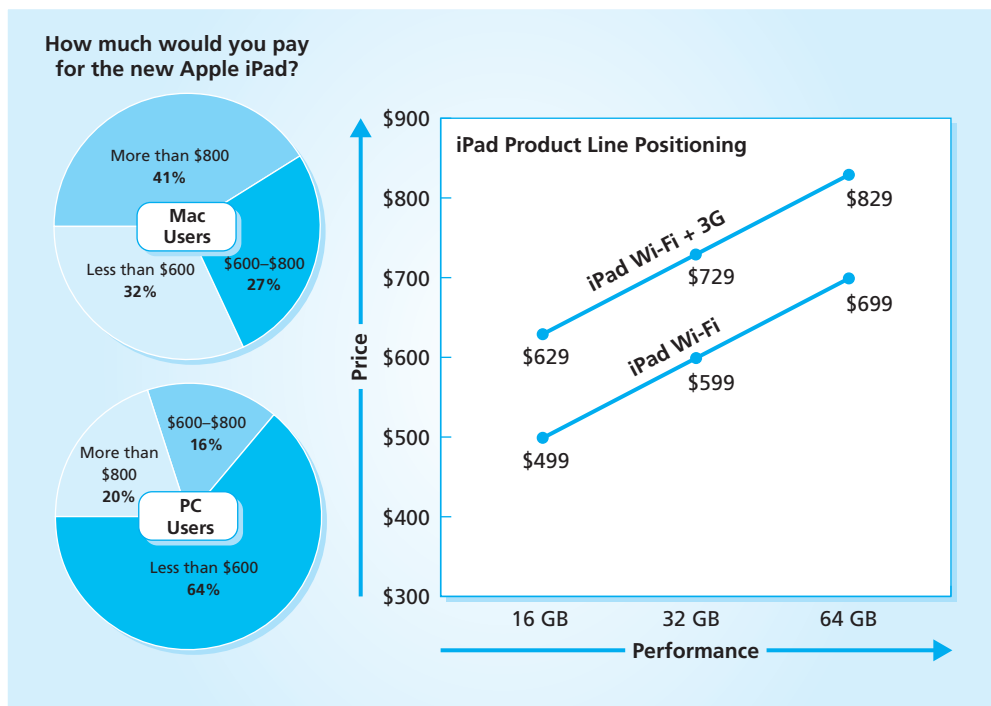


Value-Based Pricing and Pricing Strategies

■ If you win a customer on price, you will lose that customer on price; if you win a customer on value, you will keep that customer on value.¹



Prior to the launch of the iPad, the technology blog Retrevo conducted a price survey to determine how much buyers would pay for an Apple tablet.² As shown in the pie chart above, 41 percent of Macintosh

owners but only 20 percent of PC owners reported that they would pay over \$800. At the other extreme, only 32 percent of Mac owners but 64 percent of PC owners would not pay more than \$600.

Apple launched the iPad with a wide range of customer choices. The entry price of \$499 provided a base level of performance (16 gigabytes) with Wi-Fi but lacking a 3G benefit. This option would appeal to 32 percent of the Mac owners and 64 percent of the PC owners surveyed. But those who were willing to pay more to get more

could trade up to 3G (\$629), 32 GB (\$599), or both (\$729), as shown in the figure. Customers also had two other options priced at \$699 and \$829.

In 2010, Apple sold 7.46 million iPads at an estimated average net price of \$665 (the price Apple obtains after retailer discounts) which resulted in \$4.96 billion in first-year sales.

APPLE'S PRICING STRATEGIES

Apple's launch strategy for the iPad was a great margin management price strategy because the margin was likely to be more for the higher priced iPads. Offering only one or two high-price options at launch would have allowed Apple to create a traditional skim pricing strategy with great margins but lower volumes, as many target customers would not buy at a high price. But Apple's decision to offer different performance levels at several price points undoubtedly produced considerably more volume, sales revenues, and profits than a conventional skim price often used for a new product.

