Chapter 17

MARKETS WITH MARKET POWER

Microeconomics in Context (Goodwin, et al.), 5th Edition

Chapter Summary

Now that you understand the model of a perfectly competitive market, this chapter complicates the picture by adding the element of market power. You will be introduced to the traditional models of monopoly, monopolistic competition, and oligopoly. You will learn about how firms maximize profits in these more complicated theoretical situations, and also about some of the ways in which firms may negotiate with one another–either explicitly or implicitly–to attain their preferred outcomes.

Objectives

After reading and reviewing this chapter, you should be able to:

1. Define a monopoly and describe how a monopolist maximizes profits.
2. Understand why a monopoly may or may not be efficient.
3. Define monopolistic competition and describe how profits are maximized in these markets.
4. Define oligopoly and discuss firm behavior under conditions of oligopoly.

Key Terms

pure monopoly
oligopoly
natural monopoly
predatory pricing
local monopoly
price maker
nonprice competition
duopoly
price war
tacit collusion
price leadership
monopolistic competition
barriers to entry
exclusionary practices
dumping
regulated monopoly
price discrimination
industrial concentration ratio
payoff matrix
collusion
price fixing

Active Review Questions

Fill in the Blank

1. A monopoly that emerges because of economies of scale is called a ________________monopoly.

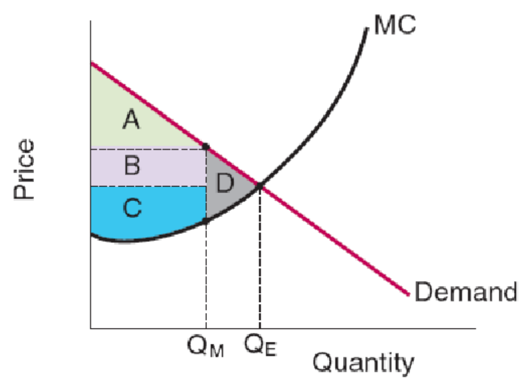
2. Joe's Superstore prevents competitors from entering the market by temporarily pricing its goods below cost, thus driving new entrants out of business. This practice is known as ________________ pricing.

3. Selling goods to another country at a price below the cost of production is known as ________________.

4. The marginal revenue curve for a monopolist is (flat/downward-sloping/upward- sloping) ________________.

5. Market power in the form of a monopoly creates benefits for the (buyer/seller) ________________ at the expense of the (buyer/seller) ________________.

Questions #6, #7, and #8 refer to the graph below. In this graph, Q_E refers to the quantity of a good that would be provided under conditions of perfect competition, and Q_M refers to the quantity of the same good that is provided under conditions of monopoly.



6. Area A shows the magnitude of ________________.

7. Area D shows the magnitude of ________________.

8. Area B represents a transfer from ________________ to ________________.

9. A firm that charges different prices to different buyers depending on their ability and willingness to pay is referred to as a ________________ seller.

True/False

10. In a hypothetical case of perfect price discrimination, producer surplus is completely eliminated.

11. In a hypothetical case of perfect price discrimination, deadweight loss is completely eliminated.

12. "Monopolistic competition" includes some characteristics of perfect competition and some characteristics of monopoly.

13. In a situation of monopolistic competition, no close substitutes are available.

14. Monopolistically competitive firms have higher unit costs than would occur in a perfectly competitive market.

Short Answer

15. Describe one way in which monopolistically competitive firms work to protect their "miniature monopoly."

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16. List three conditions of the idealized market structure of monopoly.

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17. Explain how network externalities can lead to monopolization.

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18. Briefly describe the pros and cons of allowing drug companies to enjoy substantial market power (e.g. through the use of patents).

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19. Briefly explain how monopolistic competition differs from perfect competition.

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20. Describe the main characteristics of oligopoly.

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21. Explain in what ways markets for food are not as competitive as they could be.

