10

Monopoly

- While a competitive firm is a *price taker*, a monopoly firm is a *price maker*.

- A firm is considered a *monopoly* if . . .
  - it is the sole seller of its product.
  - its product does not have close substitutes.

WHY MONOPOLIES ARISE

- The fundamental cause of monopoly is *barriers to entry*.

WHY MONOPOLIES ARISE

- Barriers to entry have three sources:
  - Ownership of a key resource.
  - The government gives a single firm the exclusive right to produce some good.
  - Costs of production make a single producer more efficient than a large number of producers.

Monopoly Resources

- Although exclusive ownership of a key resource is a potential source of monopoly, in practice monopolies rarely arise for this reason.

Government-Created Monopolies

- Governments may restrict entry by giving a single firm the exclusive right to sell a particular good in certain markets.

Government-Created Monopolies

- Patent and copyright laws are two important examples of how government creates a monopoly to serve the public interest.

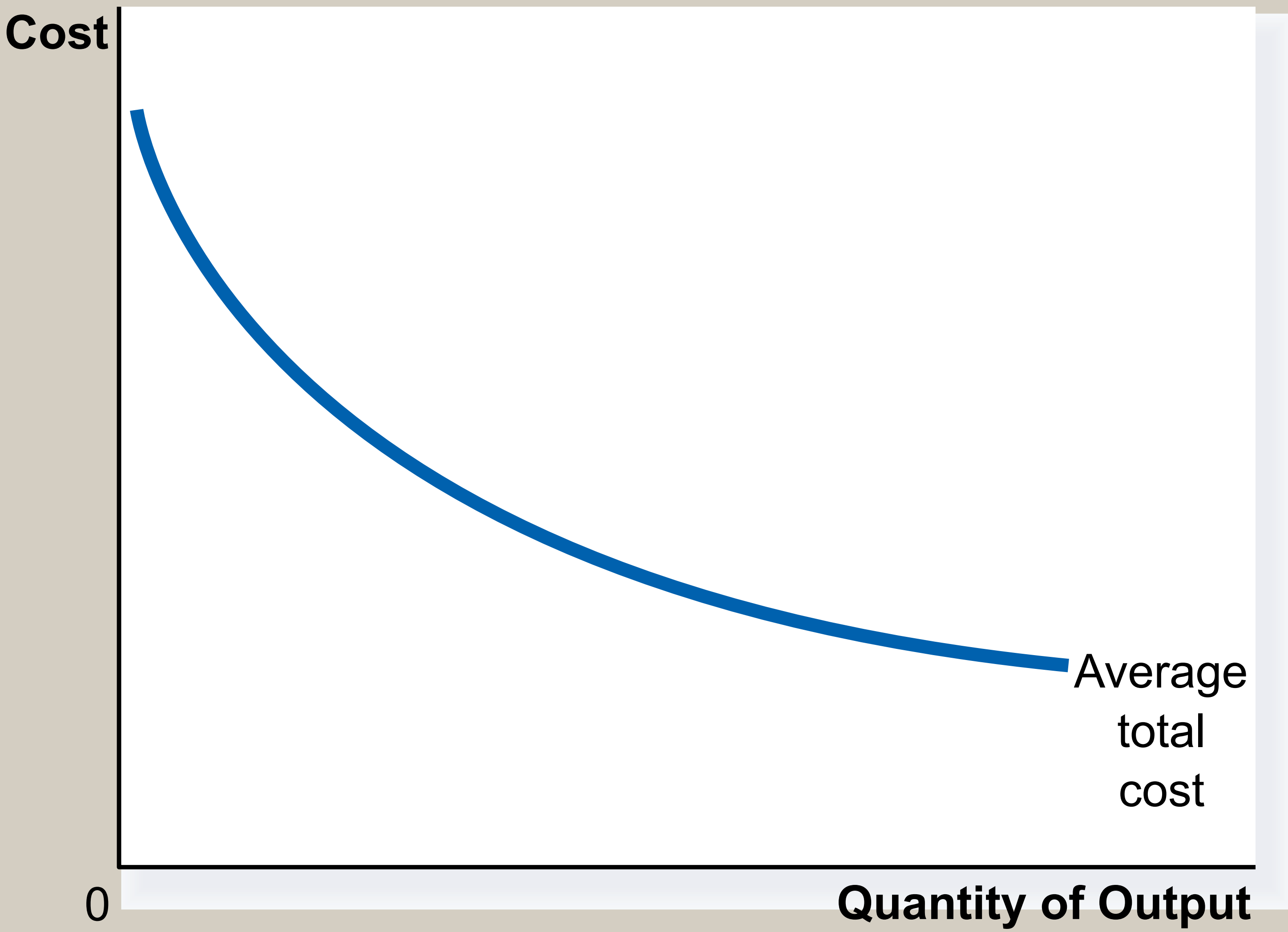
Natural Monopolies

- An industry is a *natural monopoly* when a single firm can supply a good or service to an entire market at a smaller cost than could two or more firms.

Natural Monopolies

- A *natural monopoly* arises when there are economies of scale over the relevant range of output.

