Monopolistic Competition

Goals
In this chapter you will

Examine market structures that lie between monopoly and competition
Analyze competition among firms that sell differentiated products
Compare the outcome under monopolistic competition and under perfect competition
Consider the desirability of outcomes in monopolistically competitive markets
Examine the debate over the effects of advertising
Examine the debate over the role of brand names

Outcomes
After accomplishing these goals, you should be able to

Describe the characteristics of oligopoly and monopolistic competition
Show the long-run adjustment that takes place in a monopolistically competitive market when a firm generates economic profits
Show why monopolistically competitive firms produce at less than efficient scale in the long run
Discuss the inefficiencies of monopolistically competitive markets
Provide an argument in support of and in opposition to the use of advertising
Provide an argument in support of and in opposition to the use of brand names
Strive for a Five

Monopolistic competition is tested on both sections of the AP microeconomics exam, under firm behaviors and market structures. You should be prepared to create a correctly labeled model of a monopolistically competitive market, as well as:

- Monopolistic competition profit maximization
- Excess capacity as it pertains to efficiency
- Short-run versus long-run equilibrium for monopolistic competition
- Differentiation and advertising

Key Terms

- **Oligopoly**—A market structure in which only a few sellers offer similar or identical products
- **Monopolistic competition**—A market structure in which many firms sell products that are similar but not identical
- **Free entry**—A situation where firms can enter the market without restriction
- **Efficient scale**—The quantity that minimizes average total cost

Chapter Overview

Context and Purpose

Chapter 16 is the fourth chapter in a five-chapter sequence dealing with firm behavior and the organization of industry. The previous two chapters developed the two extreme forms of market structure—competition and monopoly. The market structure that lies between competition and monopoly is known as imperfect competition. There are two types of imperfect competition—monopolistic competition and oligopoly. This chapter addresses monopolistic competition while the final chapter in the sequence addresses oligopoly. The analysis in this chapter is again based on the cost curves developed in Chapter 13.

The purpose of Chapter 16 is to address monopolistic competition—a market structure in which many firms sell products that are similar but not identical. Monopolistic competition differs from perfect competition because each of the many sellers offers a somewhat different product. As a result, monopolistically competitive firms face a downward-sloping demand curve whereas competitive firms face a horizontal demand curve at the market price. Monopolistic competition is common.

Chapter Review

Introduction

Monopolistic competition shares some features of competition and monopoly. Monopolistic competition is common.

Between Monopoly and Perfect Competition

Competitive firms charge a price equal to marginal cost, and in the long run, this is equal to average total cost, causing each firm to earn no economic profits. A monopolist charges a price that exceeds marginal cost. This reduces output and causes a deadweight loss. The market structure that lies between the extremes of competition and monopoly and contains elements of both is known as imperfect competition. There are two types of imperfect competition—oligopoly and monopolistic competition. Oligopoly is a market structure in which only a few sellers offer similar or identical products. Firms in markets with four-firm concentration ratios in excess of 50 percent are often oligopolies because four firms supply more than 50 percent of the output of the entire industry.

Monopolistic competition is a market structure in which many firms sell products that are similar but not identical. Monopolistic competition has the following characteristics:
Many sellers: This is in common with competition.

Product differentiation: This is in common with monopoly—each firm’s product is slightly different, so each firm is a price maker and faces a downward-sloping demand for its product.

Free entry: This is in common with competition—firms can enter or exit without restriction so economic profits are driven to zero.

Examples of monopolistically competitive markets are the market for books, CDs, movies, restaurants, and so on. Monopolistically competitive markets are common. Oligopoly differs from perfect competition because there are only a few sellers in the market. Monopolistic competition differs from perfect competition because each of the many sellers offers a somewhat different product. As a result, monopolistically competitive firms face a downward-sloping demand curve while competitive firms face a horizontal demand curve at the market price.

To summarize the distinguishing characteristics of the various market structures:

- Monopoly has only one firm.
- Oligopoly has a few firms selling similar or identical products.
- Perfect competition has many firms selling identical products.
- Monopolistic competition has many firms selling differentiated products.

It is often difficult to decide which structure best describes a particular market. Oligopolies may become a larger portion of the economy because high-tech industries have high fixed costs and small marginal costs, so mergers are particularly attractive. We observe this effect in cable television, publishing, and Web site providers.

Competition with Differentiated Products

Similar to a monopolist, a monopolistically competitive firm faces a downward-sloping demand curve for its product. Therefore, it follows the same rule for profit maximization as a monopolist—it produces the quantity at which marginal cost equals marginal revenue and then uses the demand curve to determine the price consistent with this quantity. In the short run, if the price exceeds average total cost, the firm makes economic profits. If the price is below average total cost, the firm generates losses.

As in a competitive market, if the firm is making profits, new firms have incentive to enter the market. Entry reduces the demand faced by each firm already in the market (shifts their demand curves to the left) and reduces their profits in the long run. If the firm is generating losses, incumbent firms have incentive to exit the market. Exit increases the demand faced by each firm that remains in the market (shifts their demand curves to the right) and reduces their losses. Entry and exit continue until the firms in the market are making zero economic profits. In long-run equilibrium, the demand curve facing the firm must be tangent to the average-total-cost curve so that \( P = ATC \) and profits are zero.

