25 Monopolistic Competition

Learning Objectives

After you have studied this chapter, you should be able to

1. list the characteristics of the monopolistic competition market structure;
2. distinguish between the monopolistic competitor's demand curve and the perfect competitor's demand curve;
3. explain the profit-maximizing behavior of a monopolistically competitive firm;
4. discuss why brand names and trademarks are important to monopolistically competitive firms and describe different methods of and forms of advertising;
5. identify the key characteristics of information products;
6. describe the shapes of the short-run cost curves of a firm that sells information products and explain the concept of short-run economies of operation for producers of information products; and
7. explain why firms that sell information products charge prices above marginal cost.

Outline

1. There are four characteristics of the theory of *monopolistic competition*, which was developed simultaneously by Edward Chamberlin and Joan Robinson in 1933.
   a. A significant number of sellers in a highly competitive market
   b. Differentiated products
   c. Sales promotion and advertising
   d. Easy entry of new firms in the long run

2. Although there are many sellers in a monopolistically competitive industry, there are not as many as there are in the perfect competition model. Each monopolistic competitor has a little control over its price, but collusion is difficult and each firm acts independently of the others.

3. Perhaps the most important feature of a monopolistically competitive industry is *product differentiation*.
   a. Differentiation refers to differences in physical characteristics.
   b. Each separate differentiated product has close substitutes.

4. It is possible to predict the optimal price–output combination of the monopolistic competitor.
   a. The monopolistic competitor's demand curve is downward sloping. Thus, its marginal revenue curve lies below its demand curve.
   b. Short-run equilibrium exists where $MR = MC$. Economic profits or losses are possible in the short run.
   c. In the long run, because of free entry, the monopolistic competitor must earn exactly zero economic profits. Nevertheless, social inefficiency exists in the long run because the price of its product exceeds marginal cost, and its rate of output lies to the left of the minimum point on the *ATC* curve.

5. Because product differentiation is such an important aspect of monopolistically competitive industries, firms in these industries promote brand names via advertising.
   a. Firms can register trademarks—words, symbols, and logos—with the U.S. Patent and Trademark Office, and they can seek legal damages if anyone makes false use of trademarks and thereby damages the image of the firm's brand names.
   b. To promote their product brands, firms use three basic advertising methods: direct marketing, mass marketing, and interactive marketing.
   c. Search goods, which are items with qualities that can be assessed in advance of their purchase, are best marketed via informational advertising that acquaints consumers with their features. Experience goods, which are items with qualities that can only be assessed following their purchase, are best marketed via persuasive advertising that induces consumers to discover previously unknown tastes for those items. Credence goods are items with qualities that consumers lack the expertise to assess without assistance.

6. Information products are goods produced using information-intensive inputs at a relatively high fixed cost but distributed for sale at a relatively low marginal cost.
   a. Because fixed costs are relatively high, the average fixed cost of producing the first copy of an information product is significant. Average fixed cost declines as the firm increases its sale of additional units.
   b. The per-unit cost of distributing additional copies of an information product is the same, relatively low amount no matter how many units are sold. Thus, marginal cost and average variable cost are equal to the same constant per-unit cost.
   c. The average total cost curve for a firm that makes and sells an information product is the sum of the downward-sloping average fixed cost curve and the constant per-unit average variable cost, so the average total cost curve for the firm that produces an information product slopes downward. Hence, the firm experiences short-run economies of operation.
   d. If the price of an information product were equal to marginal cost, and hence average variable cost, the firm would only earn sufficient revenues to cover its variable costs but not its fixed costs.

e. In a long-run monopolistically competitive equilibrium, a firm that produces an information product just earns sufficient revenues to cover its total costs, thereby earning zero economic profits, when its price equals average total costs.

Key Terms

Credence good
Experience good
Information product
Monopolistic competition
Search good
Short-run economies of operation

Key Concepts

Direct marketing
Informational advertising
Interactive marketing
Mass marketing
Persuasive advertising
Product differentiation

Completion Questions

Fill in the blank or circle the correct term.

1. The four characteristics of monopolistic competition are ______________________________, ____________________________________, ____________________________________, and ____________________________.

2. Under monopolistic competition, collusion is (easy, difficult). Each firm (must, need not) take into account the reactions of rivals, and each firm has (a little, much, no) control over its selling price.

3. The demand curve for the monopolistic competitor is ________________ sloped. Consequently, the monopolistic competitor's marginal revenue curve is (below, above) its demand, or *AR* curve.

4. In the short run, a profit-maximizing monopolistically competitive firm produces to the point at which (price, marginal revenue) equals (marginal cost, average total cost).

