

International Economics: Lecture 8

Specific Factors Model

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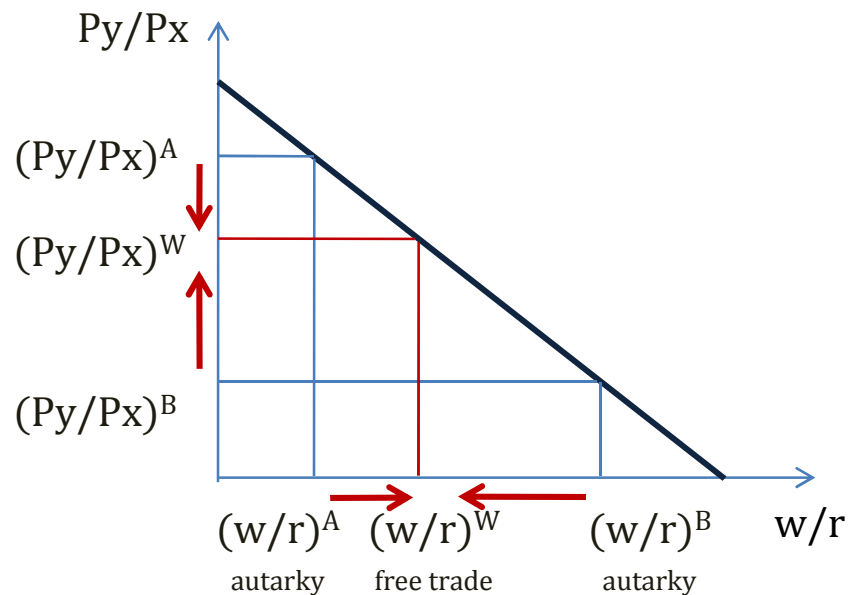
3 R's for Academic Achievement

- R1 **READ.** Read the chapter paragraph by paragraph. Read and re-read until you can answer the question: "What did the author say in this paragraph?"
- R2 **RECORD.** Once you are able to **describe** what is in the paragraph, you will want to retain that learning by **underlining, making notes in the margin, or making notes in your notebook.**
- R3 **RECITE.** Cover up your notes or printed page and **recite** aloud. Remember! If you can't say it now, you won't be able to say it tomorrow in class, nor write it in a week on an exam; so while you still have a chance, try and try again, until you can say it.

Source: F.P. Robinson. *Effective Study*.

