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|  | **Pricing Decisions and Cost Management** |
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**Transition Notes**

Much of the presentation in this chapter has been streamlined, retaining certain material while rewriting and clarifying other essential coverage. The introductory material to alternative long-term pricing approaches has been shortened, placing an emphasis on the pricing approaches themselves. The five-step decision process is applied to target costing. The material discussing value engineering has been rewritten and updated. The discussion of value-chain analysis has been streamlined along with the life-cycle budgeting, which has undergone revisions. The section on customer life-cycle costing now contains more examples. Much of the problem material at the end of the chapter is new or revised.

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| **Problem Material** **Correlation Chart** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **15th** **Edition** | **14th** **Edition** |  | **15th** **Edition** | **14th** **Edition** |
| 16 | 16 Revised |  | 28 | 28 Revised |
| 17 | 17 Revised |  | 29  | 29 Revised |
| 18 | 18 Revised |  | 30 | 30 Revised |
| 19 | 19 Revised |  | 31  | 31 Revised |
| 20 | 20 Revised |  | 32 | 32 Revised |
| 21 | 21 Revised |  | 33 | 33 Revised |
| 22 | 22 Revised |  | 34  | 34 Revised |
| 23 | 23 Revised |  | 35  | 35 Revised |
| 24 | 24 Revised |  | 36 | 36 Removed |
| 25  | 25 Revised |  | 37 | 37 Removed |
| 26  | 26 Revised |  | 38  | 38 Removed |
| 27  | 27 Revised |  |  |  |

**I. LEARNING OBJECTIVES**

1. Discuss the three major influences on pricing decisions.
2. Understand how companies make 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 prices.
8. Explain the effects of antitrust laws on pricing.
9. **CHAPTER SYNOPSIS**

This chapter describes the relationship between pricing decisions and product costing. Three major influences on pricing decisions are **customers, competitors,** and **costs.** The time horizon of the pricing decision needs to be considered as there are different factors in play for short-term versus long-term pricing decisions.

The target-costing approach is explained and distinguished from a traditional cost-plus approach. Target costing starts with a market-defined target price and then works back to a calculated target cost. Traditional cost-plus pricing approaches add required profit to product cost to determine product price.

Life-cycle budgeting, price discrimination, peak-load pricing, and the impact of antitrust laws on pricing decisions are also discussed.

**III. Points of Emphasis**

1. As students get involved in setting prices, they need a good understanding of the influences on pricing. Be certain they comprehend the interplay among customers, competitors, and costs in setting prices. Students also need to understand that different dynamics are at play in setting short-term prices versus long-term prices.
2. Students need to understand that target-costing pricing is a totally different approach from cost-plus pricing. Both methods have their place. Emphasize the target-costing approach.
3. Non-value-added costs are defined in terms of the customer. “Given a choice, would the customer pay for this cost?” Students frequently do not grasp the customer orientation in this definition.
4. As companies and customers become more environmentally aware, the issues of life-cycle budgeting and costing are becoming more important. There is a greater acknowledgement that the manufacturer may have some responsibility for the product at the end of its life cycle. This increases the importance of life-cycle budgeting. Students should be exposed to why this is becoming an important issue.

**IV. CHAPTER OUTLINE**

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| **LEARNING** **OBJECTIVE** | 1 |
| Discuss the three major influences on pricing decisions… customers, competitors, and costs |
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* 1. Companies do not price products or services in a vacuum. They must take into account numerous factors if they are to succeed in the marketplace. Demand and supply for a product are factors that determine what a company can charge for a product or service. There are three influences on demand and supply: customers, competitors, and costs.
	2. **Customers** influence price through their demand for a product based on features of the product and its quality.
	3. **Competitors** have a significant influence on price. A company must always be aware of the actions of its competitors. These actions will influence the price at which a company can sell its product. It is beneficial to know competitors’ technology, plant capacity, and operating strategies. Exchange rate fluctuations can make prices of certain products more or less competitive in foreign markets.
	4. The third influence on pricing is **costs.** A company cannot sell a product for less than its cost and hope to succeed. Knowledge of costs and cost behavior can enable a company to price its product to receive the maximum benefit.
	5. A company must always keep in mind that the key factor is the customer’s willingness to pay. Pricing may not be restrained by competition, but there is a limit to what a customer is willing to pay for a product.