The long-run equilibrium for a monopolistically competitive firm exhibits the following:

- As in monopoly, price exceeds marginal cost because profit maximization requires that \( MR = MC \), and \( MR \) is always less than demand if demand is downward sloping.
- As in competition, price equals average total cost so economic profits equal zero because, unlike in monopoly, free entry drives profits to zero.

The long-run equilibrium under monopolistic competition differs from the long-run equilibrium under perfect competition in two ways:

- Excess capacity: Monopolistically competitive firms produce in the downward-sloping portion of their average-total-cost curve. Therefore, they produce a quantity that is less than that which would be produced at the efficient scale (minimum \( ATC \)) of the firm. As a result, they are said to have excess capacity. Competitive firms produce at the efficient scale.
- **Markup over marginal cost:** A monopolistically competitive firm charges a price that exceeds its marginal cost. A competitive firm charges a price that equals its marginal cost. As a result, if a monopolistically competitive firm could attract another customer, it would increase its profits.

Monopolistic competition may be inefficient for two reasons:

- Because price exceeds marginal cost, some units that buyers valued in excess of the cost of production are not produced and consumed. This is the standard deadweight loss associated with monopoly. Regulating a monopolistically competitive firm in order to reduce the deadweight loss is not easily accomplished—the task is similar to regulating a natural monopoly.

- The number of firms in the market may not be “ideal” because the entering firm only considers its own profits but its entry generates two external effects:

  1. **The product-variety externality:** Entry creates consumer surplus in the new market, which is a positive externality.

  2. **The business-stealing externality:** Entry causes other firms to lose customers and profits and reduces existing surplus, which is a negative externality.

Therefore, the entry of new firms into a monopolistically competitive market can raise or lower social surplus.

Monopolistically competitive markets do not ensure the maximization of total surplus. However, there is no easy way for public policy to improve the market outcome.

**Advertising**

Because monopolistically competitive firms sell differentiated products at prices above marginal cost, each firm has incentive to advertise to attract more buyers. Firms that sell highly differentiated consumer products spend 10 to 20 percent of revenue on advertising; firms that sell industrial products spend little; and firms that sell undifferentiated products spend nothing at all. About 2 percent of firm revenue is spent on advertising. That spending is largely on commercials on television and radio, space in newspapers and magazines, direct mail, the yellow pages, billboards, and the Internet.

Economists debate the social value of advertising. Critics argue that advertising manipulates people’s tastes to create a desire that otherwise would not exist and that advertising impedes competition by increasing the perception of product differentiation, which increases brand loyalty, causes demand to be more inelastic, and allows the firm to charge a greater markup over marginal cost. Defenders of advertising argue that advertising provides information to customers about prices, the existence of new products, and the location of retail outlets. This information increases competition because consumers are aware of price differentials and it provides new firms with the means to attract customers from existing firms. Evidence suggests that advertising increases competition and reduces prices for consumers.

Advertising that appears to contain little information may be useful because it provides a *signal* of product quality. Firms are likely to spend a great deal on advertising only if they think their product is of high quality. Therefore, consumers may be rational to try new products that are expensively advertised because it signals that the product is of high quality. The content of the ad is irrelevant. What is important is that the ad is expensive.

Advertising is related to *brand names*. Critics of brand names argue that brand names cause consumers to perceive differences between goods that do not exist. Defenders of brand names argue that brand names ensure that the product is of high quality because (1) brand names provide *information* about the quality of a product and (2) brand names give firms the *incentive* to maintain high quality.

**Conclusion**

Monopolistic competition contains characteristics of both monopoly and competition. Like monopoly, firms face downward-sloping demand curves and charge prices above marginal cost. Like competition, entry and exit drive profits to zero in the long run. Many markets are monopolistically competitive. The allocation of resources under monopolistic competition is not perfect, but policymakers may not be able to improve on it.
Helpful Hints

1. A source of inefficiency in monopolistic competition is underproduction. That is, some units are not produced that buyers value in excess of the cost of production. The monopolistically competitive firm charges a price that exceeds marginal cost while the competitive firm charges a price equal to marginal cost. However, the higher price charged by the monopolistically competitive firm is not the source of inefficiency. As with monopoly, it is the lower quantity demanded that results from the higher price that is the source of inefficiency. By itself, the higher price simply redistributes surplus from the buyer to the seller but it does not reduce total surplus.

