N. GREGORY MANKIW

PRINCIPLES OF

ECONOMICS

Eight Edition

CHAPTER 9

Application: International Trade

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 1

Look for the answers to these questions:

- What determines how much of a good a country will import or export?
- Who benefits from trade? Who does trade harm? Do the gains outweigh the losses?
- If policymakers restrict imports, who benefits? Who is harmed? Do the gains from restricting imports outweigh the losses?
- What are some common arguments for restricting trade? Do they have merit?

 2

Review from Chapter 3

- A country has a comparative advantage in a good
  - If it produces the good at lower opportunity cost than other countries
- Countries can gain from trade
  - If each exports the goods in which it has a comparative advantage

 3

The Determinants of Trade

- The equilibrium without trade
  - Only domestic buyers and sellers
  - Equilibrium price and quantity
    - Determined on the domestic market
  - Total benefits
    - Consumer surplus
    - Producer surplus

 4

World Price and Comparative Advantage

- ➢P_W = the world price of a good, the price that prevails in world markets
- ➢P_D = domestic price without trade
- If $P_D < P_W$,
  - Domestic country has comparative advantage, country exports the good
- If $P_D > P_W$,
  - Domestic country does not have comparative advantage, country imports the good

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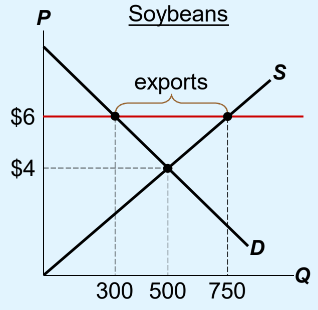
The Small Economy Assumption

- A small economy (like Taiwan) is a price taker in world markets:
  - Not always true—especially U.S. & China
  - Its actions have no effect on P_W
  - When a small economy engages in free trade, P_W is the only relevant price:
    - No seller would accept less than P_W (can sell the good for P_W in world markets)
    - No buyer would pay more than P_W (can buy the good for P_W in world markets)

 6

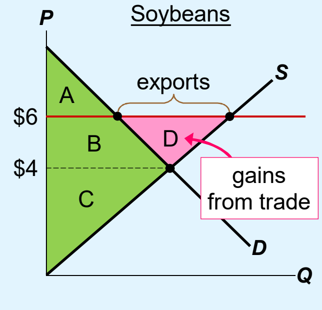
A Country That Exports Soybeans

Without trade,
P_D = $4
Q = 500
P_W = $6
Under free trade,
domestic consumers demand 300
domestic producers supply 750
exports = 450



A Country That Exports Soybeans

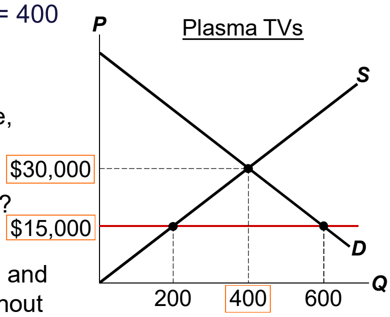
Without trade,
CS = A + B
PS = C
Total surplus
= A + B + C
With trade,
CS = A
PS = B + C + D
Total surplus
= A + B + C + D



Active Learning 1 — Analysis of Trade

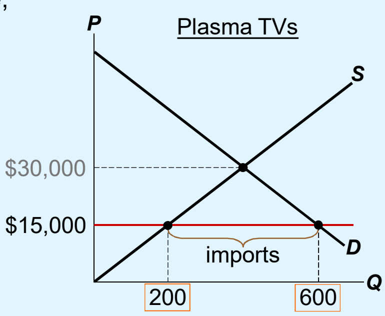
Without trade,
P_D = $30,000, Q = 400
In world markets,
P_W = $15,000

- Under free trade, how many TVs will the country import or export?
- Identify CS, PS, and total surplus without trade, and with trade.



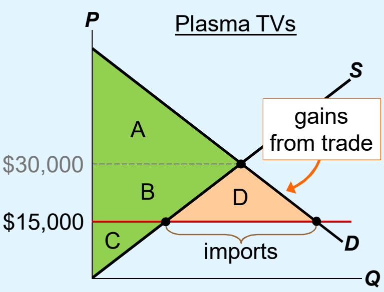
Active Learning 1 — Answers

Under free trade,
- domestic consumers demand 600
- domestic producers supply 200
- imports = 400



Active Learning 1 — Answers

Without trade,
CS = A
PS = B + C
Total surplus
= A + B + C
With trade,
CS = A + B + D
PS = C
Total surplus
= A + B + C + D



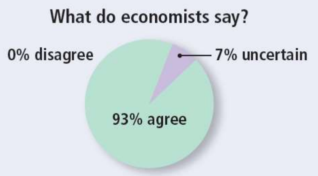
Summary: The Welfare Effects of Trade

	$P_D < P_W$	$P_D > P_W$
direction of trade	exports	imports
consumer surplus	falls	rises
producer surplus	rises	falls
total surplus	rises	rises

Whether a good is imported or exported, trade creates winners and losers. But the gains exceed the losses.

