Lecture 3c:

Side notes on Ricardo

vs. Specific Factor Model

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C181 – International Trade

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Side notes:

Getting back to the model, with industries A and M, with workers, land and capital.

Q: What if Labor is immobile in the Ricardian Model?

= Same as Specific Factor Model without Labor
Ricardo with immobile Labor (i.e. immobile factors)

Two sectors:

- Wheat with immobile labor
  = Manufacturing with Capital but no Labor

- Cloth with immobile labor
  = Agriculture with Land but no Labor
Notes

Ricardo with immobile factors

PPF?

• Production of Manufacturing goods:
  \[ = MPK \cdot K \quad \text{where MPK is constant} \]

• Production of Agricultural goods:
  \[ = MPT \cdot T \quad \text{where MPT is constant} \]
Ricardo with immobile factors

PPF

$Q_A$  

$T \cdot MPT$  

$K \cdot MPK$  

$Q_M$
Autarky equilibrium (Ricardo with immobile factors):

- Budget line (not the PPF!)
- Home no-trade equilibrium
- PPF
- Budget line (not the PPF!)
Ricardo with immobile factors

Effect of trade:

• Let’s assume that Home has a comparative advantage in Manufacturing

• The price of Manufacturing goods increases with Trade

→ Effect on production?
→ Effect on aggregate welfare?
→ Effect on income for Capital owners?
→ Effect on income for Land owners?
Clicker question: in Ricardo with immobile factors:

a) The country gains from trade on aggregate, there are no “losers” but some experience no change in welfare.

b) The country gains from trade on aggregate, but there are still some losers.

c) The country may no longer gain from trade on aggregate, and there are still some losers.

d) The country may no longer gain from trade on aggregate, but no one loses from trade.
Clicker question: in Ricardo with immobile factors:

Answer:
Ricardo with immobile factors

Effect of trade:

→ Effect on production?

No change in production since all factors are immobile
Autarky equilibrium (Ricardo with immobile factors):

![Graph showing autarky equilibrium]
TRADE equilibrium (Ricardo with immobile factors):

New budget line with Trade

Production in equilibrium (same as in Autarky)

Autarky budget line
Notes

Ricardo with immobile factors

Effect of trade:

→ Effect on aggregate welfare?
Autarky equilibrium (Ricardo with immobile factors):

New budget line with Trade

New consumption basket with Trade

Higher utility line

Production in equilibrium (same as in Autarky)

Autarky budget line
Ricardo with immobile factors

Effect of trade:

→ Effect on aggregate welfare?

Aggregate welfare still increases!

• Consumption does not have to equal production

• Consumers can still afford the Autarky consumption basket

• But now they can actually reach a higher Utility

  *(so they gain compared to Autarky)*
Ricardo with immobile factors

Effect of trade:

→ Effect on Capital owners’ welfare?

\[ R_K = P_M \cdot MPK \]
Ricardo with immobile factors

Effect of trade:

→ Effect on Capital owners’ welfare?

\[ R_K = P_M \cdot MPK \]

• HERE: No change in MPK (no labor movement)
  (unlike the more general version of the specific factor model)

• Increase in \( P_M \) implies increase in welfare
  (capital owners can buy as much manufacturing goods and more agricultural goods)
Notes

Ricardo with immobile factors

Effect of trade:

→ Effect on Land owners’ welfare?

\[ R_T = P_A \cdot MPT \]
Ricardo with immobile factors

Effect of trade:

→ Effect on Land owners’ welfare?

\[ R_T = P_A \cdot MPT \]

- **HERE:** No change in \( MPT \) (no labor movement) (unlike the more general version of the specific factor model)

- **No change in** \( P_A \) implies a decrease in welfare (land owners could buy just as much agricultural goods but fewer manufacturing goods – the cost of living increases!)
Ricardo with immobile factors

Effect of trade: summary:

→ No change in production
→ Aggregate welfare increases
→ Capital owners gain
→ Land owners loose

Same results as in the specific factor model except that there is no adjustment in MPK and MPT