

Trade Policy

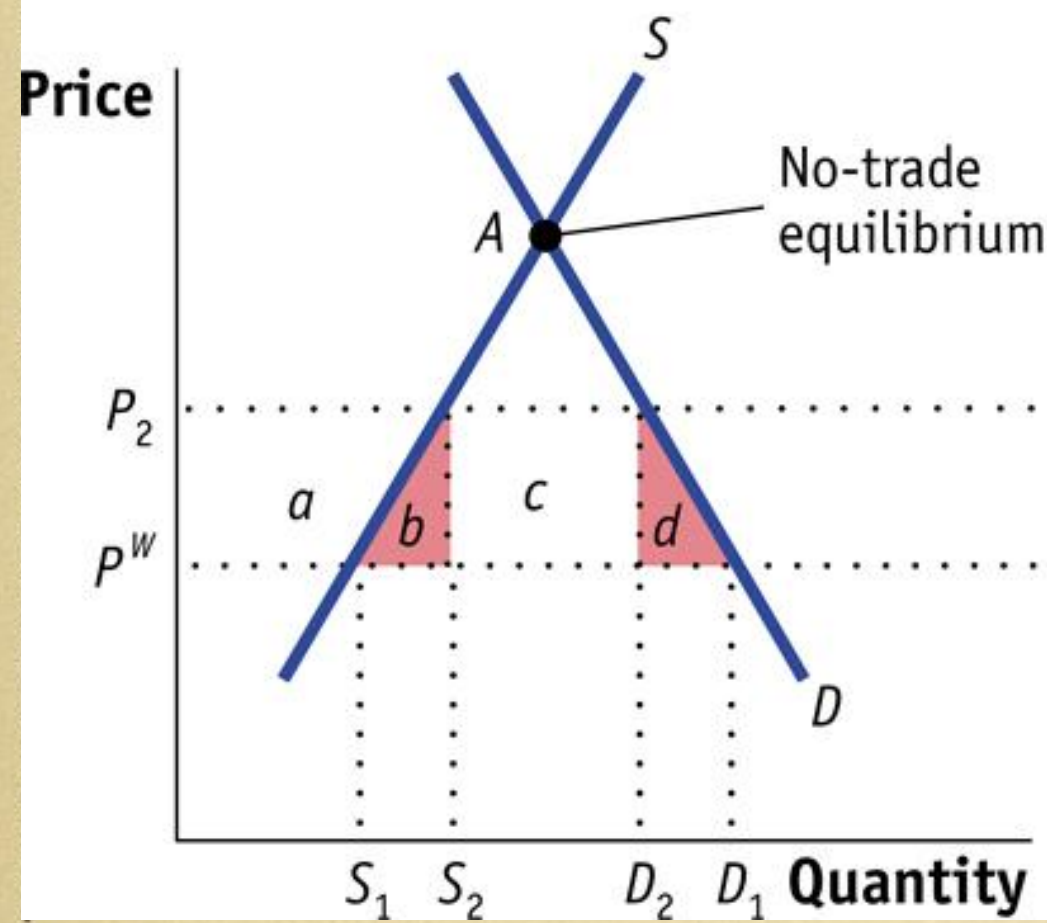
part 3

Import Quotas

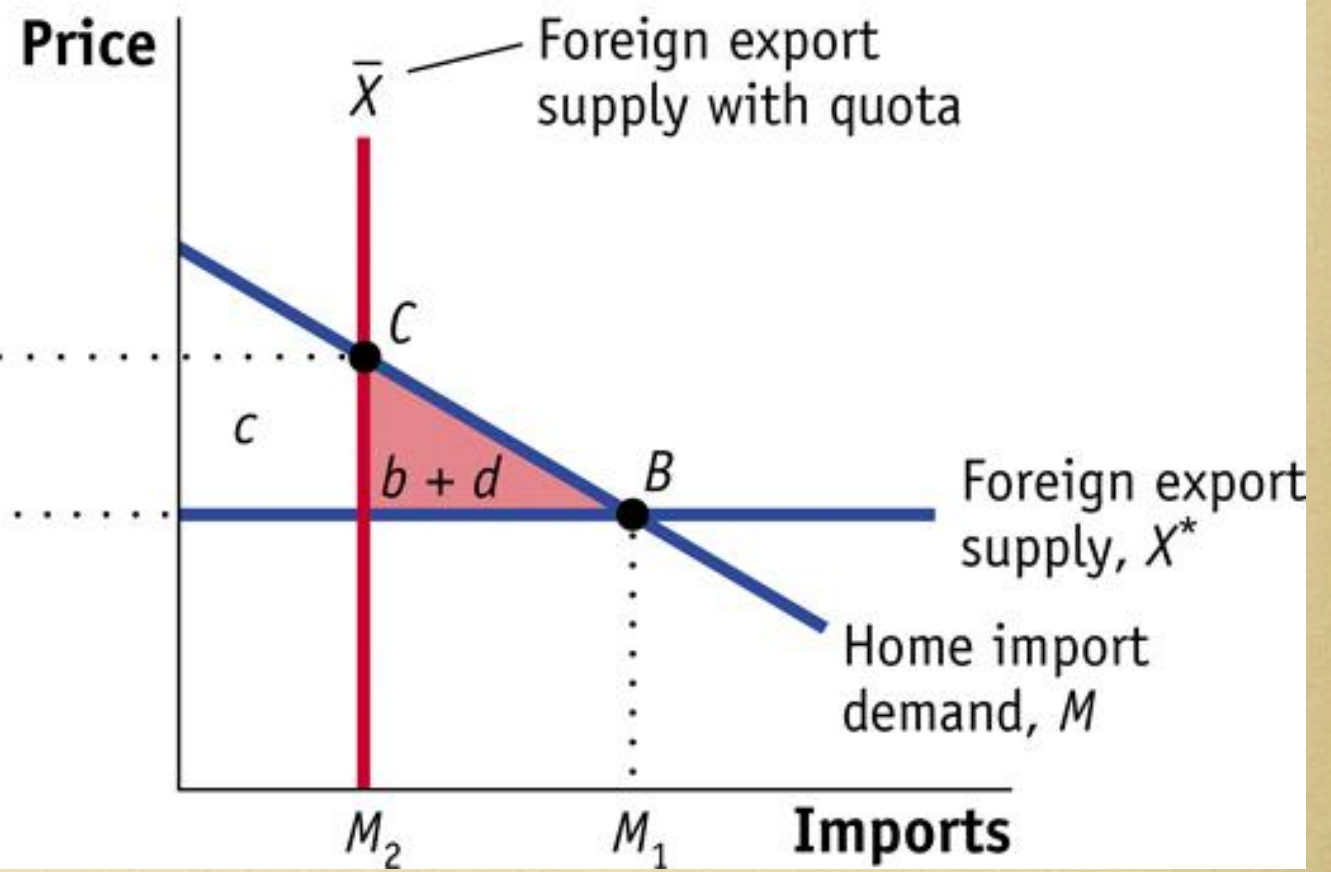
Effects of a Quota

- Now, suppose that instead of a tariff, the government imposes a quota that reduces imports to the same degree.
- Suppose we have a small country