Self-Test

Multiple-Choice Questions

1. Monopolistic competition is characterized by which of the following attributes?
   (i) Free entry
   (ii) Product differentiation
   (iii) Many sellers
   a. (i) only
   b. (ii) only
   c. (i) and (ii) only
   d. (ii) and (iii) only
   e. (i), (ii), and (iii)

2. A profit-maximizing firm in a monopolistically competitive market is characterized by which of the following?
   a. average revenue exceeds marginal revenue
   b. marginal revenue exceeds average revenue
   c. average revenue is equal to marginal revenue
   d. revenue is always maximized along with profit
   e. average revenue is always equal to marginal cost

3. A profit-maximizing firm in a monopolistically competitive market differs from a firm in a perfectly competitive market because the firm in the monopolistically competitive market
   a. is characterized by market-share maximization.
   b. has no barriers to entry.
   c. faces a downward-sloping demand curve for its product.
   d. faces a horizontal demand curve at the market price.
   e. makes economic profits in the long run.

4. A similarity between monopoly and monopolistic competition is that, in both market structures,
   a. strategic interactions among sellers are important.
   b. there are a small number of sellers.
   c. sellers are price makers rather than price takers.
   d. product differentiation is important.
   e. entry into the market is very limited.

5. If firms in a monopolistically competitive market are earning economic profits, then
   a. firms will likely be subject to regulation.
   b. barriers to entry will be strengthened.
   c. some firms will exit the market.
   d. new firms will enter the market.
   e. marginal revenue must be above marginal cost.
Figure 16-1
The lines in the following figures illustrate the potential effect of entry and exit in a monopolistically competitive market on either the demand curve or the marginal cost curve of existing firms.

6. Refer to Figure 16-1. Panel (d) illustrates the change that would occur if existing firms faced
   a. long-run economic losses.
   b. a decrease in the diversity of products offered in the market.
   c. new entrants in the market.
   d. firms exiting the market.
   e. government intervention.

Figure 16-2
7. **Refer to Figure 16-2.** Panel (a) shows a profit-maximizing monopolistically competitive firm that is
   a. in long-run equilibrium.
   b. likely to exit the market in the long run.
   c. producing its efficient scale of output.
   d. not maximizing its profit.
   e. likely to see other firms entering the market in the long run.

8. **Refer to Figure 16-2.** Panel (b) is consistent with a firm in a monopolistically competitive market that is
   a. not in long-run equilibrium.
   b. in long-run equilibrium.
   c. producing its efficient scale of output.
   d. earning economic profits.
   e. breaking even.

9. **Refer to Figure 16-2.** Panel (c) depicts
   a. a short-run equilibrium that will encourage the entry of some firms into a monopolistically competitive industry.
   b. a short-run equilibrium that will encourage the exit of some firms from a monopolistically competitive industry.
   c. a short-run equilibrium that will be stable and not encourage entry or exit of firms from a monopolistically competitive industry.
   d. a long-run equilibrium that will encourage the exit of some firms from a monopolistically competitive industry.
   e. a long-run equilibrium that will encourage the entry of some firms into a monopolistically competitive industry.

10. In a long-run equilibrium, a monopolistically competitive firm produces a quantity that is
    a. equal to the socially optimum level of output.
    b. greater than the socially optimum level of output.
    c. less than the socially optimum level of output.
    d. earning economic profits.
    e. likely to attract new firms to enter the market.

11. A firm in a monopolistically competitive market is similar to a monopoly in the sense that
    (i) they both face downward-sloping demand curves.
    (ii) they both charge a price that exceeds marginal cost.
    (iii) free entry and exit determines the long-run equilibrium.
    a. (i) only
    b. (ii) only
    c. (iii) only
    d. (i) and (ii) only
    e. (i), (ii), and (iii)

12. A firm in a monopolistically competitive market is similar to a perfectly competitive firm in the sense that
    (i) they both face downward-sloping demand curves.
    (ii) they both are price takers.
    (iii) free entry and exit determines the long-run equilibrium.
    a. (i) only
    b. (ii) only
    c. (iii) only
    d. (i) and (ii) only
    e. (i), (ii), and (iii)
Free Response Questions

1. Using a correctly labeled graph, demonstrate the long-run equilibrium position for a monopolistically competitive firm.

2. In a small college town, four microbreweries have opened in the last two years. Demonstrate the effect of new market entrants on demand for existing firms (microbreweries) that already served this market. Assume that the local community now places a moratorium on new liquor licenses for microbreweries. How will this moratorium affect the long-run profitability of incumbent firms?
Solutions

Multiple-Choice Questions
1. e TOP: Monopolistic competition | Demand curve
2. a TOP: Profit maximization
3. c TOP: Monopolistic competition | Demand curve
4. c TOP: Monopolistic competition | Demand curve
5. d TOP: Long-run equilibrium
6. c TOP: Long-run equilibrium
7. a TOP: Profit maximization
8. a TOP: Long-run equilibrium
9. a TOP: Short-run equilibrium
10. c TOP: Long-run equilibrium
11. d TOP: Long-run equilibrium
12. c TOP: Long-run equilibrium

Free Response Questions
1. The long-run equilibrium position for a monopolistically competitive firm is shown here. This graph demonstrates a break even situation.

2. The arrival of a new entrant should be graphically depicted by a leftward shift in the demand curves faced by all incumbent firms. If firms are able to make economic profits, these will be able to be maintained in the long run if new entrants are not allowed (which would essentially be a barrier to entry, meaning the market would no longer be characterized as monopolistically competitive).