Globalization

University of California San Diego (UCSD)

Econ 102

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Introduction

- The globalized labor force in the world's open economies in 1980 consisted of roughly 1 billion people
- By 2000, the population growth had increased the number to about 1.5 billion workers
- Richard Freeman calls this expansion the Great Doubling
  - How have production and trade responded?
  - Have workers been affected?
  - Which sectors expanded and will continue to expand?
  - Where will individual industries be located in this newly specializing world?

Consequences of the Great Doubling

- Assume a country that produces two goods.
  - Agriculture Q_A
  - Manufacturing Q_M
- Two countries
  - Home and Foreign
- Constant return to scale
- Balanced trade
- $L > L^*$, α_M, α_A, α_M^*, α_A^*
- Define the Full Employment Condition

Consequences of the Great Doubling

- Suppose the Great Doubling happens in the Foreign Country
  - What happens to the slope of the PPF?
  - What will the great doubling do to world price?
  - What does the great doubling changes for specialization?
  - What will the great doubling do to the consumption ray?
- Should residents in the home country welcome the great doubling?
- Should residents abroad welcome the great doubling?

Productivity change

- What if globalization is driven by productivity change?
  - What happens to the slope of the PPF?
  - What will the productivity change do to world price?
  - What will the productivity change do to the consumption ray?
- Should residents in the home country welcome the productivity change?
- Should residents abroad welcome the productivity change?

Many industries: The Dornbush-Fischer-Samuelson model

- Let's assume three industries: Avocados, Motorcycles, Computers
- Suppose the per-unit labor requirement in California and Mexico are:

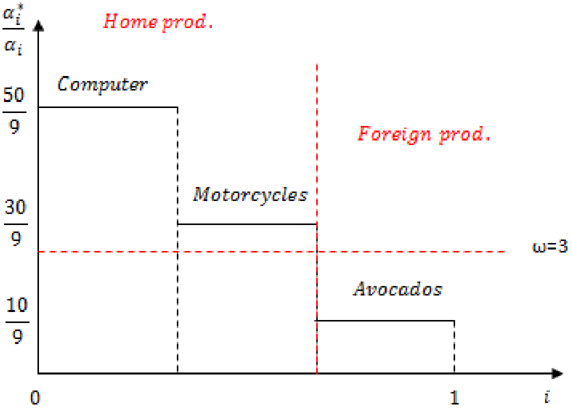
	California	Mexico	Productivity Gap $\left(\frac{\alpha_i^*}{\alpha_i}\right)$
Avocados	$\alpha_A = 0.18$	$\alpha_A^* = 0.20$	10/9
Computers	$\alpha_C = 4.5$	$\alpha_C^* = 100$	50/9
Motorcycles	$\alpha_M = 18$	$\alpha_M^* = 60$	30/9

- All California's industries are more competitive than Mexico's

The Dornbush-Fischer-Samuelson model

- To analyze the opportunity costs you will need to rank the productivity gaps
  - Where does California has the strongest comparative advantage?
  - Where does Mexico has the strongest comparative advantage?
- What can we say about the motorcycle industry which lies in-between the two limits?
  - That depends on the cross-country wage ratio $\omega = \frac{w}{w^*}$
- If $\omega < \frac{\alpha_M^*}{\alpha_M}$ California specializes in motorcycles.
- If $\omega > \frac{\alpha_M^*}{\alpha_M}$ Mexico specializes in motorcycles.

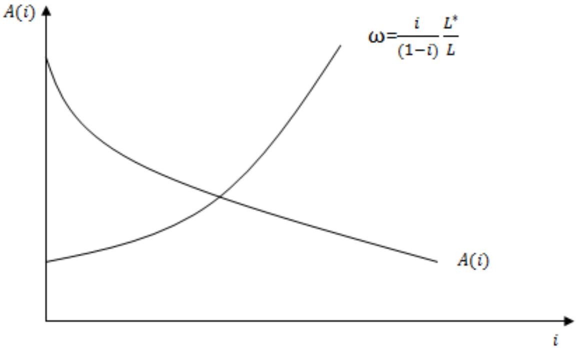
The Dornbush-Fischer-Samuelson model



The Dornbush-Fischer-Samuelson model

- We can generalize this framework to an infinity of industries
- Let's define $A(i) = \frac{\alpha_i^*}{\alpha_i}$
- The industries have different labels:
  - The industries with the narrowest productivity gap will have a label 1
  - The industries with the highest productivity gap will have a label 0
  - The home country produces good i if $\frac{w}{w^*} < A(i)$
- We need to derive the equilibrium wage gap ω from the fundamentals of our model
  - $wL = iY_w$ and $w^*L^* = (1-i)Y_w$
  - $\frac{w}{w^*} = \frac{i}{(1-i)}\frac{L^*}{L}$

The Dornbush-Fischer-Samuelson model



- What is the impact of the Great Doubling?
- What is the impact of the Productivity Change?

Conclusion

- In Ricardian trade theory the cause for globalization stems from labor productivity differences
  - Explain *Why there is Globalization*
- This lecture has analyzed *How globalization progresses*
- In the home country:
  - With two goods there is an improvement of the home's terms of trade
  - With multiple industries, the Great Doubling increases the relocation of industries with the lowest comparative advantage
  - However, workers are displaced in more productive industries and gain real incomes
- In the foreign country
  - Terms of trade are reduced but the affordable consumption possibilities with trade exceed those in autarky
  - With multiple industries, the Great Doubling increases the range of products produce abroad