(a) Home Market



(b) Import Market



Small Country

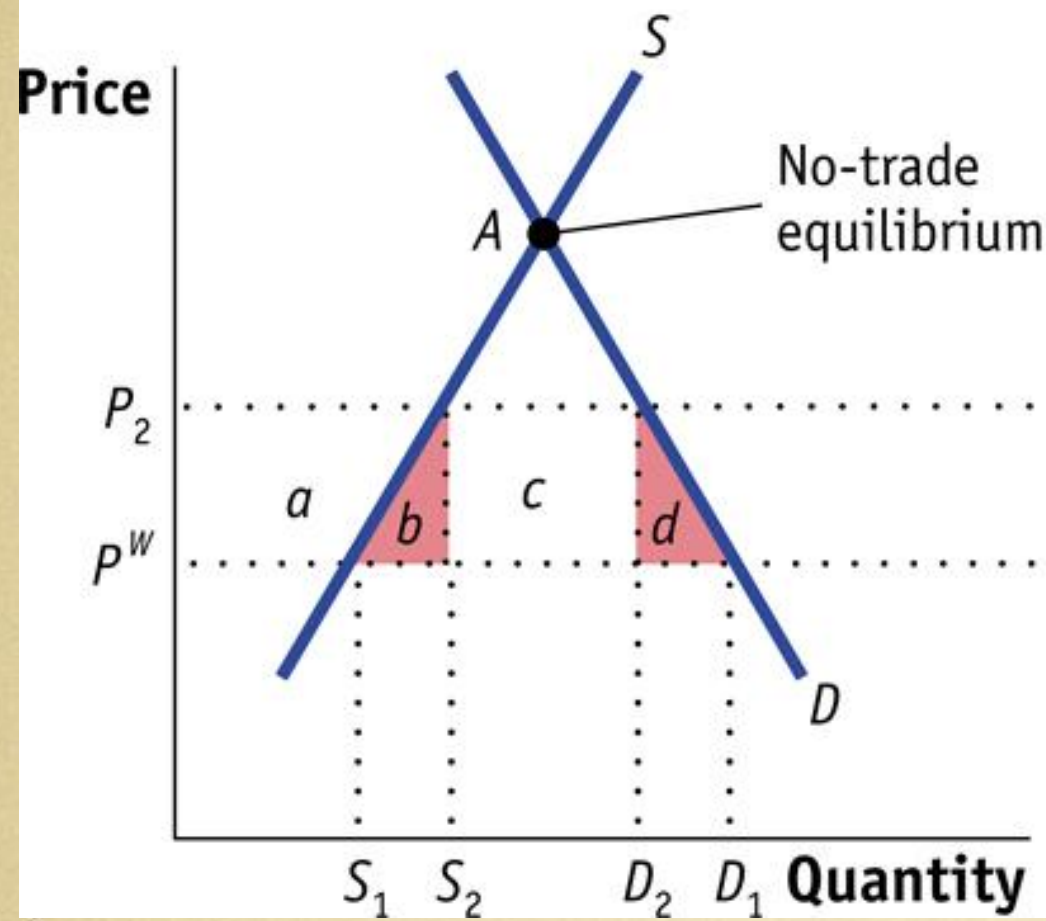
- The Foreign export supply curve, X^* , is horizontal at p^W
- Suppose the import quota of $M_2 < M_1$ is imposed
- This essentially gives us a vertical supply curve X which fixes the import quantity at M_2

- The import quota leads to an increase in the Home price, and a reduction in Home imports, just like the tariff
- We can see what the equivalent tariff, the tariff that would be set to give the same quantity and price as the quota, would be: $t = P_2 - P^W$
- For every level of import quota, there is an *equivalent import tariff*