The Heckscher – Ohlin MODEL

1. Heckscher – Ohlin theorem.
2. Factor Price Equalization theorem.
3. Rybczynski theorem.
4. Stolper-Samuelson theorem.



Heckscher – Ohlin Theorem

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

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

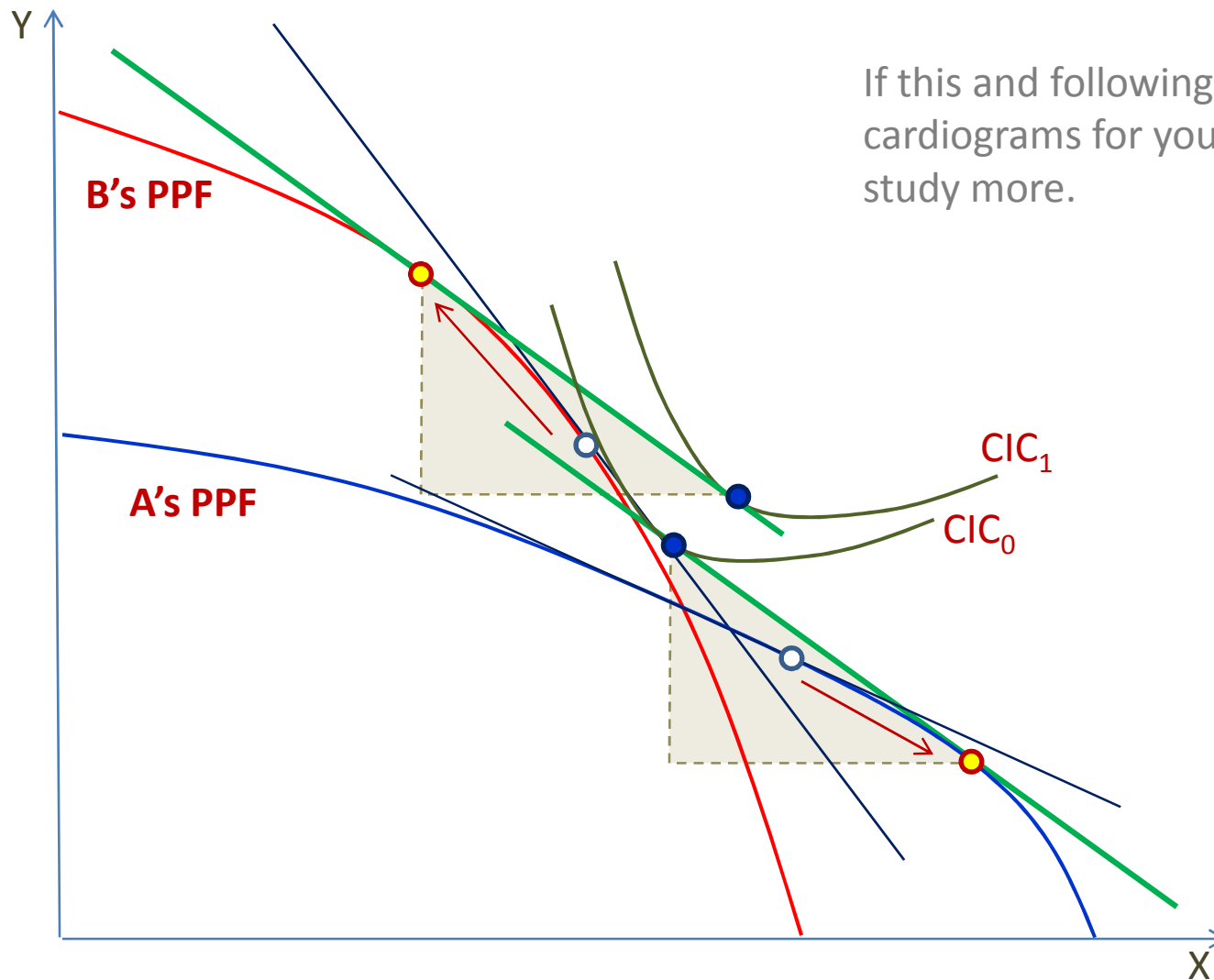
in a two-good, two-factor economy.