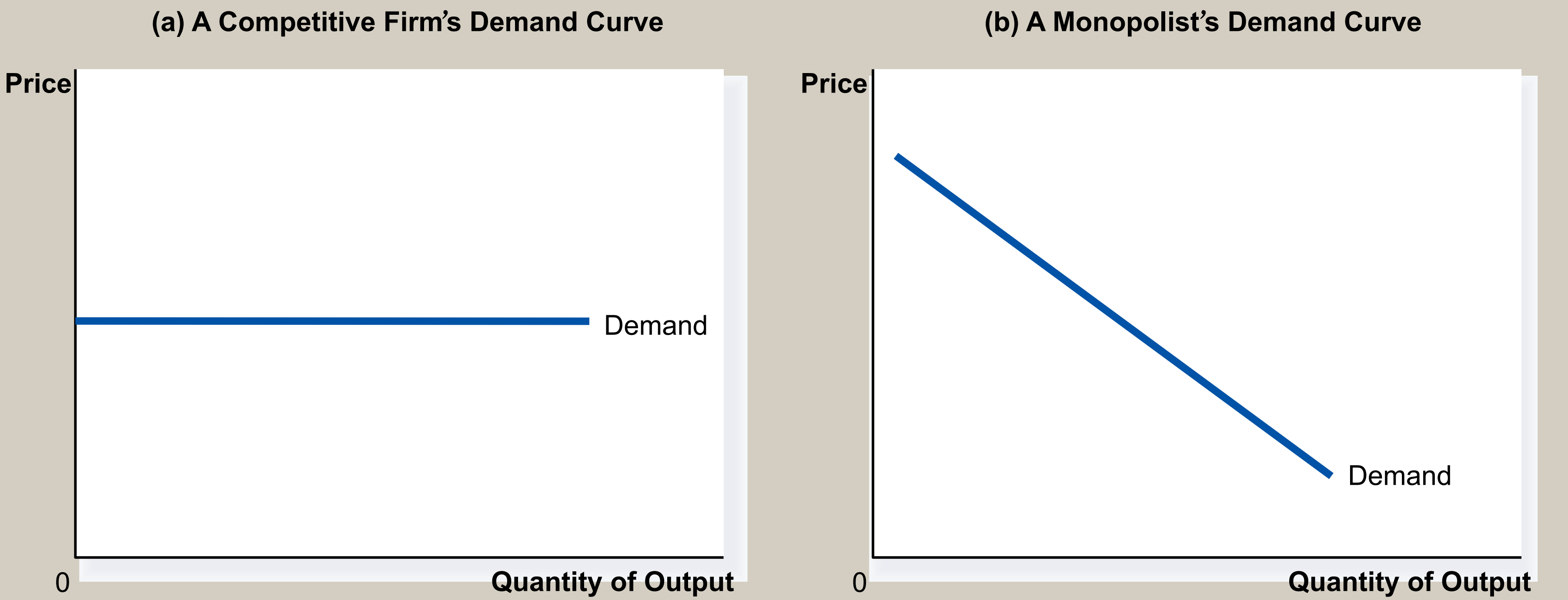
Figure 1 Economies of Scale as a Cause of Monopoly



HOW MONOPOLIES MAKE PRODUCTION AND PRICING DECISIONS

- Monopoly versus Competition
  - Monopoly
    - Is the sole producer
    - Faces a downward-sloping demand curve
    - Is a price maker
    - Reduces price to increase sales
  - Competitive Firm
    - Is one of many producers
    - Faces a horizontal demand curve
    - Is a price taker
    - Sells as much or as little at same price

Figure 2 Demand Curves for Competitive and Monopoly Firms



A Monopoly's Revenue

- Total Revenue

$$P \times Q = TR$$

- Average Revenue

$$TR/Q = AR = P$$

- Marginal Revenue

$$\Delta TR/\Delta Q = MR$$

A Monopoly's Revenue

- A Monopoly's Marginal Revenue
  - A monopolist's marginal revenue is always *less than* the price of its good.
    - The demand curve is downward sloping.
    - When a monopoly drops the price to sell one more unit, the revenue received from previously sold units also decreases.

A Monopoly's Revenue

- A Monopoly's Marginal Revenue
  - When a monopoly increases the amount it sells, it has two effects on total revenue ($P \times Q$).
    - The output effect—more output is sold, so Q is higher.
    - The price effect—price falls, so P is lower.

