

Final Exam

This is a 3 hour exam. There are three equally weighted questions. Please read them carefully and answer each of them. If you have problems understanding a question please do ask. *Good luck !!!*

Question 1: Consider two countries, Turkey and Greece. Suppose both produce wine and clothes according to the following unit labor requirements:

| | Turkey | Greece |
|---------|-------------|-------------|
| wine | $a_w^T = 4$ | $a_w^G = 4$ |
| clothes | $a_c^T = 8$ | $a_c^G = 2$ |

The Turkish labor force is 64, and in Greece it is 32. Furthermore, assume that the representative consumer in both countries has the utility function $U(x_c, x_w) = x_c^{3/5} x_w^{2/5}$.

- Depict the PPF for both countries and construct the relative supply schedule, carefully labelling your diagrams. Which country has the comparative advantage in which commodity?
- Derive the relative demand function and depict it in the same diagram as the relative supply from a). What is the equilibrium relative price? Quantify each country's imports and exports.
- Suppose Turkey's labor force changes. At what level does Turkey start to produce both commodities, whereas Greece remains completely specialized? How much does each country gain from trade in this situation?

Question 2: Distributional effects of trade.

- State the Stolper-Samuelson result and show it both graphically as well as mathematically.
- Prove that there exists a lump-sum compensation scheme that leads to Pareto-gains if a country moves from autarky to free trade.
- Analyze the distributional effects of trade under the monopolistic competition new trade model. How do your predictions change when we consider the heterogeneous firm new, new trade version of this model?

Question 3: Trade Policy in a Perfectly Competitive Framework.

- a) Show graphically as well as analytically that the optimal tariff for a small country is zero.
- b) Derive analytically as well as the graphically the optimal tariff for a large country. Explain whether there is any analogy to monopoly or monopsony pricing?
- c) The “protection for sale” model predicts that even small countries may set positive tariffs. Describe in detail how Grossman and Helpman obtain this result and derive the equilibrium tariff equation.