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

Heckscher – Ohlin theorem

X: L-intensive A: L-abundant

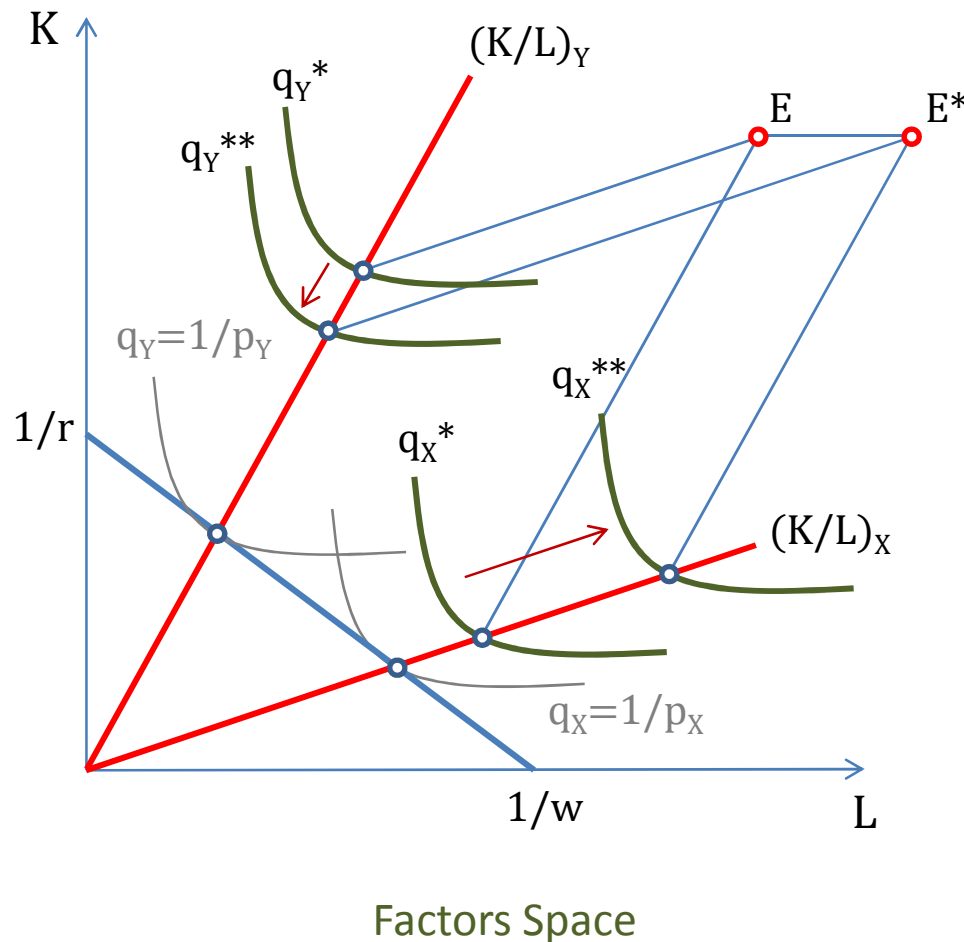
Y: K-intensive B: K-abundant



If this and following graphs look like cardiograms for you, then you should study more.

- Autarky production and consumption points.
- Free trade production points.
- Free trade consumption points.

Rybczynski theorem



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

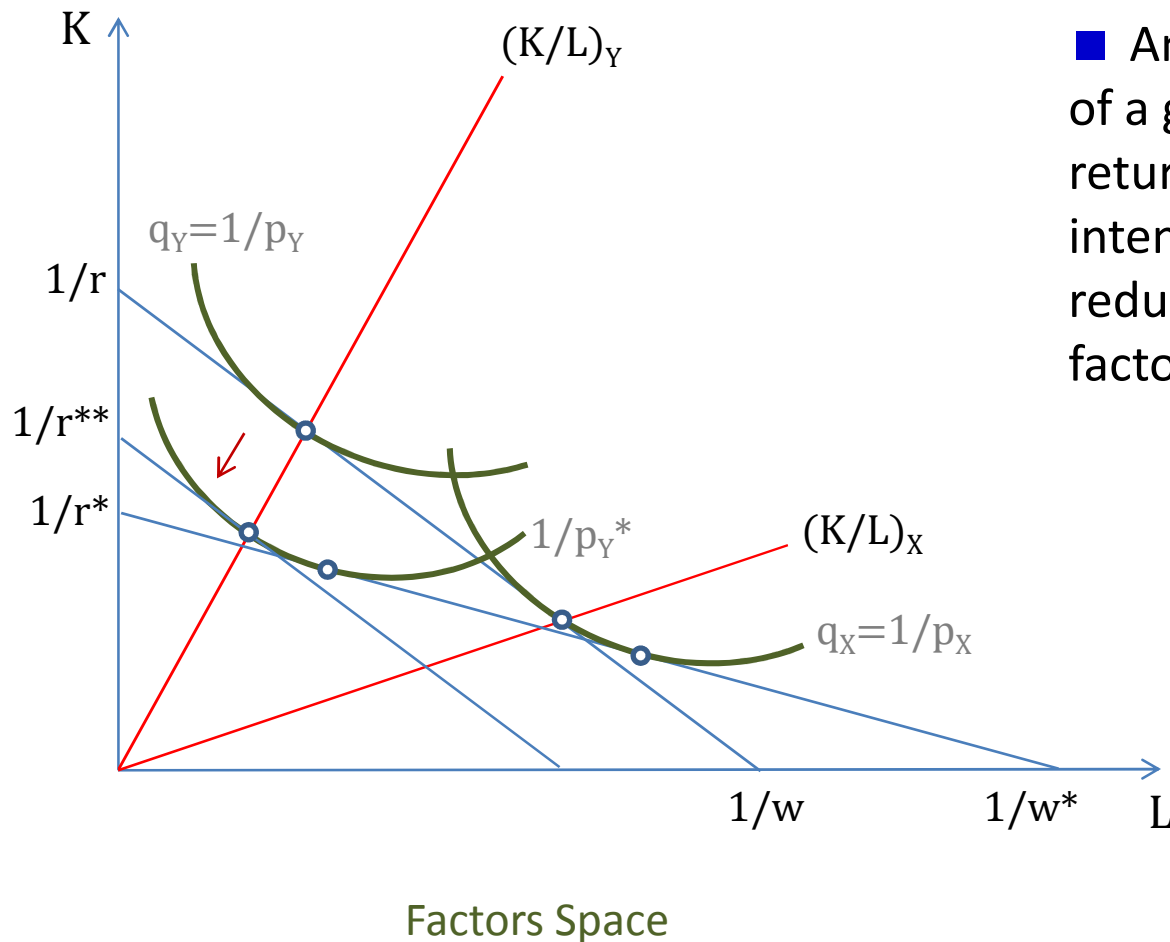
increases more than proportionally the output of the good intensive in that factor,