Figure 3 Demand and Marginal-Revenue Curves for a Monopoly

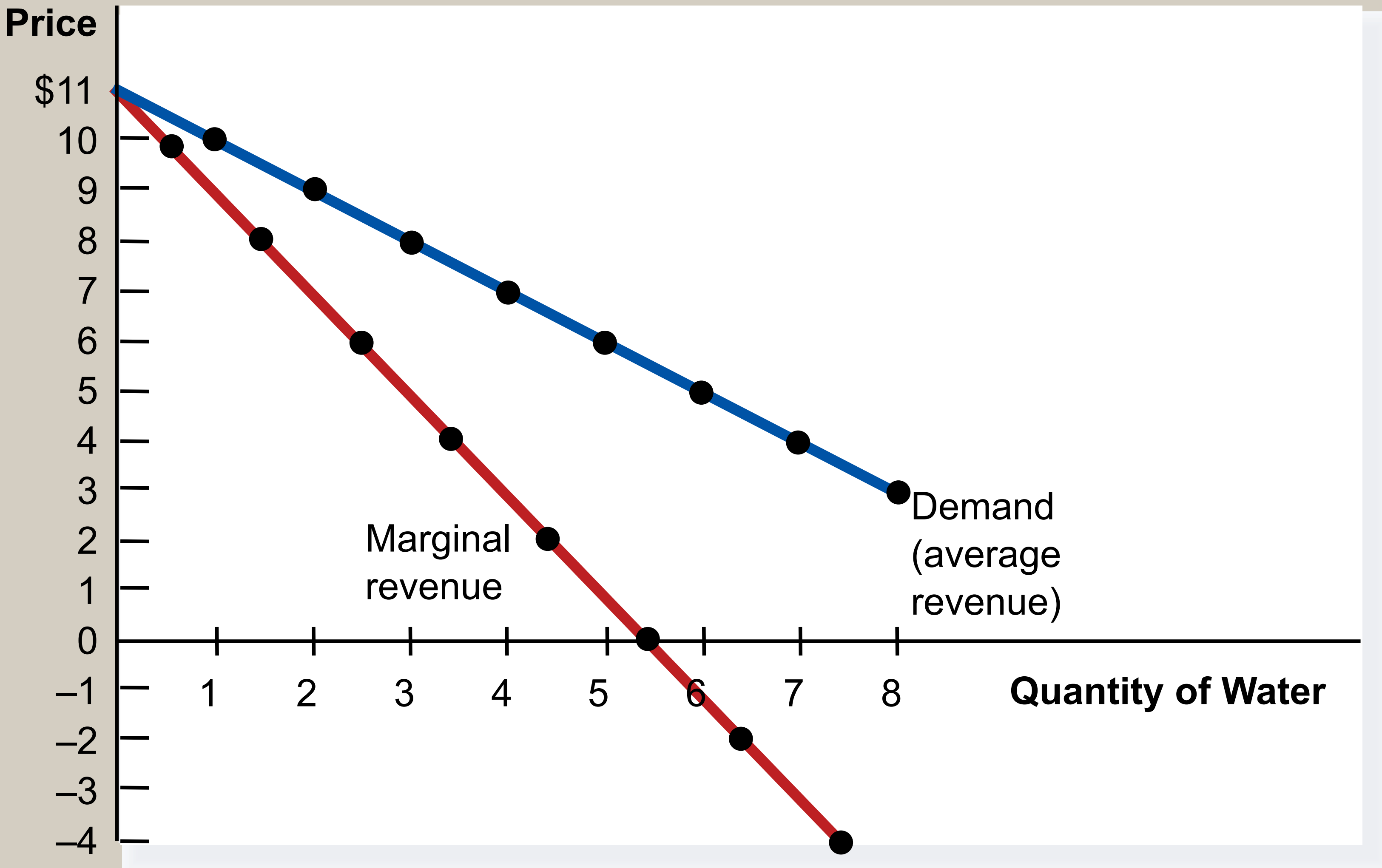
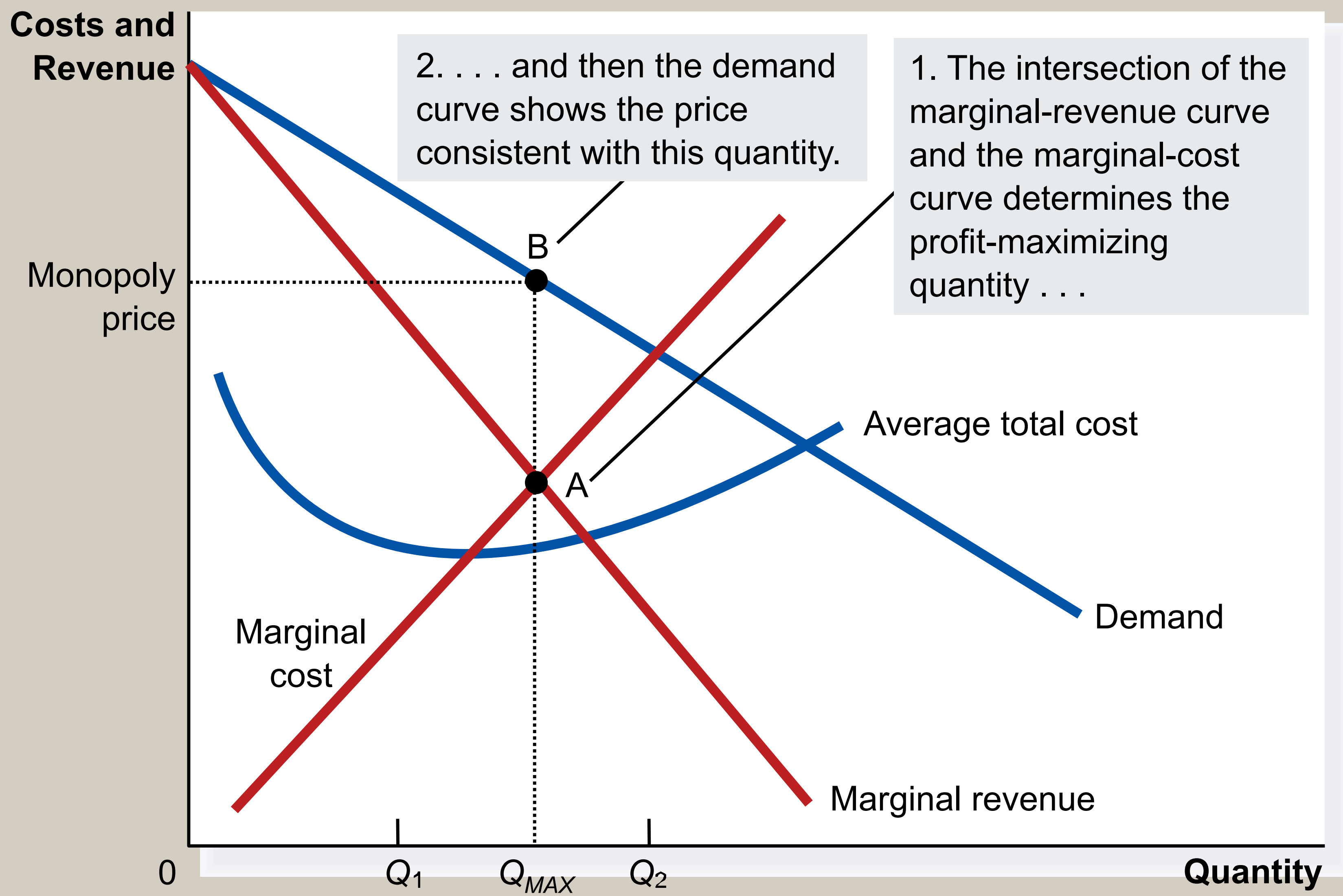


Figure 4 Profit Maximization for a Monopoly



Profit Maximization

- Comparing Monopoly and Competition
  - For a competitive firm, price equals marginal cost.