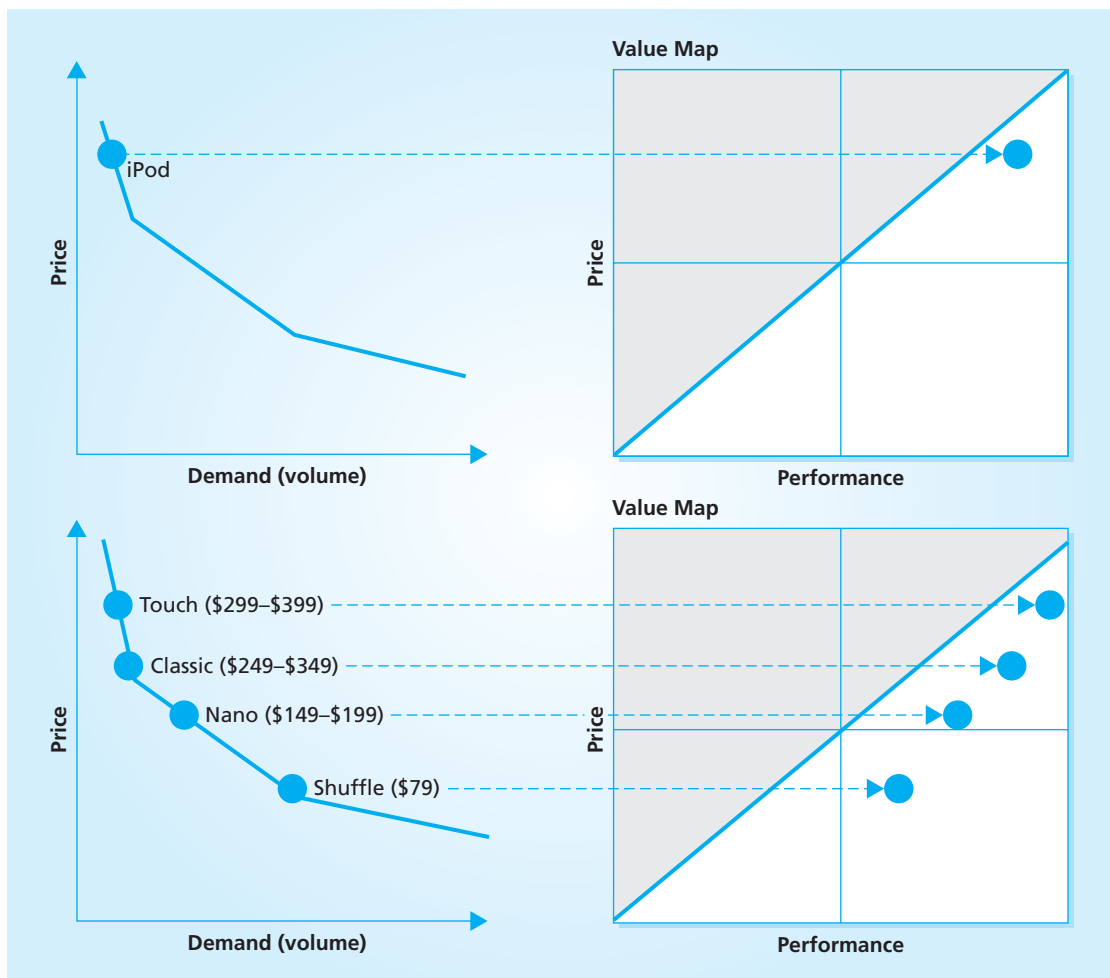
By contrast, when Apple launched the iPod, it did so at a premium, or skim, price, as the product had very high performance characteristics, as shown in the top half of Figure 8-1. The skim-pricing strategy limited sales, but it resulted in higher margins. It also gave Apple time to ramp up production. Eventually the price was lowered to attract more buyers, but at the same time Apple offered higher price-performance iPod models to capture sales from those who were willing to pay more for greater performance. This product line strategy allowed Apple to serve many different customer needs while creating a good customer value for each, as shown in the lower portion of Figure 8-1. Because of differing circumstances, Apple used a single product-price positioning strategy in launching the iPod and multiple product-price positions in launching the iPad, and both were successful.

COST-BASED PRICING VERSUS MARKET-BASED PRICING

Cost-based pricing is logical from a financial perspective and is easy to do, but it has nothing to do with what customers will pay for a product. Unfortunately, cost-based pricing is the most commonly used approach to pricing.³ One study found that over 60 percent of the businesses surveyed used cost-based pricing as their primary basis for setting price.⁴ This finding is consistent with another study of 50,000 managers from over 100 countries in which 64 percent used cost-based pricing to set price.⁵

As shown in Figure 8-2, the cost of making a product and the desired profit margin are the two primary determinants in setting a cost-based price. The price is then marked up by channel intermediaries to arrive at the purchase price that customers are asked to pay. But customers and competitors are missing from this approach to pricing. First, cost-based pricing ignores customer performance needs and what they will pay for a desired level of product performance. Second, this approach to pricing overlooks both competitors' offerings relative to customer needs and price sensitivity.