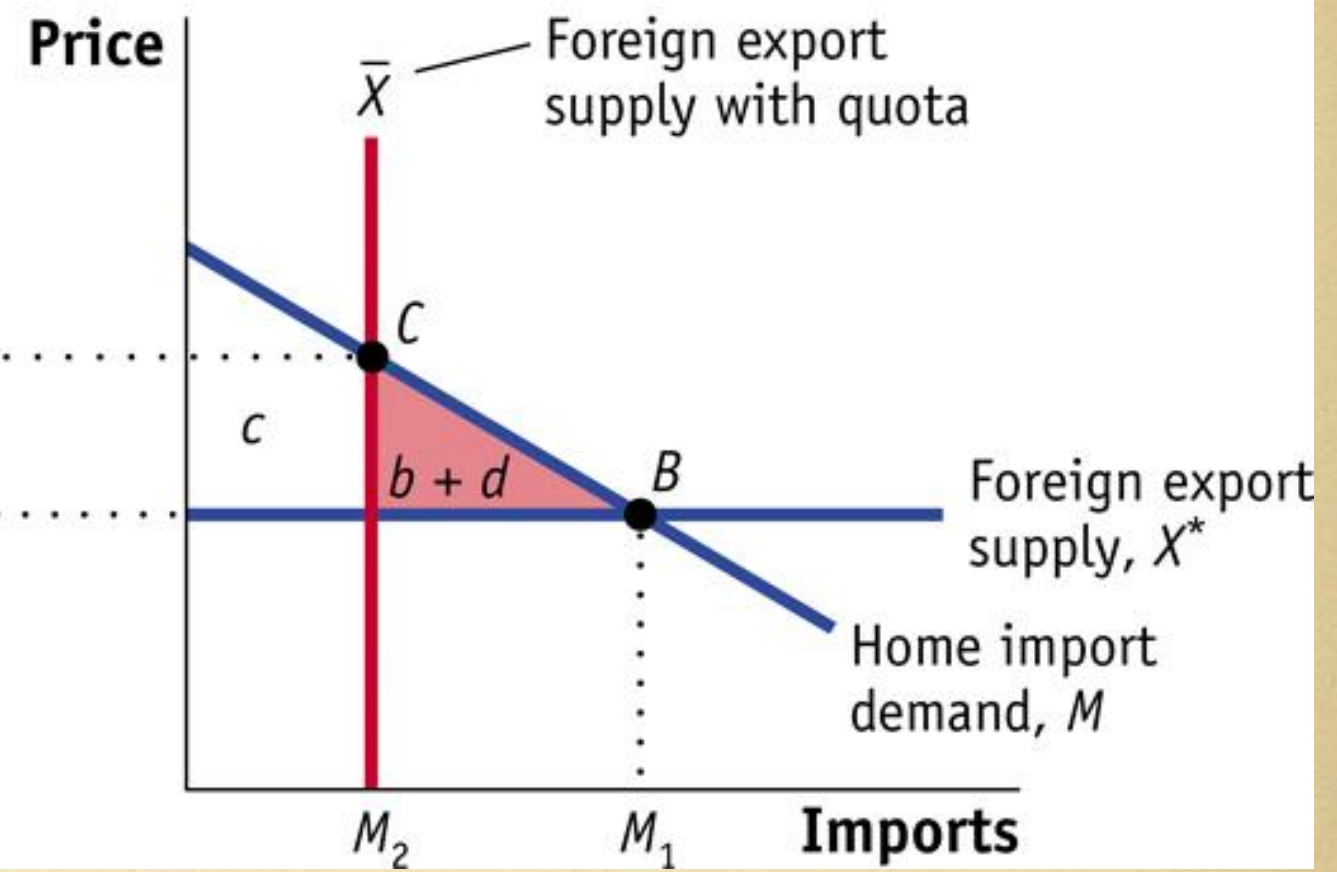
Effect on Welfare

- The rise in price from the quota leads to a fall in consumer surplus: $(a+b+c+d)$
- The increase in price facing Home producers leads to a gain in producer surplus: a

(a) Home Market



(b) Import Market



- Consider area c
- This is a tidy profit, and is called *quota rents*.
- The total quota rents are exactly what tariff revenues would have been if we had a tariff instead of a quota.
- With a quota, whoever is actually importing the good will be able to earn c
 - area c represents the total *quota rents*

There are four possible ways these rents can be allocated

1. Giving the Quota to Home Firms

- **Quota licenses** can be given to Home firms
 - Permits to import the quantity allowed under the quota system

The net effect on Home welfare:

Fall in consumer surplus $-(a+b+c+d)$

Rise in producer surplus $+a$

Quota rents earned at Home $+c$

Net effect on Home welfare: $-(b+d)$

2. Rent Seeking

- Because of the gains associated with owning a quota license, firms have an incentive to engage in inefficient activities in order to obtain them
- For example, lobbying
- Domestic lobbies compete with each other for politicians attention and waste area c!

If rent seeking occurs, welfare loss of quota is:

Fall in consumer surplus $-(a+b+c+d)$

Rise in producer surplus $+a$

Net effect on Home welfare: $-(b+c+d)$

- This loss is larger than a tariff!

