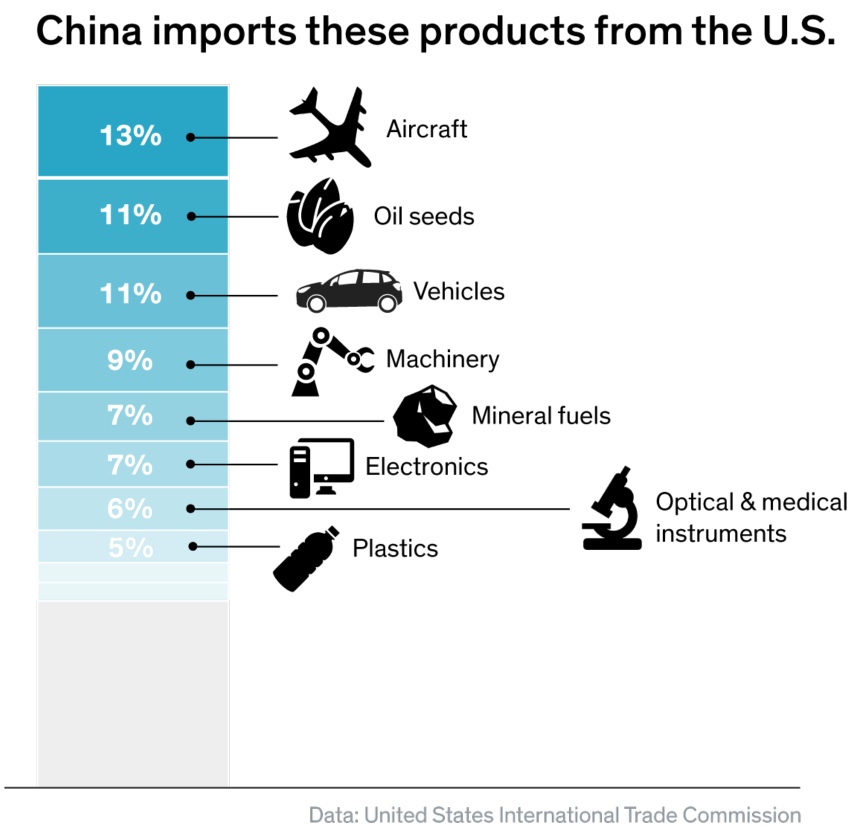
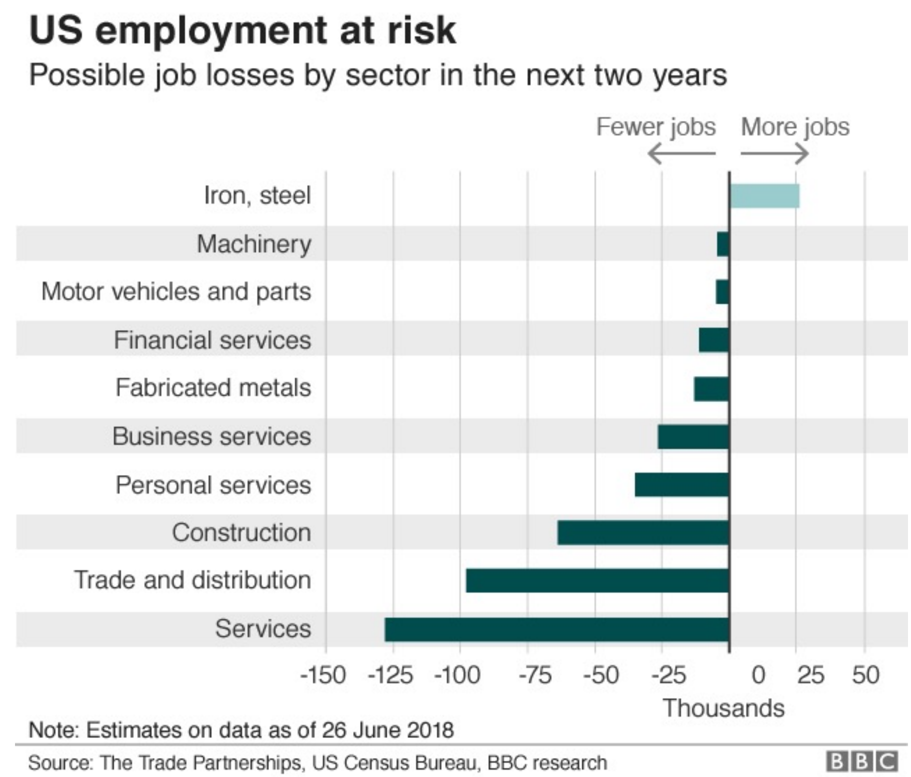
Economics 1
Principles of Economics

International Trade
(Chapter 9)

Dr. Randall R. Rojas



China imports these products from the U.S.
13%
Aircraft
11%
Oil seeds
11%
Vehicles
9%
Machinery
7%
Mineral fuels
7%
Electronics
6%
Optical & medical instruments
5%
Plastics
Data: United States International Trade Commission



US employment at risk
Possible job losses by sector in the next two years
Fewer jobs
More jobs
Iron, steel
Machinery
Motor vehicles and parts
Financial services
Fabricated metals
Business services
Personal services
Construction
Trade and distribution
Services
-150
-125
-100
-75
-50
-25
0
25
50
Thousands
Note: Estimates on data as of 26 June 2018
Source: The Trade Partnerships, US Census Bureau, BBC research

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?

I. Introduction

Recall from Chapter 2:

- 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.
- Now we apply the tools of welfare economics to see where these gains come from and who gets them.

I. Introduction

The World Price and Comparative Advantage

- Def: P_W = the world price of a good, the price that prevails in world markets.
- Def: P_D = domestic price without trade.
- If $P_D < P_W$,
  - The country has a comparative advantage in the good.
  - Under free trade, the country exports the good.
- If $P_D > P_W$,
  - The country does not have a comparative advantage.
  - Under free trade, the country imports the good.

I. Introduction

The Small Economy Assumption

- A small economy is a price taker in world markets: Its actions have no effect on P_W.
- Not always true—especially for the U.S.—but simplifies the analysis without changing its lessons.
  - No seller would accept less than P_W, since she could sell the good for P_W in world markets.
  - No buyer would pay more than P_W, since he could buy the good for P_W in world markets.

