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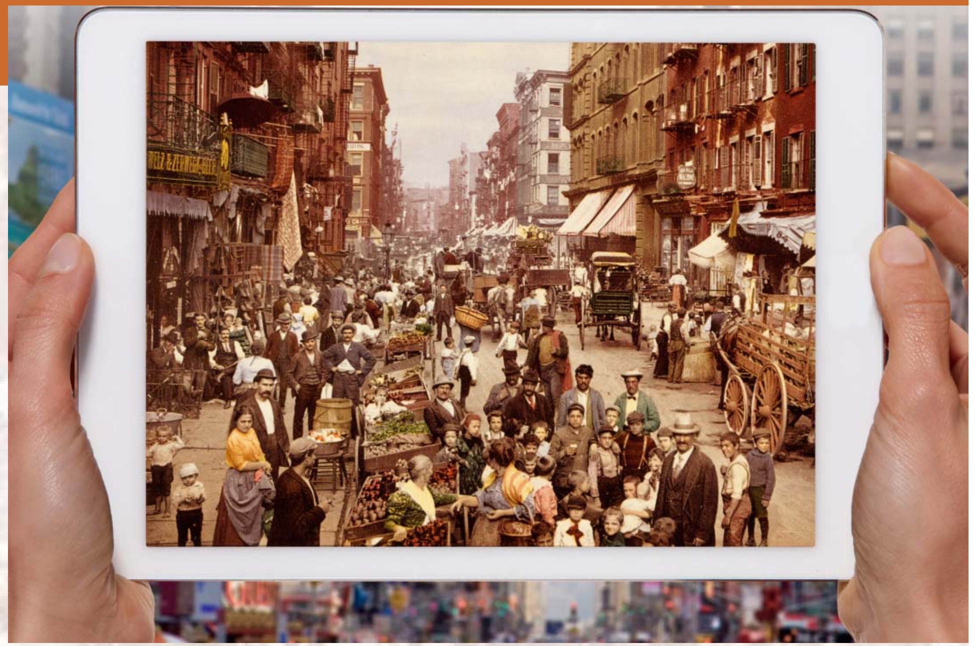
PRINCIPLES OF

ECONOMICS

Eighth Edition



CHAPTER

15

Monopoly

Premium PowerPoint Slides by:
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Introduction

- Monopoly
  - A firm that is the sole seller of a product without close substitutes
  - Has market power
    - The ability to influence the market price of the product it sells
    - A competitive firm has no market power
  - Arise due to barriers to entry
    - Other firms cannot enter the market to compete with it

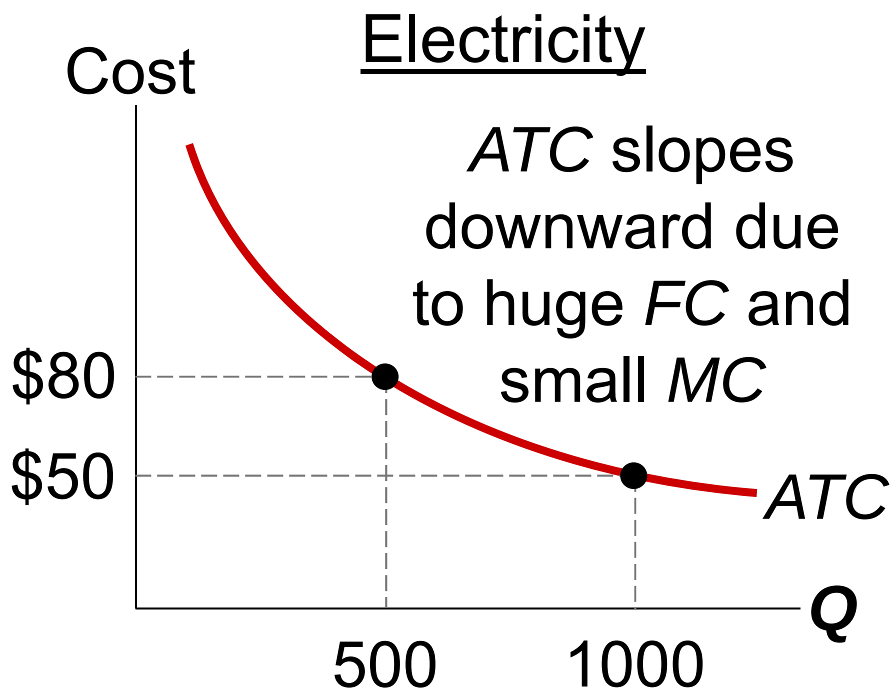
Three Barriers to Entry

1. Monopoly resources
   - A single firm owns a key resource.
     - E.g., DeBeers owns most of the world's diamond mines
2. Government regulation
   - The government gives a single firm the exclusive right to produce the good.
     - E.g., patents, copyright laws