5. In a long-run monopolistically competitive equilibrium, the price of a firm's product must be (less than, greater than, equal to) marginal cost. Thus, social (inefficiency, efficiency) exists in the monopolistic competition market structure.

6. In a long-run monopolistically competitive equilibrium, the price of a firm's product is (less than, equal to, greater than) the average total cost of producing its actual output level, but the price is (less then, equal to, greater than) the minimum feasible average total cost of producing the product.

7. Brand names and trademarks have value for firms in monopolistically competitive industries because these are important factors affecting the (demand for, supply of) products that are (homogeneous, differentiated) among the firms in this industry.

8. The main methods of advertising are ________________ marketing, ______________ marketing, and __________________ marketing.

9. An item possessing qualities that are relatively easy for consumers to evaluate in advance of purchasing the item is ____________ good. An item with qualities that are relatively difficult for consumers to evaluate in advance of purchasing the item is _________________ good. An item with qualities that consumers lack the expertise to assess without assistance is ________________ good.

10. Advertising that focuses on explaining the features of a product is __________________ advertising that is more likely to be used by a firm seeking to market (a search, an experience) good.

11. Advertising that is intended to induce a consumer to discover previously unknown tastes for an item is ____________ advertising that is more likely to be used by a firm seeking to market (a search, an experience) good.

12. For the producer of an information product, in the short run a relatively low average ____________ cost of producing the item is equal to marginal cost at any given amount of output, and the average __________________ cost curve slopes downward over its entire range.

13. If the producer of an information product were required to set the price of the item equal to marginal cost, then price would equal average (fixed, variable) cost at any given amount of output, so that total revenues would exactly equal (total fixed, total variable) costs; this means that the firm would not earn sufficient total revenues to cover any of its (total fixed, total variable) costs, so it would earn (zero, negative) economic profits.

14. If the producer of an information product sets the price of the item equal to average total cost, then total revenues would exactly equal _______________________ costs, and the firm would earn _______________ economic profits.

■ True-False Questions

Circle the **T** if the statement is true, the **F** if it is false. Explain to yourself why a statement is false.

T F 1. The monopolistic competitor has a negatively sloped demand curve.

T F 2. The monopolistic competitor must take into account the reactions of its competitors.

T F 3. The most important feature of the monopolistically competitive market is product differentiation.

T F 4. Product differentiation exists in the wheat industry.

T F 5. One important goal of advertising is to convey quality information.

T F 6. The monopolistic competition model leads to social efficiency because in the long run $P = MC$.

T F 7. A firm that produces a search good is likely to market the item using exclusively persuasive advertising.

T F 8. Based on the advertising expenses of U.S. firms, the most used advertising method is direct marketing.

T F 9. Informational advertising focuses on enlightening consumers about the features of a product.

T F 10. A problem with heavy spending on advertising is that it can signal that a firm is mismanaged and consequently may be exiting the market in the near future.

T F 11. The production of information products entails incurring relatively low fixed costs and relatively high marginal costs.

T F 12. The reason why a firm that sells an information product experiences short-run economies of operation is that the average total cost curves slopes downward over its entire range.

T F 13. If the price of an information product is equal to marginal cost, then the firm producing this item fails to earn sufficient revenues to cover fixed costs.

T F 14. The price of an information product exceeds average total cost in a long-run monopolistically competitive equilibrium.

■ Multiple Choice Questions

Circle the letter that corresponds to the best answer.

1. Which one is **not** a characteristic of monopolistic competition?
   a. Each firm must take into account its rivals' reactions to price changes.
   b. There are a significant number of sellers.
   c. There are differentiated products.
   d. Advertising is prevalent.

2. Which one of the following is an important characteristic of monopolistic competition?
   a. It is difficult to enter the industry.
   b. It is easy for firms to establish collusive agreements.
   c. Each firm has very small shares of total market production and sales.
   d. Firms are all interdependent, so decisions made by each firm affect choices of others.

3. Because each separate differentiated product sold by a monopolistically competitive firm has numerous similar substitutes, we can say for certain that the demand for each individual firm's product is relatively
   a. low, so that no one firm can sell more than a few units of its output.
   b. high, so that in principle any given firm can sell the most output in the market.
   c. elastic, as compared with the demand for the product of a monopoly producer.
   d. inelastic, as compared with the demand for the product of a monopoly producer.

4. As is also true in a perfectly competitive industry, in a monopolistically competitive industry,
   a. in the long run firms can easily enter the market in response to positive economic profits.
   b. in the short run the demand curve for each firm's product slopes downward.
   c. in the long run the price of each firm's output equals marginal cost.
   d. in the short run firms always earn positive economic profits.