II. Example: A Country That Exports Soybeans 1 of 2

Without trade,

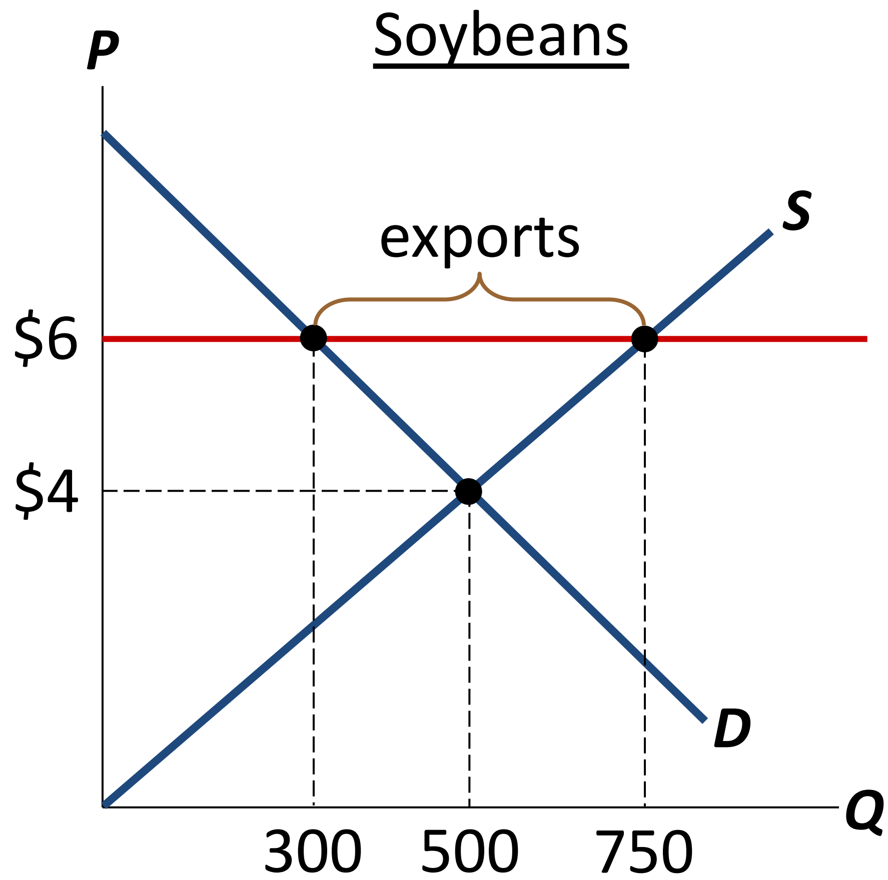
P_D = \$4

Q = 500

P_W = \$6

Under free trade,

- Domestic consumers demand 300 .
- Domestic producers supply 750.
- Exports = 450



II. Example: A Country That Exports Soybeans

Without trade,

CS = A + B

PS = C

Total surplus

= A + B + C

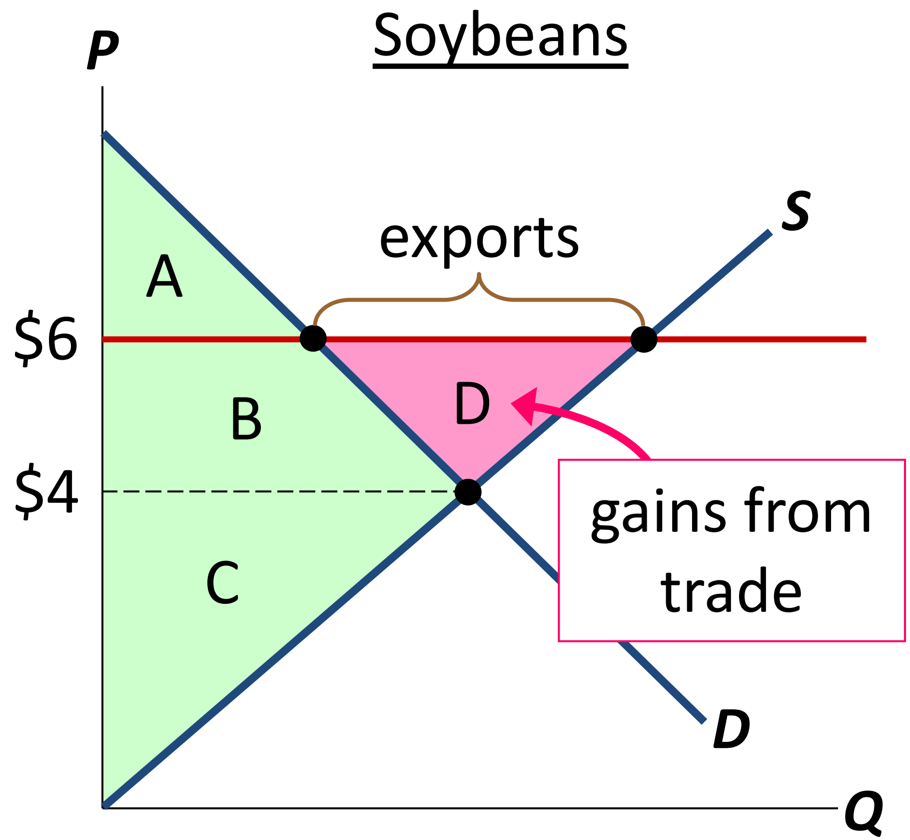
With trade,

CS = A

PS = B + C + D

Total surplus

= A + B + C + D



CS = Consumer Surplus

PS = Producer Surplus

III. Example: A Country That Imports Plasma TVs

Without trade,

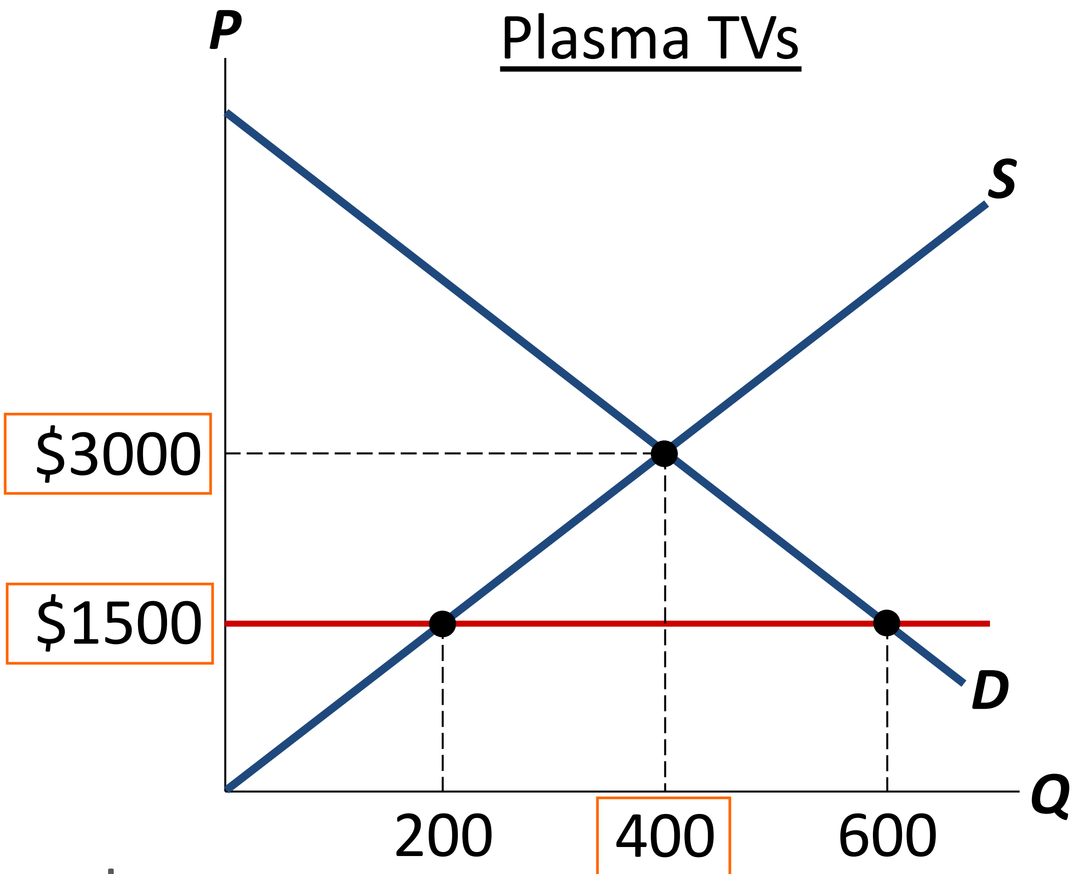
P_D = \$3000, Q = 400

In world markets,

P_W = \$1500

Under free trade, how many TVs will the country import or export?

