Negotiations and International Organizations

Introduction to the Trade Disputes, Capital Flows

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Negotiations and International Organizations

Course Details

- Lectures: Monday 18:00 – 21:00
- Contact Details:
  - Email: pkonstantinou@aueb.gr
  - Office: AUEB Main Building, Antoniadou Wing, 5th Floor
- Background Reading (Economics): Krugman, Obstfeld, Melitz (2018) *International Economics: Theory and Policy*, Pearson. Chap. 8 – 13
- Background Reading (Strategy): Dixit, A. and Nalebuff, B. (1991) *Thinking Strategically*, W. W. Norton & Co. Chap. 1-4, 8, 11
- Lewicki, R., Barry, B. and Saunders, D. (2014) *Negotiation*, 7th ed., McGraw-Hill. Chap. 1-4, 13, 16, 20

Negotiations and International Organizations

Lecture Outlines

1. Economics of Trade and International Capital Flows
2. Trade Policy Instruments (Tariffs *vs.* Non-Tariff Barriers)
3. World Trade Organization
4. International Monetary Fund
5. World Bank

Negotiations and International Organizations

Overview of the Course

- Negotiating What?
- Keep track of what are the main issues over which we negotiate in IO: What's in the background?
- Firms and Exporting Behavior (Monopolistic competition and trade)
- The Political Economy of Trade Policy (WTO)
- Trade Policy in Developing Countries
- Arguments for "activist" trade policies
- Arguments concerning trade and people

Negotiations and International Organizations

Overview of the Course

- National income accounts
- National saving, investment, and the current account
- Balance of payments accounts
- Negotiation/Bargaining in the context of IOs.
- Historical Background to IMF, World Bank and WTO
  - Negotiating a WTO / Negotiating in the WTO
  - World Bank (Global Development, Alleviating Poverty): Negotiating in the WB
  - IMF (Global Financial Stability): Negotiating with the IMF

Negotiations and International Organizations

Overview of the Course: **Evaluation/Grading**

1. Term Paper (30%)
   - Literature review on a topic related to the course. A list with potential topics will be provided in due time.
   - You will need to put together a short review of the literature (2,500-3,000 words) using academic articles you may find using Google scholar or other sources (scholarly journals).
2. Final Written Examination (70%)

Introduction – I

- Internal economies of scale result when large firms have a cost advantage over small firms, causing the industry to become uncompetitive.
- Internal economies of scale imply that a firm's average cost of production decreases the more output it produces.
- Perfect competition that drives the price of a good down to marginal cost would imply losses for those firms because they would not be able to recover the higher costs incurred from producing the initial units of output.
- As a result, perfect competition would force those firms out of the market.

Introduction – II

- In most sectors, goods are differentiated from each other and there are other differences across firms.
- Integration causes the better-performing firms to thrive and expand, while the worse-performing firms contract.
- Additional source of gain from trade: As production is concentrated toward better-performing firms, the overall efficiency of the industry improves.
- Study why those better-performing firms have a greater incentive to engage in the global economy

The Theory of Imperfect Competition

- In imperfect competition, firms are aware that they can influence the prices of their products and that they can sell more only by reducing their price.
- This situation occurs when there are only a few major producers of a particular good or when each firm produces a good that is differentiated from that of rival firms.
- Each firm views itself as a price setter, choosing the price of its product.

Monopoly: A Brief Review – I

- A monopoly is an industry with only one firm.
- An oligopoly is an industry with only a few firms.
- In these industries, the marginal revenue generated from selling more products is less than the uniform price charged for each product.
  - To sell more, a firm must lower the price of all units, not just the additional ones.
  - The marginal revenue function therefore lies below the demand function (which determines the price that customers are willing to pay).

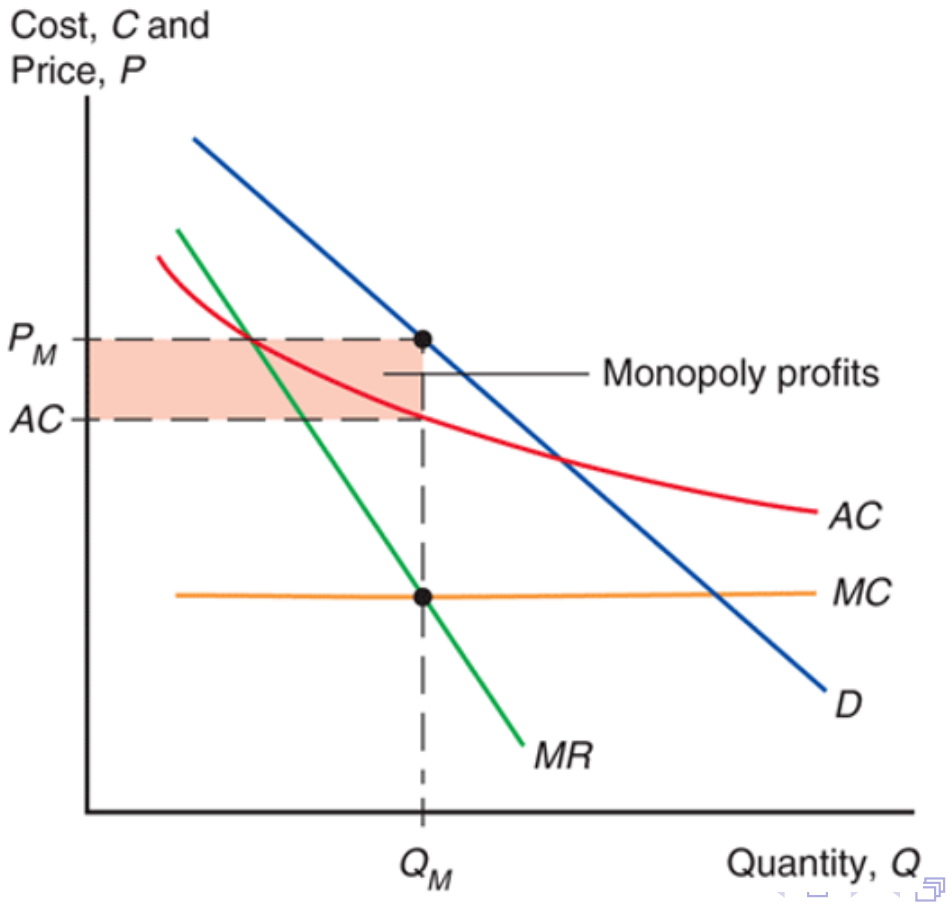
Monopoly: A Brief Review – II

- Assume that the demand curve the firm faces is a straight line $Q = A - B \times P$, where Q is the number of units the firm sells, P the price per unit, and A and B are constants.
- Marginal revenue equals $MR = P - Q/B$.
- Suppose that total costs are $C = F + c \cdot Q$, where F is fixed costs, those independent of the level of output, and c is the constant marginal cost.
- Average cost is the cost of production (C) divided by the total quantity of production (Q).

$$AC = \frac{C}{Q} = \frac{F}{Q} + c$$

Monopoly: A Brief Review – III

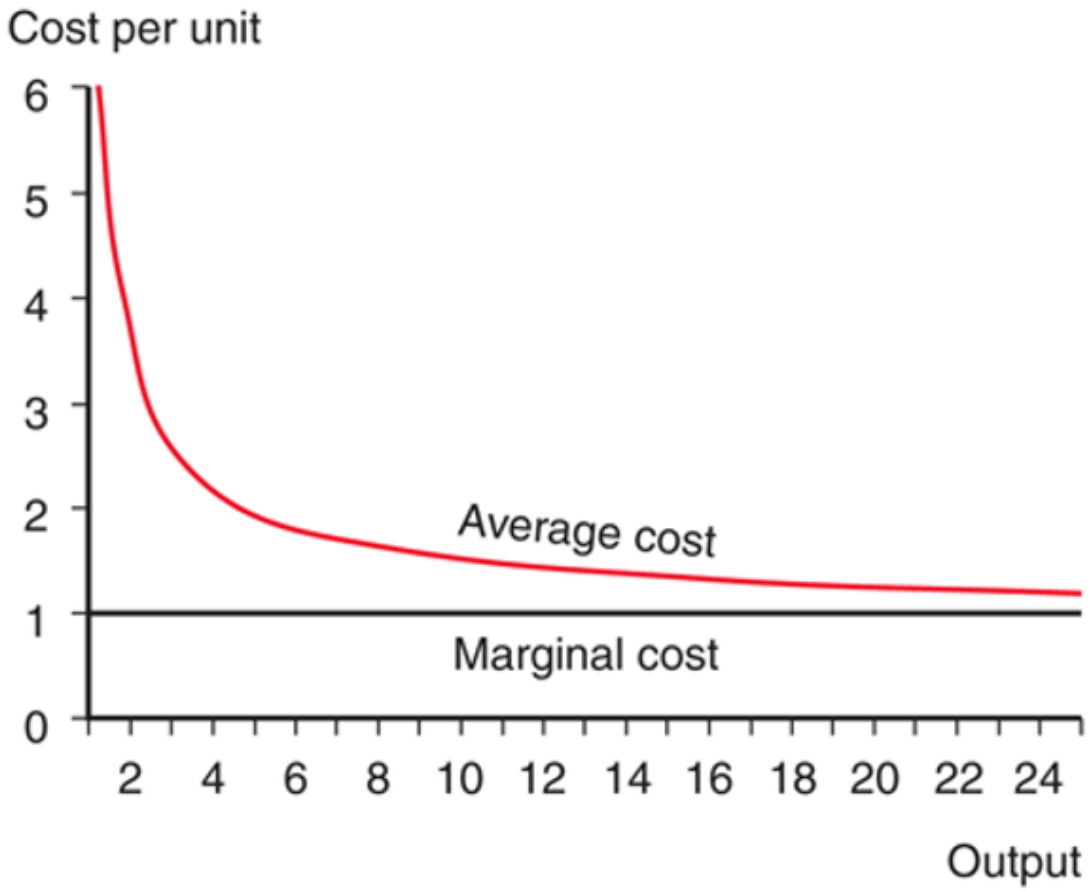
- Marginal cost is the cost of producing an additional unit of output.



Monopoly: A Brief Review – IV

- A larger firm is more efficient because average cost decreases as output Q increases: internal economies of scale.

Monopoly: A Brief Review – V



Monopoly: A Brief Review – VI

- The profit-maximizing output occurs where marginal revenue equals marginal cost.
  - At the intersection of the MC and MR curves, the revenue gained from selling an extra unit equals the cost of producing that unit.
- The monopolist earns some monopoly profits, as indicated by the shaded box, when $P > AC$.

Monopolistic Competition – I

- Monopolistic competition is a simple model of an imperfectly competitive industry that assumes that each firm
  1. can differentiate its product from the product of competitors, and
  2. takes the prices charged by its rivals as given.
- A firm in a monopolistically competitive industry is expected to sell
  - more as total sales in the industry increase and as prices charged by rivals increase.

Monopolistic Competition – II

- less as the number of firms in the industry decreases and as the firm's price increases.