Three Barriers to Entry

3. The production process

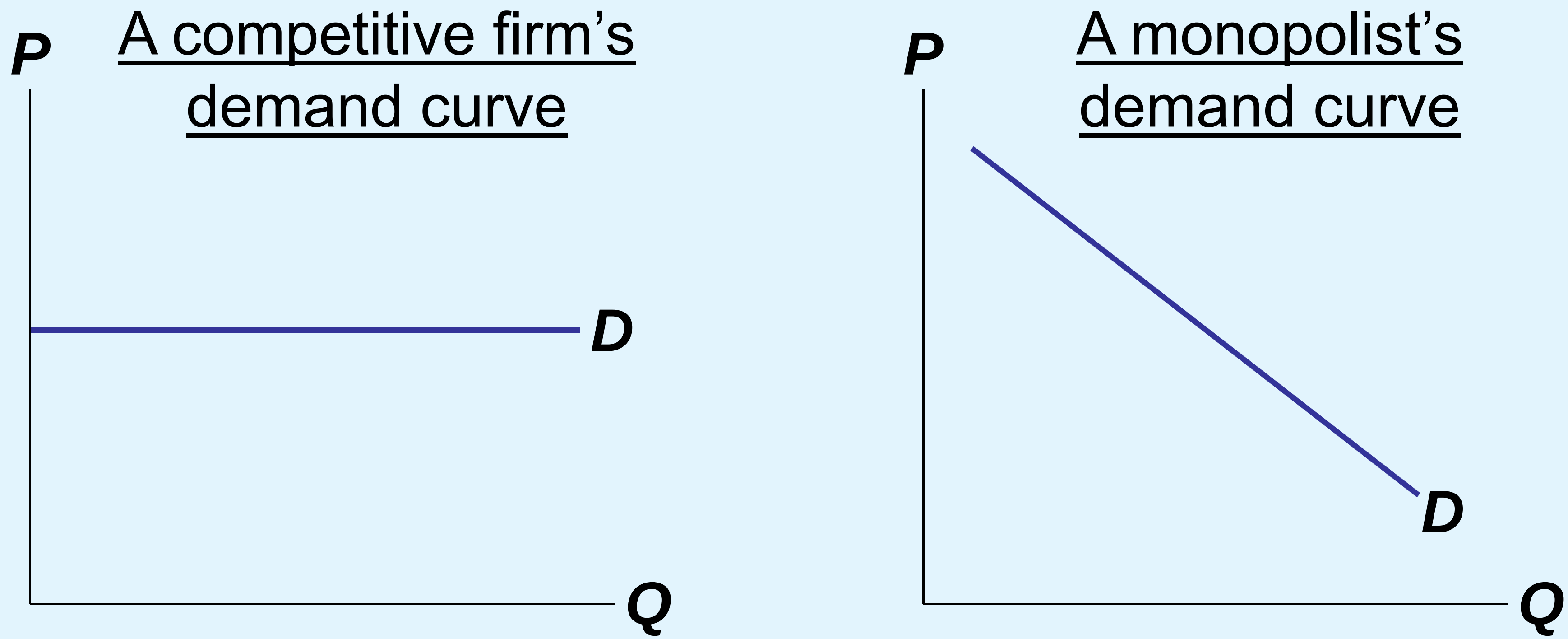
- Natural monopoly: a single firm can produce the entire market Q at lower cost than could several firms



Example: 1000 homes need electricity.

ATC is lower if one firm services all 1000 homes than if two firms each service 500 homes.