Value-based pricing, in contrast, starts with customer needs, competitors' product-price positioning, and company product-price positioning.⁶ Taking into consideration

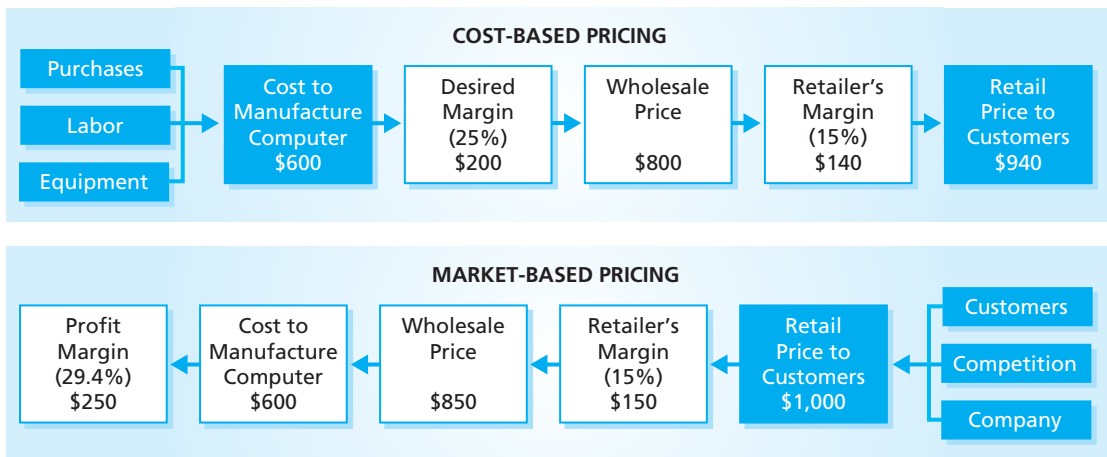
FIGURE 8-1 APPLE—IPOD'S PRODUCT-PRICE POSITIONING, BRANDING, AND CUSTOMER VALUE

customer needs, customers' price sensitivity, and competing products, a company develops its price around a product's relative strengths to create greater value than competing products offer. Although pricing needs vary, there are certain basic factors that tend to play into most value-pricing strategies.

The value drivers that seem to come to the surface are product performance, quality of customer service, brand reputation, and price.⁷

Cost-Based Pricing: Underpricing and Lower Profits

Let's look at an example of how cost-based pricing can lead to underpricing and lower profits. Figure 8-3 depicts a typical price-customer purchase curve. The curve was derived

FIGURE 8-2 COST-BASED PRICING VERSUS MARKET-BASED PRICING

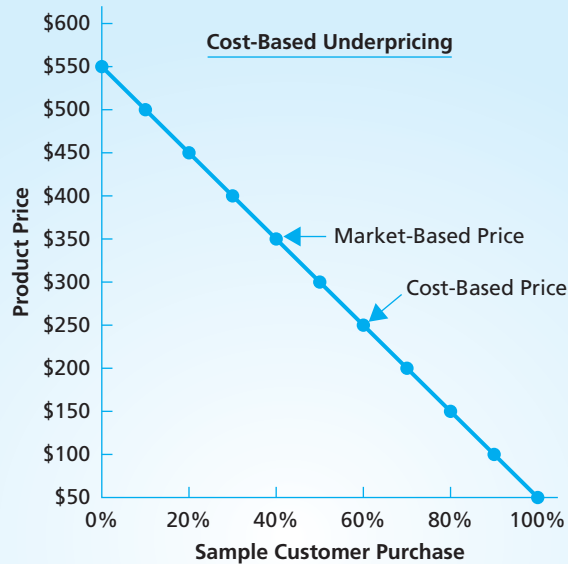
by asking a sample of customers who were interested in buying a digital camera the same question that was posed for potential buyers of the Apple iPad. After seeing a description of the product's features, functions, and ease of use, sample participants were asked: "What is the most you would pay for this digital camera?" The graph was then created by plotting the percentage of customers who would pay at different price points. For example, about 10 percent of people would pay \$500 or more for the digital camera, whereas approximately 50 percent would buy the camera for \$300. The graph included prices down to \$50, which was the amount everyone in the customer sample would pay for the camera.