- These concepts are represented by the function:

$$Q = S\left(\frac{1}{n} - b\left(P - \bar{P}\right)\right)$$

- Q is an individual firm's sales
- S is the total sales of the industry
- n is the number of firms in the industry
- b is a constant term representing the responsiveness of a firm's sales to its price

Monopolistic Competition – III

- P is the price charged by the firm itself
- $\bar{P}$ is the average price charged by its competitors

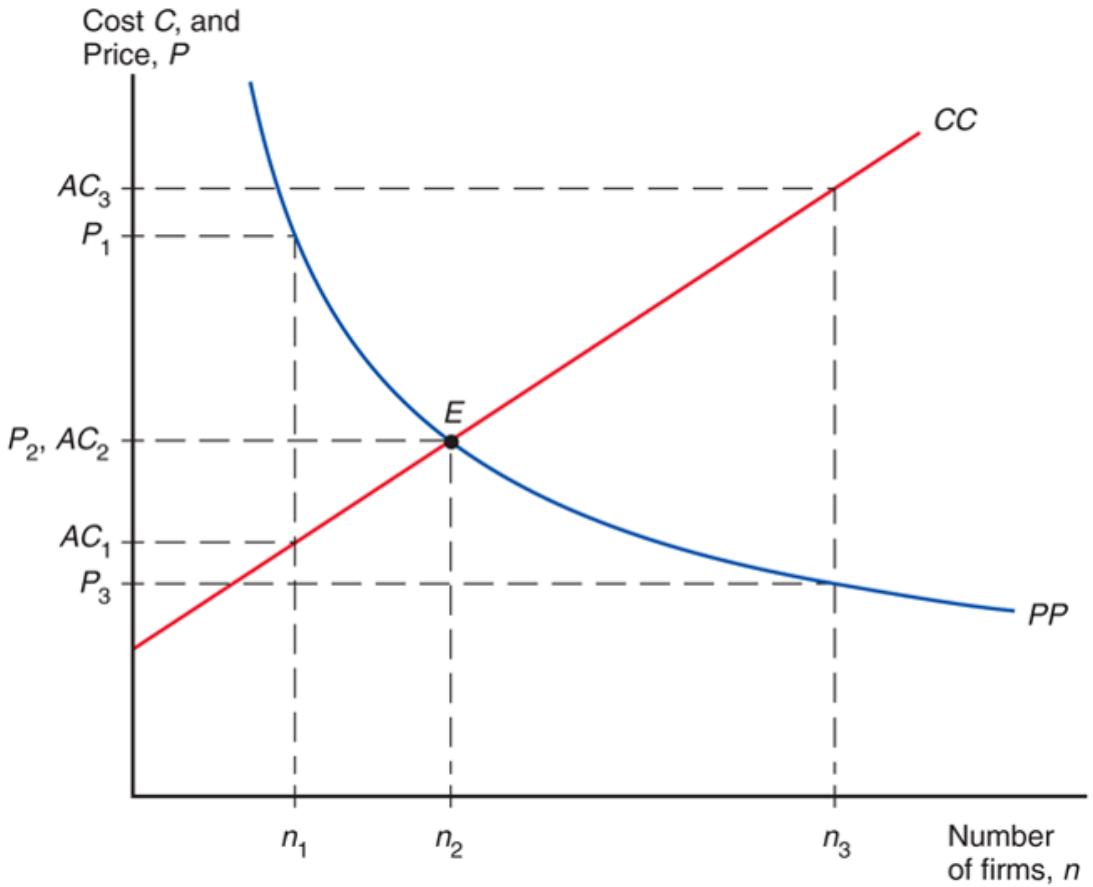
- Assume that firms are symmetric: all firms face the same demand function and have the same cost function.
  - Thus all firms should charge the same price and have equal share of the market $Q = S/n$
  - Average costs should depend on the size of the market and the number of firms:

$$AC = \frac{C}{Q} = \frac{F}{Q} + c = n\frac{F}{S} + c$$

Monopolistic Competition – IV

- As the number of firms n in the industry increases, the average cost increases for each firm because each produces less.
- As total sales S of the industry increase, the average cost decreases for each firm because each produces more.

Monopolistic Competition – V



Monopolistic Competition – VI

- If monopolistic firms face linear demand functions, $Q = A - B \cdot P$, where A and B are constants.
- When firms maximize profits, they should produce until marginal revenue equals marginal cost:

$$MR = P - \frac{Q}{S \times b} = c.$$

- As the number of firms n in the industry increases, the price that each firm charges decreases due to increased competition.

$$P = c + \frac{1}{b \times n}$$

Monopolistic Competition – VII

- Each firm's markup over marginal cost

$$P - c = \frac{1}{b \times n}$$

  decreases with the number of competing firms.

- At some number of firms, the price that firms charge (which decreases in n) matches the average cost that firms pay (which increases in n).
  - At this long-run equilibrium number of firms in the industry, firms have no incentive to enter or exit the industry.

Monopolistic Competition – VIII

- If the number of firms is greater than or less than the equilibrium number, then firms have an incentive to exit or enter the industry.
  - Firms have an incentive to exit the industry when price $<$ average cost.
  - Firms have an incentive to enter the industry when price $>$ average cost.

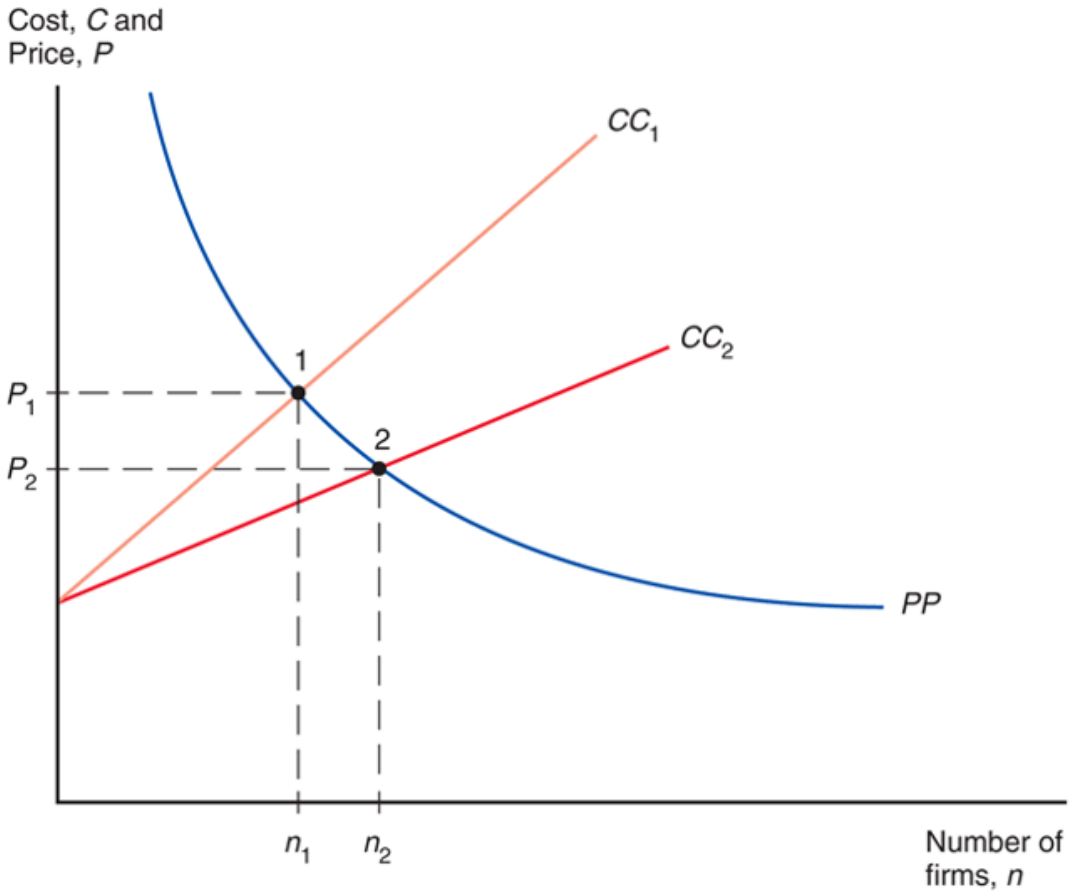
Monopolistic Competition and Trade – I

- Because trade increases market size, trade is predicted to decrease average cost in an industry described by monopolistic competition.
  - Industry sales increase with trade leading to decreased average costs:

$$AC = n\left(\frac{F}{S}\right) + c$$

- Because trade increases the variety of goods that consumers can buy under monopolistic competition, it increases the welfare of consumers.
  - And because average costs decrease, consumers can also benefit from a decreased price.

Monopolistic Competition and Trade – II



Monopolistic Competition and Trade – III

- As a result of trade, the number of firms in a new international industry is predicted to increase relative to each national market.
  - But it is unclear if firms will locate in the domestic country or foreign countries.
- Integrating markets through international trade therefore has the same effects as growth of a market within a single country.
- Product differentiation and internal economies of scale lead to trade between similar countries with no comparative advantage differences between them.

Monopolistic Competition and Trade – IV

- This is a very different kind of trade than the one based on comparative advantage, where each country exports its comparative advantage good.

Gains from Integrated Market: Example – I

- Suppose that $B = 1/30,000$, fixed cost $F = \$750,000,000$ and a marginal cost of $c = \$5,000$ per automobile.
- The total cost is

$$C = 750,000,000 + 5,000 \cdot Q.$$

- The average cost is therefore

$$AC = \frac{750,000,000}{Q} + 5,000.$$

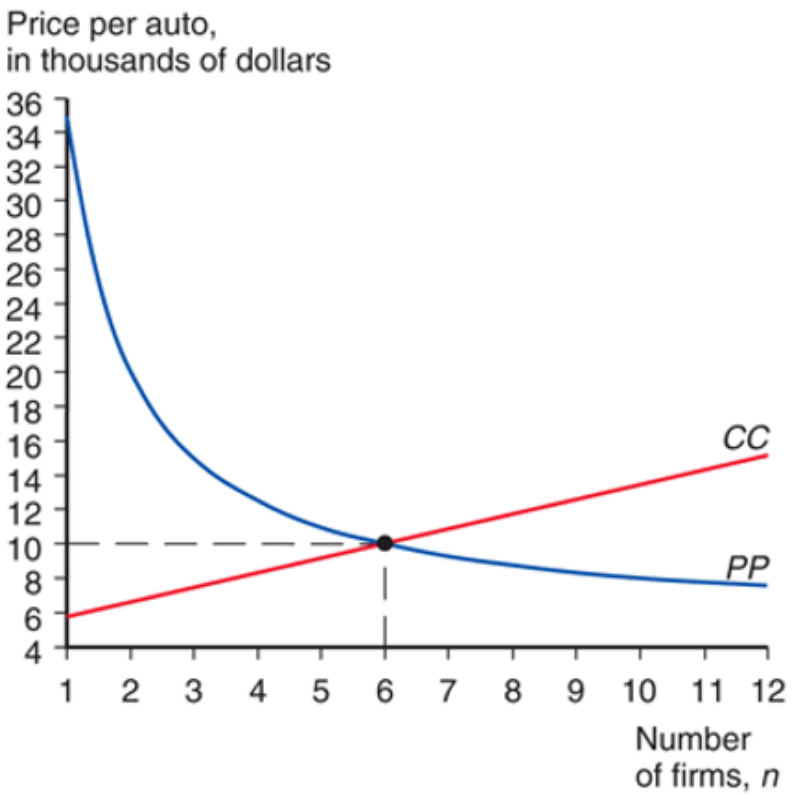
- Suppose there are two countries, *Home* and *Foreign*.

Gains from Integrated Market: Example – II

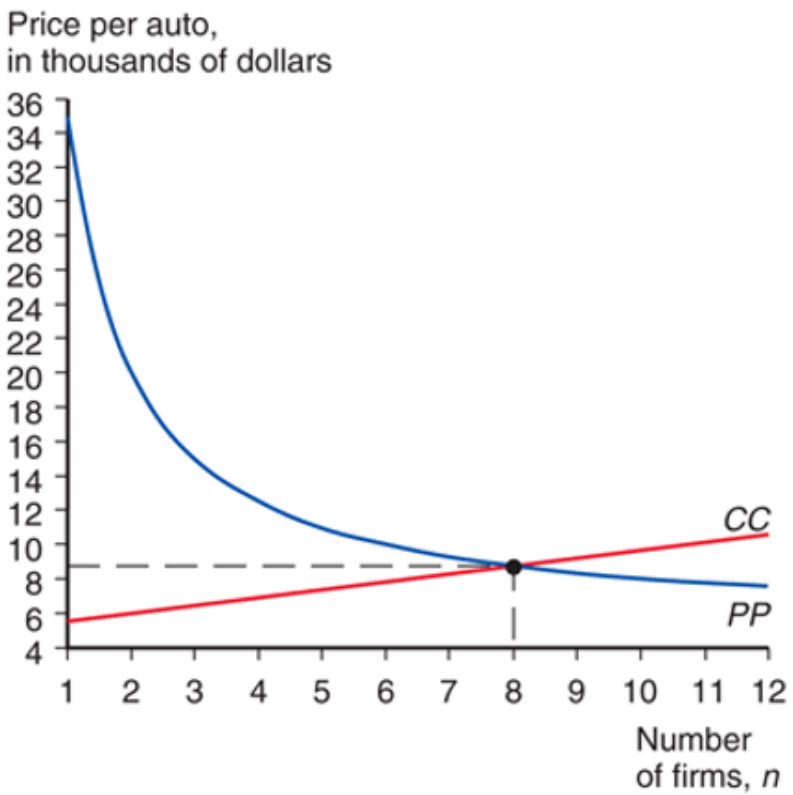
- Home has annual sales of 900,000 automobiles; Foreign has annual sales of 1.6 million.
- The two countries are assumed (for now) to have the same costs of production.
- The integrated market supports more firms, each producing at a larger scale and selling at a lower price than either national market does on its own.
- Everyone is better off as a result of the larger market with integration:
  - Consumers have a wider range of choices, and

Gains from Integrated Market: Example – III

- Each firm produces more and is therefore able to offer its product at a lower price.

