CHAPTER 12

PRICING DECISIONS AND COST MANAGEMENT

# LEARNING OBJECTIVES

1. Discuss the three major influences on prices
2. Distinguish between short-run and long-run pricing decisions
3. Price products using the target-costing approach
4. Apply the concepts of cost incurrence and locked-in costs
5. Price products using the cost-plus approach
6. Use life-cycle budgeting and costing when making pricing decisions
7. Describe two pricing practices in which noncost factors are important when setting price
8. Explain the effects of antitrust laws on pricing

# CHAPTER OVERVIEW

Chapter 12 demonstrates the broader sphere of influence for cost accounting. Pricing decisions are influenced primarily by costs, customers, and competitors, which are the specific market factors of demand and supply. This chapter does not present another costing system for determining product cost for use in pricing but utilizes necessary concepts of cost-behavior, cost drivers, and relevance to manage those costs.

Concepts presented are those of relevant costs in relation to a time horizon (short run or long run), strategy of product positioning (market-based pricing or cost-based pricing), value engineering (relationship of product design and timing of cost incurrence), the life-cycle of a product (“cradle-to-grave”), and legal considerations in pricing decisions.

Target pricing and target costing are an example of market-based pricing. Implementation of target prices and target costs is illustrated through a four-step process. Target costs are costs that the company aims to achieve. Costs are managed to reduce the cost of products and processes. Value engineering is used to reduce the nonvalue-added activities/costs and achieve greater efficiency in value-added activities. This type of cost management, lower costs, efficiency improvements, elimination of nonvalue-added activities, is used to develop cost leadership, a type of strategy used by some companies (described in Chapter 13).

Cost-plus pricing, also known as cost-based approach to pricing, is described as a starting point for pricing decisions. Though cost is a key factor in pricing a product or service, other factors must be considered. Some noncost factors are considered for their impact on pricing decisions.

An example of life-cycle pricing and costing is used to highlight the importance of full costs for pricing.

# CHAPTER OUTLINE

1. Pricing decisions in general
2. Management decisions about what to charge for products and services to achieve profitability
3. Evaluate demand at different prices
4. Manage costs across the value chain and over the product’s life cycle
5. Consider type of market and degree of competition

***Learning Objective 1:***

Discuss the three major influences on prices

1. Major influences on demand and supply
2. Customers (demand)
3. Competition (demand and supply)
4. Costs (supply)

**Do multiple choice 1. Assignments after L. O. 2.**

***Learning Objective 2:***

Distinguish between short-run and long-run pricing decisions

1. Time horizon of pricing decisions—dictates which costs are relevant, how costs are managed, and the profit that needs to be earned
2. Short-run pricing decisions
3. Time horizon of less than one year
4. More opportunistic—prices decreased when demand weak and increased when strong
5. Types include adjusting product mix and output volume in a competitive market
6. Long-run pricing decisions
7. Time horizon of one year or longer
8. Price of products in major market with some leeway in setting price
9. More costs relevant because can alter in long run
10. Earn reasonable rate of return on investment through setting profit margins

## Do multiple choice 2. Assignments after L.O. 2.

1. Pricing decisions relative to time horizon
2. Short run illustration—special order *[Exhibit 12-1]*
3. Costs: necessary information
4. Existing fixed manufacturing overhead costs irrelevant because no change
5. All direct and indirect variable manufacturing costs related to special order relevant
6. All material procurement and process-changeover costs related to special order relevant
7. All nonmanufacturing costs unaffected by accepting special order irrelevant
8. Note that unit costs can mislead
9. Competition
10. Data on capacity conditions—idle or need to reduce product to regular customers
11. Minimum price identified
12. Customers
13. Price must cover incremental costs
14. Price may also need to cover revenues lost on existing sales if price lowered
15. Price may be set at what market will bear if strong customer demand and limited capacity
16. Long-run time horizon
17. Basic concepts—strategic decisions
18. Buyers typically prefer stable (and predictable) prices over a long time horizon
19. Company must know and manage costs, over the long run, of supplying product to customers
20. Calculation of product costs
21. Full costs of producing and selling product used to set price in long run using any costing system, such as activity-based costing *[Exhibits 12-2 and 12-3]*
22. Market-based approach
23. Asks: Given what our customers want and how our competition will react to what we do, what price should we charge?
24. Starting point for product differentiation industries: look at customers and competitors first, then at cost—must accept prices set by market
25. Cost-based approach
26. Asks: Given what it costs us to make this product, what price should we charge that will recoup our costs and achieve a required return on investment?
27. Starting point for product differentiation industries: look at costs first, then consider customers and competitors
28. Market forces of demand and supply always important