and decreases the production of the other good.

Stolper – Samuelson theorem

Impact of good price changes on factor incomes

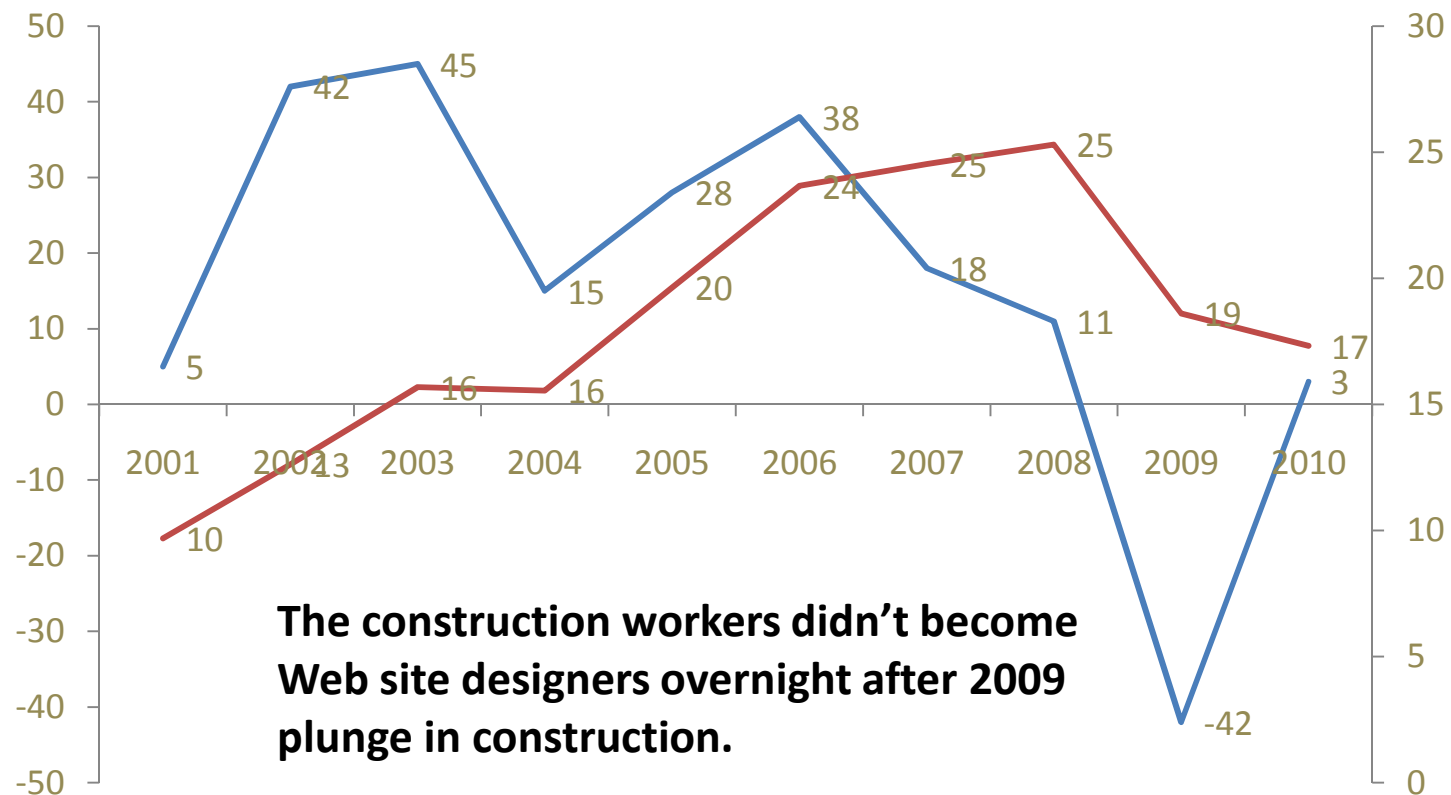
- An increase in the relative price of a good will increase the real return to the factor used intensively in that good, and reduce the real return to the other factor.