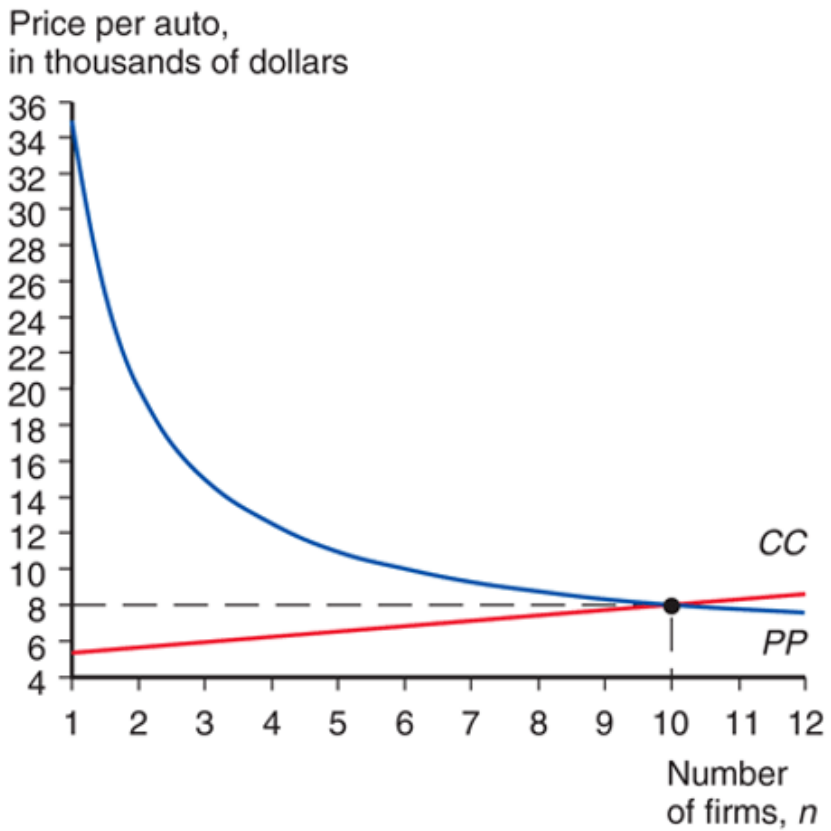


(a) Home



(b) Foreign

Gains from Integrated Market: Example – IV



(c) Integrated

Gains from Integrated Market: Example – V

	Home Market, Before Trade	Foreign Market, Before Trade	Integrated Market, After Trade
Industry output (# of autos)	900,000	1,600,000	2,500,000
Number of firms	6	8	10
Output per firm (# of autos)	150,000	200,000	250,000
Average cost	$10,000	$8,750	$8,000
Price	$10,000	$8,750	$8,000

The Significance of Intra-Industry Trade – I

- **Intra-industry** trade refers to two-way exchanges of similar goods.
- Two new channels for welfare benefits from trade:
  - Benefit from a greater variety at a lower price.
  - Firms consolidate their production and take advantage of economies of scale.
- A smaller country stands to gain more from integration than a larger country.
- About 25–50% of world trade is intra-industry.

The Significance of Intra-Industry Trade – II

- Most prominent is the trade of manufactured goods among advanced industrial nations, which accounts for the majority of world trade.
  - For the United States, industries that have the most intra-industry trade—such as pharmaceuticals, chemicals, and specialized machinery—require relatively larger amounts of skilled labor, technology, and physical capital.

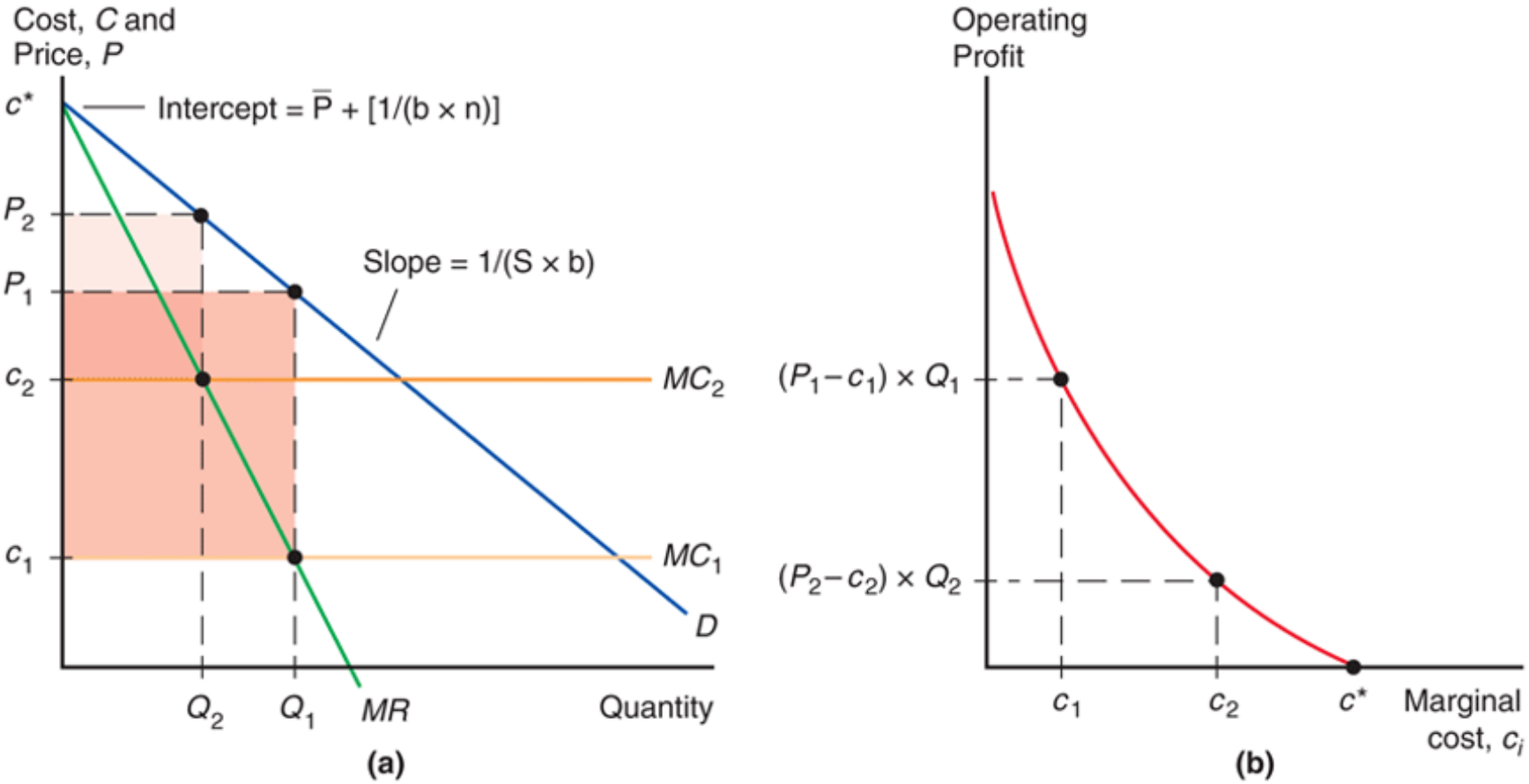
The Significance of Intra-Industry Trade – III

Metalworking Machinery	0.97
Inorganic Chemicals	0.97
Power-Generating Machines	0.86
Medical and Pharmaceutical Products	0.85
Scientific Equipment	0.84
Organic Chemicals	0.79
Iron and Steel	0.76
Road Vehicles	0.70
Office Machines	0.58
Telecommunications Equipment	0.46
Furniture	0.30
Clothing and Apparel	0.11
Footwear	0.10

Firm Responses to Trade – I

- Increased competition tends to hurt the worst-performing firms — they are forced to exit.
- The best-performing firms take the greatest advantage of new sales opportunities and expand the most.
- When the better-performing firms expand and the worse-performing ones contract or exit, overall industry performance improves.
  - Trade and economic integration improve industry performance as much as the discovery of a better technology does.

Firm Responses to Trade – II

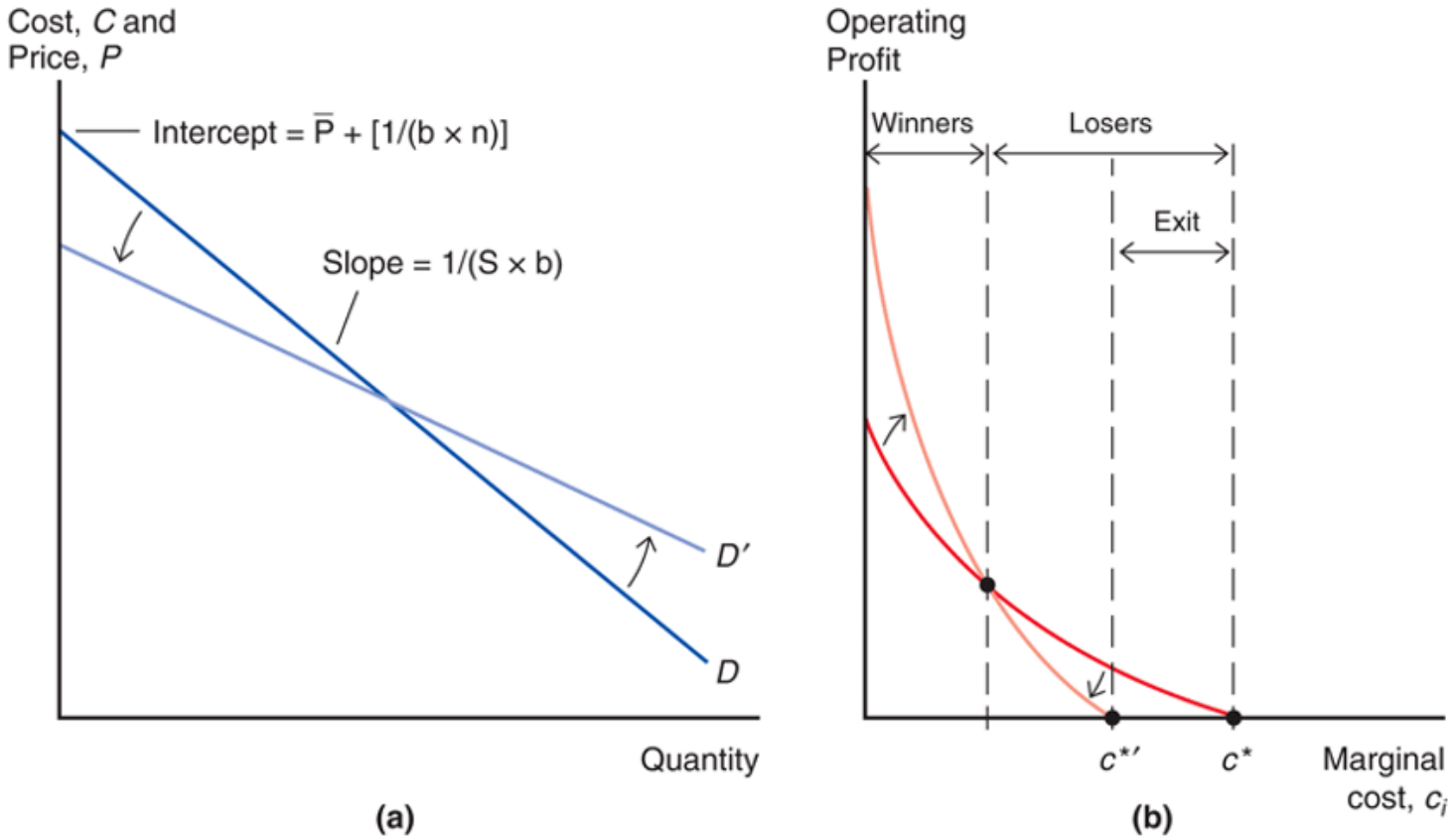


Trade Costs and Export Decisions– I

- Most U.S. firms do not report any exporting activity at all — sell only to U.S. customers.
  - In 2002, only 18% of U.S. manufacturing firms reported any sales abroad.
- Even in industries that export much of what they produce, such as chemicals, machinery, electronics, and transportation, fewer than 40 percent of firms export.
- A major reason why trade costs reduce trade so much is that they drastically reduce the number of firms selling to customers across the border.

Trade Costs and Export Decisions– II

- Trade costs also reduce the volume of export sales of firms selling abroad.



