EE451

Economic Growth and International Trade

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The Rybczynski Theorem (Trade & Growth)

- An expansion in the endowment of one factor of production raises the output of the commodity that uses the expanded factor intensively and reduces the output of the other commodity.
  - As labour grows, the output of the L-intensive commodity must expand to absorb the extra supply of labour.
  - Given fixed coefficient of production, the output of the K-intensive commodity must decrease in order to release the necessary amount of K.
  - Then, make further impacts on trade & income distribution.

Key Concepts

- Sources of Economic Growth & Implications to PPF
  - Factor growth
  - Technological change
- Neutral/ non-neutral growth
- Effects of an increase in real income
  - Production effect → increased output
  - Consumption effect → increased purchasing power

Trade Effects of Production Growth

- Given
  - a labour-abundant country
  - X is labour-intensive and Y is capital-intensive
  - HO predicts the country would export X and import Y.
  - Neutral factor growth
- 5 possible trade effects
  - Neutral: $\%\Delta X^P = \%\Delta Y^P$
  - Protrade: $\%\Delta X^P > \%\Delta Y^P$
  - Ultra-protrade: X^P increases, Y^P falls
  - Antitrade: $\%\Delta X^P < \%\Delta Y^P$
  - Ultra-antitrade: X^P falls, Y^P increases

Trade Effects of Production Growth: Graphical Illustrations

Trade Effects of Consumption Growth

- Neutral: $\%\Delta X^C = \%\Delta Y^C$
- Protrade: $\%\Delta X^C < \%\Delta Y^C$
- Ultra-protrade: X^C falls, Y^C increases
- Antitrade: $\%\Delta X^C > \%\Delta Y^C$
- Ultra-antitrade: X^C increases, Y^C falls

Trade Effects of Consumption Growth: Graphical Illustrations

Ultimate Impact on Trade

- Depends on income elasticity of demand for import, which shows change in import values as national income changes

$$\varepsilon_{M}^{NI} = \frac{\%\Delta M}{\%\Delta NI}$$

Ultimate Impact of Growth on Trade: Graphical Illustrations

Growth and Welfare

- Welfare change due to production growth
  - Analysis is straightforward.
- Welfare change due to consumption growth
  - A change in consumers' real income can alter CIC.
  - Analysis is a bit more complicated.

Growth and TOT

- Growth in abundant factors can lead to a deterioration of TOT and then would possibly produce negative effects on welfare.
- Immiserizing Growth
  - Bhagwati (1958)
  - Negative TOT effects **outweigh** the positive growth effects

Growth and TOT

- Growth in scarce factors leads to enhanced trade.