## Do multiple choice 3. Assign Exercises 12-16, 17, 18, and Problems 12-27, 28, 29, 30, 31.

1. Target costing for target pricing—a long-run approach to pricing

***Learning Objective 3:***

Price products using the target-costing approach

1. Target pricing—a market-based approach
2. Definition of **target price**: estimated price for product or service that potential customers will pay
3. Understanding what customers value
4. Understanding how competitors will price competing products
5. Analysis of competitors
6. What to know: technologies, products, costs, and financial conditions
7. How to know: customers, suppliers, competitors’ employees, and reverse engineering
8. Target cost
9. Based on target price and is target price minus target operating income per unit
10. Estimated long-run cost per unit of a product or service that enables the company to achieve target operating income per unit when selling at target price
11. Includes all future costs, both variable and fixed
12. Is a target: something to aim for (lower *existing* full cost per unit of product)

B. Implementing target pricing and target costing

1. Step 1: Develop a product that satisfies needs of potential customers
2. Step 2: Choose a **target price**
3. Step 3: Derive a **target cost per unit** by subtracting **target operating income per unit** from the target price
4. Step 4: Perform **value engineering** to achieve target cost
5. Value engineering: systematic evaluation of all aspects of the value-chain business functions, with objective of reducing costs while satisfying customer needs
6. Value engineering can result in improvements in product design, changes in materials specifications, or modifications in process methods
7. Value engineering
8. Distinguishing between value-added and nonvalue-added activities and costs
9. Value-added costs
10. Definition: A cost that, if eliminated, would reduce the actual or perceived value or usefulness customers obtain from using the product or service
11. Examples: Costs of specific product features and attributes desired by customers such as special designs on notebooks and stationery [*others mentioned in text*]
12. Nonvalue-added costs
13. Definition: A cost that, if eliminated, would not reduce actual or perceived value or usefulness customers obtain from using the product or service
14. Examples: Costs of expediting, rework, and repair
15. Challenge is to make cost improvements necessary through value-engineering methods to achieve the target cost

**Do multiple choice 4. Assign Exercises 12-19 and 12-20.**

***Learning Objective 4:***

Apply the concepts of cost incurrence and locked-in costs

1. Distinguishing between costs incurred and costs locked in *[Refer to Exhibit 12-4]*
2. **Cost incurrence**
3. Describes when a resource is consumed (or benefit forgone) to meet a specific objective
4. Emphasized in costing systems
5. **Locked-in** or **designed-in costs** *[Exhibits 12-5 and 12-6]*
6. Definition: Costs that have not yet been incurred but, based on decisions that have already been made, will be incurred in the future
7. Difficult to alter or reduce if occur early in process, at design stage
8. Cost reduction achievable through operating efficiency and productivity up to time costs incurred if cost not locked in early
9. Cost accountant needs solid understanding of technical and business aspects of entire value chain for knowledgeable interaction with others in organization
10. Strategic implications
11. Combine with kaizen or continuous improvement methods aimed at improving productivity and eliminating waste, with value engineering and better designs
12. Focus on the customer
13. Pay attention to schedules
14. Build a culture of teamwork and cooperation across business functions