Monopoly vs. Competition: Demand Curves

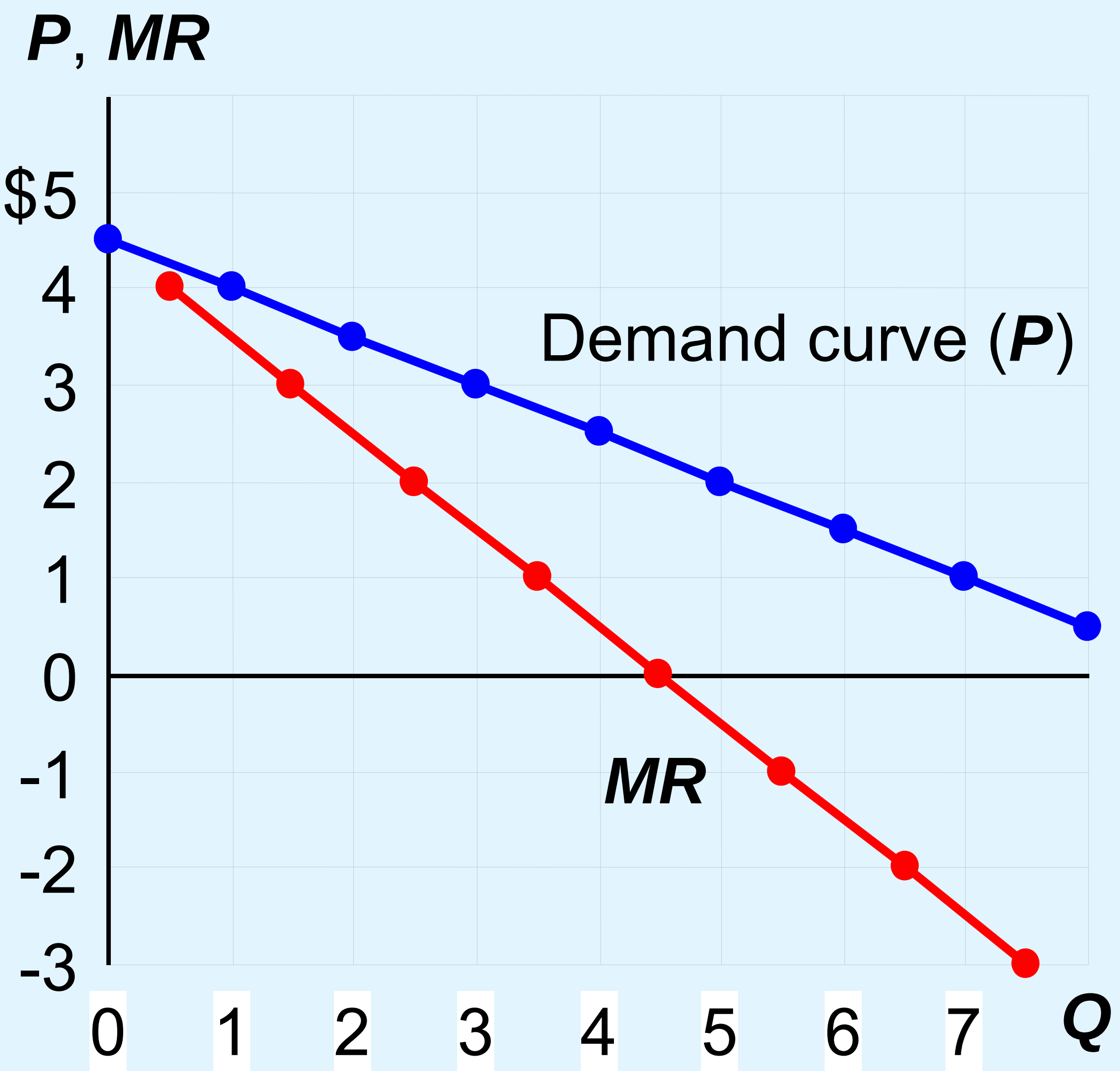


In a competitive market, the market demand curve slopes downward. But the demand curve for any individual firm's product is horizontal at the market price. The firm can increase Q without lowering P, so MR = P for the competitive firm.

A monopolist is the only seller, so it faces the market demand curve. To sell a larger Q, the firm must reduce P. Thus, MR ≠ P.

Common Grounds' D and MR Curves

Q	P	MR
0	$4.50	
		$4
1	4.00	
		3
2	3.50	
		2
3	3.00	
		1
4	2.50	
		0
5	2.00	
		–1
6	1.50	



Understanding the Monopolist's MR

- Increasing Q has two effects on revenue:
  - Output effect: higher output raises revenue
  - Price effect: lower price reduces revenue
- Marginal revenue, MR < P
  - To sell a larger Q, the monopolist must reduce the price on all the units it sells
  - Is negative if price effect > output effect
    - e.g., when Common Grounds increases Q from 5 to 6