In Figure 8-3 we assumed a market potential of 2.5 million units, the number of units that would be sold at a price of \$50. But because each camera costs \$125 to manufacture, selling it for \$50 would not be a profitable pricing strategy. Instead, a company using cost-based pricing that wants a 50 percent margin needs to price the camera at \$250, twice the unit cost. As shown in Figure 8-3, this price produces \$375 million in sales and \$187.5 million in gross profit. It appears to be a sound pricing strategy that will produce a very good gross profit.

Using the customer-derived price-purchase curve, however, we find that the camera would be underpriced at the cost-based price of \$250. At a market-based price of \$350, the company would sell 500,000 fewer cameras and have \$25 million less in sales, but the gross profit would be \$225 million. This is no small difference, as the gross profit would be \$37.5 million more. Serving fewer customers who value the product at the higher price of \$350 is much more profitable, with a gross profit margin of 64.3 percent, than selling the digital camera at the cost-based price of \$250 with a 50 percent margin.

Cost-Based Pricing: Overpricing and Lower Profits

Cost-based pricing can also lead to lower profits due to overpricing. Figure 8-4 shows the same digital camera price-purchase curve and the same market potential of 2.5 million units. However, in this example the unit cost is \$250. Using cost-based pricing logic and desiring a margin of 50 percent would lead the company to price its digital camera at \$500. Although this pricing strategy provides a good margin, only 10 percent of the potential market would buy the digital camera at that price. At a price of \$500,

FIGURE 8-3 DIGITAL CAMERA—COST-BASED UNDERPRICING

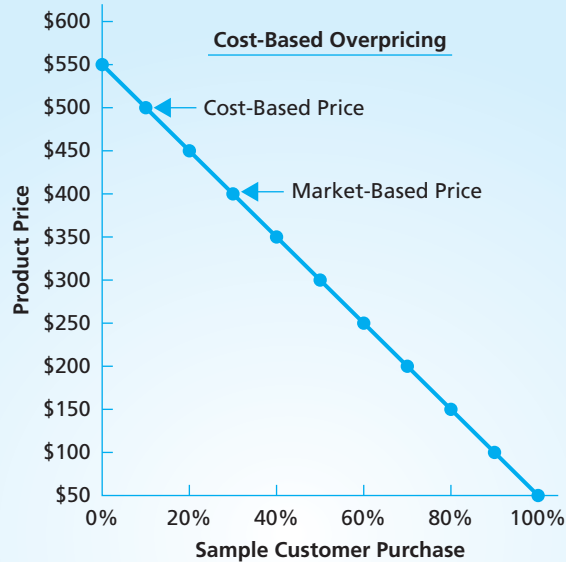
Product Price	Would Buy	Volume (millions)	Sales (millions)	Percent Margin	Gross Profit (millions)
\$500	10%	0.25	\$125	75.0%	\$93.8
\$450	20%	0.50	\$225	72.2%	\$162.5
\$400	30%	0.75	\$300	68.8%	\$206.3
\$350	40%	1.00	\$350	64.3%	\$225.0
\$300	50%	1.25	\$375	58.3%	\$218.8
\$250	60%	1.50	\$375	50.0%	\$187.5
\$200	70%	1.75	\$350	37.5%	\$131.3
\$150	80%	2.00	\$300	16.7%	\$50.0
\$100	90%	2.25	\$225	-25.0%	-\$56.3
\$50	100%	2.50	\$125	-150.0%	-\$187.5

Market Potential = 2.5 million units
Unit Cost = \$125

■ Market-Based Pricing
■ Cost-Based Pricing

the company would achieve \$125 million in sales and a gross profit of \$62.5 million. But using our market knowledge of how customers value this camera at the different price levels shown in Figure 8-4, we can see that a price which is \$100 lower (\$400) with a margin of 37.5 percent yields significantly higher levels of sales and gross profit. Sales of \$300 million would earn the company \$175 million more, and the gross profit of \$113 million is almost double that earned from using the \$500 cost-based price.

In companies where the finance function sets price, the customer-derived price-purchase curve is essential to winning the argument that a market-based price would be much more profitable than a company policy of pricing to achieve a 50 percent margin.