$$P = MR = MC$$

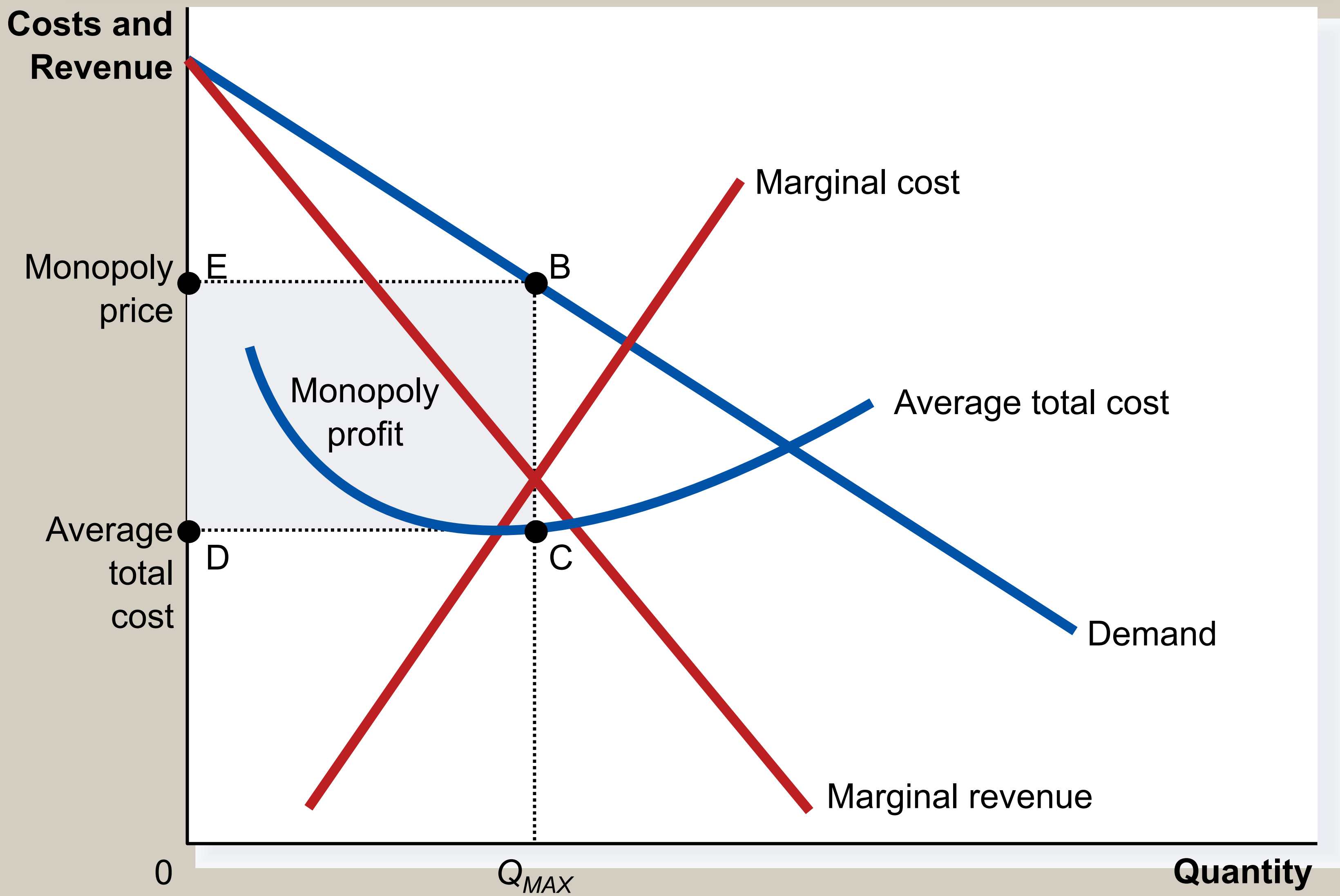
  - For a monopoly firm, price exceeds marginal cost.

$$P > MR = MC$$

A Monopoly's Profit

- Profit equals total revenue minus total costs.
  - Profit = TR - TC
  - Profit = (TR/Q - TC/Q) × Q
  - Profit = (P - ATC) × Q

Figure 5 The Monopolist's Profit



A Monopolist's Profit

- The monopolist will receive economic profits as long as price is greater than average total cost.