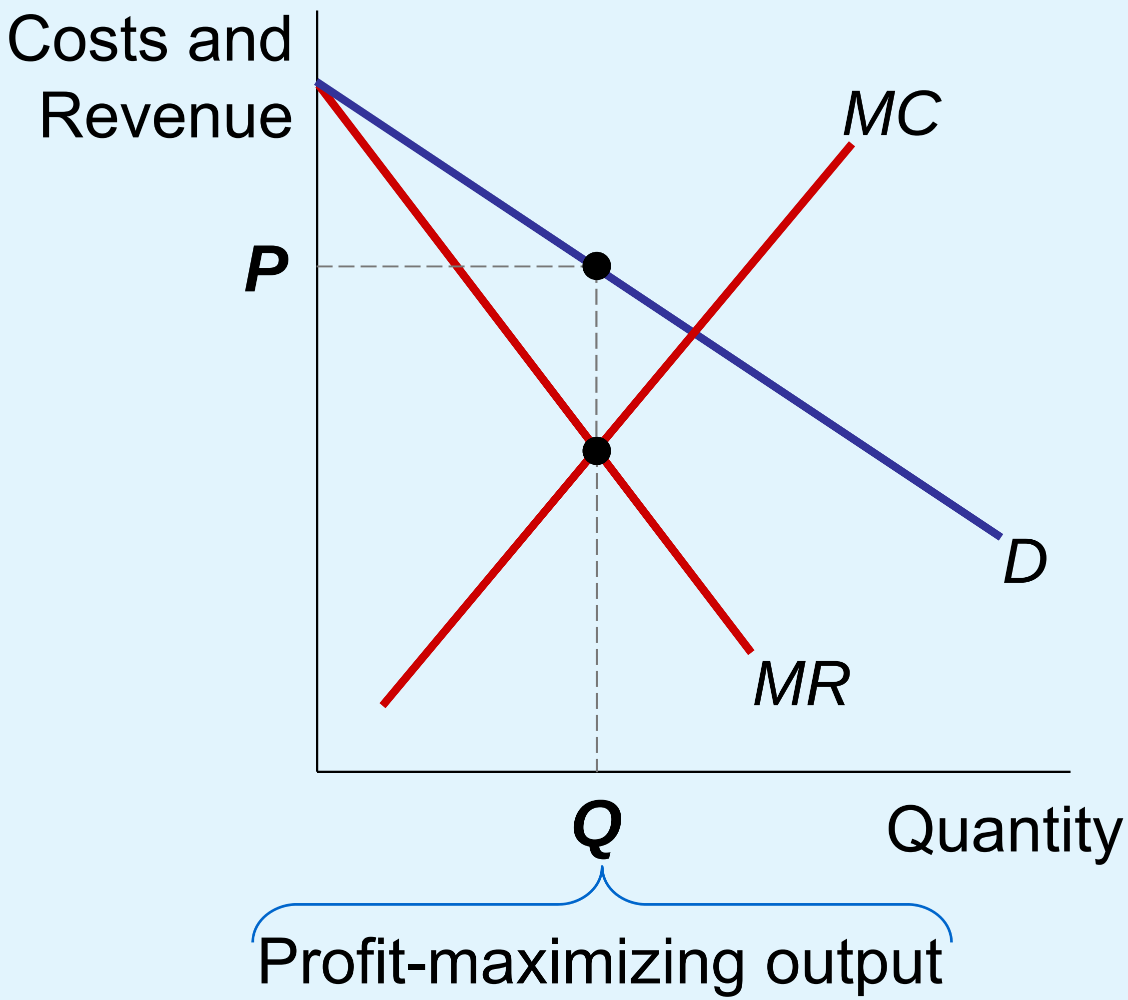
Profit-Maximization

- Like a competitive firm, a monopolist maximizes profit by producing the quantity where MR = MC
  - Sets the highest price consumers are willing to pay for that quantity
  - It finds this price from the D curve

Profit-Maximization

The profit-maximizing ***Q*** is where *MR* = *MC*.

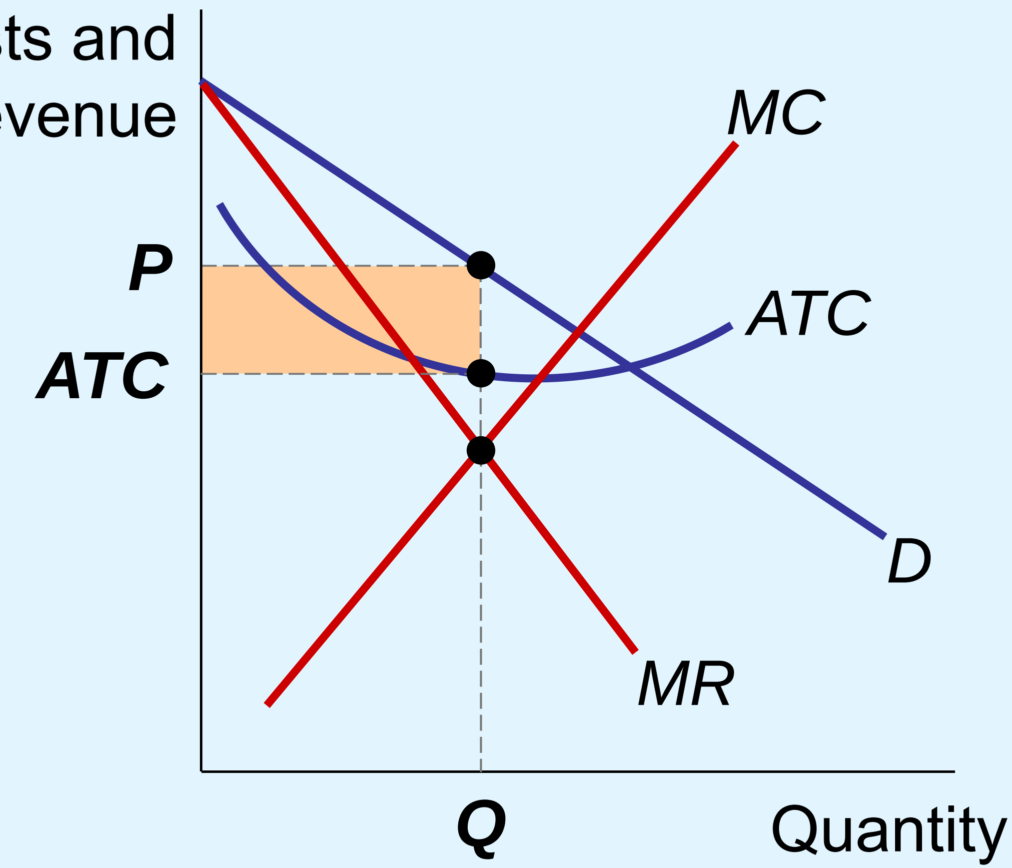
Find ***P*** from the demand curve at this ***Q***.