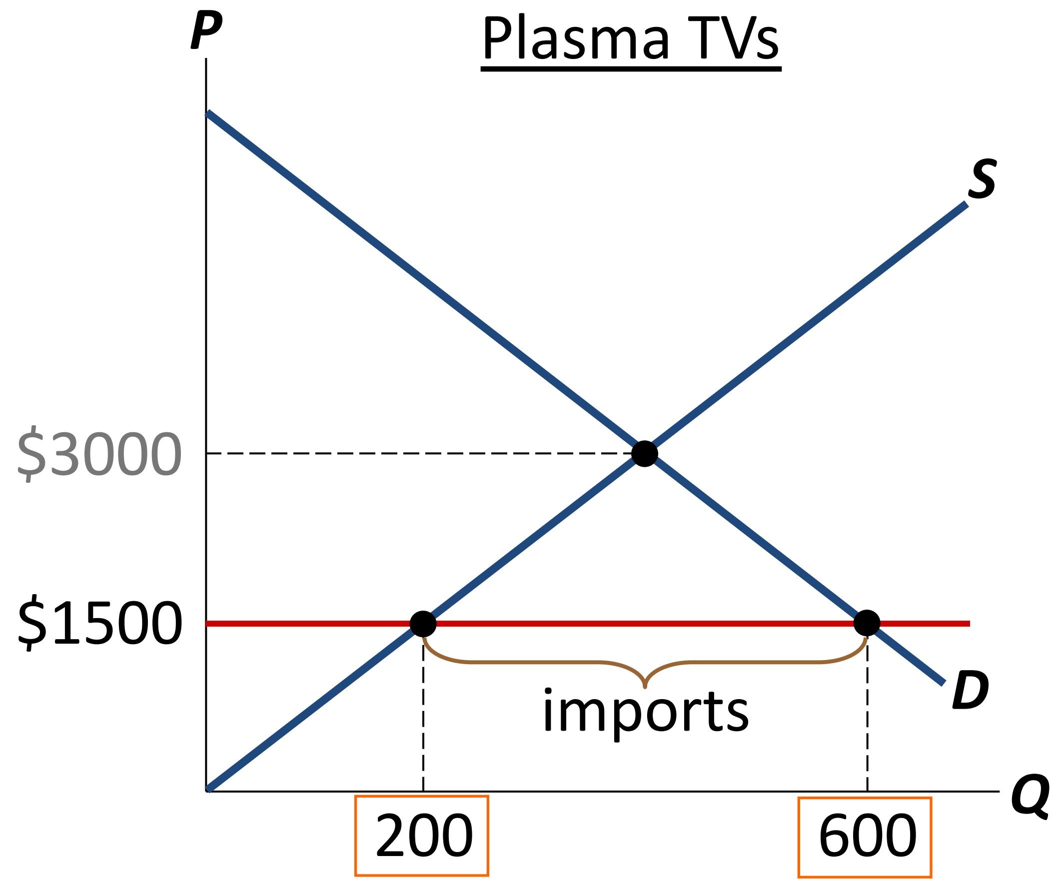
Identify CS, PS, and total surplus without trade, and with trade.



III. Example: A Country That Imports Plasma TVs

Under free trade,

- Domestic consumers demand 600.
- Domestic producers supply 200.
- Imports = 400



III. Example: A Country That Imports Plasma TVs

Without trade,

CS = A

PS = B + C

Total surplus

= A + B + C

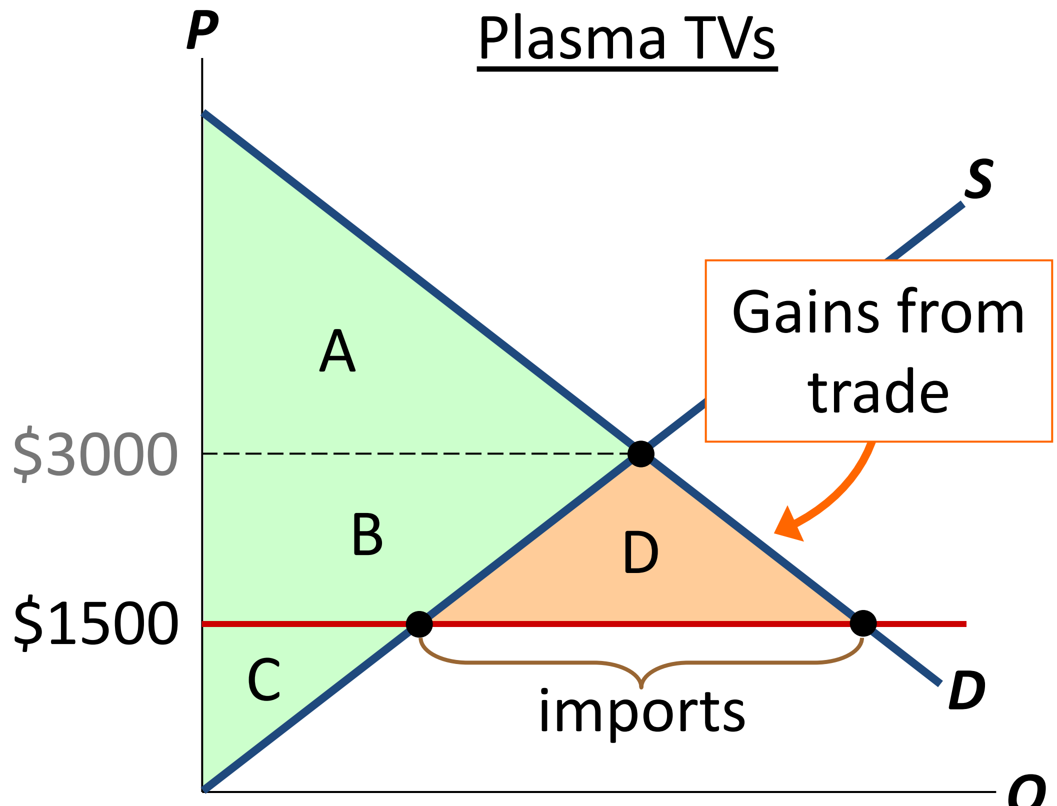
With trade,

CS = A + B + D

PS = C

Total surplus

= A + B + C + D



CS = Consumer Surplus

PS = Producer Surplus

IV. 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.

V. Other Benefits of International Trade

- Consumers enjoy increased variety of goods.
- Producers sell to a larger market, may achieve lower costs by producing on a larger scale.
- Competition from abroad may reduce market power of domestic firms, which would increase total welfare.
- Trade enhances the flow of ideas, facilitates the spread of technology around the world.