Figure 6 The Market for Drugs

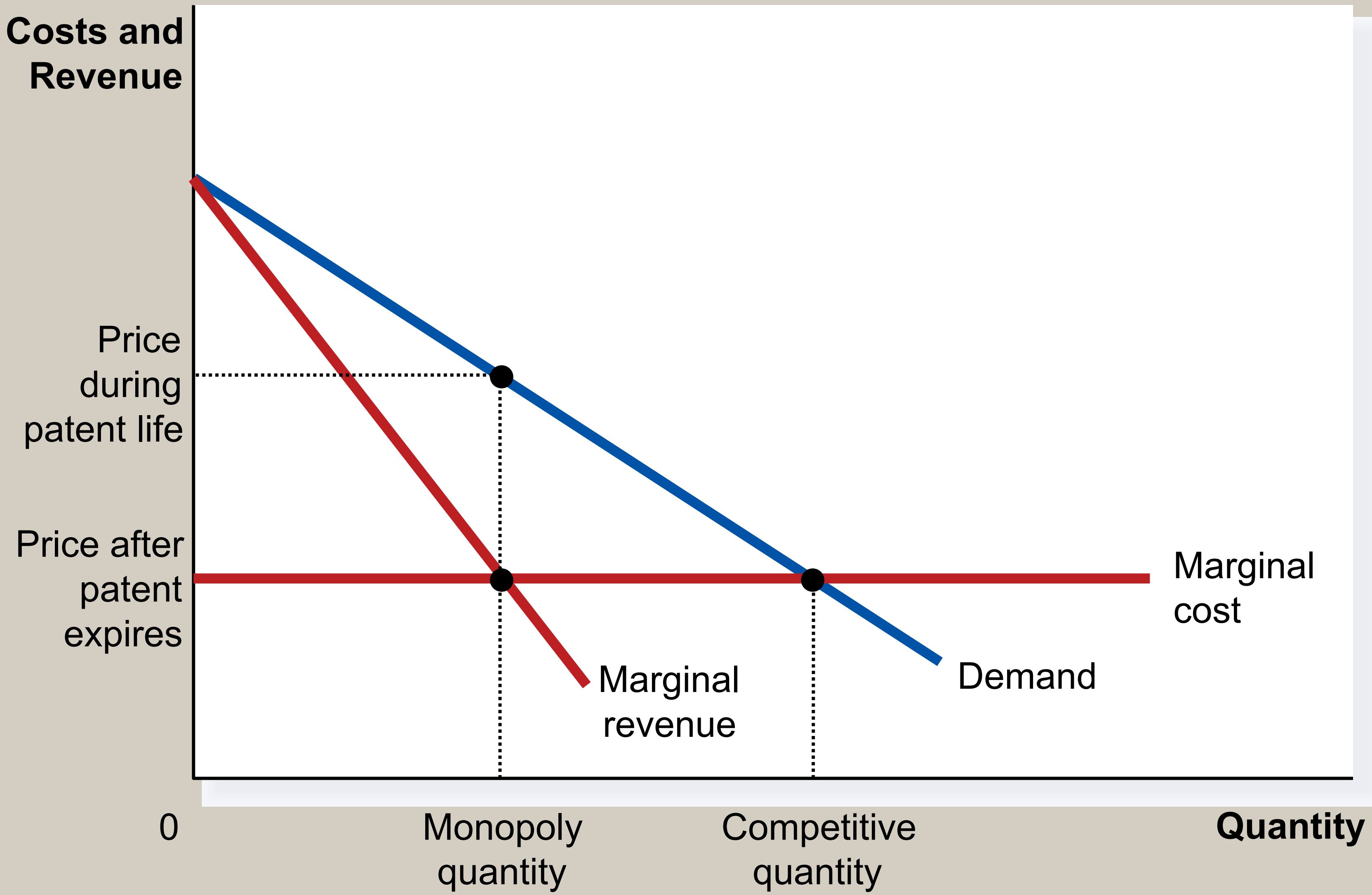
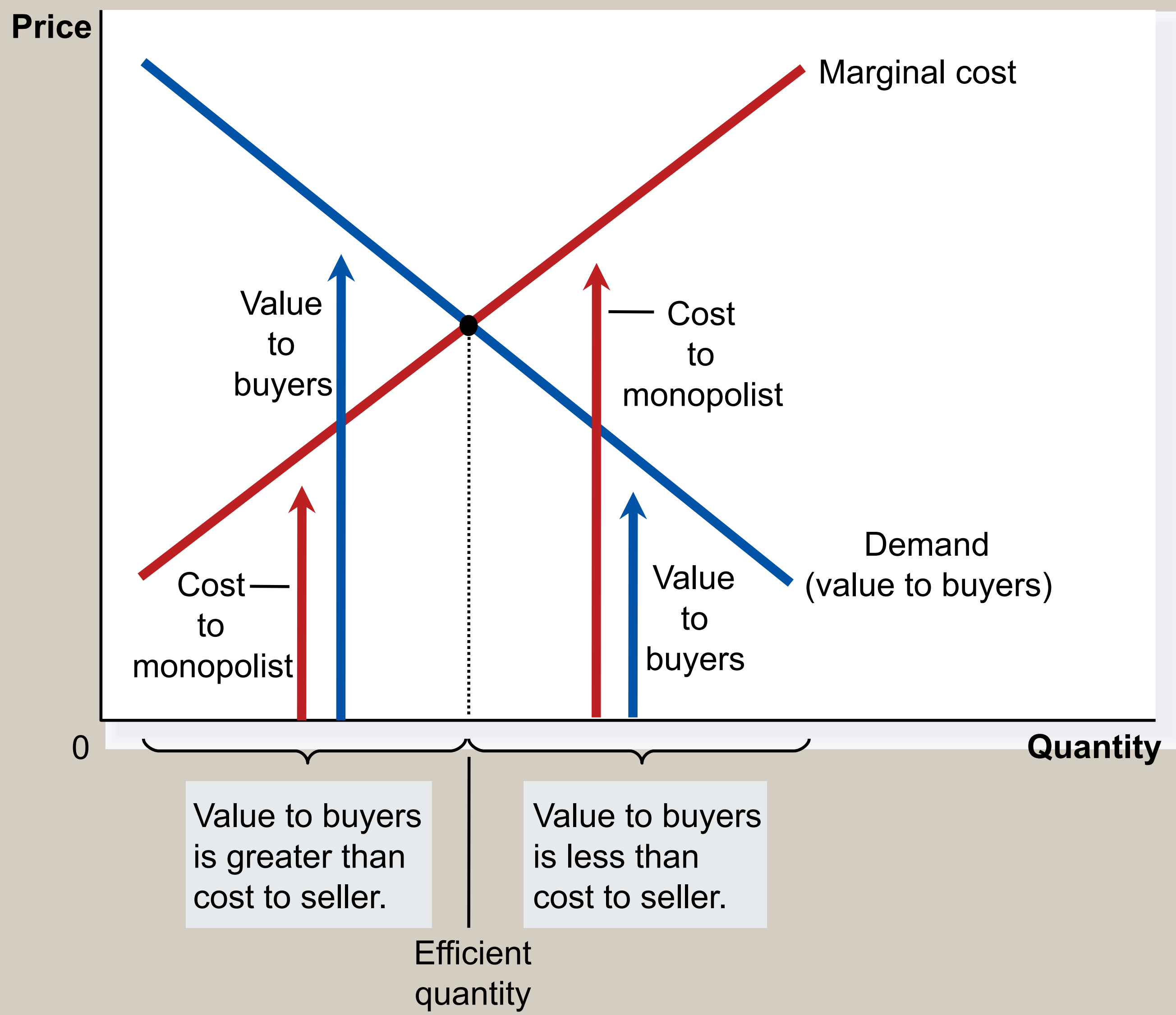


