International Economics
2024

Home assignment 3: Comparative Advantage

Consider a world consisting of two countries, Belgium and Holland.

Belgium has L=100 workers and Holland has L^*=200 workers, the only input.

There are two goods – beer (B) and tulips (T). In Belgium: MPL_B=1 and MPL_T=1/2, in Holland: MPL^*_B=1/2 and MPL^*_T=1.

Also assume that consumers in both countries have Leontief preferences, consuming B and T in the fixed proportion of one-to-one.

(a) Which country has a comparative advantage in which good?

(b) **Autarky:**
Draw the production possibilities frontier for each country.
How many units of B and T will be produced and consumed in each country?
Draw the relative supply of beer (B/T) curve for each country.
Draw the relative demand for beer curve.
What is the autarky equilibrium relative price of beer in each country?

(c) **Trade:**
Now draw the world relative supply of beer curve.
What can you say about the trade equilibrium relative price of beer?
How many units of B and T are produced and consumed in each country?
Calculate exports and imports for each country.
Does each country gain from trade?

(d) **Population growth:**
Suppose Belgium's population increases 10,000 times. Does each country gain from trade?