VI. Why All the Opposition to Trade?

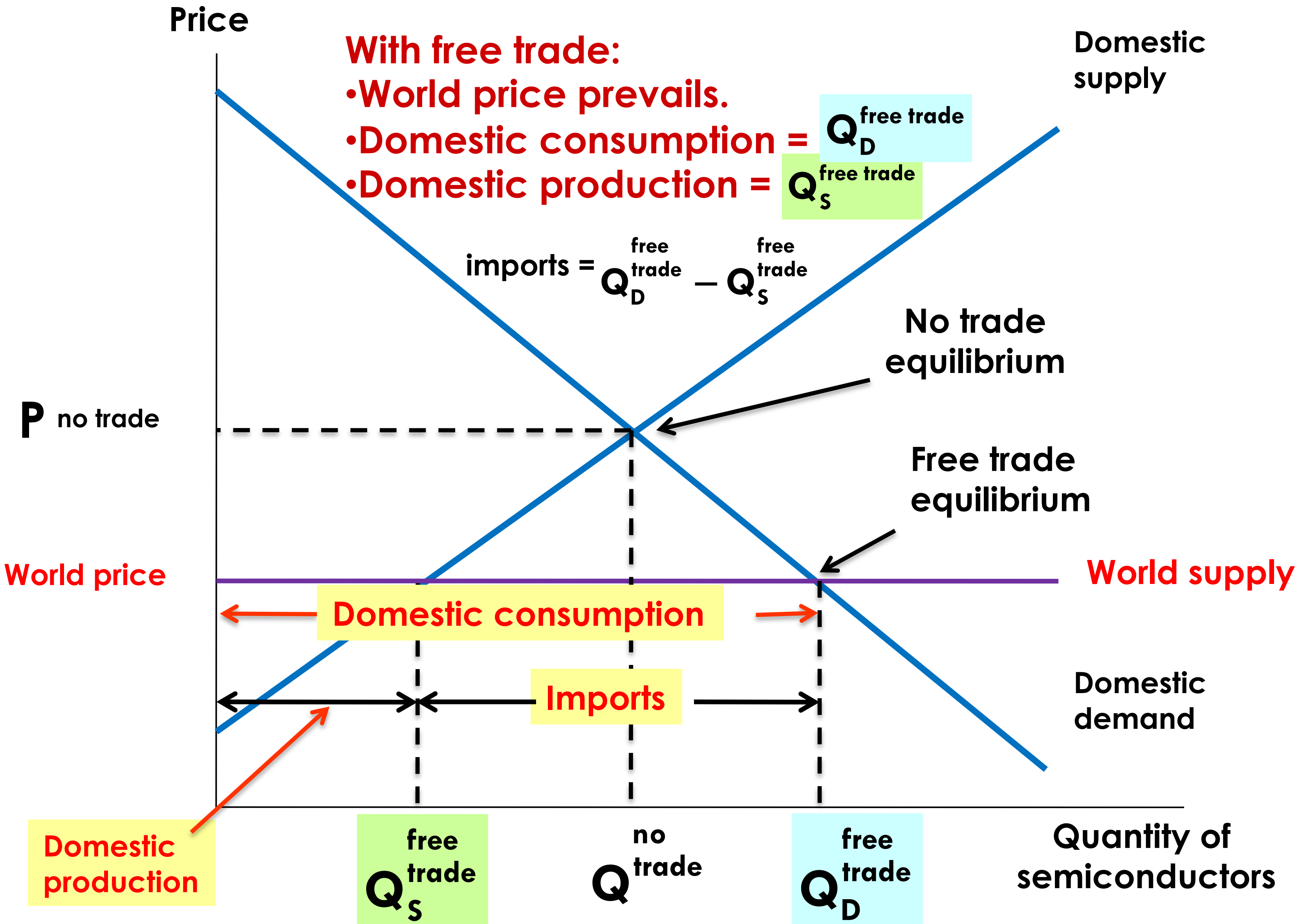
Recall one of the Ten Principles from Chapter 1: Trade can make everyone better off.

- The winners from trade could compensate the losers and still be better off. Yet, such compensation rarely occurs.
- The losses are often highly concentrated among a small group of people, who feel them acutely.
- The gains are often spread thinly over many people, who may not see how trade benefits them.
- Hence, the losers have more incentive to organize and lobby for restrictions on trade.

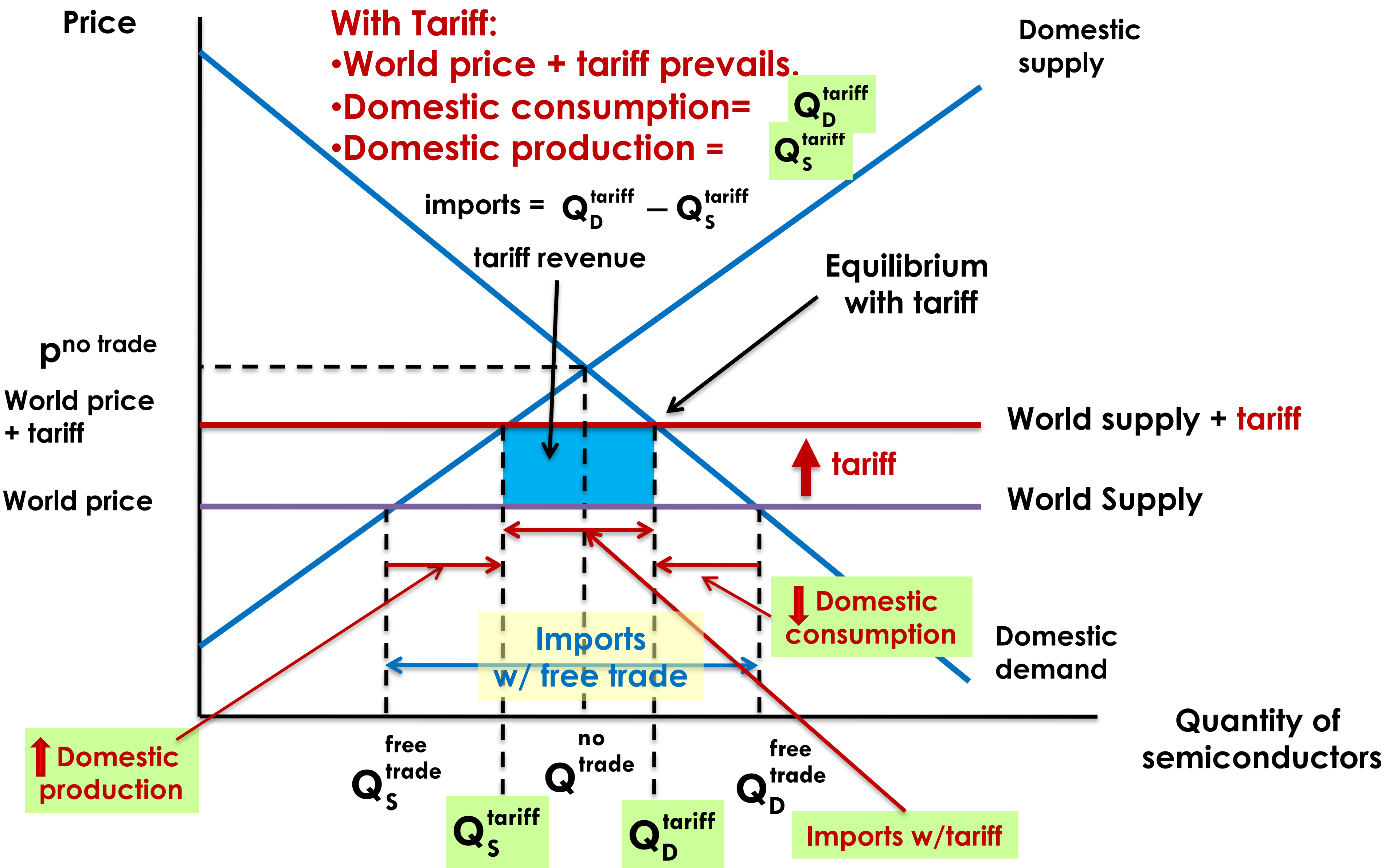
VII. Trade Barriers (Tariff)

- Def: Tariff = A tax on imports.
- Example: Cotton shirts
  - P_W = \$20
  - Tariff: T = \$10/shirt
- Consumers must pay \$30 for an imported shirt.
- Therefore, domestic producers can charge \$30/shirt.
- In general, the price facing domestic buyers & sellers equals (P_W + T).