5. As is also true of a monopoly, in a monopolistically competitive industry,
   a. in the long run more firms cannot enter the market in response to positive economic profits.
   b. in the short run each firm's marginal revenue declines as it increases its production and sales.
   c. in the short run the price of each firm's product is always less than marginal cost.
   d. in the long run the price of each firm's product equals average total cost.

6. For the monopolistic competitor, in the long run
   a. economic profits can be positive.
   b. output is too high, from society's point of view.
   c. the demand curve must be tangent to the *ATC* curve.
   d. output is produced to the right of the minimum *ATC* point.

7. The U.S. Patent and Trademark Office
   a. registers trademarks, which gives an owner the right to seek legal relief in the event it can prove misuse of the brand name by another party.
   b. acts as both judge and jury for determining whether a company has misused another firm's brand name and assessing fines on offending firms.
   c. creates all company trademarks, thereby determining the names of the brands that companies market to consumers via advertising.
   d. has its own police force, which seeks evidence of unauthorized uses of firms' brand names or false information about brands.

8. Advertising
   a. attempts to increase the demand for a firm's product.
   b. can provide more information to buyers.
   c. helps to differentiate a firm's product.
   d. All of the above.

9. Persuasive advertising is
   a. most appropriate for search goods.
   b. aimed toward reducing the degree of product differentiation.
   c. designed to provide information about the main features of a good or service.
   d. intended to acquaint consumers with a taste or preference previously unknown to them.

10. Experience goods
    a. have qualities consumers can assess before purchase.
    b. must be consumed for buyers to evaluate their qualities.
    c. are most successfully marketed by way of informational advertising.
    d. are homogeneous items sold only in perfectly competitive industries.

11. In the United States, firms spend the majority of their advertising dollars on
    a. interactive marketing.
    b. direct marketing.
    c. mass marketing.
    d. None of the above.

12. For a firm that sells an information product, which one of the following pairs of cost curves *both* slope downward in the short run?
    a. *AFC* and *ATC*
    b. *AVC* and *ATC*
    c. *MC* and *AVC*
    d. *MC* and *ATC*

13. For a firm that sells an information product, which of the following costs are identical, constant, and relatively small over all ranges of output in the short run?
    a. *AFC* and *ATC*
    b. *AVC* and *ATC*
    c. *MC* and *AVC*
    d. *MC* and *ATC*

14. The term short-run economies of operation refers to decreasing
    a. marginal cost as more units of an information product are sold.
    b. average total cost as more units of an information product are sold.
    c. average fixed cost as more units of an information product are sold.
    d. marginal cost above the minimum point of the *AVC* curve for an information product.

15. If the producer of an information product faces a strictly enforced legal requirement that any units of output it produces and sells must be offered at a price equal to marginal cost, then
    a. the firm's desired output will be at the minimum point of the average total cost curve.
    b. the firm will earn positive economic profits.
    c. the firm's desired output will be zero units.
    d. the firm will earn zero economic profits.

16. In a long-run equilibrium for a profit-maximizing, monopolistically competitive producer of an information product,
    a. the firm's desired output will be at the minimum point of the average total cost curve.
    b. the firm will earn positive economic profits.
    c. the firm's desired output will be zero units.
    d. the firm will earn zero economic profits.

17. If a firm that manufactures and sells an information product sets the price of the product equal to marginal cost, it will earn
    a. total revenues equal to its total costs.
    b. an economic loss equal to its fixed costs.
    c. an economic loss equal to its variable costs.
    d. total revenues equal to its total fixed costs

18. In the short run, a monopolistically competitive firm that manufactures and sells an information product maximizes its economic profits by producing to the point at which
    a. price equals marginal cost.
    b. price equals average total cost.
    c. price equals average variable cost.
    d. marginal revenue equals marginal cost.

