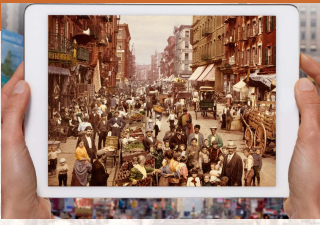


N. GREGORY MANKIWI

PRINCIPLES OF
ECONOMICS
Eight Edition



CHAPTER
9

Application:
International Trade

Premium PowerPoint Slides by:
V. Andreea CHIRITESCU
Eastern Illinois University

Modified by Joseph Tao-yi Wang

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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?

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

5

The Small Economy Assumption

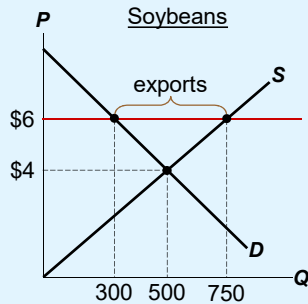
- A small economy (like Taiwan) is a price taker in world markets:
 - Not always true—especially U.S. & China
 - Its actions have no effect on P_W
 - When a small economy engages in free trade, P_W is the only relevant price:
 - No seller would accept less than P_W (can sell the good for P_W in world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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

6

A Country That Exports Soybeans

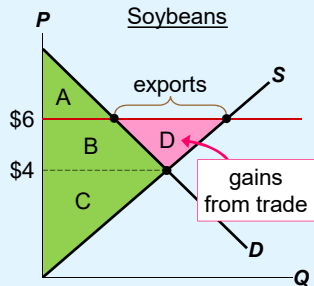
Without trade,
 $P_D = \$4$
 $Q = 500$
 $P_W = \$6$
 Under free trade,
 domestic
 consumers
 demand 300
 domestic producers
 supply 750
 exports = 450



© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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
 $= A + B + C + D$



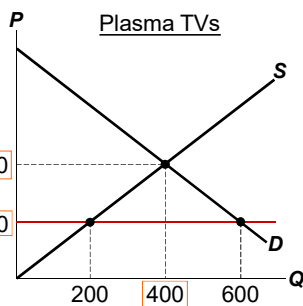
© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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.



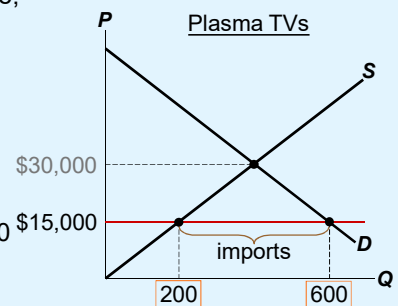
© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

Active Learning 1

Answers

Under free trade,

- domestic
 consumers
 demand 600
- domestic
 producers
 supply 200
- imports = 400

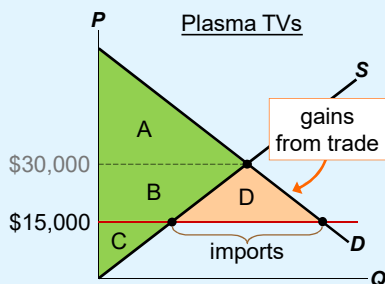


© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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
 $= A + B + C + D$



© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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.

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

ASK THE EXPERTS

Trade Deals

"Past major trade deals have benefited most Americans."

What do economists say?

0% disagree, 7% uncertain, 93% agree

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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)

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

Analysis of a Tariff on Cotton Shirts

$P_w = \$200$
 Free trade:
 buyers demand 80
 sellers supply 25
 imports = 55
 $T = \$100/\text{shirt}$
 price rises to \$300
 buyers demand 70
 sellers supply 40
 imports = 30

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

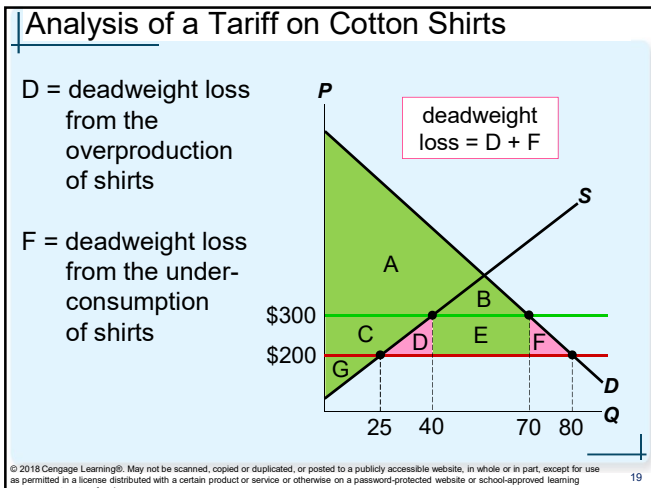
Analysis of a Tariff on Cotton Shirts

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 = $A + B + C + E + G$

deadweight loss = $D + F$

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.



Import Quotas

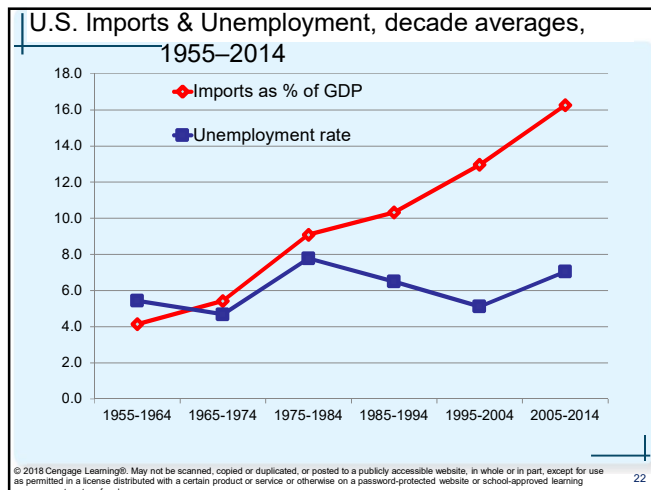
- **Import quota**
 - Quantitative limit on imports of a good
 - Mostly has the same effects as a tariff:
 - Raises price, reduces quantity of imports
 - Reduces buyers' welfare
 - Increases sellers' welfare
 - Creates profits for the foreign producers of the imported goods, who can sell them at higher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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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....

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.



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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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 A12 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.

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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?

Response	Percentage
Agree	49%
Disagree	25%
Uncertain	26%

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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!!**

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use.

CASE STUDY Trade agreements and the WTO

- **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

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use. 31

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.

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use. 32

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.

© 2018 Cengage Learning®. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part, except for use as permitted in a license distributed with a certain product or service or otherwise on a password-protected website or school-approved learning management system for classroom use. 33

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

2018/10/12 International Trade Joseph Tao-yi Wang

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

2018/10/12 International Trade Joseph Tao-yi Wang