VII. Trade Restriction (Tariff)



VII. Trade Restriction (Tariff)



VIII. Example: Analysis of a Tariff on Cotton Shirts

P_W = \$20

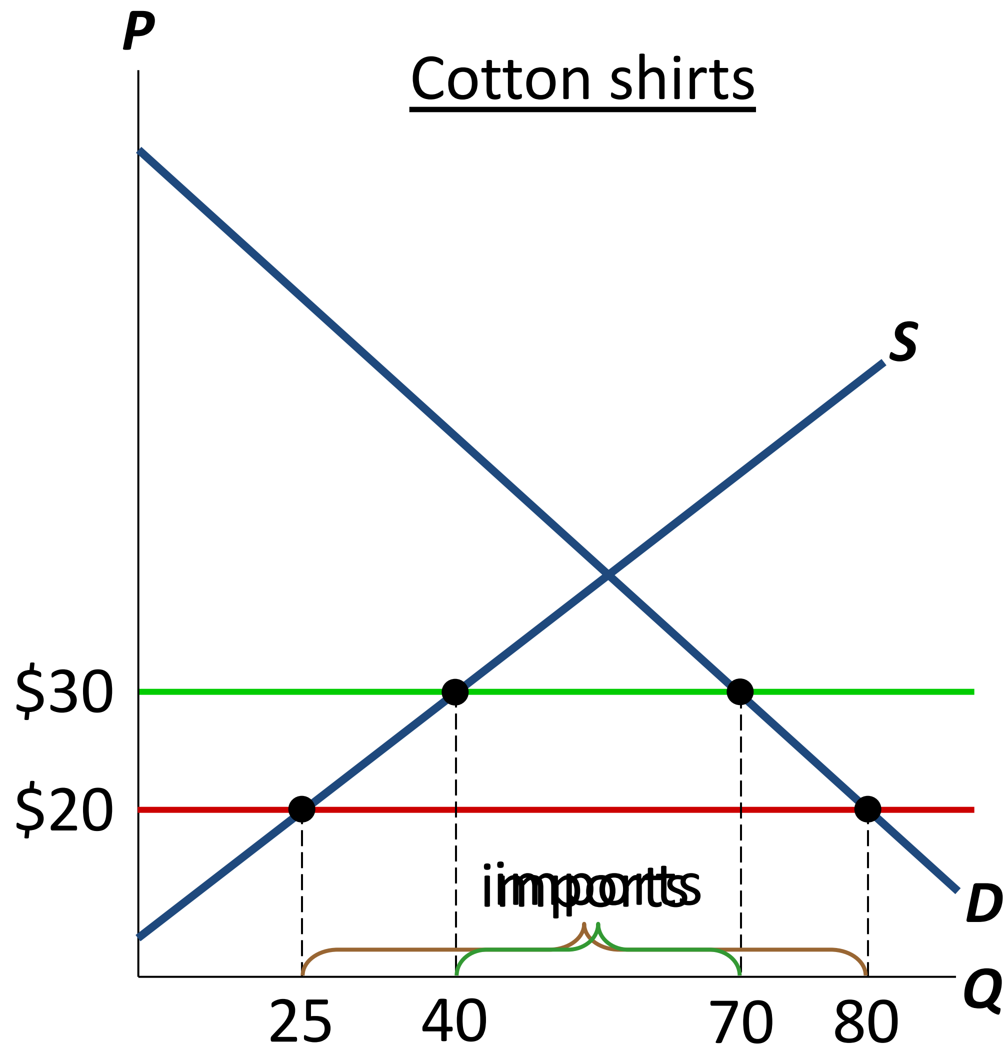
Free trade:

- buyers demand 80
- sellers supply 25
- imports = 55

T = \$10/shirt

Tariff:

- price rises to \$30
- buyers demand 70
- sellers supply 40
- imports = 30



VIII. Example: Analysis of a Tariff on Cotton Shirts

<u>Free trade</u>

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

PS = G

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

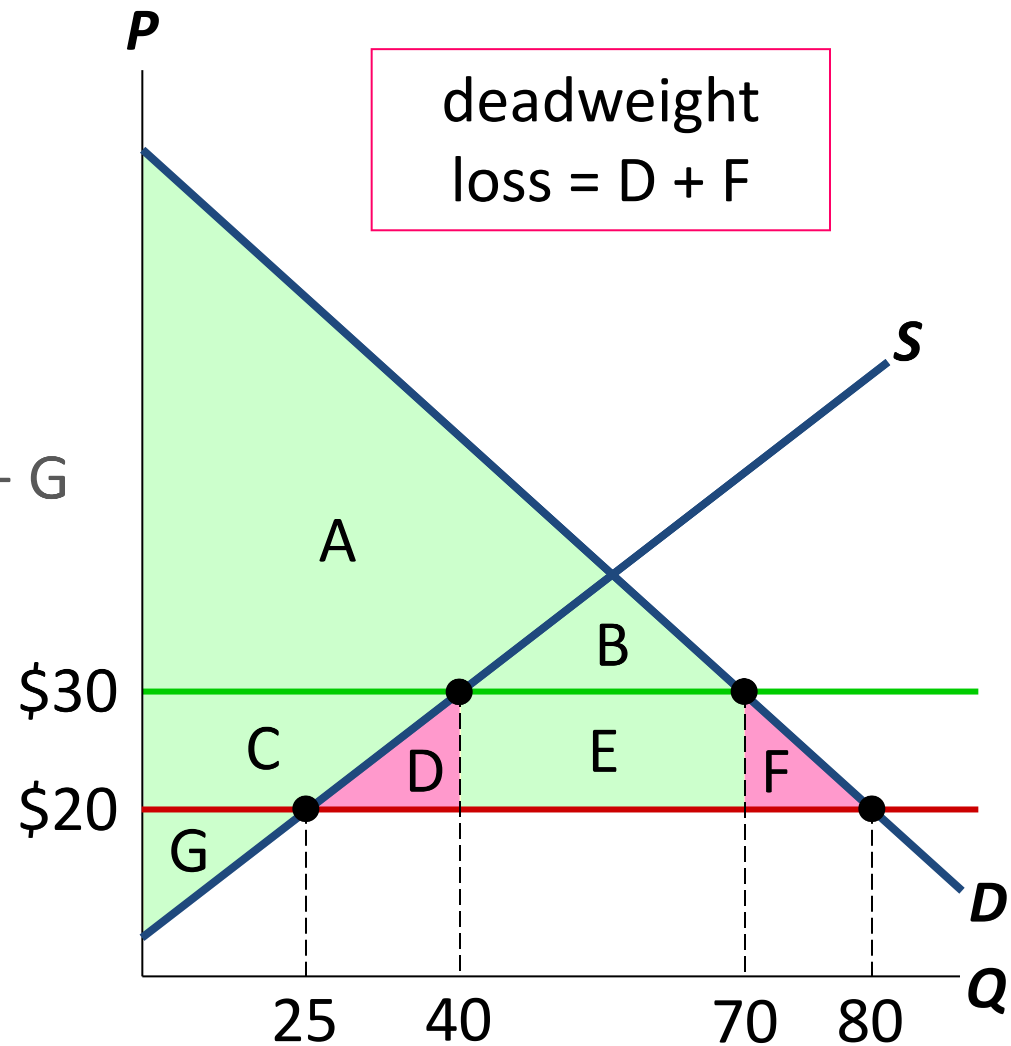
<u>Tariff</u>

CS = A + B

PS = C + G

Revenue = E

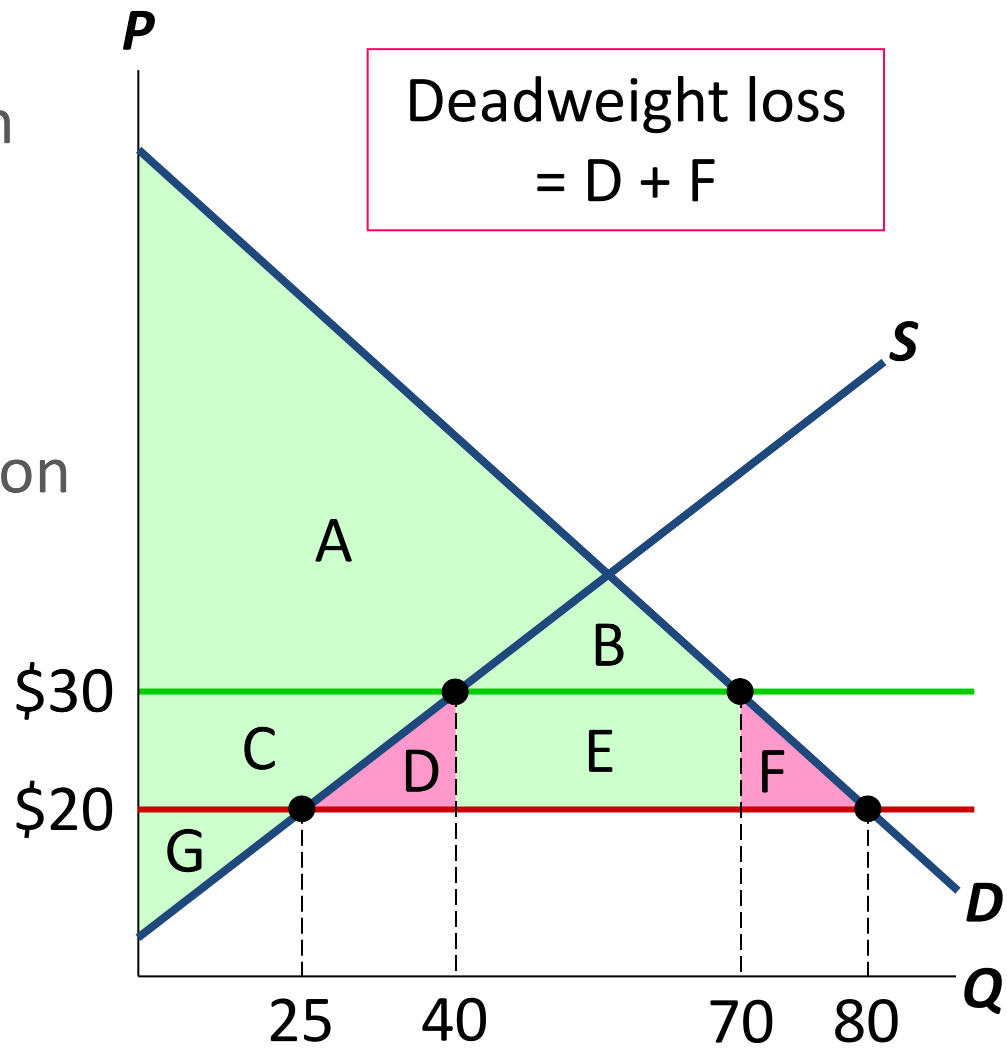
Total surplus
= A + B + C + E + G



VIII. Example: Analysis of a Tariff on Cotton Shirts

D = Deadweight loss from the overproduction of shirts.

F = Deadweight loss from the underconsumption of shirts.



IX. Example: Tariff

A tariff results in a higher:

I. Consumer surplus.

II. Producer surplus.

III. Government revenue.

a) I and II only
b) II and III only
c) I and III only
d) I, II, and III

X. The Costs of Protectionism

- Def: Protectionism = Policy of restraining trade through quotas, tariffs, or other regulations which burden foreign (but not domestic) producers.
- Example: Saving jobs through trade restrictions sounds good and is often politically rewarding. The problem is that the productive higher paying jobs that fail to be created are not always as visible as the jobs “saved”. This is one of the fundamental difficulties in debating trade politics. The gains from trade restrictions are seen and the losses are often not seen.

X. The Costs of Protectionism

- A tariff has two effects:

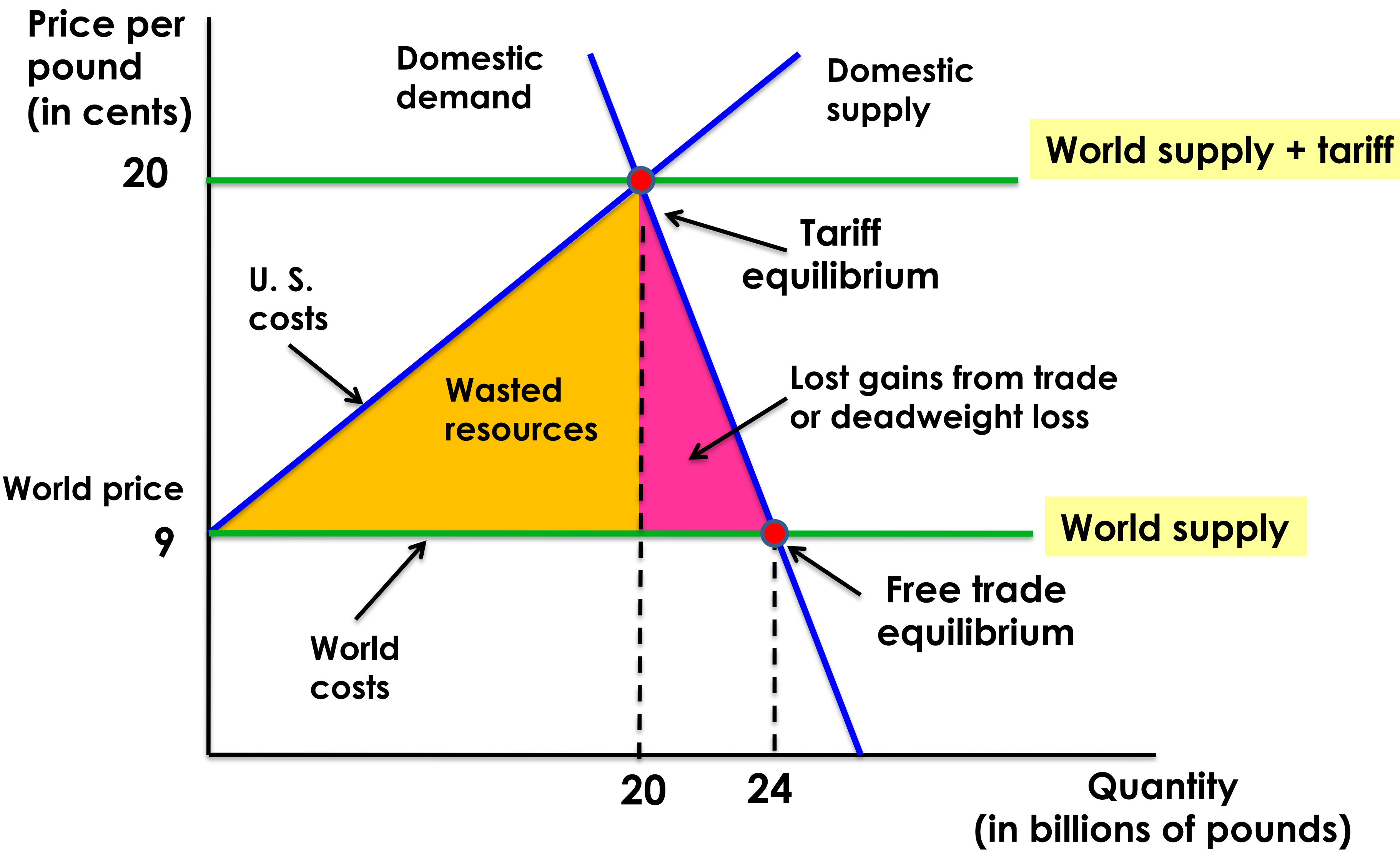
  1. ↑ domestic production, ↓ domestic consumption.

     More of the good is produced by the higher-cost domestic producers.