**Refer to Quiz Question 1 Question 13-1**

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| **LEARNING** **OBJECTIVE** | 2 |
| Understand how companies make long-run pricing decisions… consider all future variable and fixed costs as relevant and earn a target return on investment |
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2.1 Long-run pricing is a strategic decision designed to build relationships with customers based on stable and predictable prices.

Teaching point. Companies value stability. By providing stable, predictable pricing, a company can plan more effectively. Additionally, stable, predictable pricing will enhance the customer’s effectiveness in planning.

Helping the students work through Exercise 12-27 will make it easier for them to grasp the short-term pricing concept of relevant costs.

(Exhibit 13-2 illustrates the total cost of manufacturing Provalue using activity-based costing.)

(Exhibit 13-3 summarizes operating income for Provalue across the value chain using activity-based costing.)

* 1. Two approaches exist for long-run pricing decisions. Market-based pricing customers and competition and controls costs to earn a target return on investment based on the price. The cost-based approach computes price based on the costs to produce the product plus a target return on investment.
	2. Companies operating in competitive markets use the market-based approach whereas companies operating in noncompetitive markets favor the cost-based approach.

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| **LEARNING** **OBJECTIVE** | 3 |
| Price products using the target-costing approach… target costing identifies an estimated price customers are willing to pay and then computes a target cost to earn the desired profit |
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3.1 In setting long-range prices, companies can take a market-based approach, or they can take a cost-based approach.

* The market-based approach starts with a customer focus, asking what the customer wants, how competitors will react to our decisions, and what price should be charged. This approach is **target pricing.**

3.2 Market-based pricing starts with a **target price.** This is defined as the estimated price that potential customers will pay for a product. This price is based upon an understanding of the value placed on the product by the customer and how competitors will price their products.

3.3 Three reasons are given for the importance of understanding customers and competitors. They are:

* Competition from lower-cost producers means prices cannot be increased.
* Products today have a short life cycle. There is less time and opportunity to recover from pricing mistakes and loss of market share.
* Customers have become more knowledgeable and demand quality products at reasonable prices.

Teaching point. Explore with the students how Internet marketing has affected these three factors.

3.4 Understanding the value a customer places on a product is a difficult assignment. However, the sales and marketing personnel have close contact with customers so they should be able to provide valuable insight.

3.5 **Competitor analysis** is also essential to setting viable market prices. When the company understands its competitors, it can more effectively evaluate how distinctive its own products and services will be in the market, and the price they might be able to charge as a result of being distinctive. Reverse engineering is another source of information that involves disassembling and analyzing competitors’ products to become familiar with competitors’ technology.

3.6 Implementing **target pricing** and **target costing** is a five-step process.

**Step 1: Develop a product that satisfies the needs of potential customers.** This is basically a restatement of the old marketing adage, “Find a need and fill it.” However, in today’s society, the company can play a part in creating that need.

**Step 2: Choose a target price.** This price should be based on research of competitor’s products and what the customer is willing to pay.

**Step 3:** **Determine the target operating income per unit and subtract that from the target price to arrive at target cost per unit.** This is the estimated long-run cost per unit of a product or service that enables the company to achieve its target operating income per unit when selling at the target price.

**Step 4: Perform cost analysis.** This step analyzes which aspects of a product or service to target for cost reductions. In most instances, the target price will be less than the current price per unit, so the company must take steps to reduce the cost.

**Step 5:** **Perform value engineering to achieve the target cost.** **Value engineering** is a systematic evaluation of all aspects of the value chain. The objective is to reduce costs while achieving a quality level that will satisfy customers.

Teaching point. Value engineering looks for better ways to accomplish an objective. This may mean a reduction in parts, using plastic that snaps together rather than metal that is attached by screws, using less packaging, redesigning the production process to reduce product movement, adopting a more efficient distribution network. It may include omitting features on the product that the customer does not value. For example, customers may indicate a desire for a certain feature to be included in the product. However, when told that the feature will add additional X dollars to the price, they would not want the feature.

One Internet-based company studied their Web activity and discovered that many customers would place items in their cart and begin the checkout process. However, when they saw the amount of shipping charges, the sale was not completed.

This forced the company to re-evaluate its shipping function, as customers were not willing to pay that level of shipping charges.