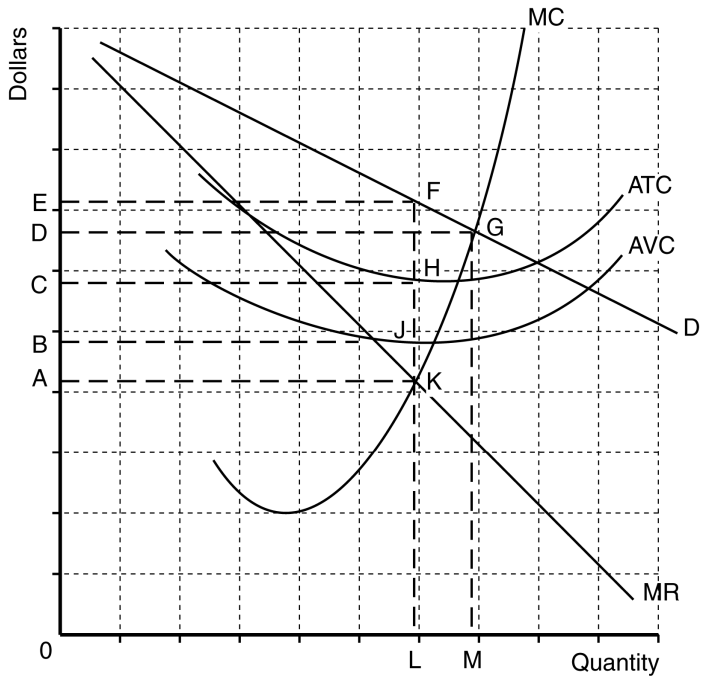
■ Matching

Choose the item in Column (2) that best matches an item in Column (1).

(1)	(2)
(a) monopolistic competition	(g) direct marketing
(b) search good	(h) informational advertising
(c) information product	(i) persuasive advertising
(d) TV and radio advertisements	(j) product differentiation
(e) mail advertisements	(k) short-run economies of operation
(f) experience good	(l) mass marketing

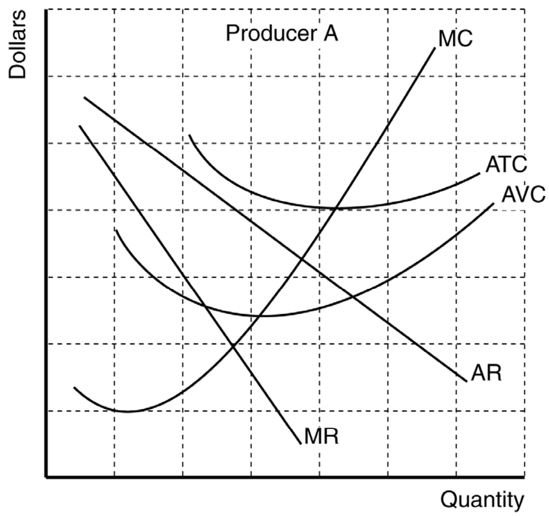
■ Working with Graphs

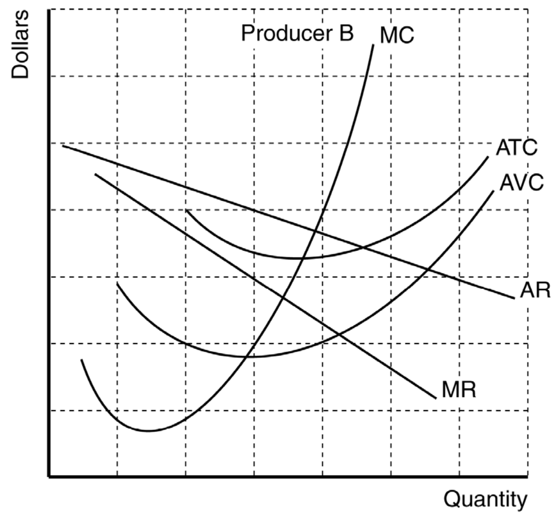
1. Use the graph of a monopolistic competitor below to answer each of the following questions.

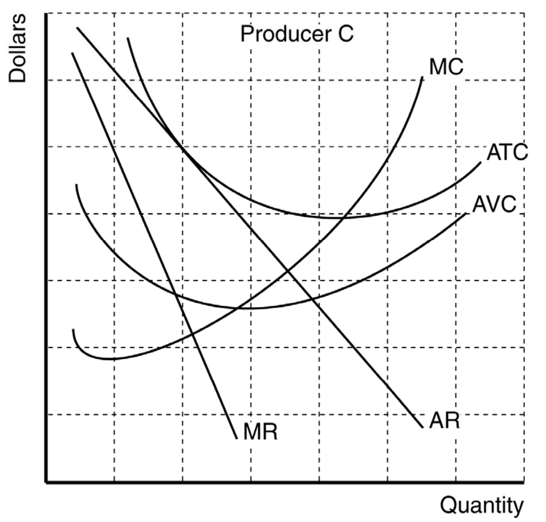


a. At what level of output will this firm operate? __________
b. What is marginal revenue at this level of output? __________
c. What price will this firm charge for its product? __________
d. The area of what rectangle is equal to total revenue? __________
e. What is the firm's average cost in equilibrium? __________
f. The area of what rectangle is equal to the firm's total cost? __________
g. Is the firm making profits or incurring losses? __________
h. The area of what rectangle is equal to profits or losses? __________