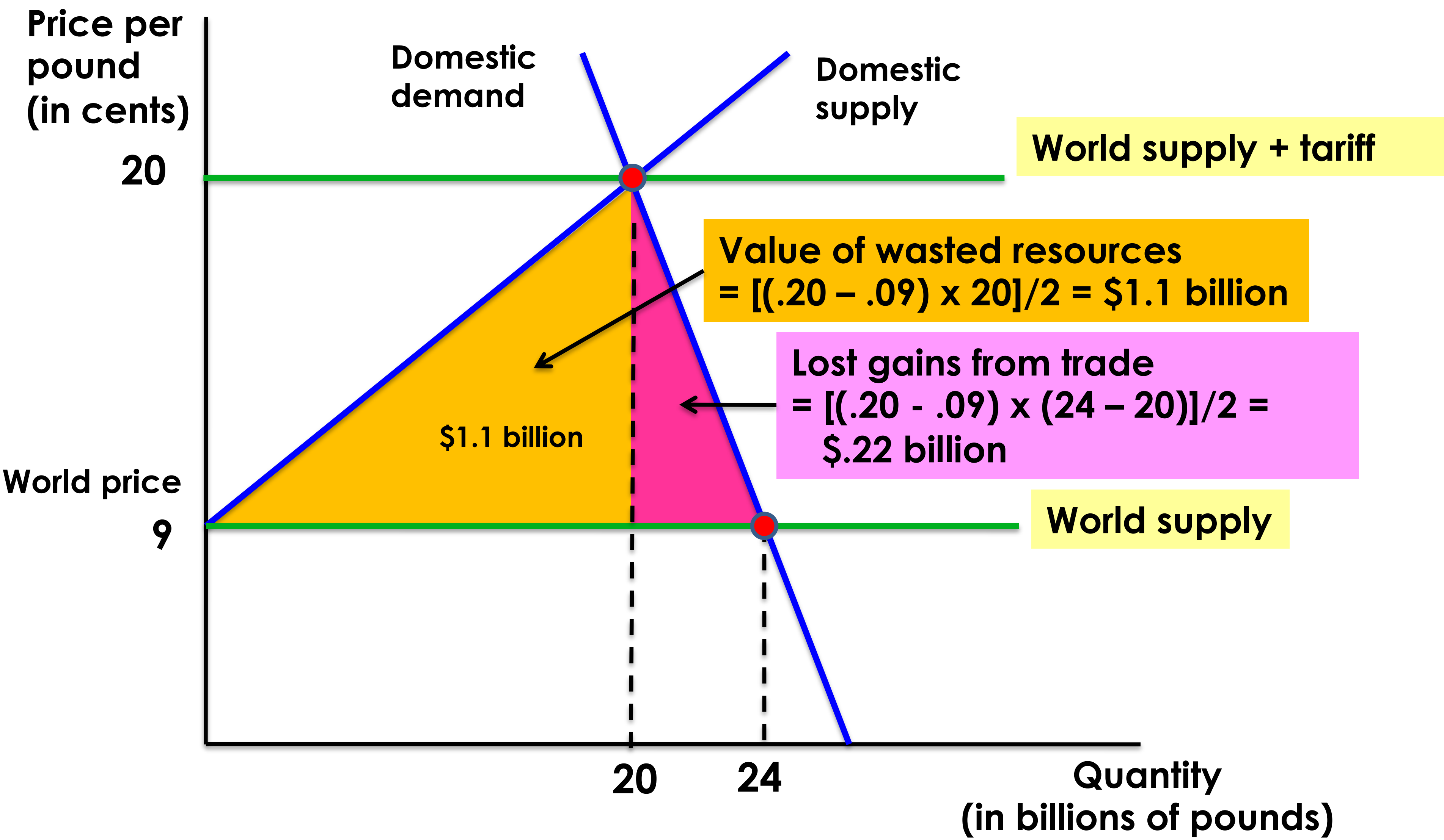
  2. Less is consumed → lower gains from trade.

- Q: Can we measure the value of wasted resources? → Yes!

X. The Costs of Protectionism



X. The Costs of Protectionism



XI. Example: Costs of Protectionism

- One final cost: lobbying
  - The loss to domestic consumers is greater than the gains to domestic producers.
- Why does congress pass tariffs?
  - Small number of producers → Benefit per producer is high.
  - Large number of consumers → Loss per consumer is low.

XII. Trade Barriers (Quotas)

- Def: An import quota = A 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.
- A tariff creates revenue for the govt. A quota creates profits for the foreign producers of the imported goods, who can sell them at higher price.
- Or, government could auction licenses to import to capture this profit as revenue. Usually it does not.

XIII. Arguments Against International Trade

Most Common Arguments

1. Trade reduces the number of jobs in the U.S.
2. It’s wrong to trade with countries that use child labor.
3. We need to keep some industries for reasons of national security.
4. We need to keep some “key” industries because of beneficial spillovers onto other sectors.
5. We can increase U.S. well-being with strategic trade protectionism.

XIII. Arguments Against International Trade 2 of 8

1. The Jobs Argument

Tariffs raise the price of protected goods.

- Trade destroys jobs in industries that compete with imports.
- Consumers have less money to spend on other goods.
- Jobs are lost in other industries—these lost jobs are hard to see.

XIII. Arguments Against International Trade

1. The Jobs Argument

Economists' Response:

- Total unemployment does not rise as imports rise, because job losses from imports are offset by job gains in export industries.
- Even if all goods could be produced more cheaply abroad, the country need only have a comparative advantage to have a viable export industry and to gain from trade.
- Trade creates jobs
- The U.S. dollars we spend on other country's good are often used to buy our goods. Jobs are created in U.S. exporting industries.