**Refer to Quiz Question 4 Exercises 13-18, 13-19; Problem 13-26**

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| **LEARNING** **OBJECTIVE** | 4 |
| Apply the concepts of cost incurrence… when resources are consumedand locked-in costs… when resources are committed to be incurred in the future |
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4.1 To implement value engineering, managers must distinguish between value-added and non-value-added costs. A **value-added cost** is a cost that, if eliminated, would reduce the value of the product in the eyes of the customer. A **non-value-added cost** is one that, if given a choice, the customer would not pay for.

Teaching point. If ordering a fragile item, the customer is willing to pay for packaging materials—the customer does not want the item damaged in shipment. This is a value-added cost. On the other hand, the customer would not be willing to pay for rework of defective products, with the attitude that it should be done right the first time. This is a non-value-added cost. Emphasize that the distinction between the two is from the view of the customer.

4.2 In performing value engineering, a distinction must be made between cost incurrence and when costs are locked in.

4.3 **Cost incurrence** describes when a resource is consumed to meet a specific objective. When direct materials are placed into production, the cost has been incurred.

4.4 **Locked-in** costs are or **designed-in costs** not yet incurred, but are based on decisions that have already been made, and will be incurred in the future.

Teaching point. In planning a trip, both types of these costs will be encountered. When the airline reservations are made, the cost of the airfare must be paid. That is an incurred cost. If a rental car is also booked, one locks-in rental price, but the cost will not be incurred until the car is used.

(Exhibit 13-4 is a graphical representation of the pattern of locked-in costs and cost incurrence.)

4.5 Design choices affect locked-in costs. Once the design of the product is finalized, the cost of the product is determined to a large degree. If the design of the product requires four screws, the cost of four screws is a locked-in cost. As the product is manufactured it becomes an incurred cost and can be avoided only by a redesign or by not manufacturing the product.

4.6 Because costs are incurred at all points in the value chain, but frequently locked in during the design phase, cost reductions can be most readily attained through *value-chain analysis* and the use of *cross-functional teams*. By forming a team of representatives from all segments of the value chain the product can be designed to reduce costs while retaining features that customers value.

4.7 The key steps in value engineering are:

* Understanding customer requirements and value-added and non-value-added costs
* Anticipating how costs are locked in before they are incurred
* Using cross-functional teams to coordinate redesign products and processes to reduce costs while meeting customer needs

(Exhibit 13-5 illustrates calculation of cost-driver rates at Provalue.)

**Refer to Quiz Question 5 Exercises 13-26, 13-27**

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| **LEARNING** **OBJECTIVE** | 5 |
| Price products using the cost-plus approach… cost-plus pricing is based on some measure of cost plus a markup |
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5.1 The cost-based approach starts with an evaluation of costs and where the selling price should be set in order to recoup costs and earn a desired return on investment. This is known as **cost-plus pricing.**

Teaching point. Depending on the competitive situation, companies would gravitate toward one approach or the other. For example, in a highly competitive market, the market approach would normally be utilized. These companies must accept the prices set by the market. If the market were less competitive, cost-plus pricing could be used. This approach is useful for companies offering products or services that differ from one another—legal services, income tax preparation, custom jewelry, to name a few. Have students identify various markets and determine which approach they are likely to utilize.

Companies selling distinctive products or services may be able to effectively utilize cost-plus pricing. The general approach to cost-plus pricing is to add a markup component to the cost base to arrive at the prospective selling price.

5.2 It should be noted that the cost-plus formula is only a starting point for pricing decisions. Costs, customers, and competitors still play a role in price setting. Unfortunately, managers will often rigidly stick to the cost-plus formula to the detriment of the company.

5.3 One approach to cost-plus pricing is to mark up the product to achieve a **target rate of return on investment.** This approach adds a markup based on the investment the company has in the equipment. The markup is added to the full cost of the product.

Teaching point. Illustrate an example of the approach to cost-plus pricing, as in Exercise 13-22. Emphasize that the desired return on investment and the markup percentage are two different numbers. If the students do not make this distinction, they will be confused about how to properly implement this approach to cost-plus pricing.

5.4 In many situations, it may be difficult to determine the specific amount of investment the company has to support a specific product, making application of the target return on investment difficult, if not meaningless. In these cases, the company simply determines the amount of desired profit and determines the appropriate markup percentage.

5.5 There are four different cost bases utilized for this purpose:

* **Variable manufacturing cost,** which includes only those manufacturing costs that are classified as variable.
* **Variable cost of the product,** which adds variable nonmanufacturing costs to the cost base.
* **Manufacturing cost,** which includes all variable and fixed manufacturing costs.
* **Full cost of the product,** which includes all costs incurred on behalf of the product.