Trade Costs and Export Decisions– III

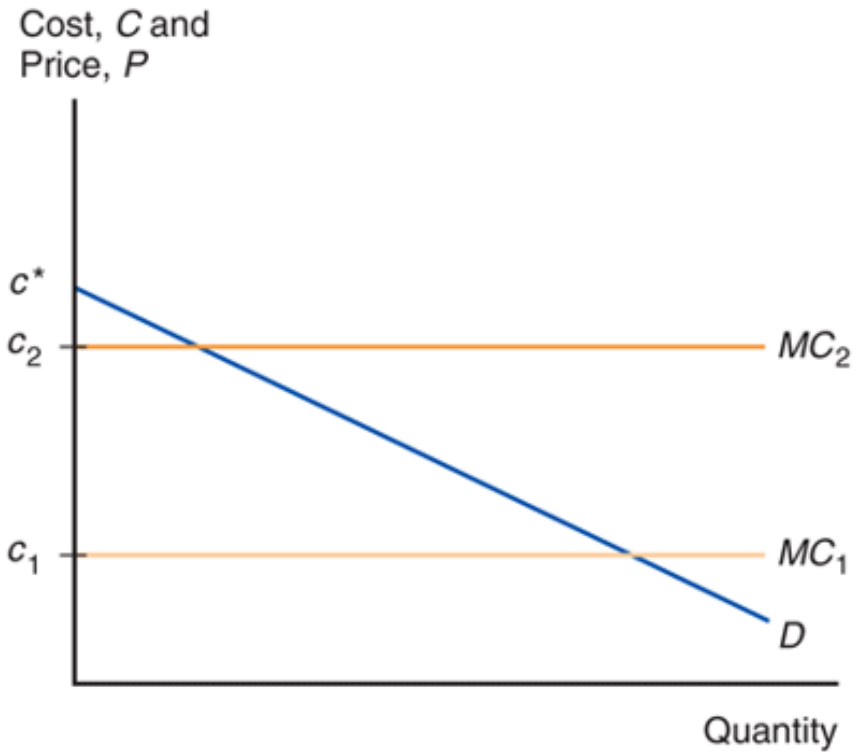
- Trade costs added two important predictions to our model of monopolistic competition and trade:
  - Why only a subset of firms export, and why exporters are relatively larger and more productive (lower marginal costs).
- Overwhelming empirical support for this prediction that exporting firms are bigger and more productive than firms in the same industry that do not export.
  - In the United States, in a typical manufacturing industry, an exporting firm is on average more than twice as large as a firm that does not export.
  - Differences between exporters and nonexporters are even larger in many European countries.

Trade Costs and Export Decisions– IV

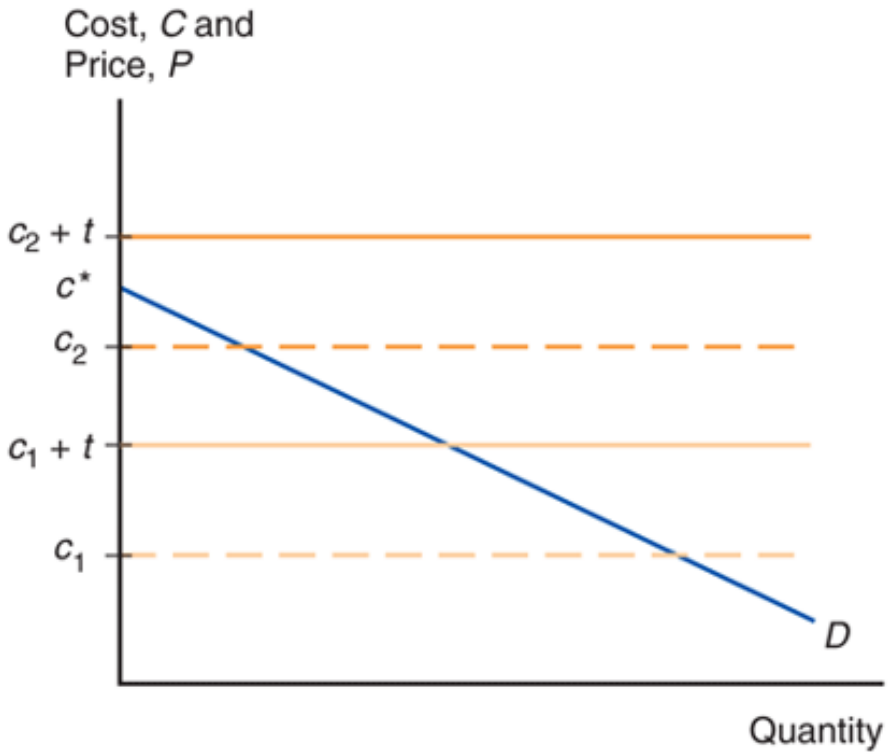
Printing	5%
Furniture	7%
Apparel	8%
Wood Products	8%
Fabricated Metals	14%
Petroleum and Coal	18%
Transportation Equipment	28%
Machinery	33%
Chemicals	36%
Computer and Electronics	38%
Electrical Equipment and Appliances	38%

Source: A. B. Bernard, J. B. Jensen, S. J. Redding, and P. K. Schott, "Firms in International Trade." *Journal of Economic Perspectives* 21 (Summer 2007), pp. 105–130.

Trade Costs and Export Decisions– V



(a) Domestic (Home) Market



(b) Export (Foreign) Market

Dumping – I

- **Dumping** is the practice of charging a lower price for exported goods than for goods sold domestically.
- Dumping is an example of **price discrimination**: the practice of charging different customers different prices.
- Price discrimination and dumping may occur only if
  - imperfect competition exists: firms are able to influence market prices.
  - markets are segmented so that goods are not easily bought in one market and resold in another.
- Dumping can be a profit-maximizing strategy:

Dumping – II

- A firm with a higher marginal cost chooses to set a lower markup over marginal cost.
- Therefore, an exporting firm will respond to the trade cost by lowering its markup for the export market.
- This strategy is considered to be **dumping**, regarded by most countries as an "unfair" trade practice.

Protectionism and Dumping – I

- A U.S. firm may appeal to the Commerce Department to investigate if dumping by foreign firms has injured the U.S. firm.
  - The Commerce Department may impose an "anti-dumping duty" (tax) to protect the U.S. firm.
  - Tax equals the difference between the actual and "fair" price of imports, where "fair" means "price the product is normally sold at in the manufacturer's domestic market."
- Next, the International Trade Commission (ITC) determines if injury to the U.S. firm has occurred or is likely to occur.

Protectionism and Dumping – II

- If the ITC determines that injury has occurred or is likely to occur, the anti-dumping duty remains in place.
- Most economists believe that the enforcement of dumping claims is misguided.
  - Trade costs have a natural tendency to induce firms to lower their markups in export markets.
  - Such enforcement may be used excessively as an excuse for protectionism.

Types of Tariffs

- A tariff is a tax levied when a good is imported.
- A **specific tariff** is levied as a fixed charge for each unit of imported goods.
  - For example, $3 per barrel of oil.
- An **ad valorem tariff** is levied as a fraction of the value of imported goods.
  - For example, 25% tariff on the value of imported trucks.

S, D, and Trade in a Single Industry – I

- Consider how a tariff affects a single market, say that of wheat.
- Suppose that in the absence of trade the price of wheat is higher in Home than it is in Foreign.
- With trade, wheat will be shipped from Foreign to Home until the price difference is eliminated.
- An import demand curve is the difference between the quantity that Home consumers demand minus the quantity that Home producers supply, at each price.
- The Home import demand curve

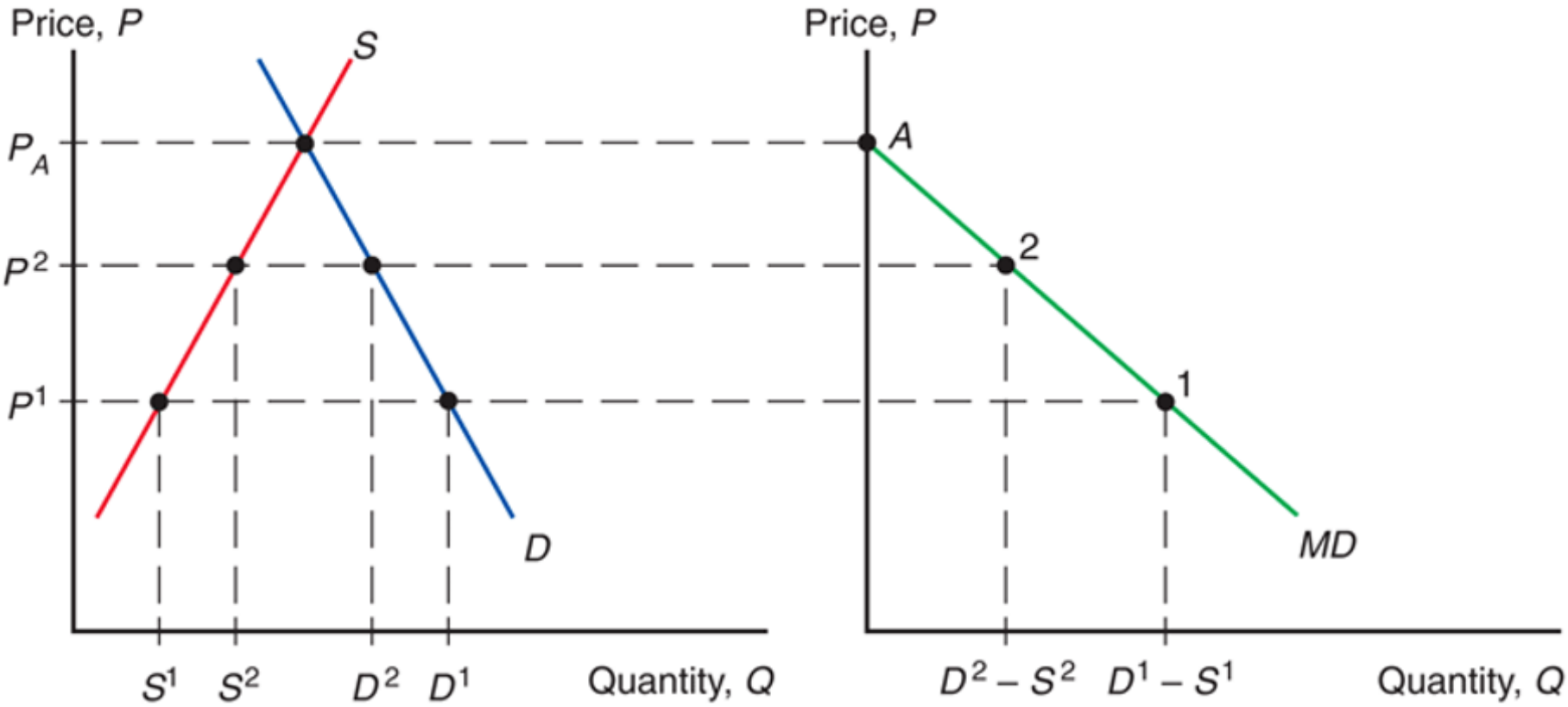
S, D, and Trade in a Single Industry – II

$$MD = D - S$$

intercepts the price axis at P_A and is downward sloping:

- As price increases, the quantity of imports demanded declines.

S, D, and Trade in a Single Industry – III



S, D, and Trade in a Single Industry – IV

- An **export supply curve** is the difference between the quantity that Foreign producers supply minus the quantity that Foreign consumers demand, at each price.
- The Foreign export supply curve

$$XS^* = S^* - D^*$$

intersects the price axis at P_A^* and is upward sloping:

  - As price increases, the quantity of exports supplied rises.

S, D, and Trade in a Single Industry – V

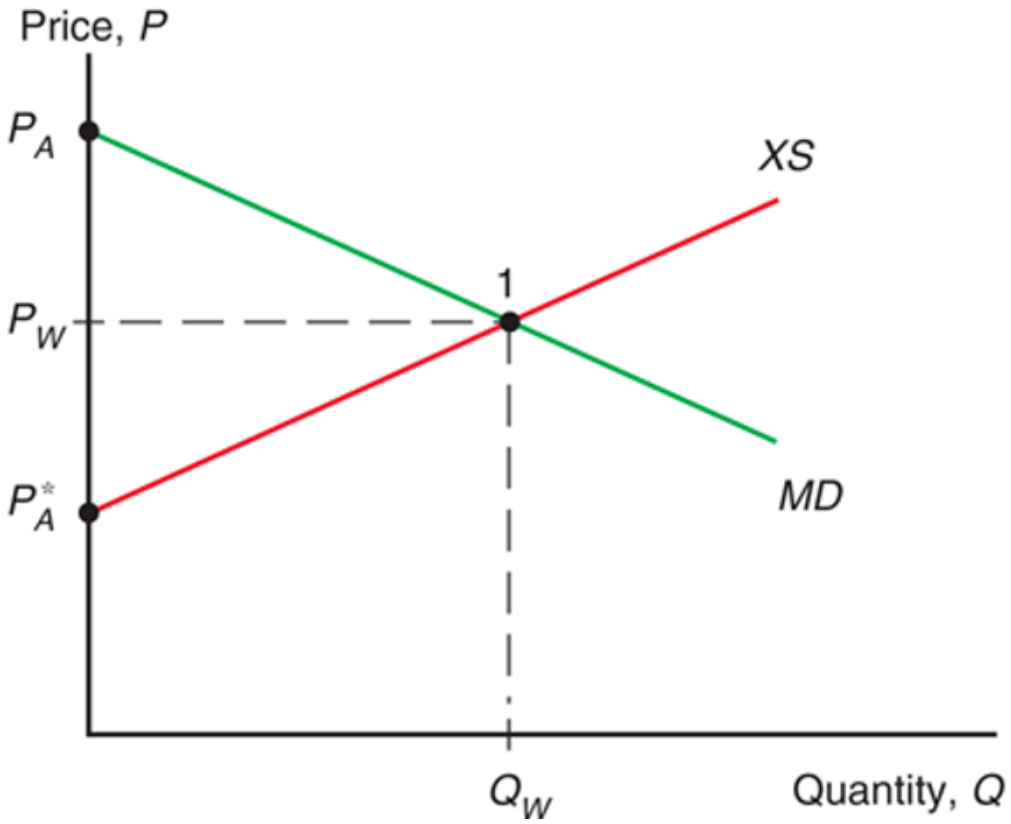
S, D, and Trade in a Single Industry – VI

