

Problem Set 2
Heckscher-Ohlin Problem

Due date to be announced

Consider two countries (England and India) that can produce two goods (cloth (C) and trains (T)) using two factors (labor (L) and capital (K)). The technology to produce each good is the same in either country and allows for substitution among inputs (i.e. isoquants have a “nice” shape). Cloth production is labor intensive while train production is capital intensive. England is relatively capital abundant, and India is relatively labor abundant. All this implies that the production possibility frontier (PPF) in each country has a “nice” shape like the ones we did in lecture. Preferences in the two countries are identical: consumers like to consume both commodities (i.e. indifference curves also have a “nice” shape).

Justify your answers as fully as possible based on this information and make sure you use the proper graphs to accompany your explanation when possible.

- (1) Draw the PPF and the community indifference curves for each country and identify the autarky equilibrium. Use the horizontal axes for cloth and the vertical axes for trains.
- (2) What relationship do you observe between autarky relative prices (p_C/p_T) in the two countries ?
- (3) What pattern of trade would result from free trade between these two countries?
(To answer this question assume that the two countries trade at some price ratio that is in between the two autarky price ratios).
- (4) What happens to the relative price of cloth in terms of trains (p_C/p_T) in England after the country starts trading freely with India?
What happens to the relative price of cloth in terms of trains (p_C/p_T) in India after the country starts trading freely with England?
- (5) How do wages and the rental price of capital change in England when the country goes from autarky to free trade with India? Will English capitalists (i.e. the owners of capital) be in favor of free trade with India?
- (6) How do wages and the rental price of capital change in India when the country goes from autarky to free trade with England? Will Indian capitalists (i.e. the owners of capital) be in favor of free trade with England?
- (7) What will happen to the capital labor ratio (K/L) in the cloth and train sectors in England after opening to trade?. Show on a graph.
- (8) What will happen to the capital labor ratio (K/L) in the cloth and train sectors in India after opening to trade?. Show on a graph.
- (9) Suppose the two countries were trading freely for several years at a fixed world price, do you expect to observe the same wages in England and India? Justify.