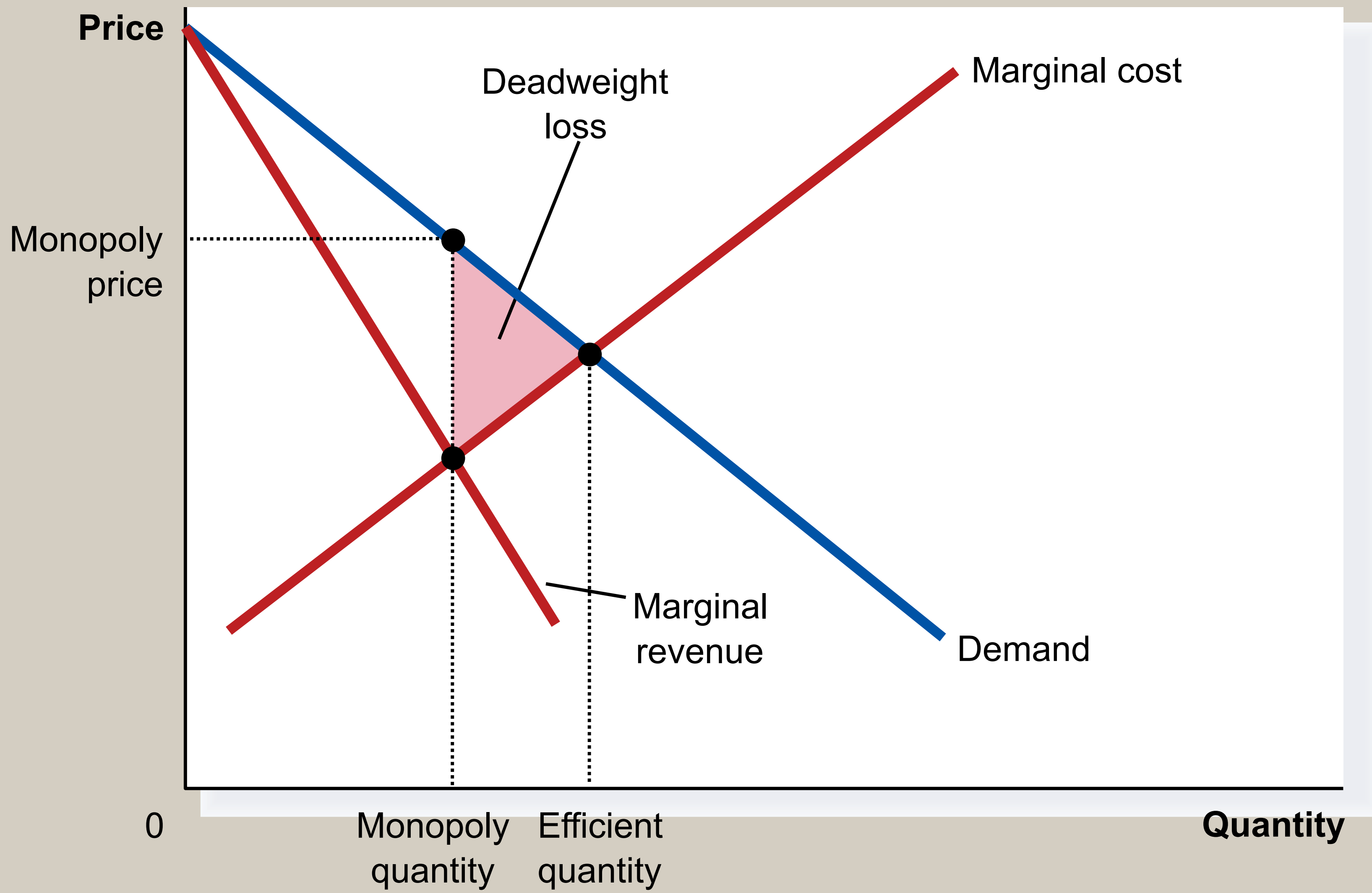
Figure 7 The Efficient Level of Output



The Deadweight Loss

- Because a monopoly sets its price above marginal cost, it places a wedge between the consumer's willingness to pay and the producer's cost.
  - This wedge causes the quantity sold to fall short of the social optimum.

Figure 8 The Inefficiency of Monopoly



The Deadweight Loss

- The Inefficiency of Monopoly
  - The monopolist produces *less than* the socially efficient quantity of output.

The Deadweight Loss

- The deadweight loss caused by a monopoly is similar to the deadweight loss caused by a tax.
- The difference between the two cases is that the government gets the revenue from a tax, whereas a private firm gets the monopoly profit.

PUBLIC POLICY TOWARD MONOPOLIES

- Government responds to the problem of monopoly in one of four ways.
  - Making monopolized industries more competitive.
  - Regulating the behavior of monopolies.
  - Turning some private monopolies into public enterprises.
  - Doing nothing at all.

Increasing Competition with Antitrust Laws

- Antitrust laws are a collection of statutes aimed at curbing monopoly power.
- Antitrust laws give government various ways to promote competition.
  - They allow government to prevent mergers.
  - They allow government to break up companies.
  - They prevent companies from performing activities that make markets less competitive.