In the short run factors are specific

In 2002-08 construction was booming in Armenia.

But in 2009 in a single year it plummeted by 42%.

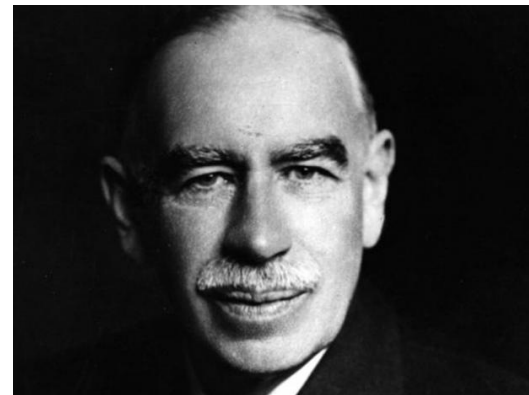


- The real growth rate of construction in Armenia (left axis)
- The share of construction in the GDP in Armenia (right axis)

HO Model is a long-run model

it is based on the idea of perfect factor mobility

In the long run we are all dead



Specific Factors Model is a short-run model

not all factors are mobile

Model assumptions:

- Three factors of production:
labor (L), capital in X (K_X), capital in Y (K_Y).
- Labor is perfectly mobile between industries.
- Capital *is specific* and each type is used in only one industry.

Diminishing marginal product

If one factor increases, while other factors are held constant,
output rises at a diminishing rate.