**Do multiple choice 5. Assign Exercise 12-22 and Problem 12-32.**

***Learning Objective 5:***

Price products using the cost-plus approach

1. Cost-plus pricing approach: adding a markup component to a cost base

1. Cost-plus **target rate of return on investment**

1. First calculate target rate of return on investment
2. Define investment specifically from one of many possibilities
3. Divide target annual operating income from organization by investment to obtain target rate of return or use required target rate of return on investment to obtain target annual operating income
4. Secondly, express target operating income per unit as a percentage of full product cost to determine markup percentage
5. Size of the “plus” determined by the market
6. Alternative cost-plus methods *[Exhibit 12-7 and Surveys of Company Practice]*
7. Use of different reliable cost bases (variable manufacturing cost, variable product cost, manufacturing cost, full cost of product as examples)
8. Choice of markup percentage (to recover costs and earn a required rate on investment)
9. Cost bases that include fewer costs have higher markup percentages to compensate for costs excluded from the base
10. Nature of competition in the marketplace (lower markups in competitive markets)
11. Advantages to use of full cost of product for pricing decisions—full recovery of all costs of product, price stability, and simplicity
12. Cost-plus pricing and target pricing
13. Cost-plus pricing determines prospective prices that balance costs, markup, and customer reaction
14. Target pricing determines product characteristics and target price on basis of customer preferences and expected competitor responses
15. Cost-plus pricing usually used by providers of unique products and services

**Do multiple choice 6 and 7. Assign Exercises 12-23 and 12-24.**

***Learning Objective 6:***

Use life-cycle budgeting and costing when making pricing decisions

1. Life-cycle product budgeting and costing—considering how to cost and price product over multiyear product life cycle
2. **Product life cycle**: spans the time from R&D on a product to when customer servicing and support no longer offered for that product
3. **Life-cycle budgeting**: estimates of revenues and costs attributable to each product over life cycle
4. **Life-cycle costing**: tracks and accumulates individual value-chain costs attributable to each product
5. Life-cycle budgeting and pricing decisions
6. Nonproduction costs are significant and identifying by product is essential for target pricing, target costing, value engineering, and cost management
7. High percentage of total life-cycle costs are incurred before any production begins and any revenues are received requires accurate revenue and cost predictions in deciding whether to commence costly R&D and design activities
8. Cause-and-effect relationships between business functions highlighted throughout product’s life cycle before costs locked in
9. Uses of life-cycle budgeting and costing

1. Multiyear time horizon for products with long life cycles with large portion of total life-cycle costs locked in at design stage

2. Management of environmental costs

3. **Customer life-cycle costs**: total costs incurred by customer to acquire and use a product or service until replaced

1. Considerations other than cost in pricing

**Do multiple choice 8. Assign Exercise 12-25 and Problem 12-34.**

***Learning Objective 7:***

Describe two pricing practices in which noncost factors are important when setting prices

1. Noncost factors
2. **Price discrimination**
3. Practice of charging different customers different price for the same product
4. Market force of demand—price inelasticity concept: insensitivity of demand to price changes
5. **Peak-load pricing**
6. Practice of charging a higher price for the same product or service when demand approaches physical capacity limits to produce that product or service
7. Market force of demand with capacity constraints (supply issue)
8. Same product sold in different countries
9. Costs of delivery
10. Differences in purchasing power of consumers
11. Government restrictions

**Do multiple choice 9. Assign Exercise 12-26 and Problems 12-35 and 12-36.**

***Learning Objective 8:***

Explain the effects of antitrust laws on pricing

1. Legal considerations
2. Key features of price discrimination laws
3. Apply to manufacturers, not service providers
4. Price discrimination permissible if differences in prices justified by differences in costs
5. Price discrimination illegal only if intent is to destroy competition
6. U. S. antitrust laws
7. Sherman Act
8. Clayton Act
9. Federal Trade Commission Act
10. Robinson-Patman Act
11. Laws against the intent of lessening or preventing competition for customers
12. **Predatory pricing**: deliberately pricing below cost in effort to drive out competitors and restrict supply, and then raising prices rather than enlarging demand
13. Predator company charges a price below an appropriate measure of its costs, and
14. Predator company has a reasonable prospect of recovering in the future, through larger market share or higher prices, the money it lost by pricing below cost
15. **Dumping**
16. Non-U. S. company sells product in United States at price below market value in the country where produced, materially injuring or threatening to materially injure industry in the United States
17. Antidumping duty imposed under U. S. tariff laws
18. **Collusive pricing** *[Concepts in Action]*
19. Companies within an industry conspire in their pricing and production decisions to achieve a price above the competitive price
20. Violates antitrust laws of U. S. because it restrains trade
21. Accounting system used in checking for conformance to antitrust laws
22. Data collected in manner that permits relatively easy compilation of variable costs
23. Detailed records kept of variable costs for all value-chain business functions with review of all proposed prices below variable costs in advance, with presumption of claims about predatory intent occurring