The Monopolist's Profit

As with a competitive firm, the monopolist's profit equals

$(P - ATC) \times Q$



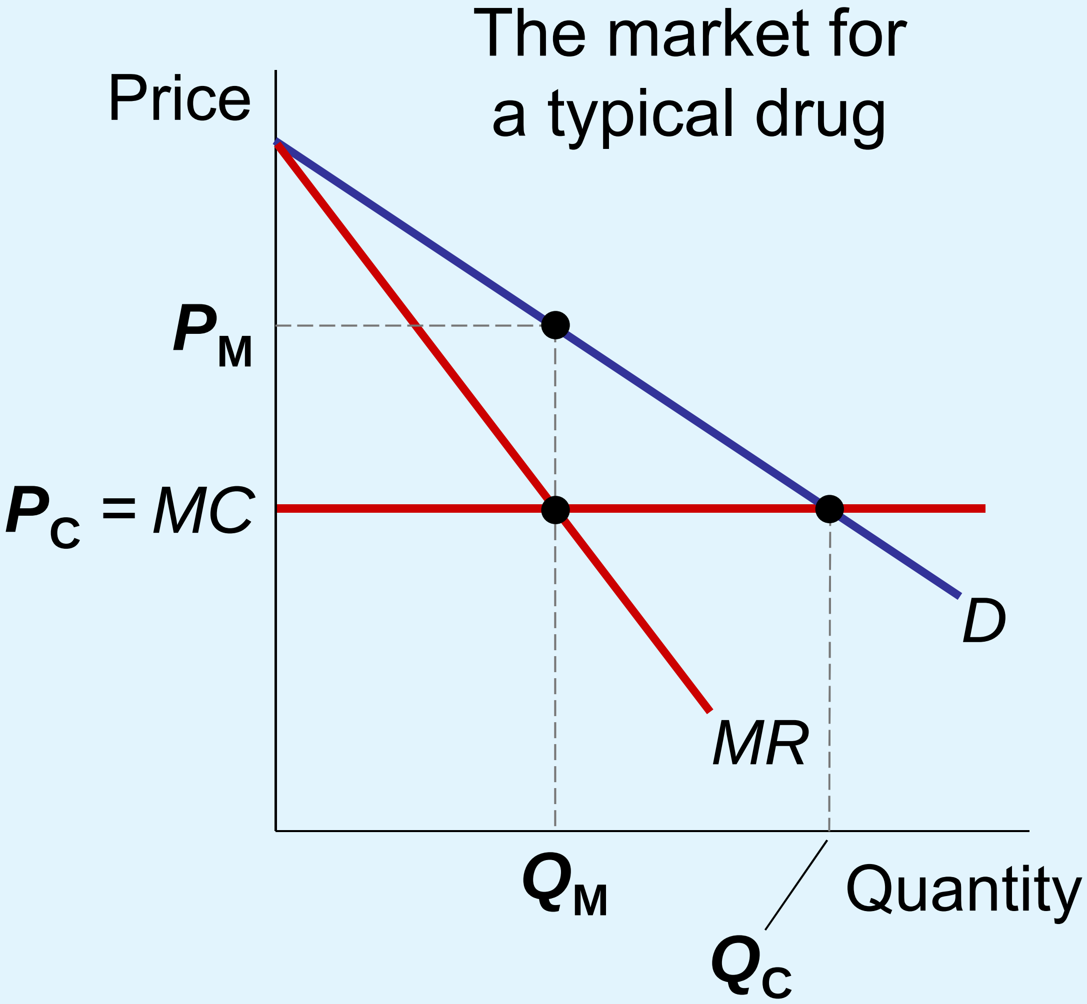
A Monopoly Does Not Have an S Curve

- A competitive firm takes P as given
  - Has a supply curve that shows how its Q depends on P
- A monopoly firm is a "price-maker"
  - Q does not depend on P
  - Q and P are jointly determined by MC, MR, and the demand curve
  - Hence, no supply curve for monopoly.

CASE STUDY: Monopoly vs. Generic Drugs

Patents on new drugs give a temporary monopoly to the seller.

When the patent expires, the market becomes competitive, generics appear.