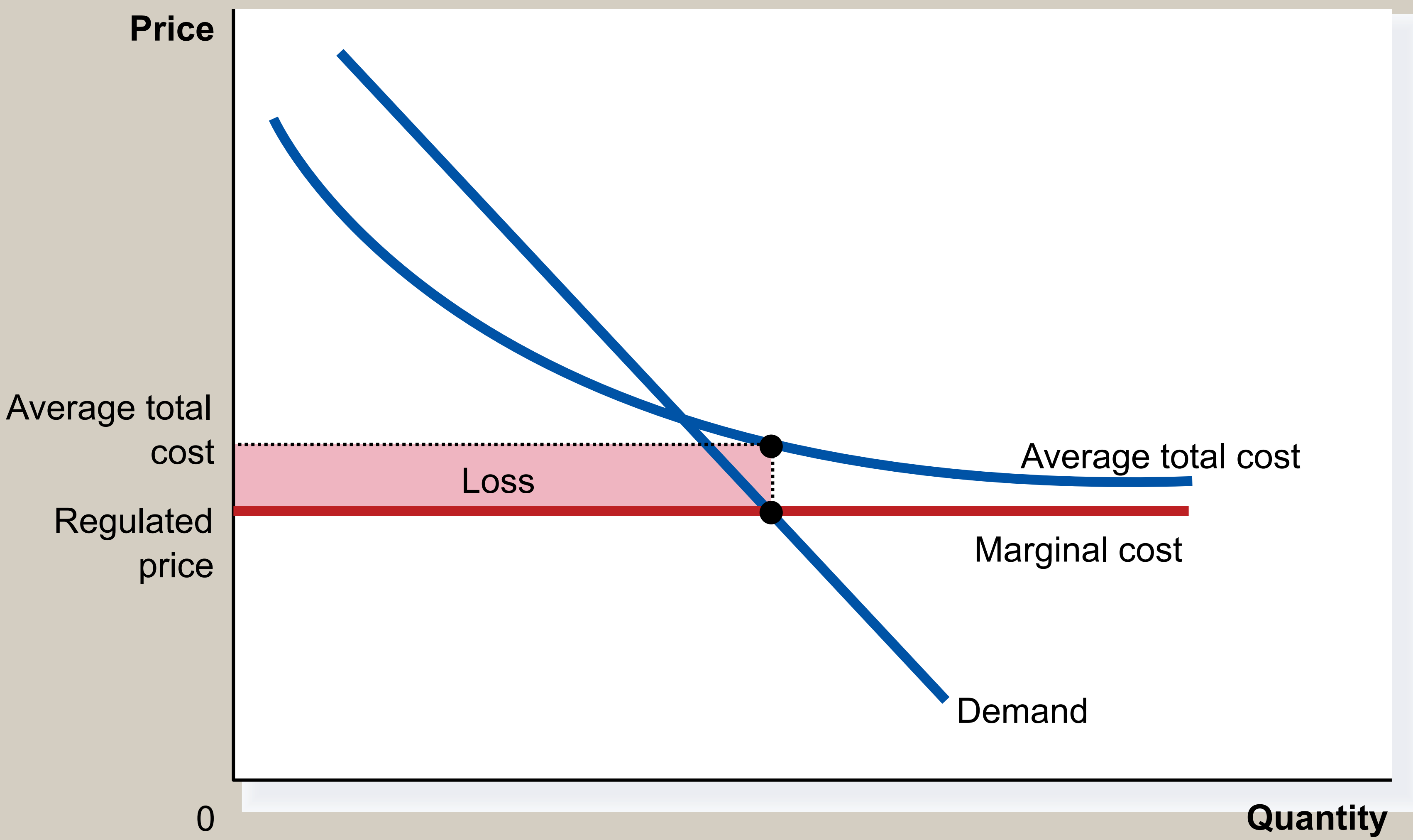
Increasing Competition with Antitrust Laws

- Two Important Antitrust Laws
  - Sherman Antitrust Act (1890)
    - Reduced the market power of the large and powerful “trusts” of that time period.
  - Clayton Act (1914)
    - Strengthened the government’s powers and authorized private lawsuits.

Regulation

- Government may regulate the prices that the monopoly charges.
  - The allocation of resources will be efficient if price is set to equal marginal cost.

Figure 9 Marginal-Cost Pricing for a Natural Monopoly



Regulation

- In practice, regulators will allow monopolists to keep some of the benefits from lower costs in the form of higher profit, a practice that requires some departure from marginal-cost pricing.

Public Ownership

- Rather than regulating a *natural monopoly* that is run by a private firm, the government can run the monopoly itself (e.g. in the United States, the government runs the Postal Service).

Doing Nothing

- Government can do nothing at all if the market failure is deemed small compared to the imperfections of public policies.

PRICE DISCRIMINATION

- *Price discrimination* is the business practice of selling the same good at different prices to different customers, even though the costs for producing for the two customers are the same.

PRICE DISCRIMINATION

- Two important effects of price discrimination:
  - It can increase the monopolist's profits.
  - It can reduce deadweight loss.