3. Auctioning the Quota

- The government of the importing country can auction off the quota licenses
- In a competitive auction, the revenue collected should exactly equal the value of the rents

Change in Home welfare:

Fall in consumer surplus $-(a+b+c+d)$

Rise in producer surplus $+a$

Auction revenue earned at Home $+c$

Net effect on Home welfare: $-(b+d)$

This is the same loss as the tariff

- During the 1980s, Australia and New Zealand both auctioned the quota licenses to import specific goods
 - Textiles, apparel, footwear, motor vehicles
- NZ: the value of imports covered by quotas
 - 1982: 28%
 - 1987: 16.5%
- In 1988, New Zealand announced plans to phase out import quotas as part of a liberalization of trade, and all quota licenses were eliminated by 1992

Auction of Import Quotas in NZ

Year (March–February)	Value of Imports (\$ millions)	Value of Bids (\$ millions)	Tariff Equivalent (Bid/Import Value)
1981–1983	\$56	\$10.5	18.7%
1983–1984	134	8.3	6.2
1984–1985	397	42.7	10.7
1985–1986	621	NA	NA
Total	1,208	NA	NA

4. “Voluntary” Export Restraint

- The importing country can give authority for implementing the quota to the exporting government
- This is often called a “*voluntary*” *export restraint* (VER)
- In the 1980s the U.S. used this type of arrangement to restrict imports of Japanese automobiles
 - The Japanese government told each Japanese firm how much it could export to the U.S.

- With VER's, quota rents are earned by foreign producers, making Home welfare:

Fall in consumer surplus $-(a+b+c+d)$

Rise in producer surplus $+a$

Net effect on Home welfare: $-(b+c+d)$

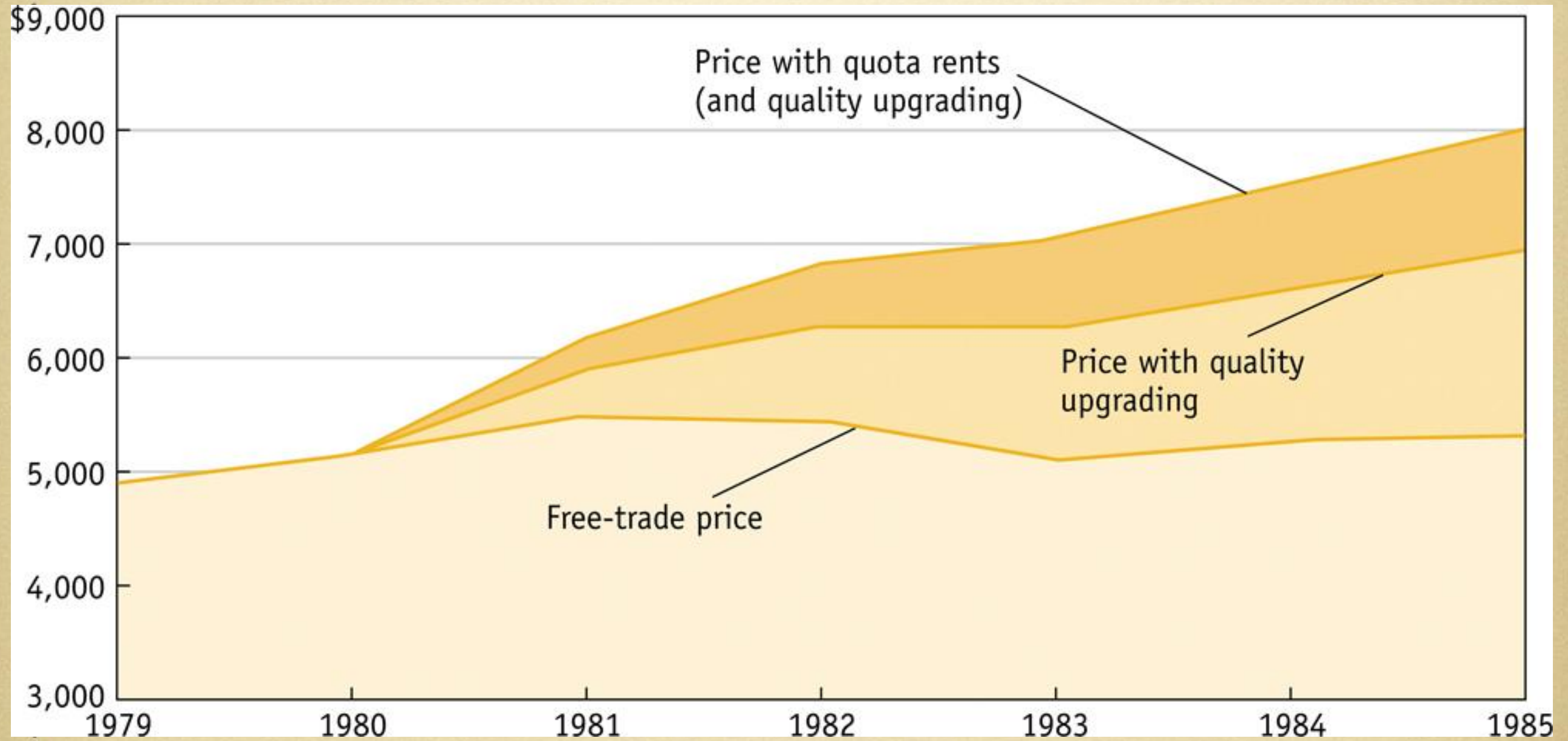
- This is of course higher than with a tariff