2. Use the graphs below to answer the questions that follow.







a. Which of the producers is a monopolistic competitor making positive economic profits? __________________

b. Which of the producers appears to be in an industry that may have reached a long-run equilibrium? __________________

c. Which of the producers is most likely to leave the industry in which it is currently operating? __________________

d. Which of the producers is in an industry that is most likely to attract additional firms? ________________

e. If all the firms in Producer C's industry are currently in a similar situation, what will most likely happen if there is a decrease in demand for the products of that industry? ______________

f. Which producer(s) is/are incurring short-run losses? _________________

■ Problems

1. Let PC = perfect competition, M = monopoly, and MC = monopolistic competition. Indicate by writing down the appropriate initials which of the following may be consistent with one, several, or all of those markets.

_____ (a) profit maximizer
_____ (b) advertising
_____ (c) long-run economic profits
_____ (d) social inefficiency
_____ (e) $P > MC$ in equilibrium
_____ (f) product differentiation
_____ (g) large economies of scale relative to market demand
_____ (h) long-run equilibrium at minimum ATC
_____ (i) short-run economic profits
_____ (j) easy entry
_____ (k) ability to set price

Answers

Completion Questions

1. significant number of sellers; differentiated product; advertising; easy entry
2. difficult; need not; a little
3. negatively; below
4. marginal revenue; marginal cost
5. greater than; inefficiency
6. equal to; greater than
7. demand for; differentiated
8. direct; mass; interactive
9. a search; an experience; a credence
10. informational; a search
11. persuasive; an experience
12. variable; total
13. variable; total variable; total fixed; negative
14. total; zero

True-False Questions

1. T
2. F There are so many rivals that they can be ignored.
3. T
4. F Wheat is largely homogeneous.
5. T
6. F Social inefficiency exists because the monopolistic competitor's demand curve is negatively sloped. Hence, $P > MC$ in equilibrium.
7. F Exclusively persuasive advertising is more likely to be used by the producer of an experience good.
8. T
9. T
10. F Heavy advertising expenses signals that a company intends to stay in business a long time and desires to develop a loyal customer base.
11. F In fact, producing an information product typically requires incurring relatively high fixed costs and relatively low marginal costs.
12. T
13. T
14. F In long-run equilibrium for an information-product firm in monopolistically competitive industry, price is equal to average total cost.

Multiple Choice Questions

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

Matching

(a) and (j)	(d) and (l)
(b) and (h)	(e) and (g)
(c) and (k)	(f) and (i)

Working with Graphs

1. a. 0L
   b. 0A
   c. 0E
   d. 0EFL
   e. 0C
   f. 0CHL
   g. Profits
   h. CEFH

2. a. B
   b. C
   c. A
   d. B
   e. Some firms will exit the industry.
   f. A

Problems

1. a. *PC*, *M*, *MC*
   b. *M*, *MC*
   c. *M*
   d. *M*, *MC*
   e. *M*, *MC*
   f. *MC*
   g. *M*
   h. *PC*
   i. *PC*, *M*, *MC*
   j. *PC*, *MC*
   k. *M*, *MC*

Glossary

Credence good A product with qualities that consumers lack the expertise to assess without assistance.

Direct marketing Advertising targeted at specific consumers, typically in the form of postal mailings, telephone calls, or e-mail messages.

Experience good A product that an individual must consume before the product's quality can be established.

Information product An item that is produced using information-intensive inputs at a relatively high fixed cost but distributed for sale at a relatively low marginal cost.

Informational advertising Advertising that emphasizes the transmission of knowledge about the features of a product.

Interactive marketing Advertising that permits a consumer to follow up directly by searching for more information and placing direct product orders.

Mass marketing Advertising intended to reach as many consumers as possible, typically through television, newspaper, radio, or magazine ads.

Monopolistic competition A market situation in which a large number of firms produce similar but not identical products. Entry into the industry is relatively easy.

Persuasive advertising Advertising that is intended to induce a consumer to try a product and discover a previously unknown taste for the item.

Product differentiation The distinguishing of products by brand name, color, and other minor attributes. Product differentiation occurs in other than perfectly competitive markets in which products are, in theory, homogeneous, such as wheat or corn.

Search good A product with characteristics that enable an individual to evaluate the product's quality in advance of a purchase.

Short-run economies of operation A distinguishing characteristic of an information product arising from declining short-run average total cost as more units of the product are sold.