- In equilibrium,

$$\begin{aligned} \text{import demand} &= \text{export supply} \\ \text{home } D - \text{home } S &= \text{foreign } S - \text{foreign } D \end{aligned}$$

$$\begin{aligned} \text{home } D + \text{foreign } D &= \text{home } S + \text{foreign } S \\ \text{world demand} &= \text{world supply} \end{aligned}$$

S, D, and Trade in a Single Industry – VII



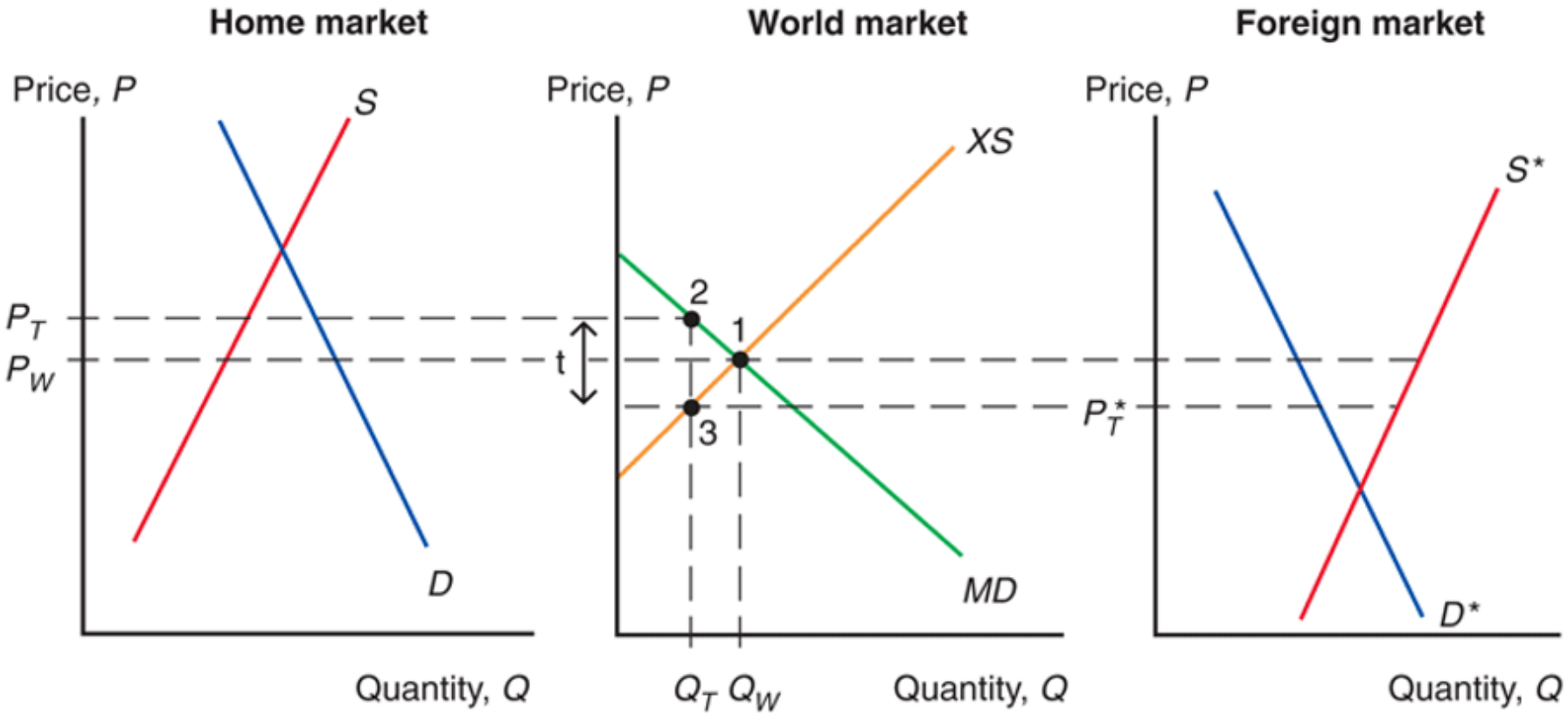
Effects of a Tariff – I

- A tariff acts like a transportation cost, making sellers unwilling to ship goods unless the Home price exceeds the Foreign price by the amount of the tariff:

$$P_T - t = P_T^*$$

- A tariff makes the price rise in the Home market and fall in the Foreign market.

Effects of a Tariff – II



- Because the price in the Home market rises from P_W under free trade to P_T with the tariff,

Effects of a Tariff – III

- Home producers supply more and Home consumers demand less, so
- the quantity of imports falls from Q_W under free trade to Q_T with the tariff.

- Because the price in the Foreign market falls from P_W under free trade to P_T^* with the tariff,
  - Foreign producers supply less, and Foreign consumers demand more, so
  - the quantity of exports falls from Q_W to Q_T.

Effects of a Tariff – IV

- The quantity of Home imports demanded equals the quantity of Foreign exports supplied when

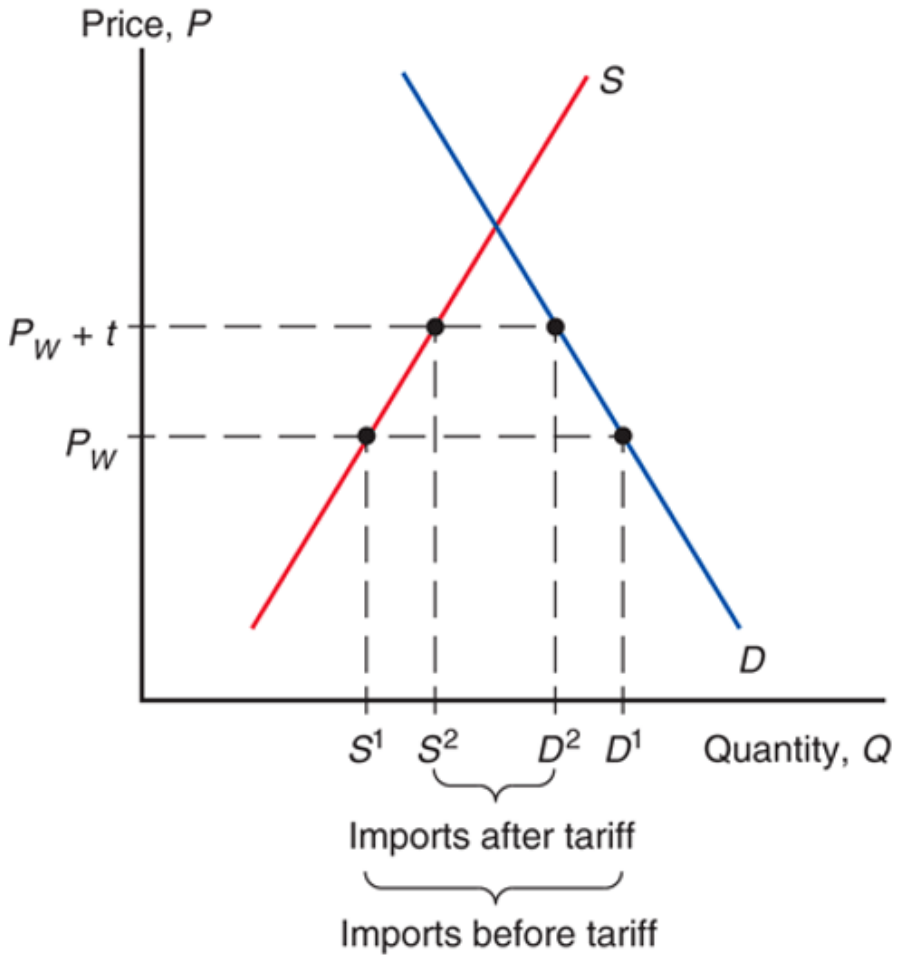
$$P_T - P_T^* = t$$

- The increase in the price in Home can be less than the amount of the tariff.
  - Part of the effect of the tariff causes the Foreign export price to decline.
  - But this effect is sometimes very small.

Effects of a Tariff in a Small Country – I

- When a country is "small," it has no effect on the foreign (world) price because its demand is an insignificant part of world demand for the good.
  - The foreign price does not fall, but remains at P_W.
  - The price in the home market rises by the full amount of the tariff, to $P_T = P_W + t$.

Effects of a Tariff in a Small Country – II



Measuring the Amount of Protection – I

- The effective rate of protection measures how much protection a tariff (or other trade policy) provides.
  - It represents the change in value that firms in an industry add to the production process when trade policy changes, which depends on the change in prices the trade policy causes.
- Effective rates of protection often differ from tariff rates because tariffs affect sectors other than the protected sector, causing indirect effects on the prices and value added for the protected sector.

Measuring the Amount of Protection – II

- For example, suppose that automobiles sell in world markets for \$8,000, and they are made from factors of production worth \$6,000.
  - The value added of the production process is $\$8,000 - \$6,000$.
- Suppose that a country puts a 25% tariff on imported autos so that home auto assembly firms can now charge up to \$10,000 instead of \$8,000.
- The effective rate of protection for home auto assembly firms is the change in value added:

Measuring the Amount of Protection – III

$$(\$4,000 - \$2,000)/\$2,000 = 100\%$$

- In this case, the effective rate of protection is greater than the tariff rate.

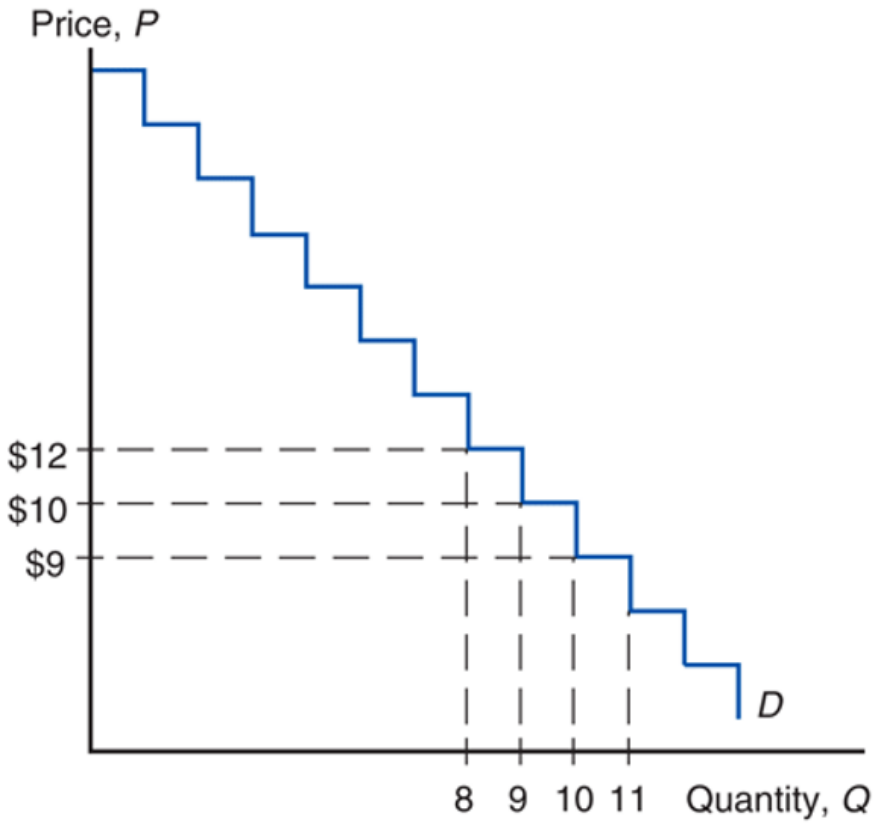
Costs and Benefits of Tariffs

- A tariff raises the price of a good in the importing country, so it hurts consumers and benefits producers there.
- In addition, the government gains tariff revenue.
- How to measure these costs and benefits?
- Use the concepts of consumer surplus and producer surplus.