Figure 10 Welfare with and without Price Discrimination

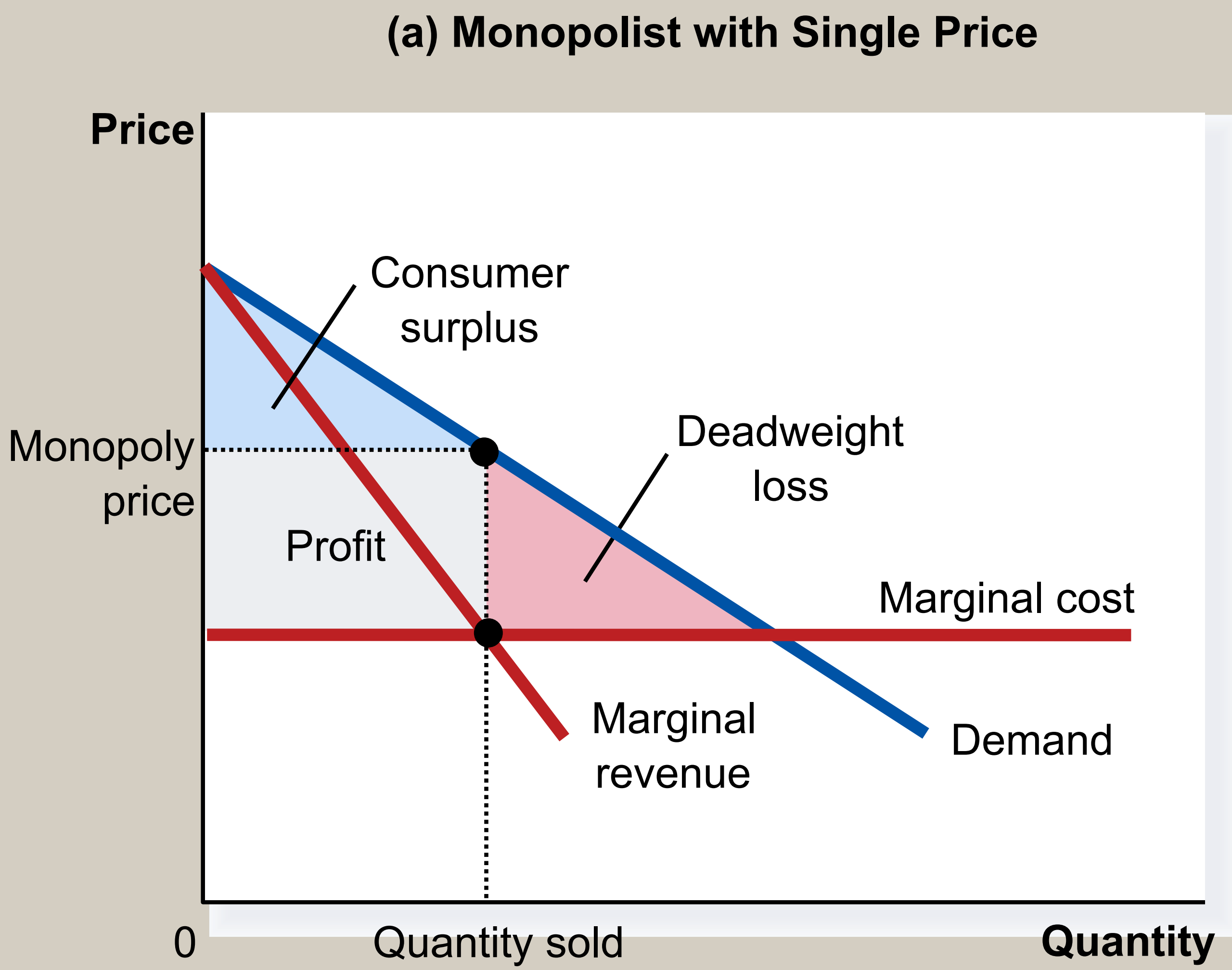
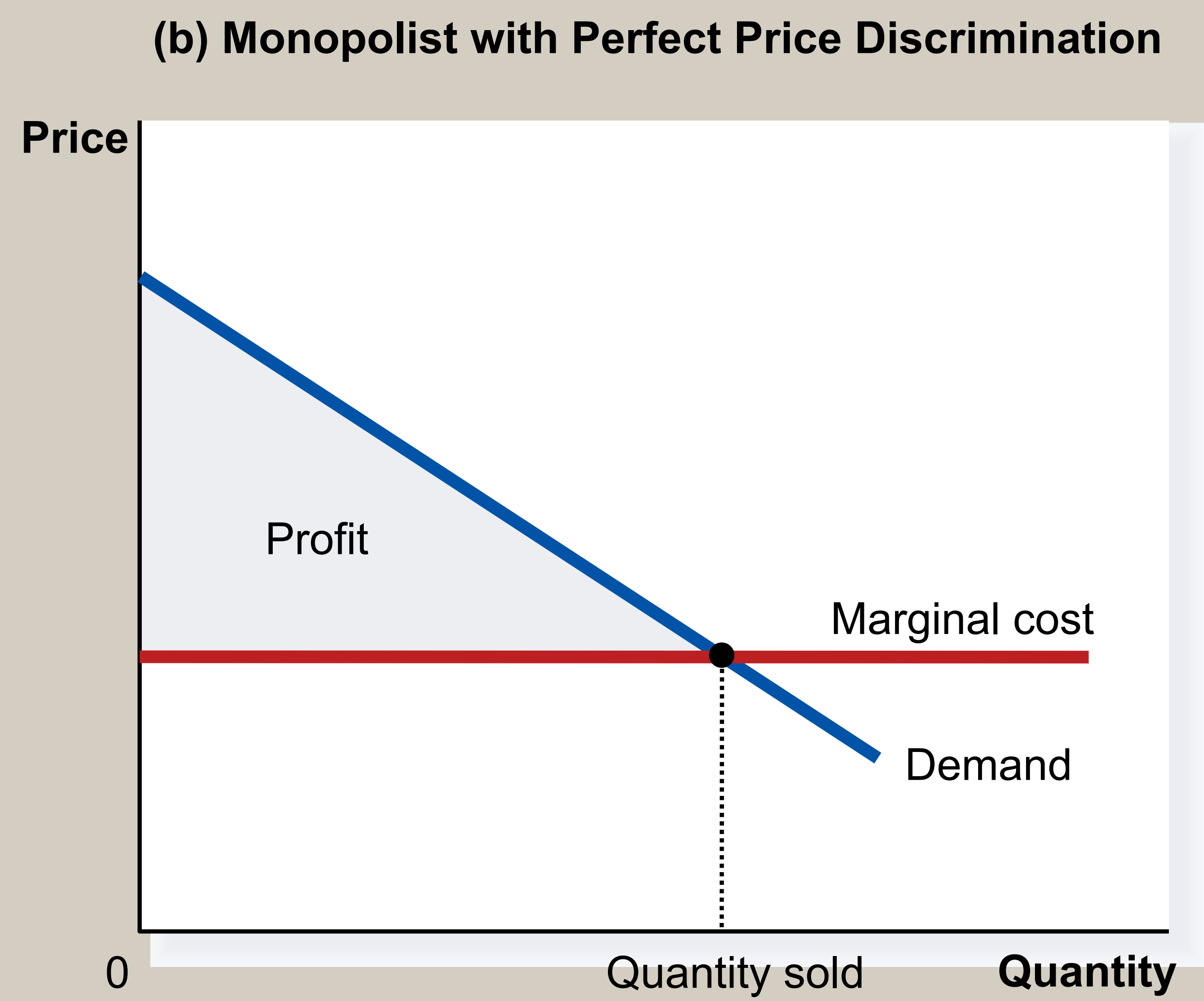


Figure 10 Welfare with and without Price Discrimination



PRICE DISCRIMINATION

- Examples of Price Discrimination
  - Movie tickets
  - Airline prices
  - Discount coupons
  - Financial aid
  - Quantity discounts


Welcome to the City of Champaign!
Payment Required 8 am - 9 pm
Monday - Friday
Accepts 4 hrs pymt after 5 pm
50 ¢ /hr
00:25
City of CHAMPAIGN
Questions?
(217) 403-7050
8a - 5p 2 hr max
5p - 9p no max
9p - 3a free
3a - 5a 7 days tow zone
5a - 8a free

Welcome to the City of Champaign!
Payment Required 8 am - 9 pm
Monday - Friday
Accepts 4 hrs pymt after 5 pm
50 ¢ /hr
City of CHAMPAIGN
Questions?
(217) 403-7050
8a - 5p 2 hr max
5p - 9p no max
9p - 3a free
3a - 5a 7 days tow zone
5a - 8a free

CONCLUSION: THE PREVALENCE OF MONOPOLY

- How prevalent are the problems of monopolies?
  - Monopolies are common.
  - Most firms have some control over their prices because of differentiated products.
  - Firms with substantial monopoly power are rare.
  - Few goods are truly unique.