Teaching point. Emphasize the importance of knowing the definition of cost in the application of the markup percentage. Using the wrong base with the wrong percentage markup will result in a product that is widely overpriced or underpriced—both undesirable results.

5.6 Surveys have shown that most managers use full cost of the product for their cost-based pricing decisions. Three advantages of this approach are cited.

* **Full recovery of all costs of the product.** The markup is designed to make a full recovery of all costs of the product.
* **Price stability.** This approach leads to price stability, as it limits the ability and temptation of sales personnel to cut prices.
* **Simplicity.** It does not require a detailed analysis of cost-behavior patterns.

5.7 As mentioned, the price as determined through the cost-plus formula is a **prospective price.** If the price under the cost-plus approach is deemed to be excessive, the markup percentage may need to be reduced. Reactions to customers and competitors may require a lower markup percentage.

5.8 Target pricing eliminates the need to go back-and-forth among prospective cost-plus prices, customer reactions, and design modifications. Target pricing approaches the pricing problem by beginning with a target price and customer preferences and working back to the cost, unlike the cost-plus approach.

5.9 Suppliers providing unique products and services (such as accountants and attorneys) usually use cost-plus pricing.

5.10 Service companies such as home repair and automobile repair use a variation of cost-plus called the **time-and-materials pricing** method**,** in which job prices are based on materials used and labor time incurred.

**Quiz Questions 6 and 7 Exercises 13-21 and 13-22; Problems 13-25, 13-28, 13-29, 13-30, 13-31**

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| **LEARNING** **OBJECTIVE** | 6 |
| Use life-cycle budgeting and costing when making pricing decisions… accumulate all costs of a product from initial R&D to final customer service for each year of the product’s life |
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6.1 A normal budget cycle is a one-year period. However, companies sometimes need to consider target prices and costs over a multiple year product life cycle.

6.2 The **product life cycle** spans the time from initial R&D on a product to the point where customer support and service are no longer offered for that product.

6.3 **Life-cycle budgeting** is the process in which managers estimate revenues and business function costs of the entire value chain.

6.4 **Life-cycle costing** tracks and accumulates business function costs across the value chain from a product’s R&D to final customer service and support.

Teaching point. In some instances, the manufacturer has a responsibility for the product beyond the sale. This can include the warranty period and the support period during which the company will make replacement parts available. In some cases, such as with a smoke detector, the manufacturer’s responsibility extends to disposal of the product. All of these post-purchase costs need to be considered in life-cycle budgeting and costing.

6.5 These factors make life-cycle budgeting important:

* The development period for R&D is long and costly. These costs must be recovered over the life span of the product.
* Many costs are locked in at the R&D and design stages. Poorly designed products require higher marketing and customer service costs.

(Exhibit 13-7 illustrates the budgeting of life-cycle revenues and costs for a software package.)

6.6 A different approach to life-cycle costing is **customer life-cycle costing.** The approach considers the cost of ownership of the product for the customer from the initial purchase to ultimate disposal.

Teaching point. The purchase of a computer printer is an example of this concept. Companies may even sell printers at extremely low prices in order to make profits on the sale of replacement ink cartridges for the printer.

**Exercise 13-23 and Problem 13-32**

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| **LEARNING** **OBJECTIVE** | 7 |
| Describe two pricing practices in which noncost factors are important when setting prices… price discrimination—charging different customers different prices for the same product; and peak-load pricing—charging higher prices when demand approaches capacity |
|  |

7.1 In some cases, cost is not a major factor in setting prices. There are two such situations that are frequently encountered.

* **Price discrimination** is the practice of charging different prices to different customers for the same product or service.

Teaching point. A customer who buys an airline ticket a month in advance will pay a lower price than one who buys the ticket one day in advance. Ask the students to brainstorm for other examples of price discrimination. Some examples might include early bird dining prices, senior discounts, or quantity discounts. Discuss why companies use this type of price discrimination.

* Another example of a pricing decision based on factors other than cost deals with capacity constraints. **Peak-load pricing** is the practice of charging a higher price for the same product or service when the demand approaches physical capacity to produce the product or service.

Teaching point. Motels are well known for peak-load pricing. During the first week in May, hotel prices in Louisville, Kentucky skyrocket, usually with a minimum stay of three nights. Why? The first Saturday in May is the Kentucky Derby. Three day packages start at $1,500 for a downtown Louisville hotel and go as high as $12,000. Engage the students in other examples of peak-load pricing.