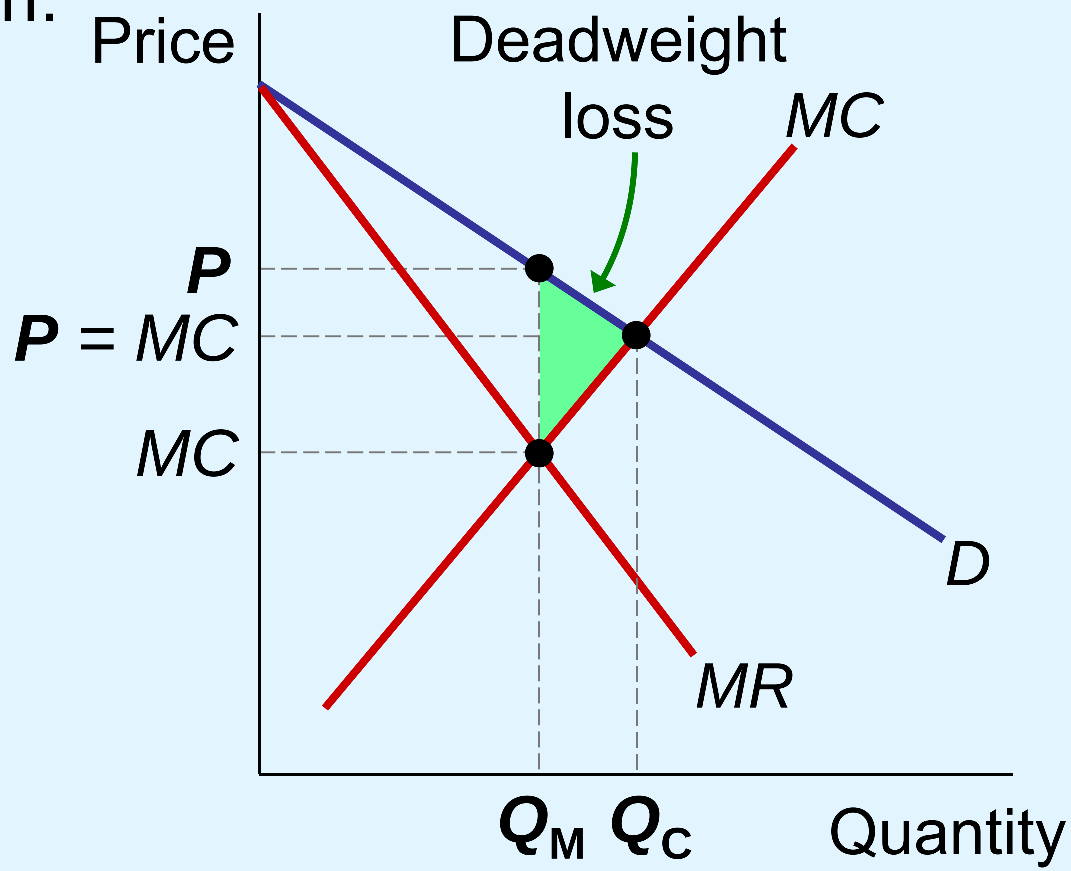
The Welfare Cost of Monopoly

- Recall:
  - Competitive market equilibrium: P = MC and total surplus is maximized
- Monopoly equilibrium, P > MR = MC
  - The value to buyers of an additional unit (P) exceeds the cost of the resources needed to produce that unit (MC)
  - The monopoly Q is too low – could increase total surplus with a larger Q.
  - Monopoly results in a deadweight loss

The Welfare Cost of Monopoly

Competitive equilibrium:
- quantity = Q_C
- P = MC
- total surplus is maximized

Monopoly equilibrium:
- quantity = Q_M
- P > MC
- deadweight loss



Price Discrimination

- Price discrimination:
  - Sell the same good at different prices to different buyers
  - A firm can increase profit by charging a higher price to buyers with higher willingness to pay
  - Requires the ability to separate customers according to their willingness to pay
  - Can raise economic welfare