**Do multiple choice 10. Assign Problem 12-37.**

**CHAPTER QUIZ SOLUTIONS:** 1.**a** 2.**d** 3.**c** 4.**c** 5.**b** 6.**a** 7.**d** 8.**b** 9.**d** 10.**c**

**CHAPTER QUIZ**

1. Major influences of competitors, costs, and customers on pricing decisions are factors of
2. supply and demand.
3. activity-based costing and activity-based management.
4. key management themes that are important to managers attaining success in their planning and control decisions.
5. the value-chain concept.
6. Short-run pricing decisions include
7. pricing a main product in a major market.
8. considering all costs in the value-chain of business functions.
9. adjusting product mix and volume in a competitive market while maintaining a stable price if demand fluctuates from strong to weak.
10. pricing for a special order with no long-term implications.
11. [CPA Adapted] Pritchard Company manufactures a product that has a variable cost of $30 per unit. Fixed costs total $1,500,000, allocated on the basis of the number of units produced. Selling price is computed by adding a 20% markup to full cost. How much should the selling price be per unit for 300,000 units?

a. $49 b. $43.75 c. $42 d. $35

1. The first step in implementing target pricing and target costing is
2. choosing a target price.
3. determining a target cost.
4. developing a product that satisfies needs of potential customers.
5. performing value engineering.
6. The best opportunity for cost reduction is
7. during the manufacturing phase of the value chain.
8. during the product/process design phase of the value chain.
9. during the marketing phase of the value chain.
10. during the distribution phase of the value chain.

**The following data apply to questions 6 and 7.**

Each month, Haddon Company has $275,000 total manufacturing costs (20% fixed) and $125,000 distribution and marketing costs (36% fixed). Haddon’s monthly sales are $500,000.

1. The markup percentage on full cost to arrive at the target (existing) selling price is

a. 25%. b. 75%. c. 80%. d. 20%.

1. The markup percentage on variable costs to arrive at the existing (target) selling price is

a. 20%. b. 40%. c. 80%. d. 66 %.

1. The price of movie tickets for opening day and the few days following compared to the price six months later is an example of
2. price gouging.
3. peak-load pricing.
4. dumping.
5. demand elasticity.
6. The World Trade Organization (WTO) is an international institution created with the goal of
7. levying punitive damages (as much as triple) for proven instances of dumping.
8. requiring a finding of material injury to an industry before any dumping tariffs can be levied.
9. putting companies from the more developed countries at a competitive disadvantage to encourage lesser developed nations.
10. promoting and regulating trade practices among countries by lowering import duties and tariffs.
11. Which of these do antitrust laws on pricing **not** cover?
12. collusive pricing
13. dumping
14. peak-load pricing
15. predatory pricing

**WRITING/DISCUSSION EXERCISES**

1. **Discuss the three major influences on prices**

***Using the basic economic concepts of supply and demand, explain why customers, competitors, and costs are considered major influences on pricing decisions.***

The text addresses each of these in the section, “Major Influences on Pricing Decisions” in terms of demand and supply. The basic connections are that costs affect supply, customers affect demand, and competitors affect both demand and supply. An expanded discussion of alternate or substitutable products could be added regarding supply. Students may have the opportunity to make connections between the concepts studied in economics and the application of those concepts through accounting.

1. **Distinguish between short-run and long-run pricing decisions**

***How does the saying, “A lifetime is but the repetition of one day,” describe the relationship between the short run and the long run?***

The authors of the text use the phrase “one-time-only special order” when referring to the short-run opportunity of selling goods through a special arrangement. A manager could label any number of these “opportunities” as special and find the special opportunities become more and more frequent, even to the point of being the main portion of the business. Pricing for the short run is usually different than pricing for the long run. The pricing of special orders would not necessarily cover long-run costs, and the business could become dependent upon such “special orders” and would eventually suffer loss. Economists picture the long-run cost curve as a series of short-run cost curves that intersect one after the other. A one-time-only special order should be just that – one time only.