FIGURE 8-4 DIGITAL CAMERA—COST-BASED OVERPRICING

Product Price	Would Buy	Volume (millions)	Sales (millions)	Percent Margin	Gross Profit (millions)
\$500	10%	0.25	\$125	50.0%	\$63
\$450	20%	0.50	\$225	44.4%	\$100
\$400	30%	0.75	\$300	37.5%	\$113
\$350	40%	1.00	\$350	28.6%	\$100
\$300	50%	1.25	\$375	16.7%	\$63
\$250	60%	1.50	\$375	0.0%	\$0
\$200	70%	1.75	\$350	-25.0%	-\$88
\$150	80%	2.00	\$300	-66.7%	-\$200
\$100	90%	2.25	\$225	-150.0%	-\$338
\$50	100%	2.50	\$125	-400.0%	-\$500

Market Potential = 2.5 million units
Unit Cost = \$250

□ Cost-Based Pricing
■ Market-Based Pricing

VALUE PRICING

Market-based pricing requires extensive customer and competitor intelligence.⁸ Without having high levels of both, it is simply not possible to implement this kind of pricing. Market-based pricing starts with a good understanding of customer needs and the benefits that a product offers relative to competitors' products.⁹ On the basis of product performance benefits, the price is set relative to competition to create a superior value. In this way, the price

is determined in the market, not at the factory or in the finance department. This section discusses five kinds of value pricing:

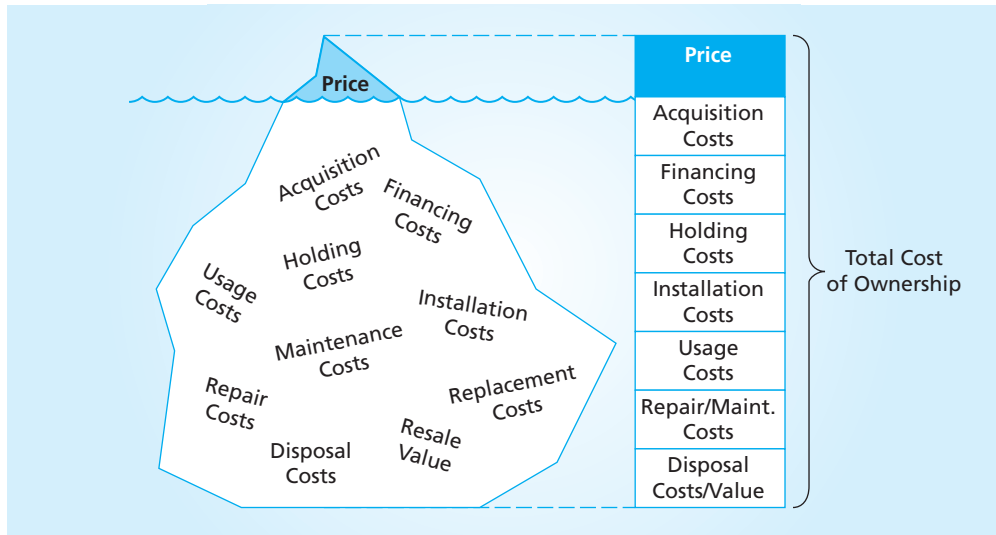
1. **Value-in-Use Pricing**—Price is set to provide customers with an attractive savings after considering the life-cycle costs of acquiring, owning, using, maintaining, and disposing of a product.
2. **Life-Cycle Value Pricing**—Price is set with respect to the total cost of ownership over the life cycle of a product on the basis of the net present value of the difference between the company's and a competitor's life-cycle ownership costs.
3. **Perceived-Value Pricing**—Price is set on the basis of the value that customers realize when they compare the price and benefits of the company's product with those of a key competitor's product.
4. **Performance-Based Pricing**—Price is set on the basis of customer preferences for different levels of price and performance and taking into consideration how the company and competitors are positioned with respect to delivering both price and performance.
5. **Customerization Value Pricing**—Price is set by unbundling a product's features or performance levels, placing a price on each, and then allowing customers to select the features and performance that they want at a price that they are willing to pay. The price of the top-performing product that has all features serves as the reference price. Customers who buy the product with only the features and performance level they desire have an inferred savings (value) relative to reference price.