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Problems

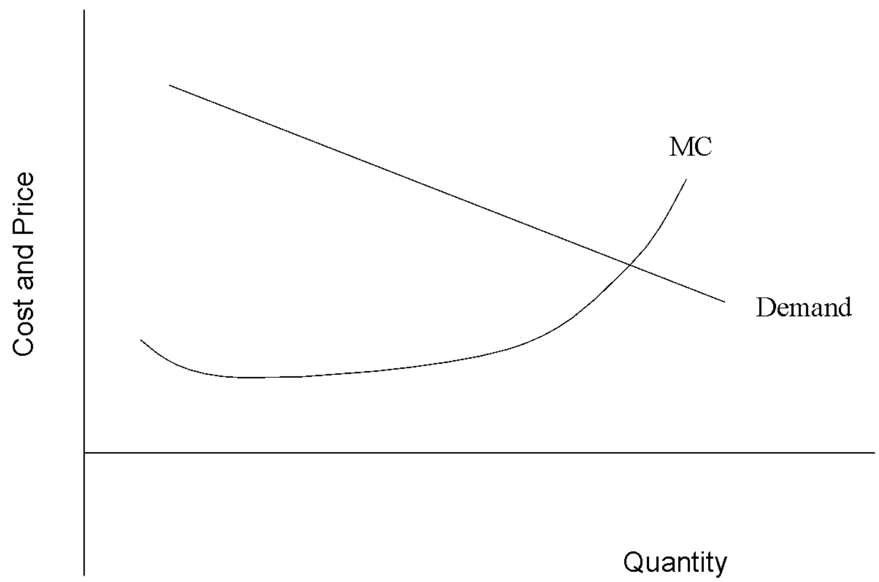
1. Suppose that a monopolistic firm produces hair dryers. The chart below shows the quantities of hair dryers that can be sold at various prices.

Quantity of Hairdryers	**Price of Hairdryers**	**Total Revenue**	**Marginal Revenue**
1	$100		
2	$90		
3	$80		
4	$70		
5	$60		
6	$50		

   a. Fill in the total and marginal revenue columns in the chart shown above.

   b. If marginal cost is equal to marginal revenue at MC=MR=$20, what is the profit maximizing level of production (assuming that the firm should produce at all)?

2. The following graph shows the demand curve and the marginal cost curve for a monopolistic firm producing electric cars.



a. Sketch a possible marginal revenue curve for this firm.

b. On the horizontal axis, label the profit-maximizing level of production as Q_1. On the vertical axis, label the price P_1 that the firm will charge at the profit maximizing level of production.

c. Label the area of deadweight loss in the graph you draw for part (b).

d. How do the monopolistic price and quantity compare to those of competitive market equilibrium?

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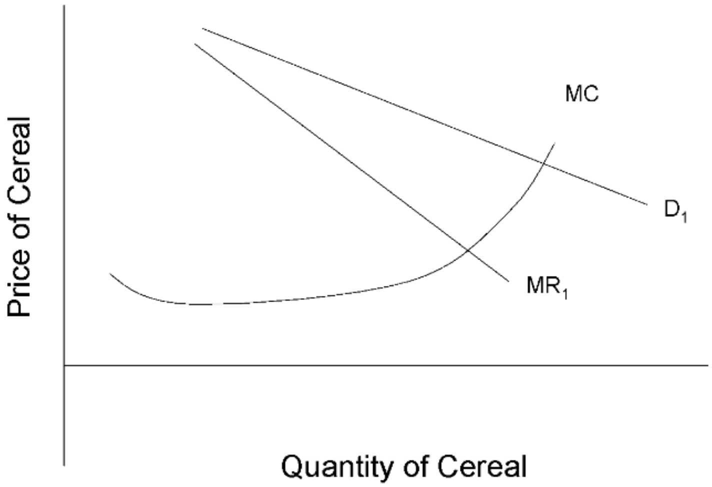
3. Harry's Auto Shop is a perfectly price discriminating seller. Harry has an uncanny ability to assess how much people are willing to pay for a car, and he sets prices accordingly.

a. Sketch the demand curve and the marginal cost curve for Harry's Auto Shop.

b. Show the area that represents consumer surplus on the graph you drew for part (a).

c. Show the area of the producer surplus on the same graph.