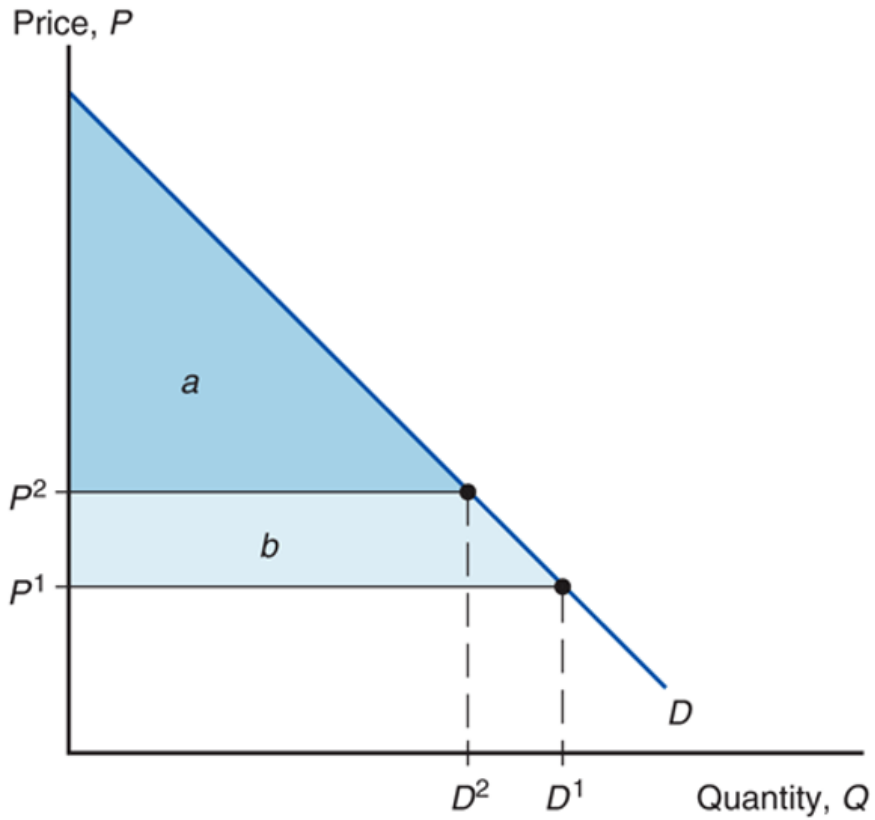
Consumer and Producer Surplus – I

- Consumer surplus measures the amount that consumers gain from purchases by computing the difference in the price actually paid from the maximum price they would be willing to pay for each unit consumed.
  - When price increases, the quantity demanded decreases as well as the consumer surplus.

Consumer and Producer Surplus – II



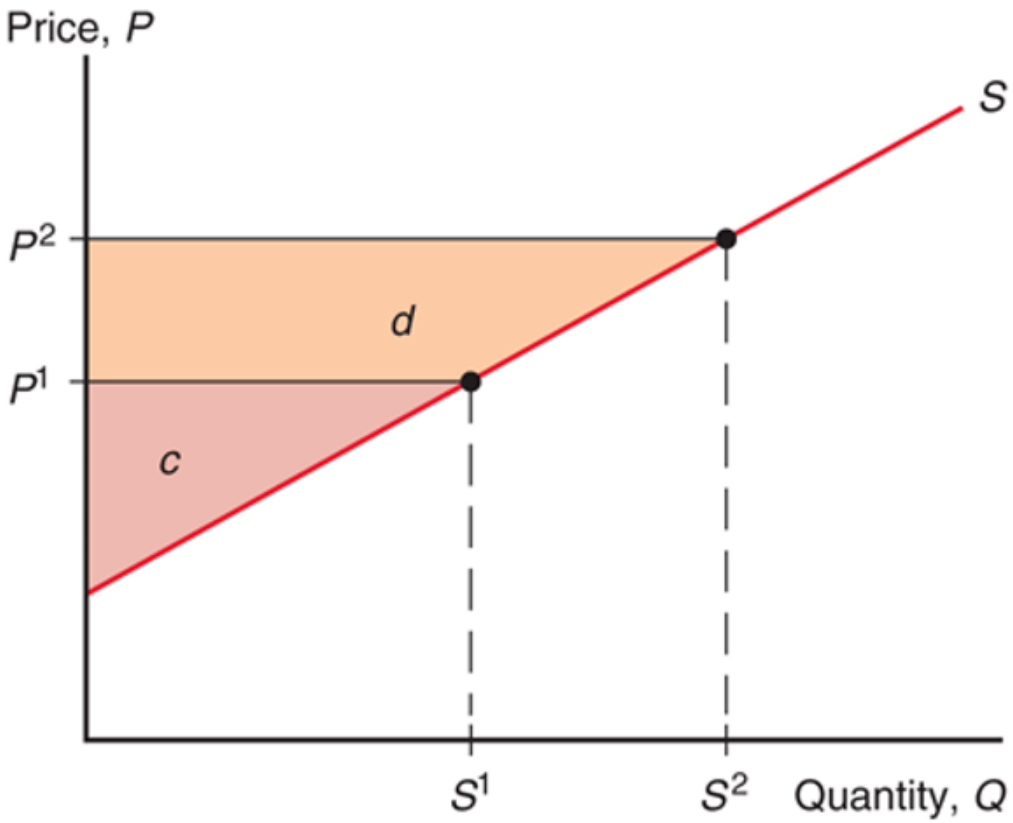
Consumer and Producer Surplus – III



Consumer and Producer Surplus – IV

- Producer surplus measures the amount that producers gain from sales by computing the difference in the price received from the minimum price at which they would be willing to sell.
  - When price increases, the quantity supplied increases as well as the producer surplus.

Consumer and Producer Surplus – V



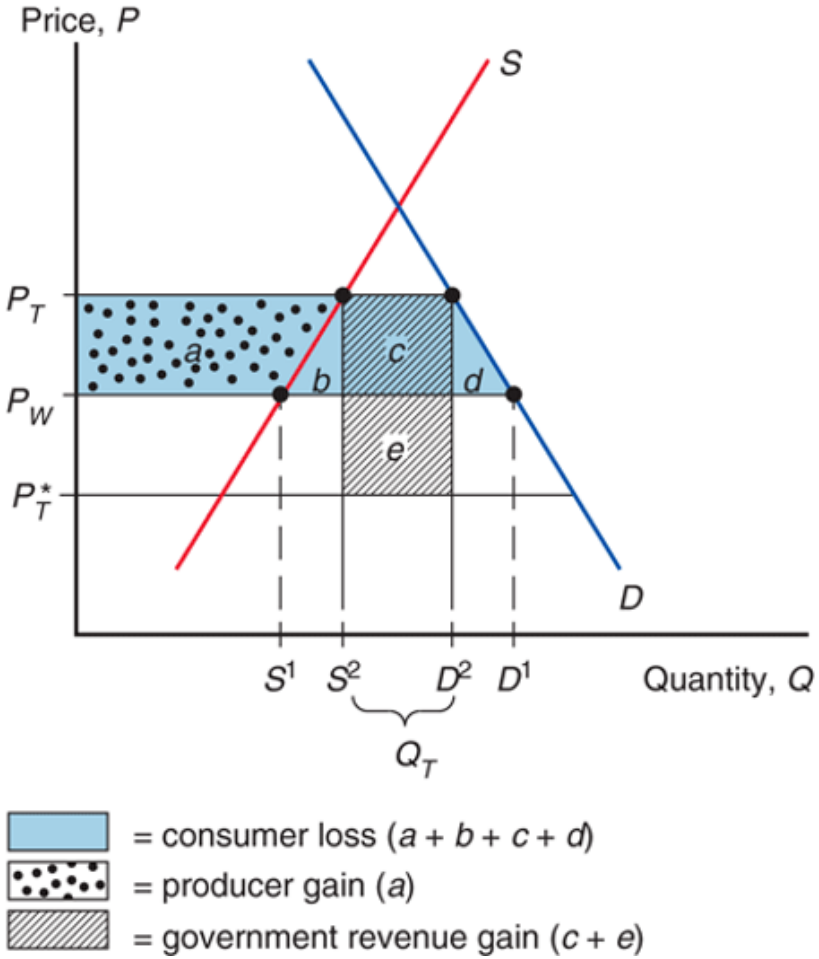
Measuring Costs and Benefits of Tariffs – I

- A tariff raises the price in the importing country:
  - consumer surplus decreases (consumers worse off)
  - producer surplus increases (producers better off).
  - the government collects tariff revenue equal to the tariff rate times the quantity of imports with the tariff.

$$tQ_T = (P_T - P_T^*)(D_2 - S_2)$$

- Change in welfare due to the tariff is $e - (b + d)$.

Measuring Costs and Benefits of Tariffs – II



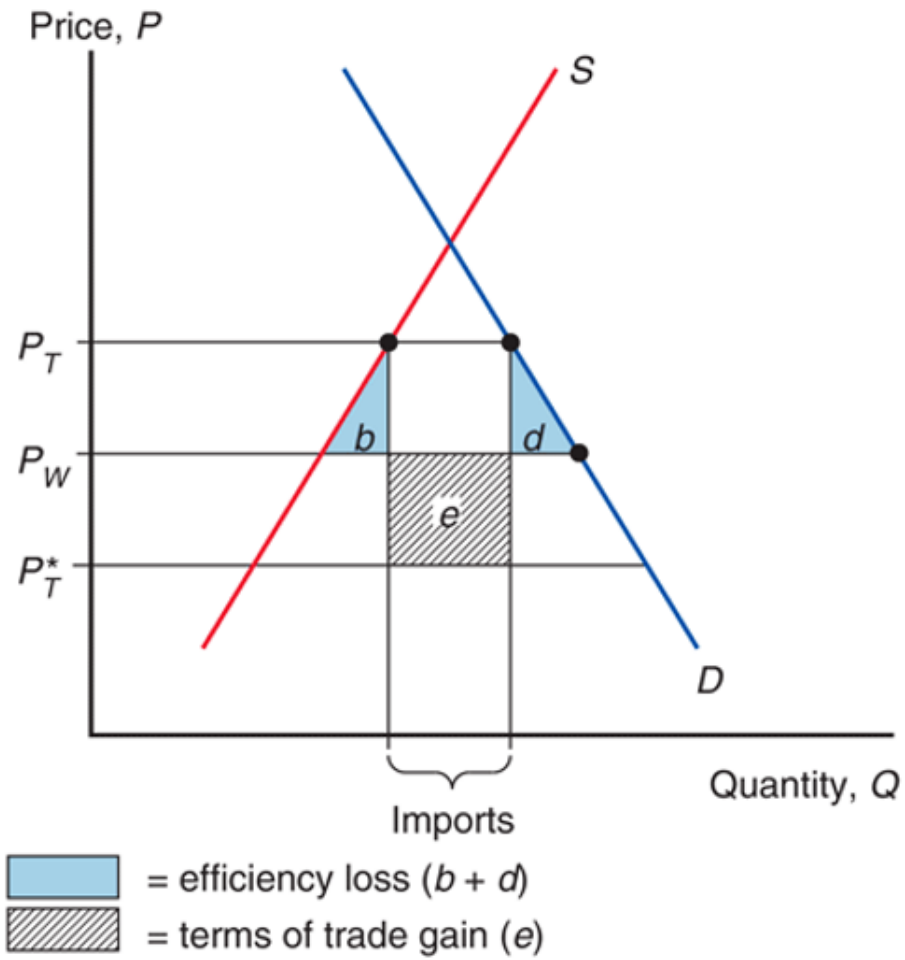
Measuring Costs and Benefits of Tariffs – III

- For a "large" country, whose imports and exports affect world prices, the welfare effect of a tariff is ambiguous.
- The triangles b and d represent the efficiency loss.
  - The tariff distorts production and consumption decisions: producers produce too much and consumers consume too little.
- The rectangle e represents the terms of trade gain.
  - The tariff lowers the Foreign price, allowing Home to buy its imports cheaper.

Measuring Costs and Benefits of Tariffs – IV

- Part of government revenue (rectangle *e*) represents the terms of trade gain, and part (rectangle *c*) represents some of the loss in consumer surplus.
  - The government gains at the expense of consumers and foreigners.
- If the terms of trade gain exceed the efficiency loss, then national welfare will increase under a tariff, at the expense of foreign countries.
  - However, foreign countries are apt to retaliate.

