

Midterm Exam

This is a 80 min exam. There are three equally weighted questions. Please read them carefully and answer each of them. If you have problems understanding a question please ask. *Good luck, viel Glück, bonne chance, y mucha suerte !!!*

Question 1: Student A works 50 hours a week and takes 50 hours to write a term paper and 25 hours to assemble a computer. His roommate B works 40 hours a week and needs 20 hours to write a term paper as well as to build a computer.

- Graph each student's production possibility frontier. Who has the absolute advantage in writing term papers and who in producing computers? Who has the comparative advantage in producing each?
- Depict both students' joint relative supply schedule. For each segment, indicate whether A and B respectively produce both or only one commodity, and if the latter which one.
- As you know, preferences à la $U = Q_p Q_c$ imply an (inverse) relative demand function of the form $p_p/p_c = 1/(Q_p/Q_c)$. Find the equilibrium relative price as well as the equilibrium quantities produced, consumed, and traded by each student. Who gains from trade?

Question 2: The US government considers imposing a tariff on imported beer.

- Let the US be a small country. Graphically analyze the effects the tariff has on the quantities produced/consumed/imported and on the welfare of the different domestic groups affected. What is the overall effect on US welfare?
- Assume the US is a large importer of beer. Show how the tariff affects the world market price of beer. Repeat a) for the large country case.
- Explain how, in the presence of NAFTA, the tariff can lead to trade diversion between imported German and Mexican beer. Graphically analyze the welfare effects on domestic consumers and the US government.

Question 3: Over the last few decades income inequality in the US has increased.

- State the Stolper-Samuelson result and explain the magnification effect in prices. What does this magnification effect imply for the real income of the two factors?
- Use the Stolper-Samuelson result to explain how trade could have led to the above-mentioned increase in income inequality.
- Use the same line of argument to explain why income inequality should have decreased in Mexico.