ASK THE EXPERTS
Trade Deals

"Past major trade deals have benefited most Americans."



Winners and Losers From Trade

- Other benefits of international trade
  - Consumers: increased variety of goods
  - Producers: lower costs - economies of scale
  - Increased competition: reduce market power of domestic firms (increase total welfare)
  - Enhanced flow of ideas, facilitates the spread of technological advances around the world

Winners and Losers From Trade

- Then why all the opposition to trade?
  - The losers have more incentive to organize and lobby for restrictions on trade:
    - Losses: concentrated among a small group of people, who feel them acutely
    - Gains: spread thinly over many people, who may not see how trade benefits them
    - The winners from trade could compensate the losers and still be better off
    - (but such compensation rarely occurs)

Winners and Losers From Trade

- Tariff
  - Tax on goods produced abroad and sold domestically
- Free trade
  - Domestic price = World price
- Tariff on imports
  - Raises domestic price above world price
    - By the amount of the tariff

Analysis of a Tariff on Cotton Shirts

P_W = $200

Free trade:

buyers demand 80

sellers supply 25

imports = 55

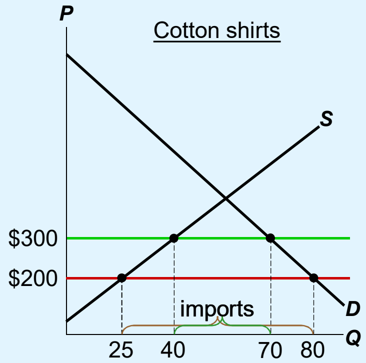
T = $100/shirt

price rises to $300

buyers demand 70

sellers supply 40

imports = 30



Analysis of a Tariff on Cotton Shirts

Free trade

CS = A + B + C + D + E + F

PS = G

Total surplus = A + B + C + D + E + F + G

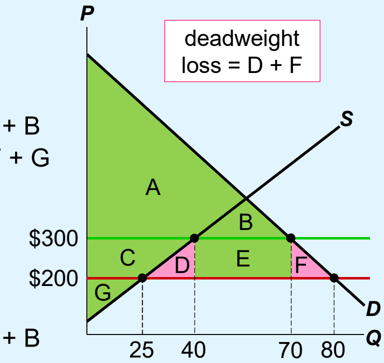
With tariff

CS = A + B

PS = C + G

Revenue = E

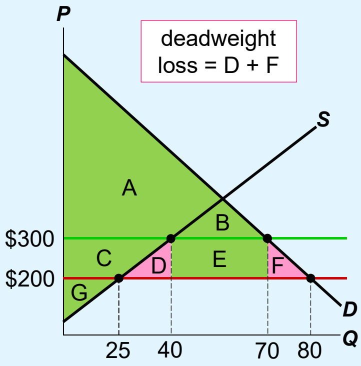
Total surplus = A + B + C + E + G



Analysis of a Tariff on Cotton Shirts

D = deadweight loss from the overproduction of shirts

F = deadweight loss from the under-consumption of shirts



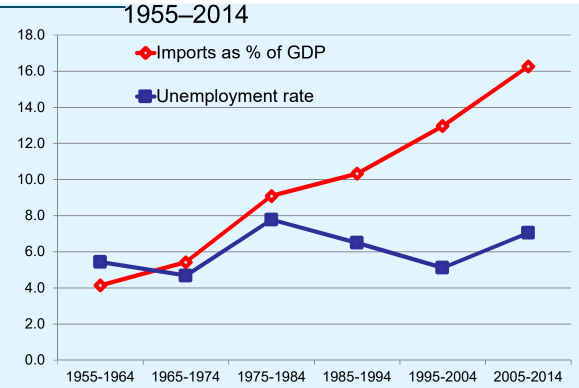
Import Quotas

- Import quota
  - Quantitative limit on imports of a good
  - Mostly has the same effects as a tariff:
    - Raises price, reduces quantity of imports
    - Reduces buyers' welfare
    - Increases sellers' welfare
  - Creates profits for the foreign producers of the imported goods, who can sell them at higher price

Arguments For Restricting Trade

- The jobs argument
  - "Trade with other countries destroys domestic jobs"
- But: Free trade creates jobs at the same time that it destroys them
  - Total unemployment does not rise as imports rise, because job losses from imports are offset by job gains in export industries….

