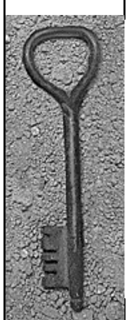
Heckscher-Ohlin Theory

? Two factors of production: capital and labor

? Countries have identical technology

? Labor abundant/capital abundant

? Labor intensive/capital intensive



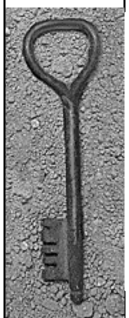
Factor Abundance and factor intensity

? Abundance defined in two ways:

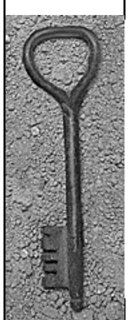
- First definition is based on relative factor quantities.
  - • Country A is capital abundant if it has more capital per unit of labor than does country B.
    - If A is capital abundant, then B must be labor abundant.
  - • This definition is used in the textbook.

? Second definition is based on factor prices.

- • Country A is capital abundant if the relative rental rate for capital in A is lower than in B.



Factor intensity

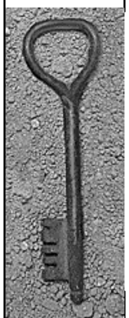


1st predictions of the Heckscher-Ohlin Theory

Prediction of the theory:

1)A country exports the product that uses their abundant factor Intensively. For instance,

$$\frac{\text{US land supply}}{\text{US labor supply}} \;?\; \frac{\text{Foreign land supply}}{\text{Foreign labor supply}}$$



Example

? Suppose US has land 100 units, and labor 50 units. The Foreign countries have land 200 units, and labor 150 units. Assume that there are two goods in the world – wheat and cloth. Assume that wheat is land intensive and cloth is labor intensive. Then according to the prediction of the Heckscher-Ohlin theory of trade, Us will export which good? And Foreign countries will export which good?

? Answer: US export wheat and Foreign export cloth.

Second prediction: (contd from Chap4)

Stolper-Samuelson Theorem:

? Link between changes in output prices and changes in factor prices.

? Most general form: an increase in the relative price of a good increases the real return to the factor used intensively in that good’ s production and decreases the real return to the other factor.

– Factor prices change proportionally more than output prices (*magnification effect*).

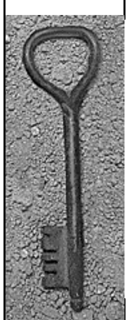
? When assumptions of Heckscher-Ohlin model are added, the Stolper-Samuelson theorem means that opening trade *raises* the real reward to the abundant factor and *lowers* the real reward to the scarce factor.

– Trade boosts production of the good of comparative advantage, increasing that good’ s opportunity cost and relative price.

3rd Prediction: Factor price equalization theorem

The Factor Price Equalization Theorem

- ? According to Stolper-Samuelson theorem, moving from autarky to unrestricted trade raises the real reward of the abundant factor.
  - Similarly, such a move lowers the real reward of the scarce factor.
  - Same adjustment takes place in the second country, but with the roles of the two factors reversed.
    - Trade raises the real reward of a factor in a country where that factor is abundant and lowers its price in the country where it is scarce.
- ? Thus, even when factors are immobile between the two countries, unrestricted trade in goods tends to equalize the price of each factor across countries.
  - With free trade in goods and no international factor mobility, $w^A = w^B$ and $r^A = r^B$.



Does H-O theory explain actual trade pattern?

- ? Read pp.68-76. Also read, the box on p. 52 about China's production shift after opening-up trade.
- ? Do all the even numbered problems of Chapter 4, pp. 78-79. These are due on April 12, 2001 in class.
- ? Also do the self-graded quiz of chapter 4.
- ? We will skip chap 5 and 6, and move on to trade policies, chapter 7.