***Chapter 1*:**

**MANAGERS, PROFITS, AND MARKETS**

# 

# Essential Concepts

1. Managerial economics applies microeconomic theory—the study of the behavior of individual economic agents—to business problems in order to teach business decision makers how to use economic analysis to make decisions that will achieve the firm’s goal—maximization of profit.
2. Economic theory helps managers understand real-world business problems by using simplifying assumptions to abstract away from irrelevant ideas and information and turn complexity into relative simplicity.
3. *Microeconomics* is the study and analysis of the behavior of individual segments of the economy: individual consumers, workers and owners of resources, individual firms, industries, and markets for goods and services. Using marginal analysis, microeconomics provides the foundation for understanding the everyday business decisions managers routinely make in running a business. Such decisions are frequently referred to as *business practices* or *tactics*.
4. *Industrial organization* is a specialized branch of microeconomics that focuses on the behavior and structure of firms and industries. Industrial organization supplies the foundation for understanding *strategic decisions* through the application of game theory.
5. Strategic decisions differ from routine business practices or tactics because, in contrast to routine business practices, strategic decisions seek to shape or alter the conditions under which a firm competes with its rivals in ways that will increase and/or protect the firm’s long-run profit. While routine business practices are *necessary* for keeping organizations moving toward their goal of profit-maximization, strategic decisions are generally *optional* actions managers can take as circumstances permit.
6. Industrial organization identifies seven economic forces that promote long-run profitability: few close substitutes, strong entry barriers, weak rivalry within markets, low market power of input suppliers, low market power of consumers, abundant complementary products, and limited harmful government intervention.
7. The economic cost of using resources to produce a good or service is the opportunity cost to the owners of the firm using those resources. The opportunity cost of using any kind of resource is what the owners of the firm must give up to use the resource.
8. Total economic cost is the sum of the opportunity costs of market-supplied resources plus the opportunity costs of owner-supplied resources. The opportunity costs of using market-supplied resources are the out-of-pocket monetary payments made to the owners of resources, which are called *explicit costs*. The opportunity cost of using an owner-supplied resource is the best return the owners of the firm could have received had they taken their own resource to market instead of using it themselves. Such nonmonetary opportunity costs are called *implicit costs*.
9. Businesses may incur numerous kinds of implicit costs, but the three most important types of implicit costs are (1) the opportunity cost of cash provided by owners, known as equity capital, (2) the opportunity cost of using land or capital owned by the firm, and (3) the opportunity cost of the owner’s time spent managing the firm or working for the firm in some other capacity.
10. Economic profit is the difference between total revenue and total economic cost:

Economic profit = Total revenue – Total economic cost

= Total revenue – Explicit costs – Implicit costs

Economic profit belongs to the owners and will increase the wealth of the owners. When revenues fall short of total economic cost, economic profit is negative, and the loss must be paid for out of the wealth of the owners.

1. When accountants calculate business profitability for financial reports, they follow a set of rules known as “generally accepted accounting principles” or GAAP. These rules, which are constructed by the Securities and Exchange Commission (SEC) and the Financial Accounting Standards Board (FASB) do not allow accountants to deduct most types of implicit costs for the purposes of calculating taxable accounting profit. Thus, accounting profit differs from economic profit because accounting profit does not subtract from total revenue the implicit costs of using resources.

Accounting profit = Total revenue – Explicit costs

1. Since the owners of firms must cover the costs of all resources used by the firm, maximizing economic profit, rather than accounting profit, is the objective of the firm’s owners.
2. The value of a firm is the price for which it can be sold, and that price is equal to the present value of the expected future profit of the firm.
3. The risk associated with not knowing future profits of a firm is accounted for by adding a risk premium to the discount rate used for calculating the present value of the firm’s future profits. The larger (smaller) the risk associated with future profits, the higher (lower) the risk premium used to compute the value of the firm, and the lower (higher) the value of the firm will be.
4. If cost and revenue conditions in any period are independent of decisions made in other time periods, a manager will maximize the value of a firm by making decisions that maximize profit in every single time period.
5. Taking a course in managerial economics can help you avoid making a number of common mistakes in business decision making: never increase output simply to reduce average costs, generally avoid the pursuit of market share because doing so usually lowers profit, focus on maximizing total profit rather than profit margin, understand that maximizing total revenue does not maximize profit, and avoid the use of cost-plus pricing methods when setting prices.
6. In firms for which the manager is not also the owner, the managers are agents of the owners, or principles. A principal-agent problem exists when agents have objectives different from those of the principal, and the principal either has difficulty enforcing agreements with the agent or finds it too difficult and costly to monitor the agent to verify that the agent is furthering the principal’s objectives.
7. Agency problems arise because of moral hazard. Moral hazard exists when either party to an agreement has an incentive not to abide by all provisions of the agreement, and one party cannot cost-effectively find out if the other party is abiding by the agreement, or cannot enforce an agreement even when information is available.
8. In order to address agency problems, shareholders can employ a variety of corporate control mechanisms. Shareholders can reduce agency problems by:
   * 1. requiring managers to hold a stipulated amount of the firm’s equity,
     2. increasing the percentage of outsiders serving on the company’s board of directors, and
     3. financing corporate investments with debt instead of equity. Corporate takeovers also create an incentive for managers to make decisions that maximize the value of a firm.
9. A price-taking firm cannot set the price of the product it sells because price is determined strictly by the market forces of demand and supply.
10. A price-setting firm sets the price of its product because it possesses some degree of market power, which is the ability to raise price without losing all sales.
11. A market is any arrangement that enables buyers and sellers to exchange goods and services, usually for money payments. Markets exist to reduce transaction costs, the costs of making a transaction.
12. Market structure is a set of characteristics that determines the economic environment in which a firm operates:
    * 1. the number and size of firms operating in the market,
      2. the degree of product differentiation, and
      3. the likelihood of new firms’ entering.
13. Markets may be structured as one of four types:
    * 1. A perfectly competitive market has a large number of relatively small firms selling an undifferentiated product in a market with no barriers to entry.
      2. A monopoly market is one in which a single firm, protected by a barrier to entry, produces a product that has no close substitutes.
      3. In monopolistically competitive markets, a large number of relatively small firms produce differentiated products without any barriers to entry.
      4. In oligopoly markets, there are only a few firms whose profits are interdependent—each firm’s decisions about pricing, output, advertising, and so forth affects all other firms’ profits—with varying degrees of product differentiation.
14. Globalization of markets is the economic integration of markets located in nations around the world. Globalization provides managers with both an opportunity to sell more goods and services to foreign buyers as well as the threat of increased competition from foreign producers.