4. Ten breakfast cereal producers operate in a market characterized by monopolistic competition. The demand, marginal revenue, and marginal cost curves faced by an individual breakfast cereal producer are shown below.



Suppose that five new breakfast cereal producers enter the market. Show the new demand curve and the new marginal revenue curve that result on the graph above.

5. Suppose the market for cookbooks is a duopoly. The chart below shows a payoff matrix for the two cookbook producers.

Producer 1's options	Producer 2's options: Low Price	Producer 2's options: High Price
Low Price	$20 / $20	$80 / $1
High Price	$1 / $80	$100 / $100

a. Based on the information shown in the payoff matrix above, how much profit would each firm make if the firms were non-cooperative?

b. If producer 2 charged a high price and producer 1 charges a low price, how much profit would producer 1 make?

c. If the firms colluded and set prices together, how much profit would each producer make?

Self Test

1. Which of the following is a condition of monopoly?

    a. Two or more sellers.
    b. Only one buyer.
    c. A good with several close substitutes.
    d. Barriers to entry.
    e. None of the above.

2. A "natural monopoly" is

    a. An oligopoly.
    b. A monopoly characterized by diseconomies of scale.
    c. A monopoly that emerges because of economies of scale.
    d. A monopoly on a scarce natural resource.
    e. A monopoly that solves the problem of diseconomies of scale.

3. In international trade, "dumping" refers to

    a. Exclusionary practices.
    b. Charging unfairly high prices.
    c. Providing unwanted goods free of charge.
    d. Selling goods at a price below the cost of production.
    e. Selling goods above market price.

4. Which of the following statements is *false*?

    a. Monopolistic firms maximize profits at the point where MC=MR.
    b. Monopolistic firms are price takers.
    c. Monopolistic firms face a downward sloping demand curve.
    d. Monopolistic firms face a downward sloping marginal revenue curve.
    e. All of the above are true.

5. The demand curve for the output of a monopolistic firm is equal to

    a. The marginal revenue for the product in question.
    b. The market supply curve for the product in question.
    c. The market demand curve for the product in question.
    d. The demand curve for a firm in a perfectly competitive market.
    e. The concentration ratio of the firm.

6. A monopolistic firm can sell more by

   a. Advertising its product successfully.
   b. Competing effectively with other firms.
   c. Lowering the price of its product.
   d. Both a and c are true.
   e. Options a, b, and c are all true.

7. Suppose a firm can sell five units of output at a price of $10 each. To sell six units of output, the firm must lower its price to $9 per unit. To sell seven units, the firm must lower its price to $8 per unit. Which of the following statements is *true*?

   a. The firm can maximize profits at all of the production levels listed above.
   b. The firm faces an upward sloping demand curve.
   c. Based on the information given above, we can conclude that seven units is the profit maximizing level of production.
   d. Based on the information given above, we can conclude that this firm faces net losses at the levels of production considered here.
   e. The firm can be described as a "price maker."

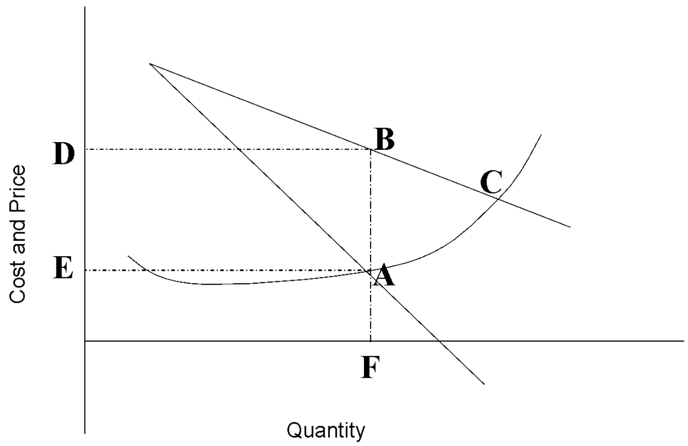
8. Suppose a firm can sell one unit of product for $50, two units for $45 each, three units for $40 each, or four units for $35 each. When the firm sells four units, marginal revenues is equal to

   a. $5.
   b. $20.
   c. $25.
   d. $30.
   e. $35.

