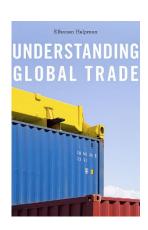
# International Trade and the Multinational Firm

Lecture: Thursday, 12 - 14 Room 414 Start: October 21, 2021

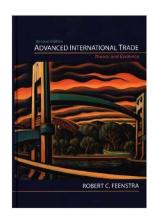
**Outline:** The <u>lecture</u> starts out with theories of international trade based on comparative advantage (Ricardo and Heckscher-Ohlin) followed by theories based on monopolistic and oligopolistic competition to explain intra-industry trade. The final part covers firm heterogeneity and multinational firms.

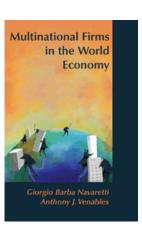
**Tutorial:** Wednesday, 14 - 16 HS 308 Start: to be announced

The lecture is accompanied by a <u>tutorial</u> which gives you the opportunity to practice the material. Problem sheets are provided on a weekly basis.









# **Covid-19-Instructions**

**UniNow-Registration** 

Please scan the QR Code of this Lecture Hall (HS 414 Lecture; HS 308 Tutorial)

For your own safety and to protect others we require you to wear a medical face mask (surgical mask).

## Letter of the COVID-19 Taskforce of the University of Würzburg October 11, 2021

Dear students,

As the city of Würzburg currently exceeds a 7-day incidence of 35, only those who have been vaccinated, recovered or tested negative may attend this course. The 3G status is checked randomly, possibly also after this session. You now have the possibility to leave the event should you not be vaccinated, recovered or tested negative. This is because violation of the 3G rule must be reported to the authorities by the University and can lead to a fine.

Your COVID 19 Task Force of JMU

Prof. Dr Paul Pauli, Prof. Dr Lars Dölken, Prof. Dr Andreas Dörpinghaus, Prof. Dr Doris Fischer, Dr Uwe Klug

Information of the University of Würzburg about Coronavirus: https://www.uni-wuerzburg.de/en/home/

### Resources

The course does not draw on a single textbook but uses different texts (see below), journal articles and research papers at several parts of the lecture. This material will be referenced as we go along.

Lecture notes and problem sets are successively provided via WueCampus.

Recordings of the lecture and the tutorial will be available on WueCampus for 14 days after the respective session.

## **Textbooks and monographs**

Helpman, E. (2011). Understanding Global Trade. Princeton University Press.

Feenstra, R.C. (2016). Advanced International Trade. Theory and Evidence. Princeton University Press, Second Edition Caves, R., R.W. Jones and J.A. Frankel (2007). World Trade and Payments. Addison Wesley

Bhagwati, J., A. Panagariya and T. N. Srinivasan (1998). Lectures on International Trade. Second Edition. MIT Press

Gandolfo, G. (1998). International Trade Theory and Policy. Springer-Verlag, Berlin and New York

Markusen, J.R., J.R. Melvin, W.H. Kaempfer, K. E. Maskus (1995). International Trade. McGrawHill

Barba Navaretti, G. and A.J. Venables (2004). Multinational Firms in the World Economy. Princeton University Press

### **Structure of the Lecture**

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

## If time permits we may also address the following topics:

VI Armington Model and an Introduction to Trade Theory with Numbers

VII The general neoclassical model – closed economy

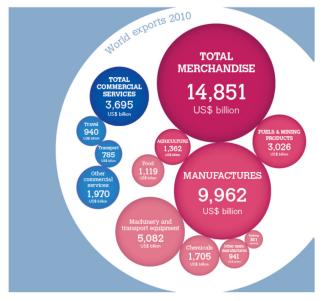
VIII The general neoclassical model of international trade

IX Sector-specific factors: The Ricardo-Viner model

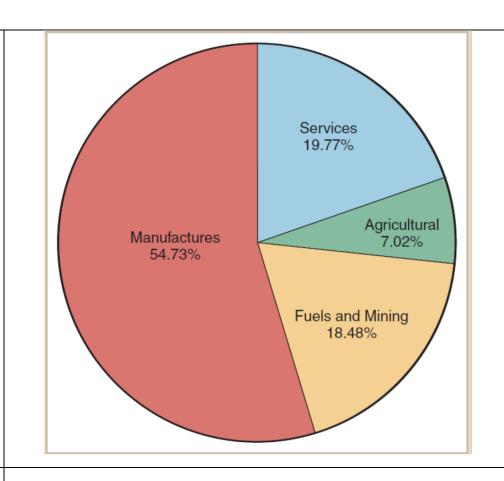
# **The Composition of World Trade**



#### **International Trade Statistics 2011**



Source: WTO (2011). International Trade Statistics.



Source: Krugman, P., M. Obstfeld and M.J. Melitz (2012). International Economics: 18

## **World Merchandise Trade – Regional Shares**

Source: WTO (2011). International Trade Statistics.