Measuring Costs and Benefits of Tariffs – V



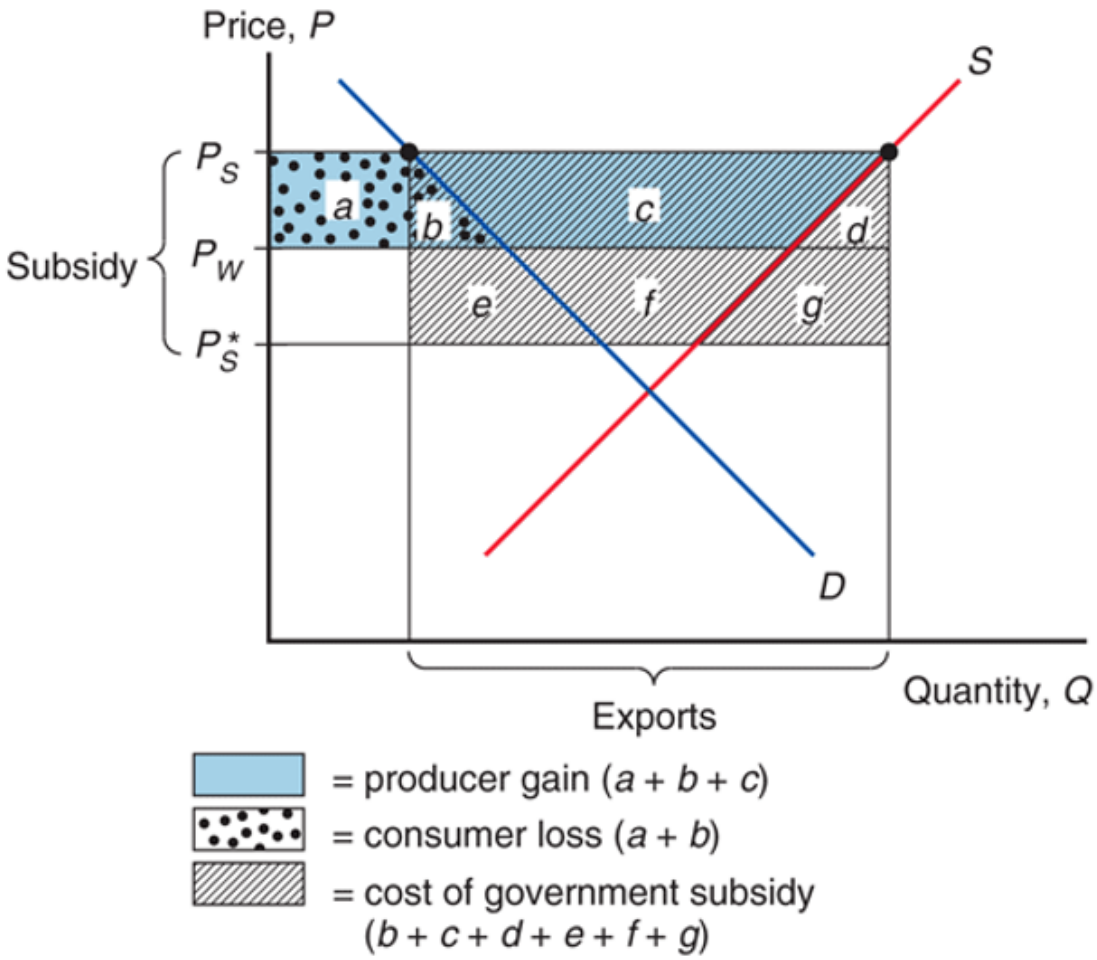
Measuring Costs and Benefits of Tariffs – VI

- Tariffs can lead trading partners to retaliate with their own tariffs, thus hurting exporters in the country that first adopted the tariff.
- Tariffs can be hard to remove and large tariffs may induce producers to engage in wasteful activities to avoid paying tariffs.
  - Ford and Subaru install (then later remove) seats in vans and pickups trucks to avoid U.S. tariff on imports of light commercial trucks.

Export Subsidy – I

- An export subsidy can also be specific or ad valorem:
  - A specific subsidy is a payment per unit exported.
  - An ad valorem subsidy is a payment as a proportion of the value exported.
- Also, government revenue falls due to paying $s \cdot X_S^*$ for the export subsidy.
- An export subsidy lowers the price paid in importing countries $P_S^* = P_S - s$.
- In contrast to a tariff, an export subsidy worsens the terms of trade by lowering the price of exports in world markets.

Export Subsidy – II



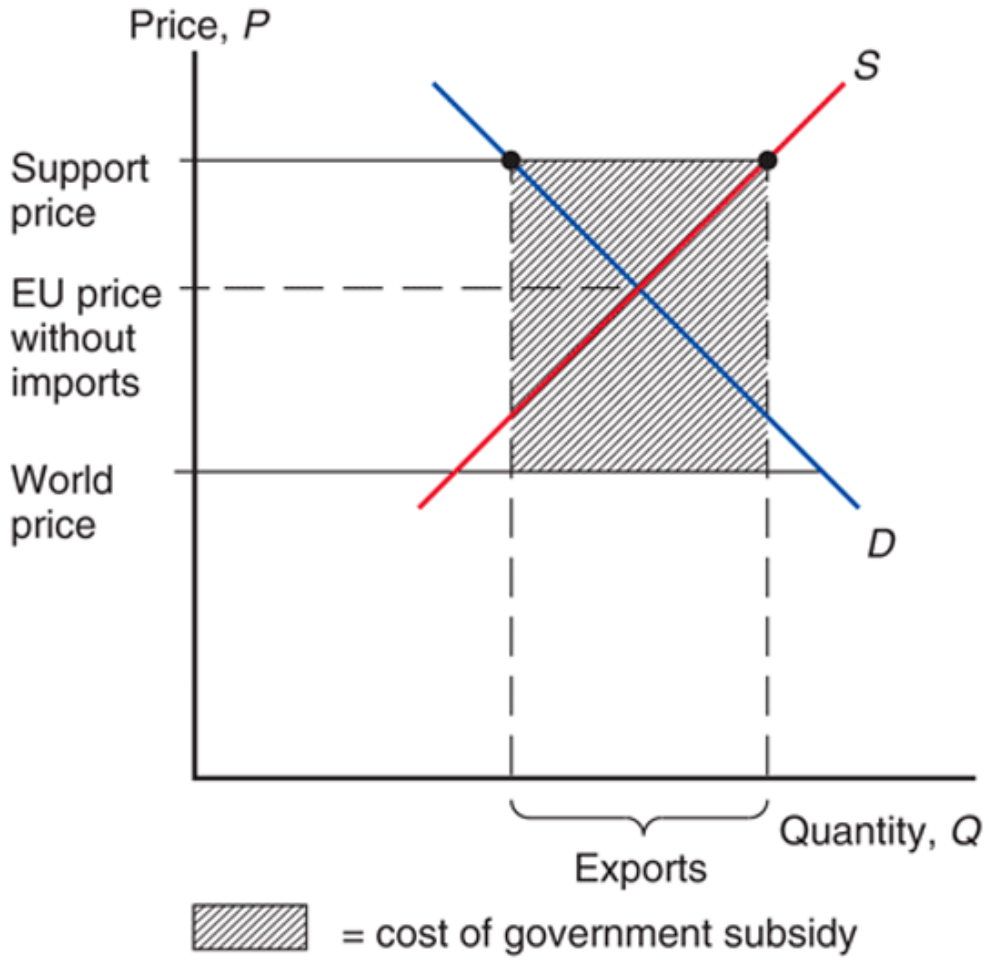
Export Subsidy – III

- An export subsidy damages national welfare.
- The triangles b and d represent the **efficiency loss**.
  - The export subsidy distorts production and consumption decisions: producers produce too much and consumers consume too little compared to the market outcome.
- The area $b + c + d + f + g$ represents the **cost of the subsidy paid by the government**.
  - The terms of trade decrease, because the price of exports falls.

European Export Subsidy – I

- The European Union's Common Agricultural Policy sets high prices for agricultural products and subsidizes exports to dispose of excess output.
  - Subsidized exports reduce world prices of agricultural products.
- The cost of this policy for European taxpayers is almost $30 billion more than its benefits (in 2007). Subsidy payments are about 22% of the value of farm output.
  - The EU has proposed that farmers receive direct payments independent of the amount of production to help lower EU prices and reduce production.