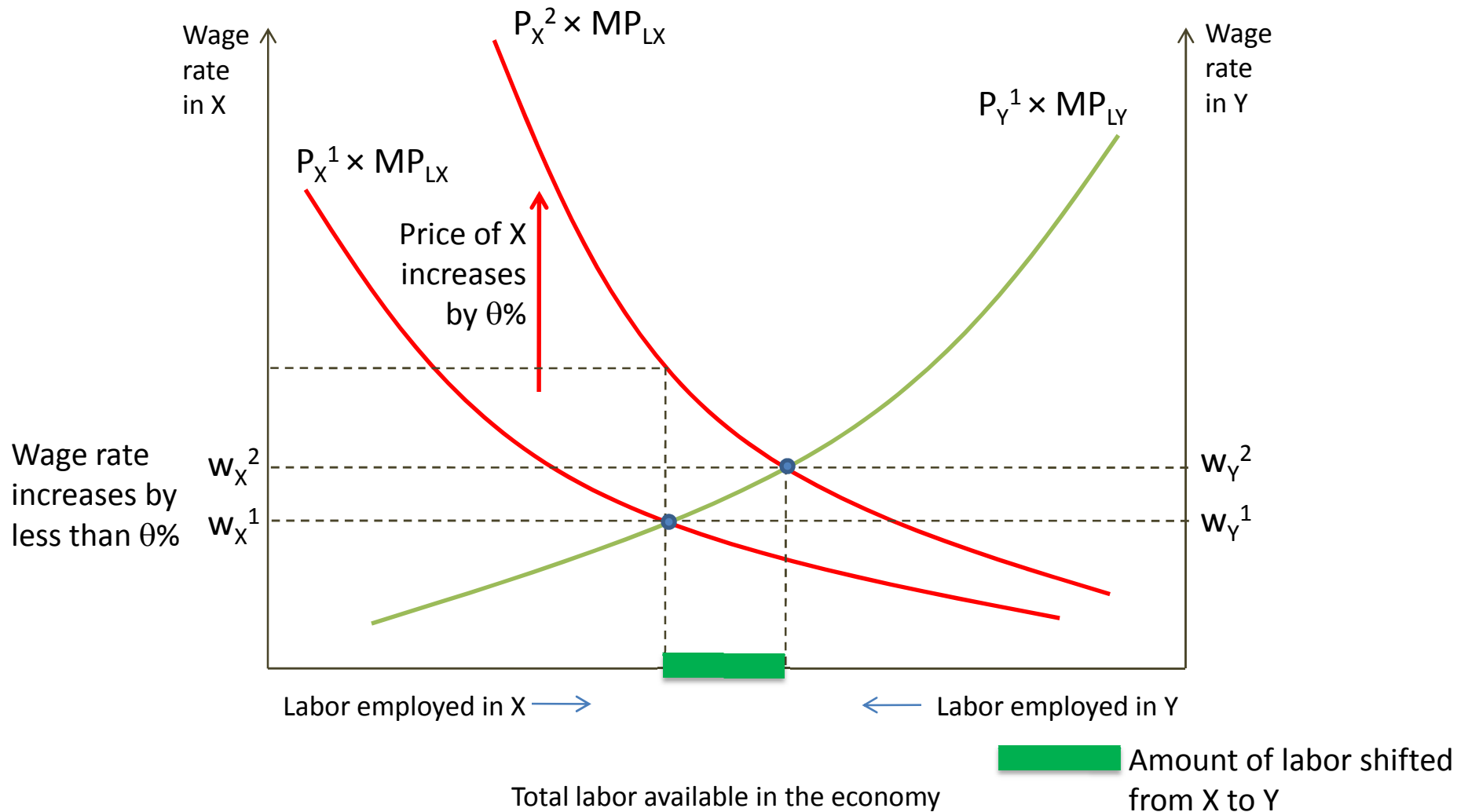
(otherwise the whole world could be fed on the output of one acre of land).

Specific Factors Model

A rise in the price of X

$VMP = P \times MP$

Value of marginal product equals to price multiplied by marginal product.



Specific Factors Model

The effect of rise in the price of X
on factor incomes

- Capital **specific to X** industry unambiguously **gains**.
- Capital **specific to Y** industry unambiguously **loses**.
- Real wage of labor decreases in terms of X, increases in terms of Y (**Neoclassical ambiguity**).

Specific Factors Model

Trade & Income distribution

- Trade increases the relative price of X, in which country has a comparative advantage.
- Trade benefits the factor that is specific to the export sector, but hurts the factor that is specific to the import-competing sector.
- Trade has ambiguous effect on mobile factor.

Specific Factors Model

Trade & Income distribution

- A country gains from Trade, because its choices are expanding.
- Those who gain from trade may compensate those who lose and still be better off.
- But in real life such redistributions are either unpractical, or ineffective.

Thank you and take care,

but remember

An investment in knowledge
pays the best interest.

Benjamin Franklin