Application: U.S. Imports of Japanese Automobiles

- In the early 1980s, the U.S. suffered a deep recession and unemployment in the auto industry rise sharply
- In 1980 the United Automobile Workers and Ford Motor Comp. applied to the International Trade Commission (ITC) for protection under Article XIX of GATT and Section 201 of U.S. trade laws

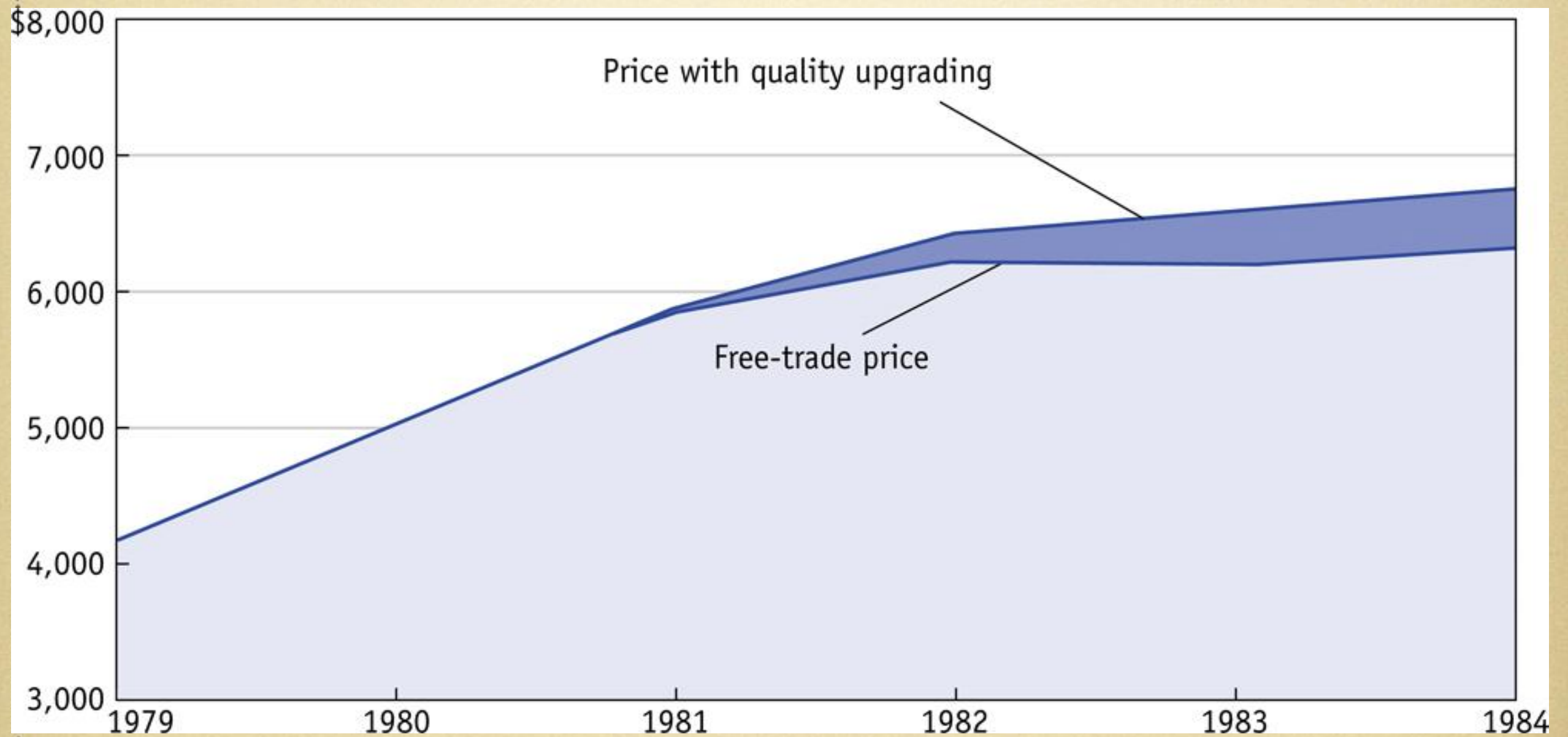
- The ITC determined that the U.S. recession was a more important cause of injury to the auto industry than increased imports
- In response, several congressmen from states with auto plants pursued other means
- Aware of this, the Japanese government announced it would “voluntarily” limit Japan’s export of autos to the U.S.