9. Which of the following statements is *true*?

   a. Monopolistic firms face zero profits in the long run.
   b. Monopolistic situations do not involve any inefficiencies.
   c. The monopolistic firm always faces a downward sloping marginal cost curve.
   d. The perfectly competitive firm faces a horizontal marginal revenue curve.
   e. The monopolistic firm faces a horizontal marginal revenue curve.

Questions #10 and #11 refer to the graph below.



The graph shown above depicts the demand, marginal revenue, and marginal cost curves faced by a monopolistic firm.

10. Point A indicates

    a. Total cost.
    b. The point where MR=MC.
    c. The price buyers are willing to pay at equilibrium.
    d. The point where MC=P.
    e. Total revenue.

11. Which of the following statements is *false*?

    a. When the firm chooses a level of production F, buyers will pay a price E.
    b. Point A is on the marginal cost curve.
    c. Point B shows the level of demand that corresponds to the profit maximizing level of production.
    d. Point C indicates the price and quantity of production that would exist in a competitive equilibrium.
    e. Because the firm described by this graph is a monopoly, production is lower and price is higher than they would be at competitive equilibrium.

12. Rent-seeking behavior is

    a. An effort to find affordable housing.
    b. An effort to get transfers or favors.
    c. A behavior of all monopolists.
    d. A behavior of governments only.
    e. A behavior that facilitates creation of a perfectly competitive market.

13. Which of the following statements is *false*?

    a. In some cases, monopoly can be a preferable option for society as a whole compared with a situation of perfect competition.
    b. For some services, such as passenger rail transportation, government subsidies to a monopolist may produce the most socially beneficial outcome.
    c. Government regulation of an industry characterized by natural monopoly can help to reduce the inefficiencies associated with market power.
    d. Optimally efficient pricing always leads to self-sustaining revenues.
    e. All of the above are true.

14. Which of the following is an example of a price discriminating seller?

    a. Frank sells condominiums only to buyers of a certain ethnic background.
    b. Ellen charges different prices to different buyers, depending on their ethnic or religious background.
    c. Amelia charges different prices to different buyers depending on their ability or willingness to pay.
    d. An airline charges the same price to all travelers.
    e. Both a and b are correct.

15. When you go shopping you discover that you can choose among twenty different brands of breakfast cereal, all with about the same nutritional content. The proliferation of cereal options is an example of

    a. product differentiation
    b. oligopoly
    c. perfect competition
    d. a price war
    e. monopoly

16. Which of the following statements is *true* of a monopolistically competitive firm?

    a. It faces a downward sloping demand curve.
    b. It earns positive economic profits in the long run.
    c. It produces more than a perfectly competitive firm.
    d. It charges lower prices than a perfectly competitive firm.
    e. Its profits are protected by significant barriers to entry.

17. Under conditions of oligopoly, firms may collude in order to

   a. Avoid the outcome associated with the prisoner's dilemma.
   b. Increase competition.
   c. Solve the concentration ratio problem.
   d. Create a prisoner's dilemma for buyers.
   e. Initiate a price war with one another.

18. Which of the following is a form of implicit collusion?

   a. Duopoly
   b. Price wars
   c. Non-price competition
   d. Prisoner's dilemma
   e. Price leadership

19. Which of the following statements about oligopoly is *false*?

   a. Under conditions of oligopoly, entry into the market is difficult.
   b. The amount of long-run economic profit made by oligopolistic firms is variable.
   c. Each firm in an oligopoly makes decisions without regard for the actions of other firms.
   d. Game theory is used to analyze the behavior of firms in an oligopoly.
   e. Firms in an oligopolistic market often have an incentive to collude.

