvements in overall industry productivity.

Note: The table refers to the basic versions of the models (row 2). As discussed in the text, models that combine features from different approaches presented in the table have been developed.

Source: Based on Table 1 of Bernard et al. (2007a).

Source: WTO (2008). World Trade Report.