1. **Price products using the target-costing approach**

***Why is the development “of a product that satisfies needs of potential customers” given as the first step in implementing target pricing and target costing?***

A discussion of products that have not sold, at any price, would fit in at this point. Marketing bloopers, such as the Edsel by Ford Motor Company, could be used as illustration. Almost any product has had its detractors. Some people were quite skeptical that television would ever be marketable. Facsimile machines were used in the first half of the twentieth century but were not popular or highly marketable until the later half of that century. In many instances, the company that introduces a new product does not succeed with the product, but those companies that follow with similar products are highly successful. The personal computer and cell phone industries have given illustration of these phenomena.

1. **Apply the concepts of cost incurrence and locked-in costs**

***How does an understanding of cost incurrence and locked-in costs help a manager prevent “unintended consequences” from occurring in the value chain of business functions?*** If a manager cuts time and cost in the development and design stages of a product, the consequence might well be additional costs in the manufacturing process (scrap and rework costs) and in the warranty phase (greater costs to satisfy customer). The perceived good of reducing costs might result in the development of a bad situation—an unintended consequence.

Students could be asked, “Can warranty costs that result from producing a faulty product be easily reduced after (or even during) production? What kind of decisions might have been made in the planning stages of the product that could cause a company to manufacture a faulty product?”

1. **Price products using the cost-plus approach**

***Does a company that uses a market-based approach to pricing need to be more concerned with continuous improvement than a company using a cost-based approach?***

In the discussions of fixed and variable costs, one notes that over a long enough time period all costs are variable. Given time, all things change. A company must incorporate the possibility of change in planning and control decisions. The concept of continuous improvement is relevant to all products or services. In the marketplace, costs change, competitors change, and customers change. No one company or product should be lax about making improvements. As noted in the text, the market ultimately determines the markup component for cost-plus pricing.

1. **Use life-cycle budgeting and costing when making pricing decisions**

***How does life-cycle product budgeting and costing illustrate the concept of different costs for different purposes?*** Life-cycle product costing is done using a different time frame than the usual reporting done on a calendar basis. Life-cycle product reporting spans costs over several years. The life-cycle budget must reflect this same time frame for comparison to be effective. The costs are different in that they are spread over a longer time than the usual annual report time frame, may be greater in amount in the nonproduction phase, and may be locked in at the research and design stages.

In the margin notes of the text, a method is presented for implementing life-cycle costing: coding revenues and expenses through the journal entries by product as well as by function.

1. **Describe two pricing practices in which noncost factors are important when setting prices**

***Why study pricing practices in which cost is not a factor in a cost accounting course?***

Cost accounting provides managers with various types of information, not just that which pertains to costs. Cost accountants gather and use information on capacity for allocating fixed costs. Capacity information is critical for peak-load pricing and in similar special situations. For example, ground transportation was in high demand after 9-11-01 when the airlines were grounded for several days following the World Trade Center tragedy. Car rental companies experienced extraordinary demand for their product. Supply (capacity) was limited and prices could have reflected the huge gap between supply and demand. Some companies did charge premium prices for their product/service. To meet their demand for travel, some people were actually buying cars for short-term “rental” to be able to move from one part of the country to another (increasing the capacity in a rather expensive way). Enterprise Rent-A-Car, for example, did follow their usual guidelines of pricing during that period of time at their airport locations (no discounts granted but prices not raised above regular quoted prices). At their nonairport locations that do not engage in one-way rentals (thus increasing capacity in another manner), exception was made to not only allow such rentals but also to not add the typical “drop charge” for returning the car to its previous location—a cost to the company. Cost to the company was not a factor in their pricing.

 In a similar manner, information about revenues and their sources would be gathered in the accounting system and would be useful for price discrimination among different market segments. One of the purposes of accounting is to provide a communication channel for the organization.

1. **Explain the effects of antitrust laws on pricing**

***What is one of the best ways to insure that a company complies with the antitrust laws on pricing?*** The authors of the text note at the end of Chapter 23 the importance of “tone at the top” in promoting ethical behavior within the organization. Top management must make clear the type of behavior that is acceptable and expected through all layers and in all parts of the organization.