Prices of Japanese Car Imports



- If we take the quota rents per car and multiply it by the number of imports, we can estimate the total rents to be about \$2.2 billion

Prices of American Cars



Tariffs and quota

- We now know that import tariffs and quotas create significant DWL
- Why would a government protect imports with tariffs and quotas?
- Recall first possible motive – beneficial terms-of-trade
 - Exist only for sufficiently large countries

Sugar in US

- Let's go back to an example of sugar industry protection in the US

Why does US government restrict sugar imports?

- Motive 1: US is a large country and a net importer of sugar, hence the terms-of-trade motive for protectionism

What do we know about sugar tariff

- The tariff is extremely high, hence huge DWL
- Foreign export supply is very elastic, hence terms-of-trade effects is very modest

In class exercise

- Show that the terms-of-trade gains from a tariff are larger if the Foreign export supply curve is less elastic

An Important Complication

- The quota licenses for the US sugar program are actually managed by the *exporting* countries, not the US.
- That means that *foreign exporters* get the licenses, and hence the quota rents, and not *US importers*.
- Foreign exporters get to buy at the low world price and sell in the US at the high US price.

- You can see why a VER can indeed be “voluntary:”
- Exporting countries can easily be made better off by the restrictive policy because of the quota rents.
- US sugar program transfers around \$400 million of quota rents to sugar exporting countries each year.