### Table I.4

Intra- and inter-regional merchandise trade, 2011

(Billion dollars and percentage)

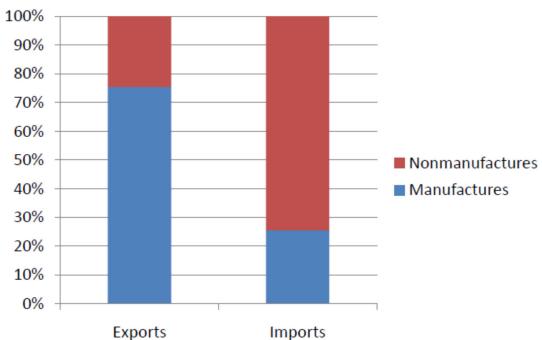
|   | Destination Destination |                                 |        |     |        |             |      |       |
|---|-------------------------|---------------------------------|--------|-----|--------|-------------|------|-------|
| Origin  | North<br>America        | South and<br>Central<br>America | Europe | CIS | Africa | Middle East | Asia | World |
| Share of regional trade flows in world merchandise expo | rts                     |                                 |        |     |        |             |      |       |
| World   | 16.4                    | 4.2                             | 38.6   | 3.0 | 3.0    | 3.8         | 28.8 | 100.0 |
| North America   | 6.2                     | 1.1                             | 2.1    | 0.1 | 0.2    | 0.4         | 2.7  | 12.8  |
| South and Central America                               | 1.0                     | 1.1                             | 0.8    | 0.0 | 0.1    | 0.1         | 0.9  | 4.2   |
| Europe  | 2.7                     | 0.7                             | 26.2   | 1.3 | 1.1    | 1.1         | 3.6  | 37.1  |
| Commonwealth of Independent States (CIS)                | 0.2                     | 0.1                             | 2.3    | 0.9 | 0.1    | 0.1         | 0.7  | 4.4   |
| Africa  | 0.6                     | 0.1                             | 1.2    | 0.0 | 0.4    | 0.1         | 0.8  | 3.3   |
| Middle East   | 0.6                     | 0.1                             | 0.9    | 0.0 | 0.2    | 0.6         | 3.7  | 7.0   |
| Asia  | 5.1                     | 1.1                             | 5.2    | 0.6 | 0.9    | 1.4         | 16.4 | 31.1  |

- the ,triad' (North-America, Europe/Asia) dominates world trade
- a large amount of trade takes place within these blocs

# **The Changing Nature of World Trade**

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

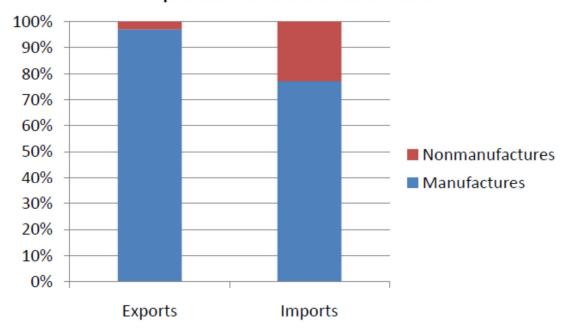




Source: Krugman (2008) – Nobel Lecture Slides

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

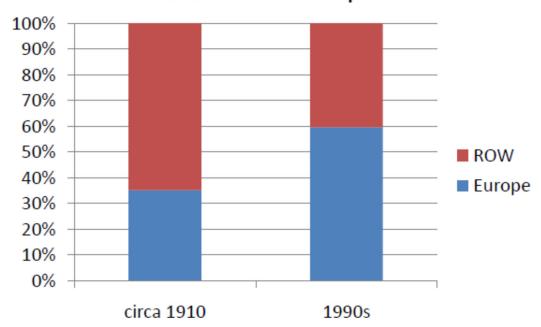
#### Composition of British trade in the 1990s



Source: Krugman (2008) – Nobel Lecture Slides

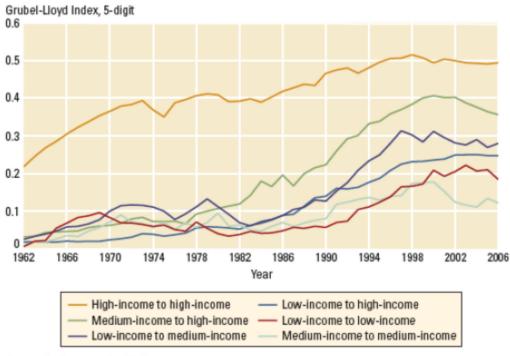
Furthermore, trade increasingly seemed to be between similar countries.

### **Destination of British exports**



Source: Krugman (2008) – Nobel Lecture Slides

## More broadly, rise of intraindustry trade



Source: Brülhart 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

A

Source: WTO (2008). World Trade Report.

## Trade Theories: An Overview provided by the WTO

Table 7
Trade theories

|   | Traditional trade theory    | "New" trade theory | Heterogeneous firms models |
|---|-----------------------------|--------------------|----------------------------|
|   | Ricardo,<br>Heckscher-Ohlin | Krugman(1980)      | 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 <sup>1</sup>            |
| Aggregate productivity (through selection/reallocation) | No                          | No <sup>2</sup>    | 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                         |

<sup>&</sup>lt;sup>1</sup> Variety effects are ambiguous. See Section C.3.

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).

<sup>&</sup>lt;sup>2</sup> 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.