

Economics of European Integration

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Problem Set 8

References: BW (6.ed) The Economics of European Integration Ch. 10

Exercise 1: Ricardian model of trade

Take two economies in autarky, Denmark and Netherlands, endowed with 400 and 500 hours of work, respectively. Both countries produce two types of goods, cheese and bread:

Output per hour	Denmark	Netherlands
Cheese	4	2
Bread	0.5	1

- Which country has absolute advantage in the production of cheese? Which in bread?
- What is the relative price of cheese in Denmark and in the Netherlands?
- Which country has a comparative advantage in cheese? Which in bread?
- What are the upper and the lower bound of the free trade price? Do countries specialize partially or completely?
- Draw the Production Possibility Frontier (PPF) of Denmark and the Netherlands. What is the interpretation of the slope?

Exercise 2: Heckscher-Ohlin model of trade

Suppose we have two countries, Pakistan and Iran. Both produce robotic machinery and hand-made carpets. Keeping the implications of the model by Heckscher-Ohlin in mind:

- Which country is likely to be relatively more abundant in labor? And which in capital? Which production, do you think, is more K-intensive and which one more L-intensive? Discuss.
- Based on your reasoning, plot the PPFs for both Pakistan and Iran, as well as the indifference curves and the relative price curves in autarky (assume preferences to be the same in both countries). What does the slope of the relative price curve say about the direction of the exchange?
- Assume the two countries open to international trade. Represent the triangle of exchange, and identify imports and exports.

Exercise 3: Agglomeration and the New Economic Geography

While the theory of “Comparative Advantage” investigates specialization *across sectors but within the same country*, we now turn to the geography of within-country specialization by looking at the location of economic activity *across regions within the same sector and country*.

- a. Name and explain the two forces that drive a firm's location choice of its economic activity within/across countries.
- b. Explain the circular-causality logic of agglomeration.
- c. How does European Integration affect economic geography within member states, i.e. location choices of firms? Explain graphically considering circular causality.
- d. Why do agglomeration and dispersion effects work within nations but less so across borders?