Real Data: U.S. Imports & Unemployment, Decade averages, 1961–2010

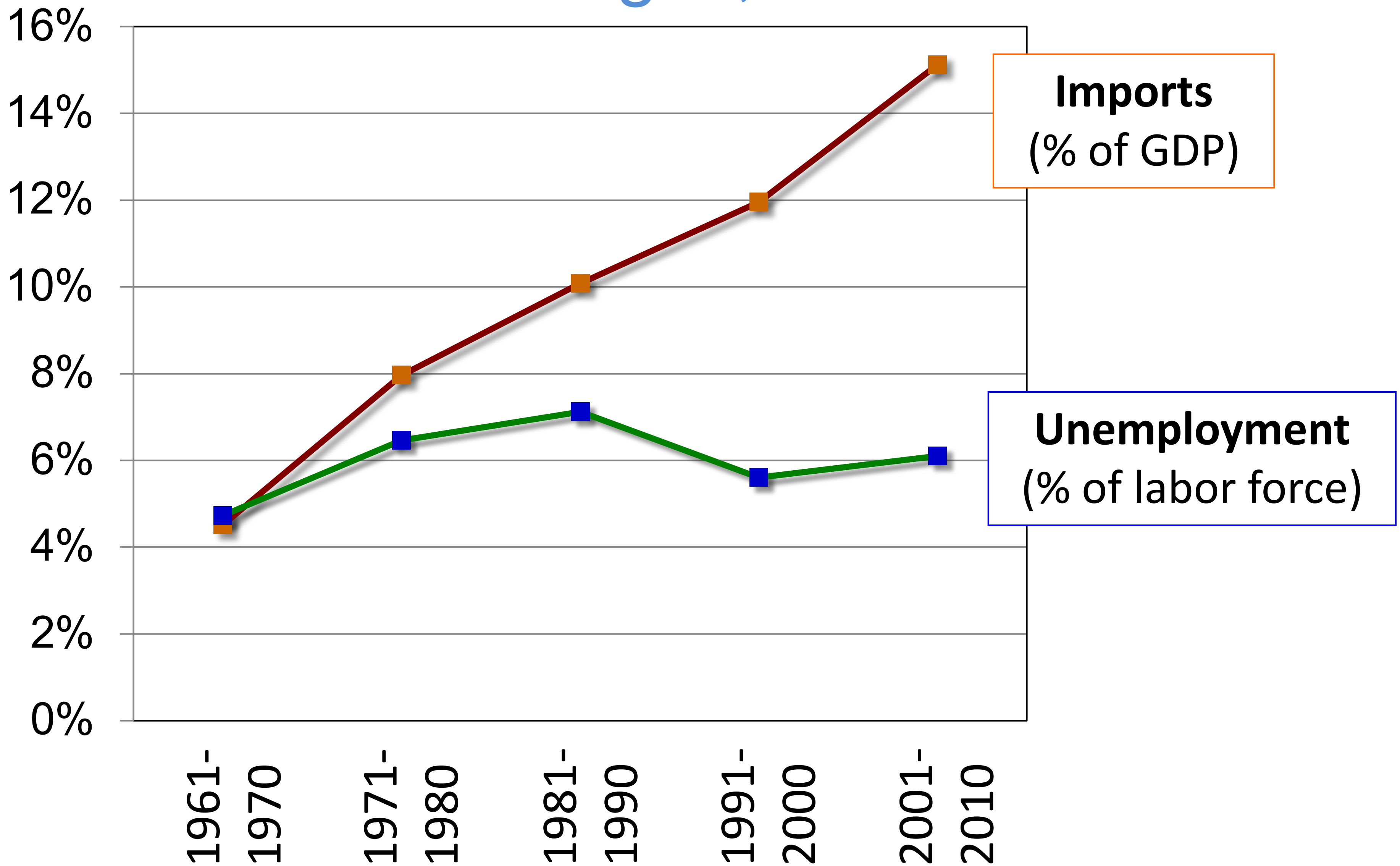
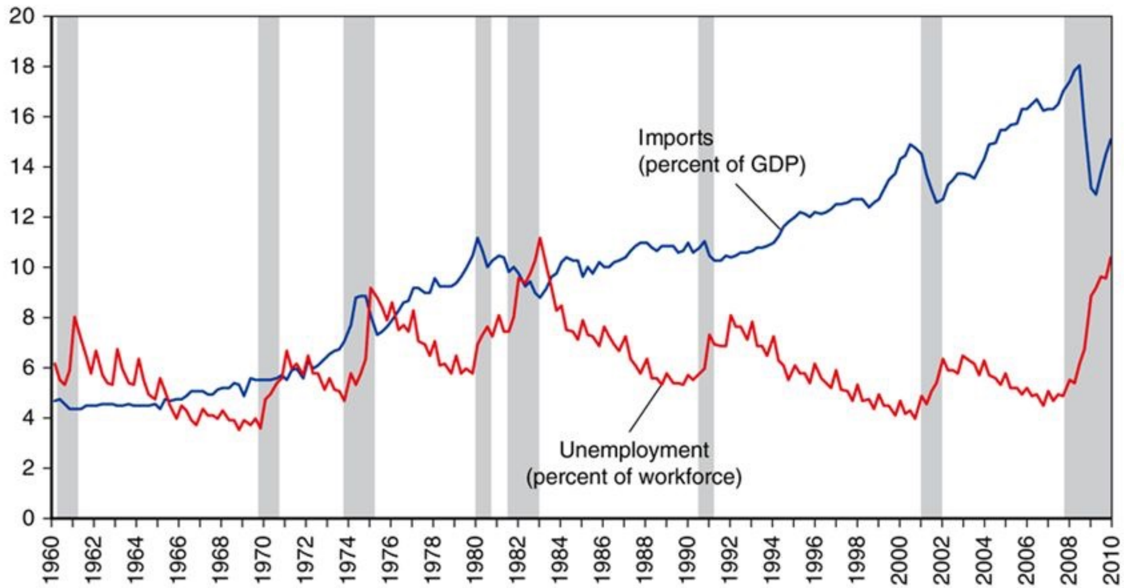
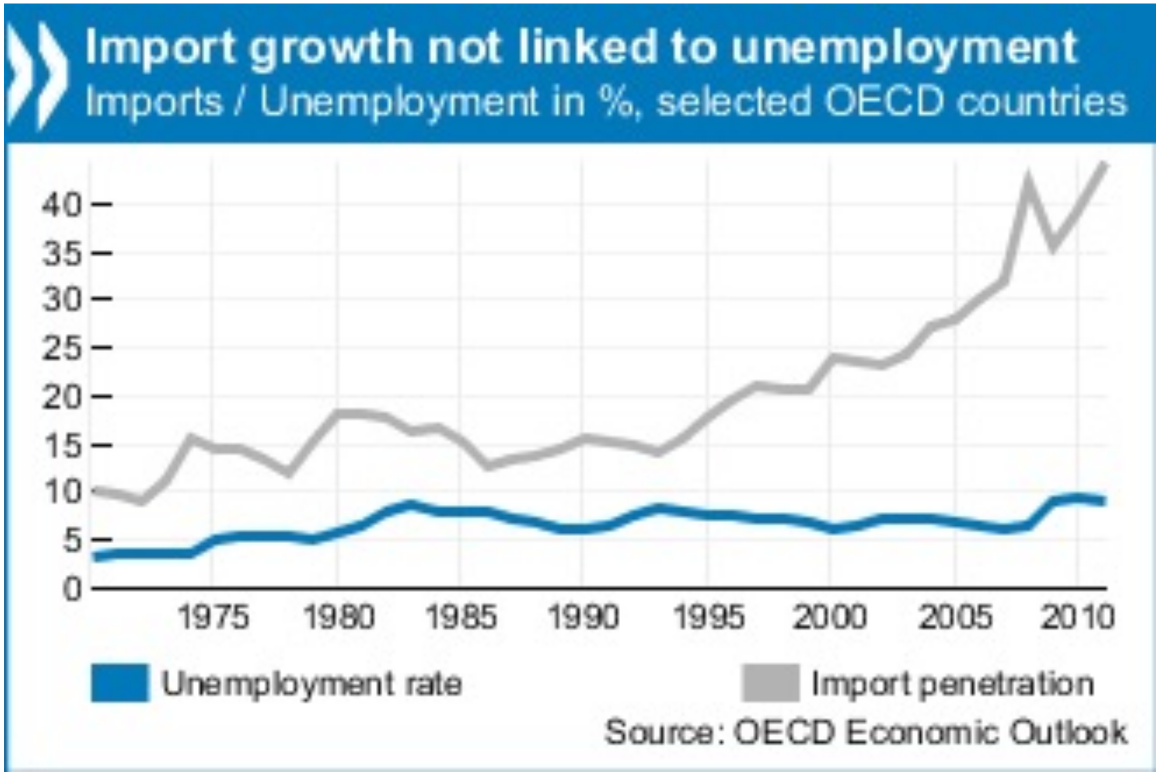


Fig. 4-12: Unemployment and Import Penetration in the U.S.



Source: US Bureau of Economic Analysis for imports and US Bureau of Labor Studies for unemployment.


Import growth not linked to unemployment
Imports / Unemployment in %, selected OECD countries
40
35
30
25
20
15
10
5
0
1975
1980
1985
1990
1995
2000
2005
2010
Unemployment rate
Import penetration
Source: OECD Economic Outlook

XIII. Arguments Against International Trade

2. The National Security Argument

An industry vital to national security should be protected from foreign competition, to prevent dependence on imports that could be disrupted during wartime.

- Economists' Response:
  - Fine, as long as we base policy on true security needs.
  - But producers may exaggerate their own importance to national security to obtain protection from foreign competition.

XIII. Arguments Against International Trade

3. The Unfair-Competition Argument

Producers argue that their competitors in another country have an unfair advantage,
e.g., due to government subsidies.

- Economists' Response:
  - Great! Then we can import extra-cheap products subsidized by the other country's taxpayers.
  - The gains to our consumers will exceed the losses to our producers.

XIII. Arguments Against International Trade

4. The Child Labor Argument

It is wrong to trade with countries that employ child labor.

- Economists’ Response:
  - Restricting imports made by child labor may do more harm than good.
    - Children work out of necessity—what else will they do?
    - Often the alternative is worse.
  - Child labor is a poverty problem, not a trade problem.

XIII. Arguments Against International Trade

5. The Protection-as-Bargaining-Chip Argument

Example: The U.S. can threaten to limit imports of French wine unless France lifts their quotas on American beef.

- Economists' Response:
  - Suppose France refuses. Then the U.S. must choose between two bad options:

    A) Restrict imports from France, which reduces welfare in the U.S.

    B) Don't restrict imports, which reduces U.S. credibility.

XIV. Summary 1 of 2

- 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.

XIV. Summary 2 of 2

- Common arguments for restricting trade include: protecting jobs, defending national security, not trading with countries that employ child labor, 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.