7.2 Prices are also affected by factors other than cost when a product is sold internationally. Pricing differences occur due to differences in purchasing power of consumers in different countries and government restrictions that limit the prices that can be charged.

**Refer to Quiz Questions 8 and 9**

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| **LEARNING** **OBJECTIVE** | 8 |
| Explain the effects of antitrust laws on pricing… antitrust laws attempt to counteract pricing below costs to drive out competitors or fixing prices artificially high to harm consumers |
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8.1 Companies are not entirely free to set prices as they choose. **Antitrust laws** regulate pricing considerations. Two key features of these laws are:

* Price discrimination is permissible if differences in prices can be justified by differences in costs.
* Price discrimination is illegal only if the intent is to lessen or prevent competition.

8.2 The Sherman Act, the Clayton Act, the Federal Trade Commission Act, and the Robinson-Patman Act are the significant pieces of antitrust legislation in the United States.

* A principal component of these acts is the prohibition of **predatory pricing;** that is, deliberately setting prices below cost in an effort to drive competitors out of business and restrict supply. The company could then raise prices.
* Another prohibited practice in the area of antitrust is **dumping.** This occurs when a non-U.S. company sells a product in the United States at a price below market value in the country where it is produced.
* A third practice is **collusive pricing.** This occurs when companies in an industry conspire in their pricing and production decisions to achieve a price above a competitive price and, therefore, restrain trade.

**Refer to Quiz Question 10 Problem 13-34**

**V. OTHER RESOURCES**

To download these and other resources, visit the Instructor’s Resource Center [*www.pearsonhighered.com*](http://www.pearsonhighered.com/).

The following exhibits were mentioned in this chapter of the Instructor’s Manual, and have been included in the **PowerPoint Lecture presentation** created specifically for this chapter. You may use the PowerPoint Lecture presentations “as is”, or modify them to suit your individual needs.

Exhibit 13-2 illustrates the total cost of manufacturing Provalue using activity-based costing.

Exhibit 13-3 summarizes operating income for Provalue across the value chain using activity-based costing.

Exhibit 13-4 is a graphical representation of the pattern of locked-in costs and cost incurrence.

Exhibit 13-5 illustrates calculation of cost-driver rates at Provalue.

Exhibit 13-7 illustrates the budgeting of life-cycle revenues and costs for a software package.

**CHAPTER 13 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. Burkhart Company manufactures a product that has a variable cost of $25 per unit. Fixed costs total $1,000,000, allocated on the basis of the number of units produced. Selling price is computed by adding a 25 percent markup to full cost. How much should the selling price be per unit for 200,000 units?

a. $31.25

b. $42.00

c. $37.50

d. $30.00

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 during the
7. manufacturing phase of the value chain.
8. product or process design phase of the value chain.
9. marketing phase of the value chain.
10. 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 percent fixed) and $125,000 distribution and marketing costs (36 percent 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 percent.

b. 75 percent.

c. 80 percent.

d. 20 percent.

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

a. 20 percent.

b. 40 percent.

c. 80 percent.

d. 66 2/3 percent.

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. Price discrimination is
7. always illegal.
8. a type of peak-load pricing.
9. not regulated in the United States.
10. the practice of charging different prices to different customers for the same product or service.
11. Which of these do antitrust laws on pricing *not* cover?
12. Collusive pricing
13. Dumping
14. Peak-load pricing
15. Predatory pricing

**CHAPTER 13 QUIZ SOLUTIONS**

# 1. a

# 2. d

# 3. c

# 4. c

# 5. b

# 6. a

# 7. d

# 8. b

# 9. d

# 10. c

**Quiz Question Calculations**

3. Variable cost $25.00

Fixed cost 5.00 ($1,000,000/200,000 units)

Full cost $30.00

25% Markup 7.50

Selling price $37.50

6. Manufacturing costs $275,000

Distribution & Marketing costs 125,000

Total cost $400,000

Sales $500,000 Markup $100,000

Full cost $400,000 Full cost $400,000 = 25%

Profit $100,000

7. Variable manufacturing $275.000 × 80% = $220,000

Variable dist/marketing $125,000 × 64% = 80,000

Total Variable cost $300,000

Sales $500,000 $200,000

VC 300,000 $300,000 = 66 2/3%

Markup $200,000