20. Which one of the following statements is false?

   a. One of the reasons that markets are becoming more concentrated in the U.S. is lax enforcement of existing antitrust laws.
   b. The existence of "exceptional" profits by companies is a sign that a market economy is functioning well.
   c. Most lobbying organizations in the U.S. represent business interests.
   d. Many retiring members of the U.S. Congress take new jobs as lobbyists.
   e. Net neutrality requires that internet providers treat all online content the same.

Answers to Active Review Questions

1. natural
2. predatory
3. dumping
4. downward-sloping
5. seller; buyer
6. consumer surplus
7. deadweight loss
8. consumer; producer
9. price discriminating
10. False. In a hypothetical case of perfect price discrimination, *consumer* surplus is completely eliminated.
11. True.
12. True.
13. False.
14. True.
15. Monopolistically competitive firms often engage in non-price competition (e.g. advertising, using attractive packaging, etc.).
16. (a) There is only one seller. (b) The good being sold has no close substitutes. (c) Barriers to entry prevent other firms from starting to produce the good in question.
17. Network externalities can "lock in" one technology, product, or system, making it hard for other options to gain a foothold in the market. The textbook discusses the example of computer operating systems: once a large number of people have adopted one operating system, the firm producing that system has a significant advantage over new entrants that might attempt to compete.
18. Offering patents can create an incentive to develop new drugs. On the other hand, the high prices of patented drugs can mean that life-saving drugs are denied to thousands or even millions of people who need them. (It is worth noting that other options are available to motivate research and development in pharmaceuticals.)
19. In monopolistic competition, products are differentiated instead of identical. Also, more important, while there is only one seller for monopoly, there are generally many in a monopolistically competitive market structure. We can say that each has a "mini-monopoly" for its own niche (i.e., differentiated) product.
20. Oligopoly is a structure where a few sellers dominate the market, and at least some control enough of the market to be able to influence price; and entry by competitors is very difficult.
21. Markets for food are not especially competitive, given that farmers have for decades enjoyed government subsidies. The markets have grown increasingly distorted over time, as relatively few farms have grown immense in size, resulting in disproportionate subsidies accruing to them (the payments are often in relation to farm size). Many argue that such a generous policy does nothing to promote efficiency in food production—quite the contrary!

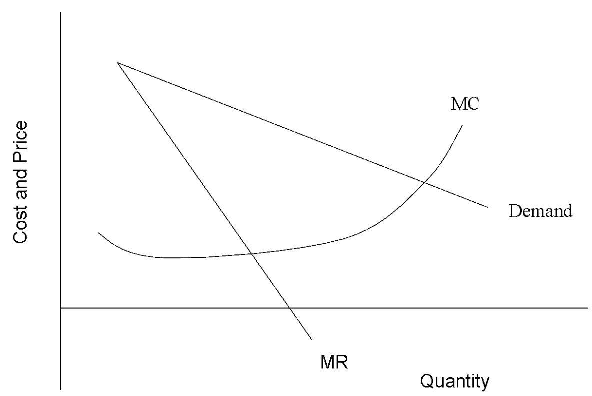
Answers to Problems

1. a.

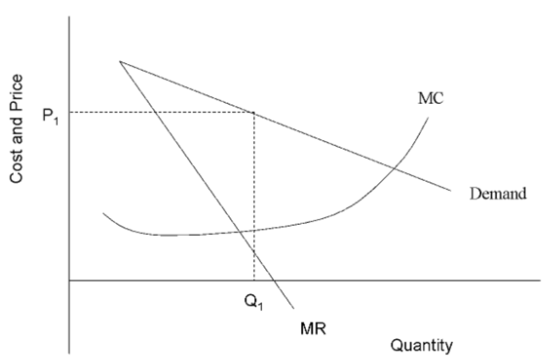
Quantity of Hairdryers	Price of hairdryers	Total Revenue	Marginal Revenue
1	$100	$100	$100
2	$90	$180	$80
3	$80	$240	$60
4	$70	$280	$40
5	$60	$300	$20
6	$50	$300	$0