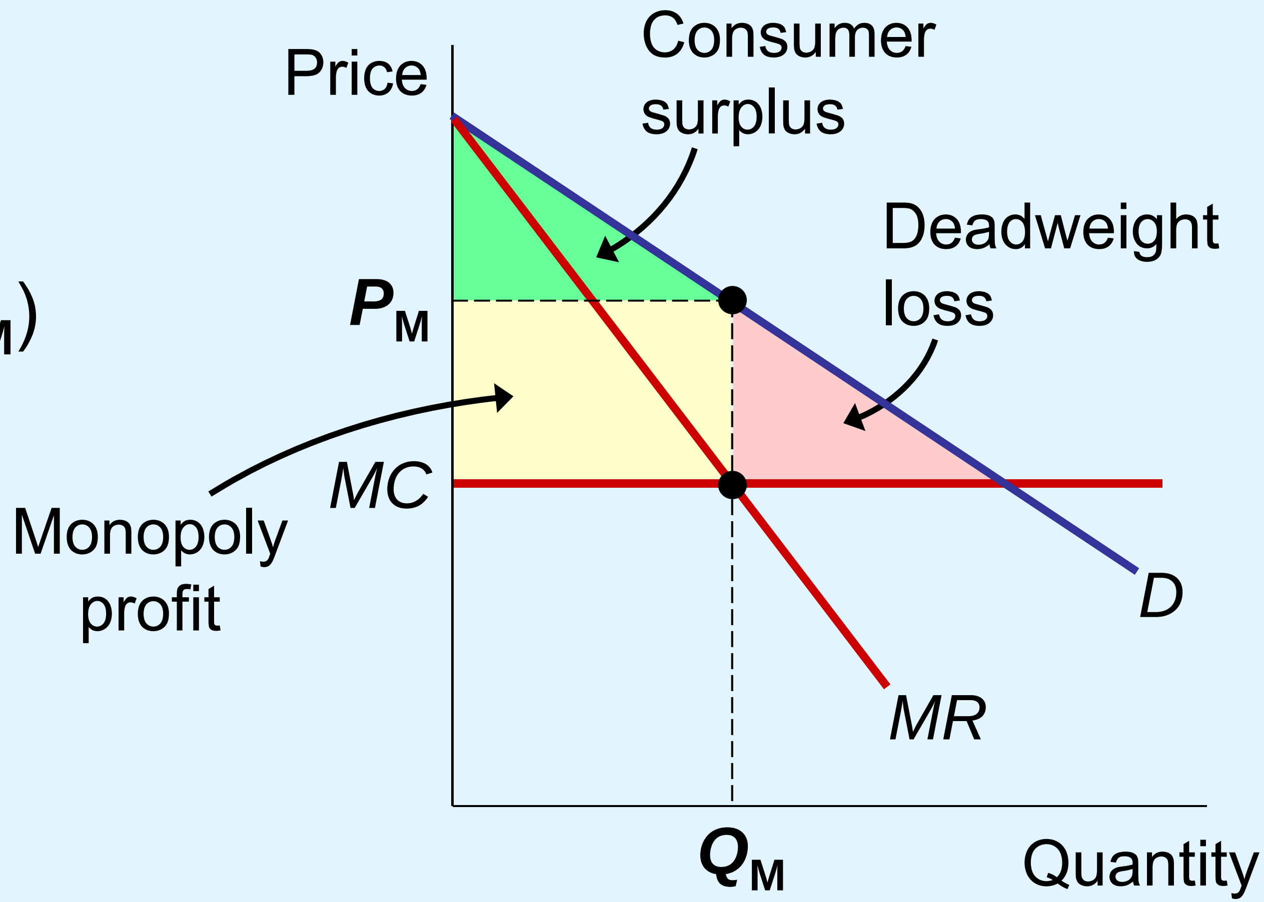
Price Discrimination

- Perfect price discrimination
  - Charge each customer a different price
    - Exactly his or her willingness to pay
  - Monopoly firm gets the entire surplus (Profit)
  - No deadweight loss

Single Price Monopoly

Here, the monopolist charges the same price (P_M) to all buyers.

A deadweight loss results.



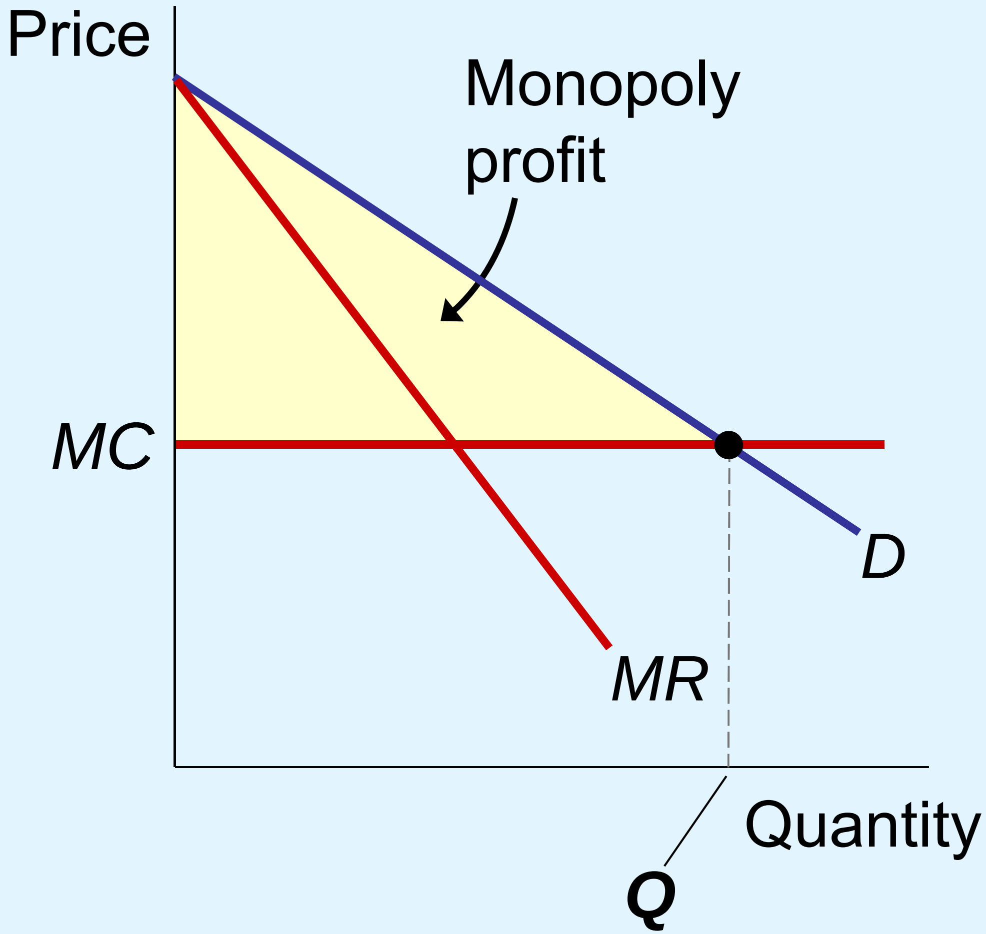
Perfect Price Discrimination vs. Single Price Monopoly

Here, the monopolist produces the competitive quantity, but charges each buyer his or her WTP.