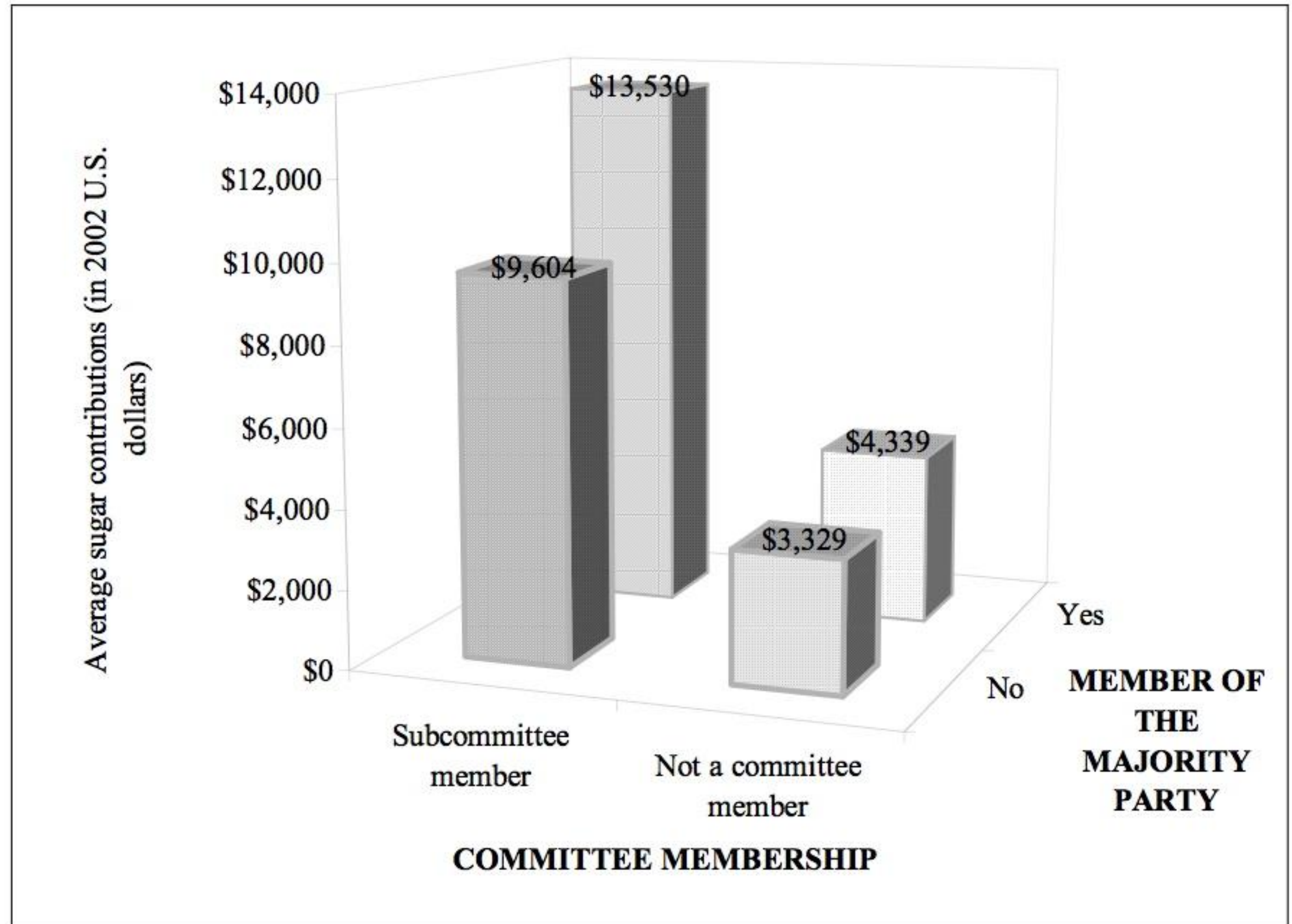
Why does US government restrict sugar imports?

- Motive 2: political lobbying
- The policy benefits US sugar growers and corn-syrup manufacturers at the expense of everybody else in the country.
- Perhaps those people have managed to acquire disproportionate political influence.

- we have assumed that the US government puts equal weight on all Americans
 - and no weight on foreigners
- Perhaps this is an error.
- Perhaps the domestic beneficiaries of the policy are given more weight in the political decision process than other Americans.

- Evidence from From Gökçekus, et al (2003):
- between 1989 and 2002, individuals in the sugar business donated approximately \$1.5 million annually in campaign contributions to members of the US Congress

Figure 3 Sugar contributions and 'Power'



From Gökçekus, Knowles, and Tower (2003)

- US sugar policies provided approximately \$1 billion of benefit to sugar producers per year
- if one assumes that they are all due to sugar-industry campaign contributions, sugar producers received \$714 in benefit for each dollar invested in the political process!

A less obvious political player

- Archer Daniels Midland
 - large corporation offering a wide range of products to the industrial agriculture and food processing sectors
- In 1974, the company made a large (\$80 million) and risky investment in technology to produce high-fructose corn syrup

A less obvious political player

- Also known for extraordinary generosity to politicians of both parties!
- One bold example: the CEO allegedly attempted to deliver \$100,000 in unmarked envelope to Nixon in the White House!

Protection for sale

- Government “sells” protection to interest groups
- Government values social welfare plus lobbies’ monetary contributions
- It will choose policy to maximize social welfare, with extra weight on the lobbying groups!

Protection for sale

- Suppose government chooses P to max:
 - $A^{\text{cons}}CS(P) + A^{\text{prod}}PS(P) + A^{\text{tax}}TR(P, P^{\text{World}})$
- If $A^{\text{cons}} = A^{\text{prod}} = A^{\text{tax}} = 1$ then government max social welfare
- If $A^{\text{prod}} > 1$ then the government is biased towards producers
- Sufficiently high A^{prod} would explain existence of trade policy!