**Heckscher-Ohlin model (1/2)**

**Problem 1**

Suppose some countries make wine (W) and cheese (C) using their resources 400 labor units (labor hours - L) and 600 land units (T). Producing one liter of wine requires 4 units of work and 2 units of land, and one kilogram of cheese - 8 units of work and 16 units of land.

1. Which factor is used relatively intensively in the production of cheese, and which in the production of wine?
2. Graph the constraints of each factor of production on the graph and determine the set of production possibilities (PPF).
3. Formulate the assumptions for the H-O model. In light of these assumptions, determine the balance of wine and cheese production.
4. Suppose now that the same goods are produced abroad (\*) using the same technology. Abroad (\*) has the same amount of land, but 100 units of labor more. What is the volume of production of both goods abroad?
5. How does the structure of production factors abundance translate into the relative prices of goods in both countries? (Tip: Draw the relative cheese supply in both countries and the relative demand curve on one chart.)

**Problem 2**

Suppose that you need 10 units of labor and 5 units of land to produce 1 liter of wine, while 4 labor units and 8 units of land are needed to produce one kilo of cheese. Let's assume that in a perfectly competitive market, wine unit prices is $ 30 and cheese unit price is $ 16, respectively.

1. Draw market equilibrium lines of both goods (equalizing marginal costs and prices of goods). Calculate the unit wage and rent in balance.
2. What will happen to factor prices when the price of cheese rises to $ 24 per kilogram (with the price of wine unchanged)? Determine this with the appropriate theorem and then calculate.
3. How will the increase in the price of cheese affect the purchasing power of employees and landowners?

**Problem 3**

Suppose the world consists of two economies that produce two goods: beer (P) and cheese (S) using both labor and capital. It takes 16 labor units (L) and 8 capital units (K) to produce one liter of beer. One kilogram of cheese requires - 2 labor units and 6 capital units. The country has at its disposal 1000 units of labor and 1000 units of capital, while the rest of the world (\*) has 2400 labor units and 2000 capital units.

1. Present the described situation using an appropriate diagram (in the resource space of production factors), in which draw a diversification cone.
2. Determine which good is relatively labor intensive and which is capital intensive.
3. Allocate (graphically) the factors of production between two sectors and calculate the production volume of both goods in both countries.
4. What trade flows can be expected in this case in the light of the H-O theory?
5. How will the relative price of beer change in the country as a result of opening for trade? Who will benefit from such a change in prices and who will lose? Why?
6. If the country's capital stock decreases to 800 units (e.g. under the influence of coronavirus), how will the structure of production change under autarky conditions?
7. Will this change affect the directions of trade between the country and abroad?
8. What if the capital stock in the country falls to 400 units? How will this affect the production structure?