Gains From Trade

Why Trade Works

Gains from Trade

• There are several steps required to show how trade is mutually beneficial

• Start from a point of “autarky”

• Trade is based on “arbitrage”

Autarky Equilibrium

• Autarky – country is completely closed to trade
• No exports, imports
• Only concerned with domestic demand and supply

Autarky Equilibrium Diagram:

- P
- Q
- CS
- PS
- S
- D
- 7.50
- 0
- 12
Trading Situation

- Trade is based on “arbitrage” – the ability to buy in one market and sell in another market for a profit

- Example – 2 countries (US, Canada)
  - Price in the US (in US$) - $7.50
  - Price in Canada (in US$) - $15.00

- In Which Direction will trade take place?

- What will be the new price in both countries?

Autarky Equilibrium

- Arbitrage situation exists, thus there exists an incentive to trade

- Trade should lead to a single “world” price that exists in both countries –why?

- Where will that “world price” be located?

- What determines the “world price”?
Excess Supply/Demand
• If we think that the world price ($P_W$) will be between the autarky prices in Canada ($P_C$) and the US ($P_{US}$), this creates excess supply or excess demand in each country.
• In this example, $P_C > P_W > P_{US}$
  • In the US, excess supply is generated that can be exported to Canada
  • In Canada, excess demand is created for goods that can be imported from the US

Determination of World Price
• $P_W$ is determined at the price where excess demand and excess supply are equal

Welfare Effects of Trade
• We can look at the welfare effects of trade in two ways
  – Country as a whole (CS+PS+GR)
  – Individual members of society
    • Consumers (CS)
    • Firms (PS)
    • Government (GR)
Effects of Free Trade II

• In our example of trade between the US and Canada, suppose that the world price ($P_W$) = $11.00.

  – What happens to CS and PS in Canada?
  – What happens to CS and PS in the US?
  – Does Canada gain from this trade?
  – Does the US gain from this trade?

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**Canadian Welfare Changes**

In autarky,

- $CS = v$
- $PS = x + w$

With trade,

- $CS = v + w + y$
- $PS = x$

Net Benefit from trade = $y$

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**US Welfare Changes**

In autarky,

- $CS = a + b + c$
- $PS = d + e$

With trade,

- $CS = a$
- $PS = b + c + d + e + f$

Net benefit from trade = $f$
Gains From Trade: Conclusion

- Both countries gain - trade is “mutually beneficial”
- “Who” benefits in each country depends upon whether the country imports or exports
- How we measure benefits/costs
  - Consumer/Producer surplus
  - Equal weights to both
  - “One dollar, one-vote” system (Monetization)