b. 5 hairdryers

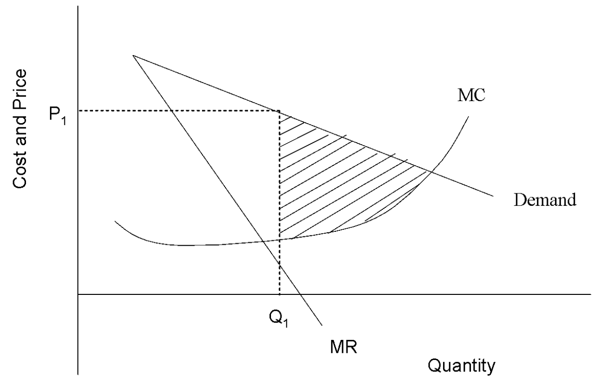
2. a.



2.b.

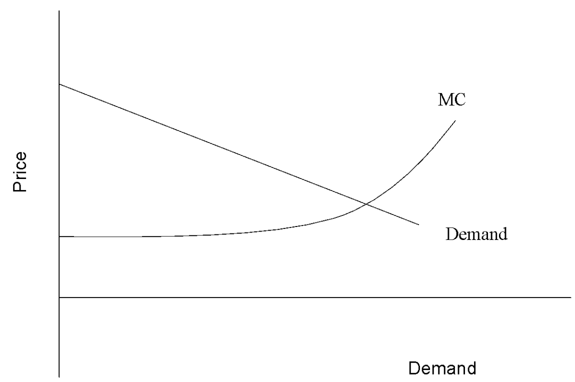


2. c.



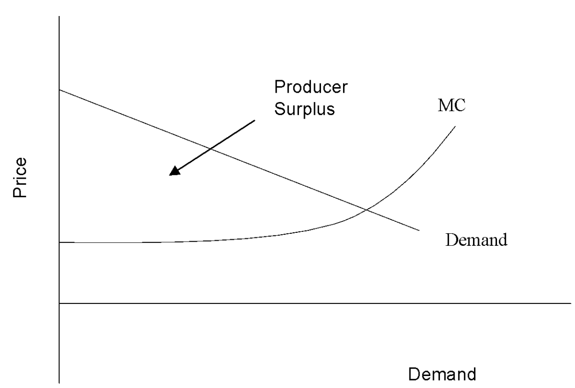
2. d. The quantity sold by the monopolist is lower, and the price charged is higher, than in perfect competition.

3. a.

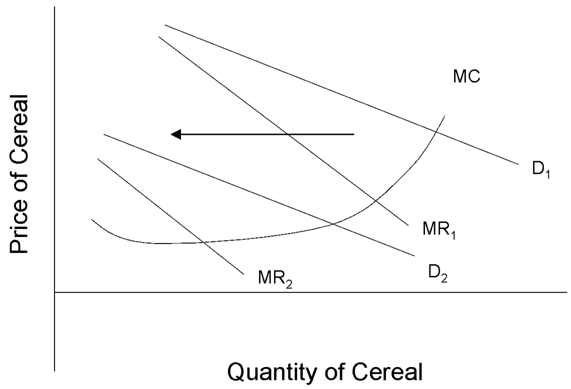


3.b. There is no area of consumer surplus on this graph.

3. c.



4.



5. a. They will each make $20.
5. b. Producer 1 will make $80.
5. c. Both firms will make $100.

Answers to Self Test Questions

1. d
2. c
3. d
4. b
5. c
6. d
7. e
8. b
9. d
10. b
11. a
12. b
13. d
14. c
15. a
16. a
17. a
18. e
19. c
20. b