U.S. Imports & Unemployment, decade averages, 1955–2014



Arguments For Restricting Trade

- The national-security argument
  - "The industry is vital for national security and it should be protected from foreign competition, to prevent dependence on imports that could be disrupted during wartime"
- Fine: When there are legitimate concerns over national security
  - But producers may exaggerate their own importance to national security to obtain protection from foreign competition

Arguments For Restricting Trade

- The infant-industry argument
  - "New industries need temporary trade restriction to help them get started"
- But: Difficult to implement in practice
  - The temporary policy is hard to remove
  - Protection is not necessary for an infant industry to grow

Arguments For Restricting Trade

- The unfair-competition argument
  - "Producers argue their competitors in another country have an unfair advantage, e.g. due to government subsidies"
- But: Increase in total surplus for the country
  - We should welcome imports of low-cost products subsidized by the other country's taxpayers
  - The gains to our consumers will exceed the losses to our producers

Arguments For Restricting Trade

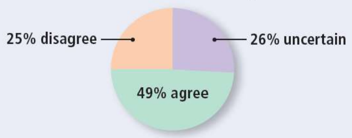
- The protection-as-a-bargaining-chip argument
  - "Trade restrictions can be useful when we bargain with our trading partners"
- But: The threat may not work
  - U.S. threaten to limit TSMC's A13 imports unless Taiwan lifts restrictions on American beef.
  - Suppose Taiwan refuses. Then the U.S. must choose between two bad options:
    - A) Restrict imports from Taiwan, which reduces welfare in the U.S.
    - B) Don't restrict imports, which reduces U.S. credibility.

ASK THE EXPERTS

Trade Deals

"Refusing to liberalize trade unless partner countries adopt new labor or environmental rules is a bad policy, because even if the new standards would reduce distortions on some dimensions, such a policy involves threatening to maintain large distortions in the form of restricted trade."

What do economists say?



CASE STUDY

Trade agreements and the WTO

- World Trade Organization, WTO
- Unilateral approach to achieve free trade
  - Remove its trade restrictions on its own
  - Great Britain, 19th century
  - Chile and South Korea, recent years
- Multilateral approach to free trade
  - Reduce its trade restrictions while other countries do the same
  - NAFTA, GATT
  - NAFTA now replaced by USMCA!!

CASE STUDY

Trade agreements and the WTO

- North American Free Trade Agreement (NAFTA)
  - 1993, lowered trade barriers among the United States, Mexico, and Canada
- General Agreement on Tariffs and Trade (GATT)
  - Continuing series of negotiations among many of the world's countries with the goal of promoting free trade

CASE STUDY

Trade agreements and the WTO

- GATT
  - United States helped to found GATT
    - After World War II
    - In response to the high tariffs imposed during the Great Depression
  - Successfully reduced the average tariff among member countries from about 40% to 5%
  - Enforced by the WTO
  - 2015: 162 countries; more than 97 % of world trade

Trade agreements and the WTO

CASE STUDY

- Advantages of the multilateral approach
  - Potential to result in freer trade than unilateral approach
    - Reduce trade restrictions abroad and at home
  - Political advantage
    - Producers are fewer and better organized than consumers
    - Greater political influence

Summary

- A country will export a good if the world price of the good is higher than the domestic price without trade. Trade raises producer surplus, reduces consumer surplus, and raises total surplus.
- A country will import a good if the world price is lower than the domestic price without trade. Trade lowers producer surplus but raises consumer and total surplus.
- A tariff benefits producers and generates revenue for the government, but the losses to consumers exceed these gains.

Summary

- Common arguments for restricting trade include: protecting jobs, defending national security, helping infant industries, preventing unfair competition, and responding to foreign trade restrictions.
- Some of these arguments have merit in some cases, but economists believe free trade is usually the better policy.

Chapter 9: International Trade

- Imports benefit consumers
- Exports benefit producers
- Trade benefit the entire economy
  - Should Taiwan sign FTA or ECFA with other countries?
- Homework:
  - Mankiw, Ch.9, Problem 3, 4, 7-10

Chapter 9: International Trade

- 2007 - Essay Q5
- 2008 - (Multi-Choice Q9-Q11, Q15)
- 2009 - Essay B
- 2010 - (True/False Q2, Q9)
- 2012 - Essay A7-A9 (True/False Q9)
- 2013 - Essay III (True/False Q3)
- 2014 - Essay C-2
- 2015 - Essay C
- 2018 - Essay B1-B5

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