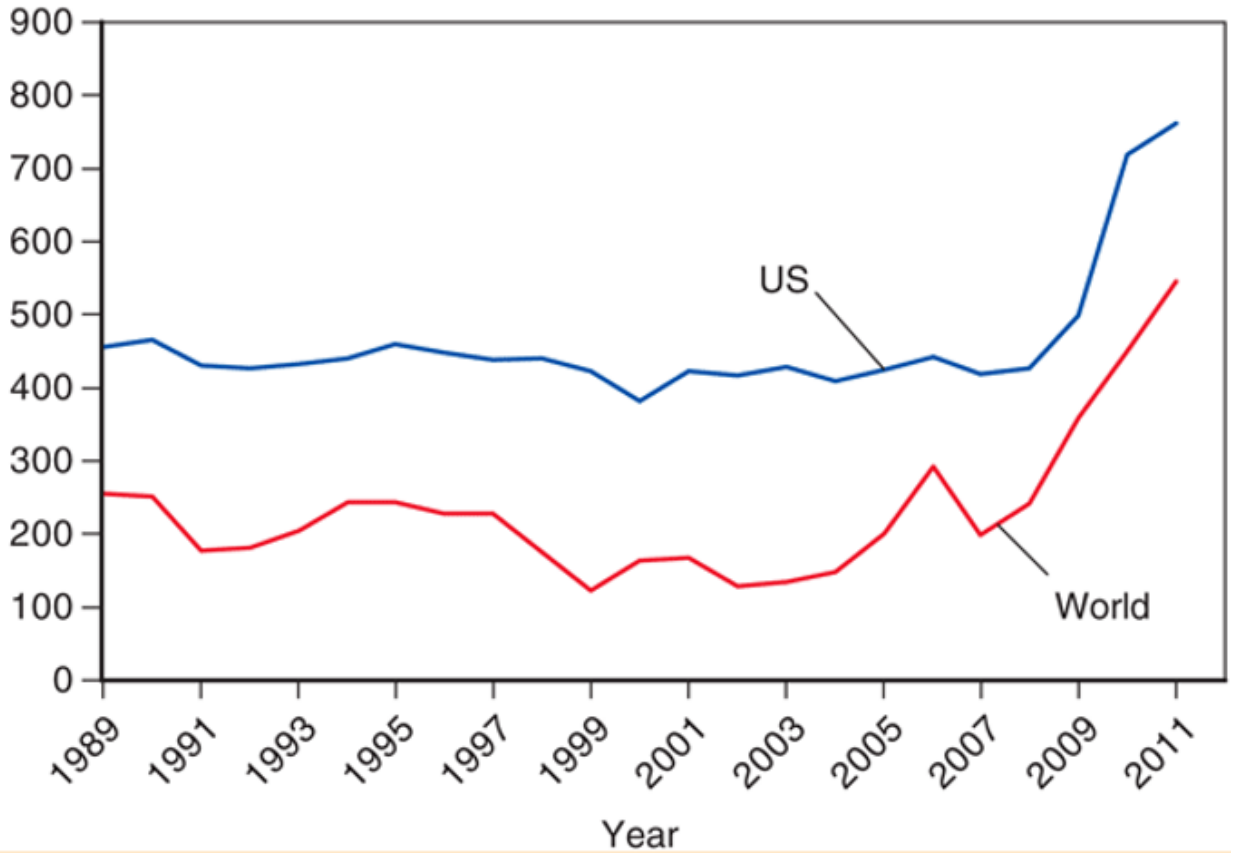
European Export Subsidy – II



Import Quota

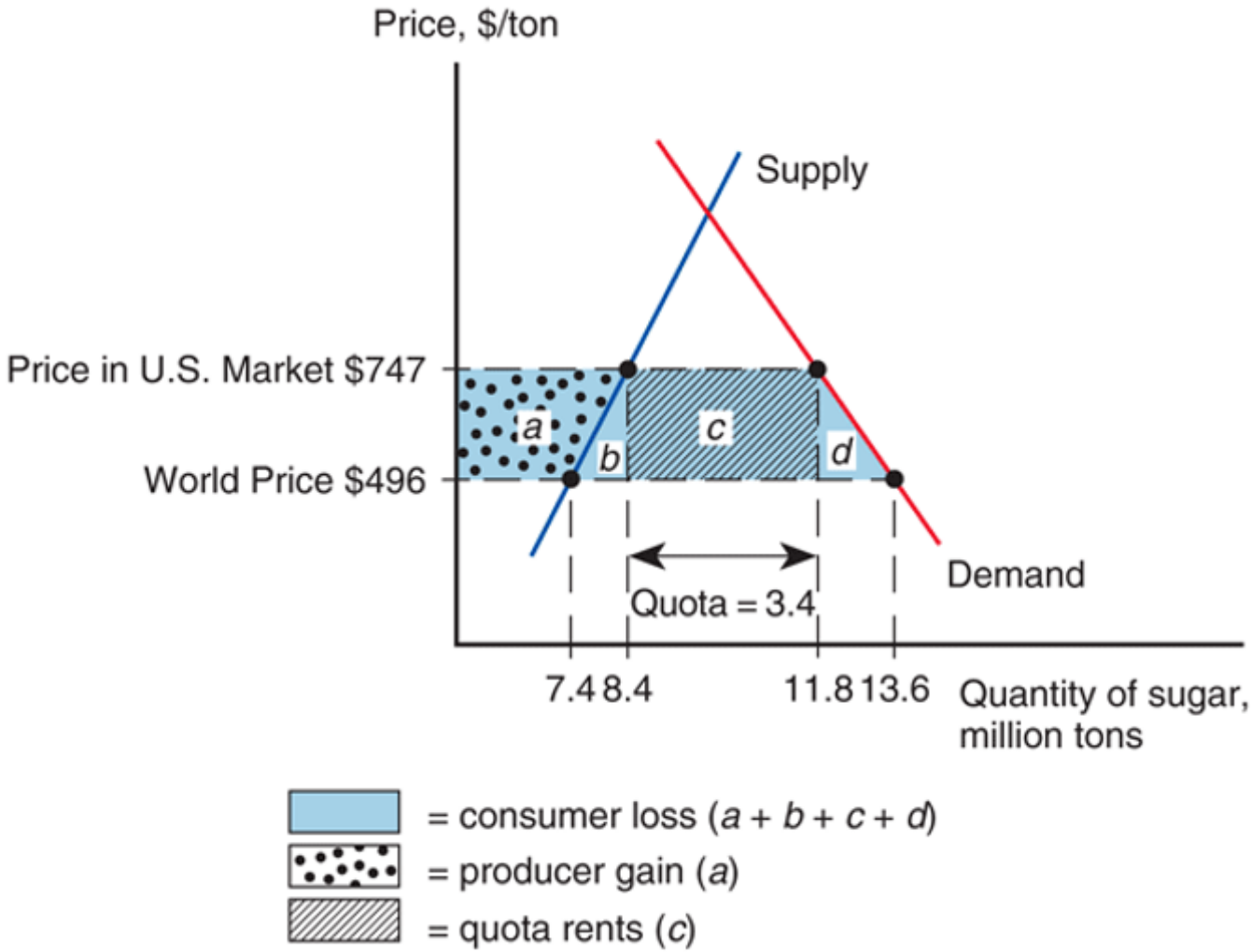
- An import quota is a restriction on the quantity of a good that may be imported.
- This restriction is usually enforced by issuing licenses or quota rights.
- A binding import quota will push up the price of the import because the quantity demanded will exceed the quantity supplied by Home producers and from imports.
- When a quota instead of a tariff is used to restrict imports, the government receives no revenue.
  - Instead, the revenue from selling imports at high prices goes to quota license holders.
  - These extra revenues are called quota rents.

Import Quota on Sugar



Source: U.S. Department of Agriculture.

Import Quota on Sugar



Voluntary Export Restraint

- A voluntary export restraint works like an import quota, except that the quota is imposed by the exporting country rather than the importing country.
- These restraints are usually requested by the importing country.
- The profits or rents from this policy are earned by foreign governments or foreign producers.
  - Foreigners sell a restricted quantity at an increased price.

Local Content Requirement – I

- A local content requirement is a regulation that requires a specified fraction of a final good to be produced domestically.
- It may be specified in value terms, by requiring that some minimum share of the value of a good represent home value added, or in physical units.
- From the viewpoint of domestic producers of inputs, a local content requirement provides protection in the same way that an import quota would.

Local Content Requirement – II

- From the viewpoint of firms that must buy home inputs, however, the requirement does not place a strict limit on imports, but allows firms to import more if they also use more home parts.
- Local content requirement provides neither government revenue (as a tariff would) nor quota rents.
- Instead, the difference between the prices of home goods and imports is averaged into the price of the final good and is passed on to consumers.

Local Content Requirement – III

- Any public work project funded by the American Recovery and Re-Investment Act of 2009 (ARRA) must use U.S. iron, steel, and manufactured goods (unless foreign bid more than 25% lower).
  - The Bay Bridge linking San Francisco and Oakland did not use ARRA funding because some key components would have been 23% ($400 million) more expensive.
- Delays due to having to show that some items are unavailable from U.S. sources.
- Has triggered protectionist clauses that shut U.S. firms out of opportunities abroad.

Other Trade Policies

- Export credit subsidies
  - A subsidized loan to exporters
  - U.S. Export-Import Bank subsidizes loans to U.S. exporters.
- Government procurement
  - Government agencies are obligated to purchase from home suppliers, even when they charge higher prices (or have inferior quality) compared to foreign suppliers.
- Bureaucratic regulations (red tape)
  - Safety, health, quality, or customs regulations can act as a form of protection and trade restriction.

The Effects of Trade Policies – I

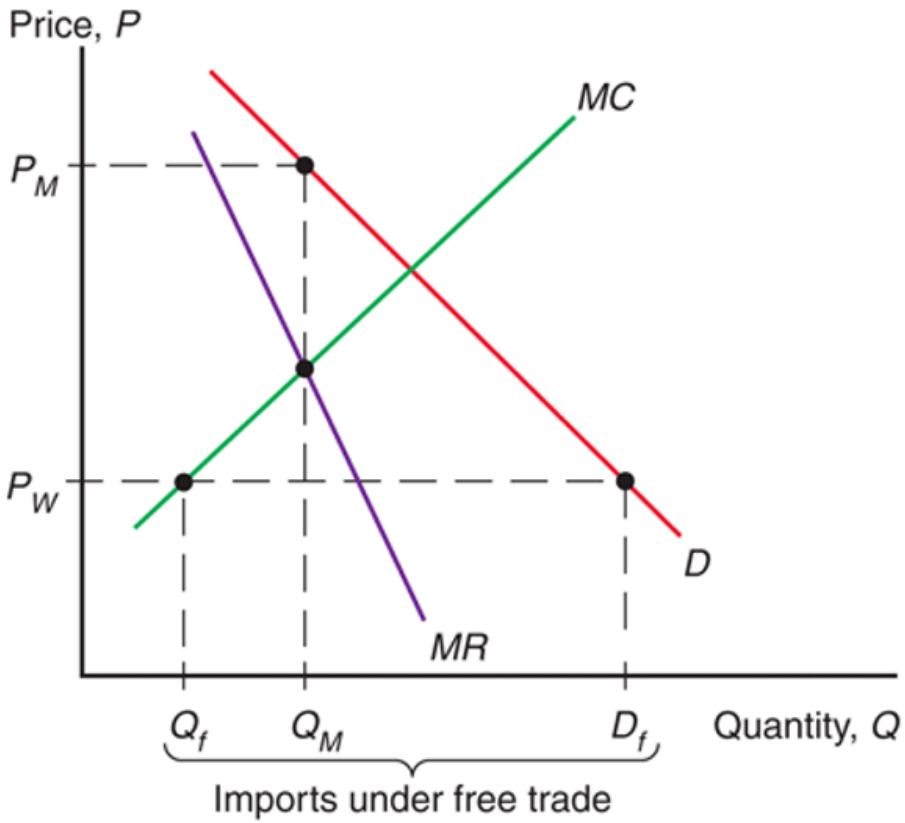
- For each trade policy, the price rises in the Home country adopting the policy.
  - Home producers supply more and gain.
  - Home consumers demand less and lose.
- The world price falls when Home is a "large" country that affects world prices.
- Tariffs generate government revenue; export subsidies drain it; import quotas do not affect government revenue.
- All these trade policies create production and consumption distortions.

The Effects of Trade Policies – II

Policy	Tariff	Export Subsidy	Import Quota	Voluntary Export Restraint
Producer surplus	Increases	Increases	Increases	Increases
Consumer surplus	Falls	Falls	Falls	Falls
Government revenue	Increases	Falls (government spending rises)	No change (rents to license holders)	No change (rents to foreigners)
Overall national welfare	Ambiguous (falls for small country)	Falls	Ambiguous (falls for small country)	Falls

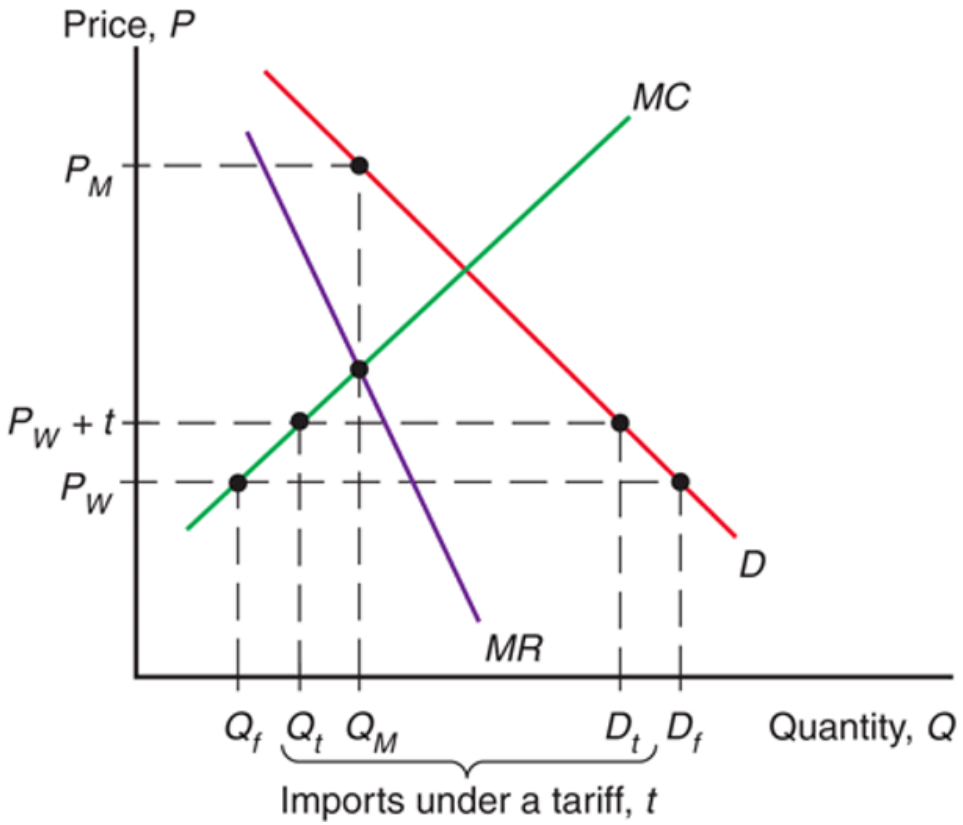
Tariffs and Quotas with a Monopoly

A Monopolist under Free Trade



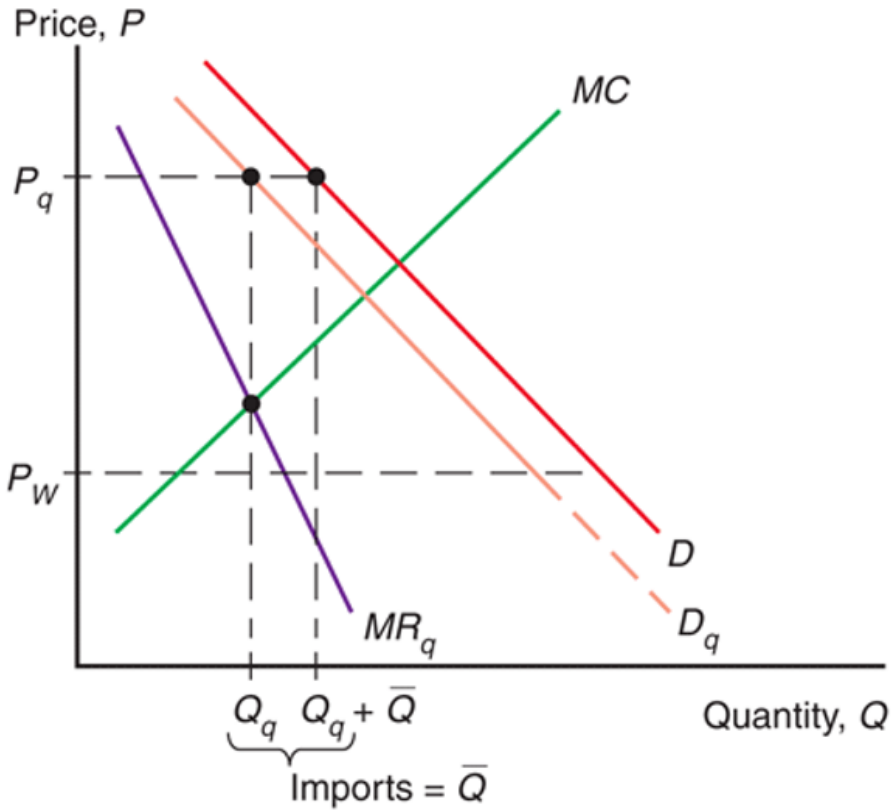
Tariffs and Quotas with a Monopoly

A Monopolist Protected by a Tariff



Tariffs and Quotas with a Monopoly

A Monopolist Protected by an Import Quota



Tariffs and Quotas with a Monopoly

Comparing a Tariff and a Quota