International Economics: Lecture 6
The Heckscher-Ohlin Model Extensions

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I was born into an upper-middle class family in a village in the South of Sweden.

Having seen in a newspaper a review of a book - written by professor Eli Heckscher - I suggested to my parents, that I should take up studies there. This I did and was much stimulated by Heckscher's teaching. He was always helpful and friendly although we started with a cleavage of opinion about the correct economic principles for the right time to cut trees in forestry.

_Bertil Ohlin, Autobiography_

_**Bertil Ohlin.**_ Swedish economist and political leader who is known as the founder of the modern theory of the dynamics of trade. In 1977 he shared the Nobel Prize for Economics with James Meade.

_Britannica_
Dear Students, when completing homework, please write down your full student ID.

For example, if your ID is AD 12345, then write down AD 12345, not 2345, or not 345, or not 45, or not 5.

Thank you.

Details make perfection, and perfection is not a detail.

Leonardo da Vinci
What is the biggest export category of Armenia to Georgia?

- Cement
- Grapes
- Hard liquor
- Copper ore
- Glass bottles

Artist: Sergio Marony
The Heckscher–Ohlin theorem

A country has comparative advantage in and will export the good that uses its abundant factor intensively,

and will import the good that uses its scarce factor intensively.

E.g. capital-abundant country will export capital-intensive good and import labor-intensive good from labor-abundant country.

(Generally ) there is no complete specialization in HO world.
The Heckscher – Ohlin MODEL

2. Factor Price Equalization theorem.
3. Rybczynski theorem.
Factor price equalization theorem

In free trade, with
• identical technologies,
• perfect competition,
• no factor intensity reversal,
• constant returns to scale
• different factor endowment

factor prices are equalized
in a two-good, two-factor economy.

i.e. Free trade of goods equalized not only good prices, but also factor prices.
Lerner diagram

a tool, which shows how factor prices depend on product prices

- **Isoquant**: All possible combinations of inputs that yield a specific amount of output.
- **Isocost**: All possible combinations of factors, whose cost is constant.

- **Unit-value isoquant**: Isoquant for one dram’s worth of $X$, $X=1/p_x$.
- **Unit-value isocost**: One dram’s worth of factors.

With constant returns to scale, the entire production function can be represented by a single isoquant.
We assume perfect competition, which implies

Revenue = Cost

Revenue is shown in unit value isoquant

\[ p_i \cdot q_i (K_i, L_i) = 1 \]

Cost is shown in unit value isocost

\[ L \cdot w + K \cdot r = 1 \]

Y is K-intensive and

\[ \frac{(K/L)_Y}{(K/L)_X} > 1 \]
Rybczynski theorem refers to unbalanced growth

In a two-good, two-factor economy with constant returns to scale

*economic growth* due to an increase in one factor of production

*at constant relative prices*

*increases more than proportionally* the output of the good intensive in that factor,

and decreases the production of the other good.
What did Armenia export to Georgia in 2014?

$89.7M

Source: The Observatory of Economic Complexity. MIT
Thank you and enjoy,

and remember

The fundamental value of education is not in the specific subjects learned, but in the development of the ability to think.