This is called **perfect price discrimination**.

The monopolist captures all CS as profit.

But there's no DWL.



Price Discrimination in the Real World

- Perfect price discrimination
  - Not possible in the real world
    - No firm knows every buyer's WTP
    - Buyers do not reveal it to sellers
- Price discrimination
  - Firms divide customers into groups based on some observable trait that is likely related to willingness to pay (WTP), such as age

Examples of Price Discrimination

- Movie tickets
  - Discounts for seniors, students, and people who can attend during weekday afternoons.
    - Lower WTP than people who pay full price on Friday night
- Airline prices
  - Discounts for Saturday-night stayovers
    - Business travelers (higher WTP) vs. more price-sensitive leisure travelers

Examples of Price Discrimination

- Discount coupons
  - People who have time to clip and organize coupons are more likely to have lower income and lower WTP than others
- Need-based financial aid
  - Low income families have lower WTP for their children's college education
  - Schools price-discriminate by offering need-based aid to low income families

Examples of Price Discrimination

- Quantity discounts
  - A buyer's WTP often declines with additional units, so firms charge less per unit for large quantities than small ones.
    - Example: A movie theater charges $4 for a small popcorn and $5 for a large one that's twice as big

Public Policy Toward Monopolies

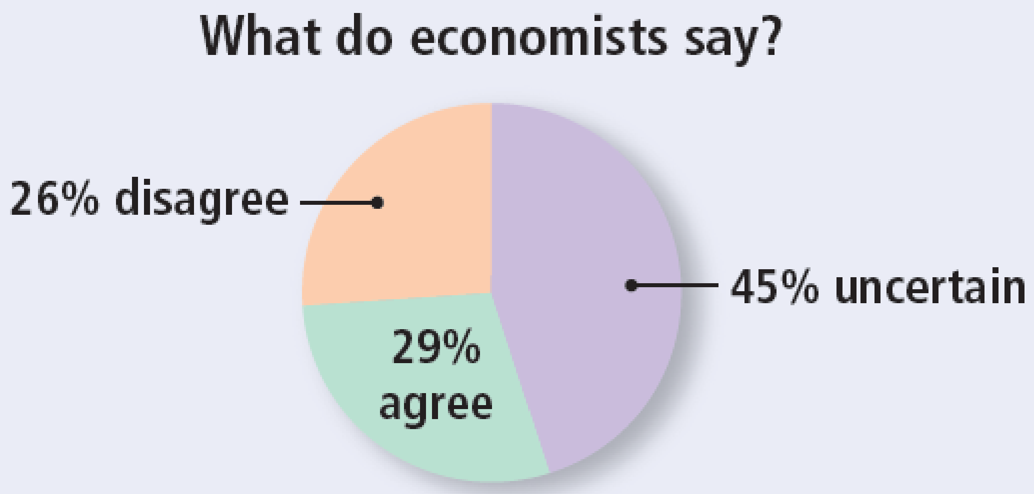
1. Increasing competition with antitrust laws

- Sherman Antitrust Act, 1890
- Clayton Antitrust Act, 1914
- Prevent mergers
- Break up companies
- Prevent companies from coordinating their activities to make markets less competitive

ASK THE EXPERTS

Airline Mergers

"If regulators had not approved mergers in the past decade between major networked airlines, travelers would be better off today."



Public Policy Toward Monopolies

2. Regulation

- Regulate the behavior of monopolists
  - Set the monopolists’ price
- Common in case of natural monopolies
  - MC < ATC at all Q
  - Marginal-cost pricing would result in losses
- Regulator might subsidize the monopolist or set P = ATC for zero economic profit

Public Policy Toward Monopolies

3. Public ownership

- How the ownership of the firm affects the costs of production
- Private owners: incentive to min costs
- Public owners (government)
  - If it does a bad job, losers are the customers and taxpayers
  - Public ownership is usually less efficient since no profit motive to minimize costs

Public Policy Toward Monopolies

4. Do nothing

- Some economists argue that it is often best for the government not to try to remedy the inefficiencies of monopoly pricing
- Determining the proper role of the government in the economy requires judgments about politics as well as economics

The Prevalence of Monopoly

- Pure monopoly – rare in the real world
- Many firms have market power, due to:
  - Selling a unique variety of a product
  - Having a large market share and few significant competitors
- In many such cases, most of the results from this chapter apply, including:
  - Markup of price over marginal cost
  - Deadweight loss