# Answers to Applied Problems

1. a. Total explicit cost = $793,000 (= 555,000 + 45,000 + 28,000 + 165,000)

Total implicit cost = $190,000 (= 175,000 + 0.15 × 100,000)

Total economic cost = $983,000 (= 793,000 + 190,000)

1. Accounting profit = $177,000 (= 970,000 ­– 793,000)
2. Economic profit = –$13,000 (= 970,000 – 983,000)

d. The owner’s accounting profit is $13,000 less than what he could have earned in salary and return on investment of his $100,000, i.e., his economic profit is –$13,000. Thus, he would have made $13,000 more if he had kept his job and invested his $100,000 in stocks of other businesses.

2. The $8,000 of lost income, even though not tax-deductible, is indeed part of the economic cost the doctor incurs by going to Mexico to treat patients, and the doctor should consider this $8,000 cost in making her decision to travel to Mexico.

3. a. Burton's explicit cost's are $18,000 per month. His implicit costs are $20,000 per month ($15,000 + $5,000).

b. Opportunity cost = explicit + implicit costs = $18,000 + 20,000 = $38,000 per month

c. Burton Cummings’ costs of production (= $38,000/month) exceed his revenues by $13,000 (= 38,000 – 25,000). Rather than lose $13,000 per month, Burton could rent his rig (and receive $15,000 per month) and drive trucks for another firm (and earn $5,000 per month). With this use of his resources he would earn $20,000 per month. Or, Burton could try his luck as a singer in a rock band.

4. One cost of opening a tennis shop would be the forgone salary of the previous job. Given that Nadal’s or Venus’ foregone income would be much larger than that of a university coach, their opportunity cost would be higher.

5. Linking the board of directors' compensation to return on equity creates an incentive for management to pursue profit-maximization as a goal, thereby reducing the agency problem between managers and shareholders. Directors have better, easier, and cheaper access to information about the firm's revenues and costs. Shareholders are numerous and each one has only a relatively small stake in the profitability of the firm. It is generally easier for a shareholder simply to sell its shares and reinvest in another company.

6. a. Some Marriott franchises are shirking their responsibility to maintain high quality hotels, and this shirking damages the reputation of all Marriott franchises.

b. Poorly run franchises damage the Marriott reputation and reduce the profitability of hotels owned by Marriott.

1. Where there is little repeat business, there is less incentive for a hotel to provide quality service. Where there is a lot of repeat business, franchises will have an incentive to maintain quality to attract repeat business.

7. Even though the financial arrangement with Delta and United limited the growth in SkyWest’s economic profits in future years, the agreement decreased the risk associated with SkyWest’s profits. In the Fortune article, one financial analyst states, “They (SkyWest) shield themselves from the factors that lead to volatility in earnings—fuel prices, ticket prices, and load factors—and bring investors the certainty they are looking for.” The lower level of risk reduces the risk-adjusted discount rate, and, for a given stream of profits, the value of the SkyWest rises.

**Answers to Mathematical Exercises**

1. a. *PV* = *NCF*/(1 + *r*)t = $1,000/(1.065) = $938.97

b. *PV* = $1,000/(1.065)2 = $881.66

1. *PV* = $1,000/(1.065)3 = $827.85

2. The present value is calculated as follows:



3. Option *A*: Ashton pays Demi $1,000,000 each year for 10 years (Ashton wishes to make each payment at year-end.)

Option *B*: Ashton pays Demi $5,000,000 in cash now.

If the appropriate interest rate is 8 percent:

*PV*Option *A* = $1,000,000/(1.08)1 +    + $1,000,000/(1.08)10 = $6,710,081

*PV*Option *B* = $5,000,000

Clearly, Demi should take option *A* and Ashton should want to pay her $5,000,000 now.

If the appropriate interest rate is 20 percent:

*PV*Option A = $1,000,000/(1.20)1 +    + $1,000,000/(1.20)10 = $4,192,472

*PV*Option B = $5,000,000

In this case, Demi should demand $5,000,000 cash now, and Ashton should try to talk her into taking $10,000,000 spread over ten years.

# Answers to Homework Exercises in Student Workbook

1. a. $47,177,000 d. $6,573,000

1. $5,880,000 e. $693,000
2. $53,057,000 f. ­–$907,000

2. a. $12,635,513

1. $11,336,861
   1. a. monopolistic competition

b. oligopoly

c. perfect competition

d. monopoly

1. SunKist is just one of many citrus producers. Consumers are generally not brand conscious with respect to fresh fruits and vegetables.

5. Lexus has market power because product differentiation, even within the market for luxury cars, gives Lexus some ability to raise price without losing all sales. In addition, a dealership in one city seldom loses sales to Lexus dealers in other towns or cities, unless they are only a short distance away.