Understanding Total Cost of Ownership

Price is the most visible cost of any purchase, whether it is a new car, computer, insurance policy, vacation trip, or simple household cleanser. All customers are price sensitive to some degree. Some customers, however, are willing to pay more for extra benefits. These benefits often include reduced costs in other areas of product ownership. The other costs of owning a product are much less obvious than the purchase price. As shown in Figure 8-5, price is only the tip of the iceberg; the other costs of ownership are beneath the surface. Value-in-use pricing considers the annual cost of ownership for a competitor's product and the annual cost of ownership for the business's product in determining the business's customer value.¹⁰

This does not necessarily mean lowering prices. By considering the total cost of ownership that is incurred by target customers, a business can use value-in-use pricing to offer them an attractive savings (economic value) while maintaining a premium price. For example, in Figure 8-6, the price of a business's product is higher than the price of the competitor's product, but the total cost of ownership for the business's product is lower than the competitor's product. Because of lower acquisition, use, and other costs, the value in use of the business's product is higher than that of the competing product, and the customer saves money.

When a company uses value-in-use pricing, the price is based on the attractive savings that customers realize over the life of the product, not just on the costs of manufacturing and marketing the product. Customers are interested in overall savings, or economic value, and the higher the savings, the more attractive the business's product. The more attractive the product, the higher the purchase price can be, regardless of manufacturing and marketing costs. Chapter 4 discussed the various ways that a business can

FIGURE 8-5 PRICE IS ONLY THE TIP OF THE ICEBERG IN VALUE-IN-USE PRICING

lower the cost of ownership and thereby achieve higher price levels while still creating a superior value for target customers.

Value-in-Use Pricing

A business tends to remain focused on price until it realizes how customers acquire, finance, use, maintain, and dispose of or resell its product. The business then understands that pricing is not the only option it has to create a competitive advantage. By looking more deeply into the costs of ownership, a business can discover new opportunities for customer savings and value creation. Let's begin with Figure 8-6, a total-cost-of-ownership analysis of a material that a company hoped to sell in the automotive manufacturing market. This market is highly price competitive, and customers simply do not pay price premiums. To do business in the market, the company was told it would need to set a price below the going price of \$2 per pound. Had the company been a typical business, it would then have focused on ways to lower its price so its product would be attractive to the automotive industry. However, an analysis of the company's and competitors' ownership costs, as shown in Figure 8-6, reveals that a customer's total cost per pound for the competitor's product is \$6. The \$2 purchase price is only one third of the total cost of purchase; the other two thirds are costs associated with acquiring and using the product.

The company's total cost of ownership at a price equal to the competitor's price of \$2 results in a \$5.05 total cost of purchase. The lower total cost of purchase would save customers 95 cents per pound over the competitor's product. The value-pricing question is: "Can the company capture a price premium and still deliver a meaningful economic value to customers?"

Price premiums can be difficult to explain when customers look only at the purchase price, but the company set its price at \$2.20, a 10 percent price premium, in the belief that customers in its market would readily see the substantial savings they would realize in a

FIGURE 8-6 VALUE-IN-USE PRICING



product that cut overall costs by 75 cents per pound.¹¹ If a customer used 10,000 pounds of the product per month, the customer's monthly savings would be \$7,500—or \$90,000 annually. If the customer used 100,000 pounds per month, the yearly savings would be \$900,000. With savings at that level, any supplier business would strategize that the higher price is justified due to the customer value it provides. Even at a price of \$2.30, which would save 65 cents per pound, a customer with monthly volumes of 100,000 would still save \$780,000 annually.

Life-Cycle Value Pricing

We can take the value-in-use pricing presented in Figure 8-6 one step further to demonstrate perceived value for products that have a usage life of several years. Figure 8-7 presents the net present value and cost of ownership for a medical apparatus sold by BioTronics at a price of \$60,000, which is \$10,000 more than the major competitor's price. Both products have an expected 5-year life. Purely on a price basis, the customer would be inclined to buy the competitor's product, saving \$10,000. Doing so, however, would end up costing the customer more because of the greater cost of operating the equipment over 5 years.

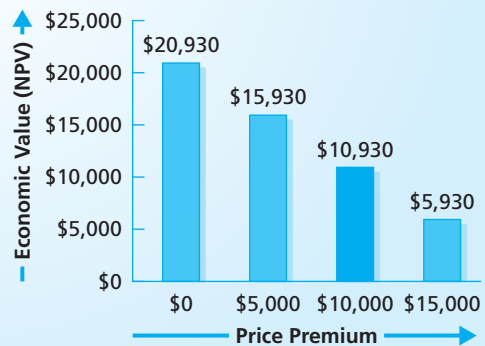
FIGURE 8-7 LIFE-CYCLE VALUE PRICING

Competitor	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Price	\$50,000.00					
Operating Costs		\$15,000	\$15,000	\$15,000	\$15,000	\$15,000

BioTronics	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Price	\$60,000.00					
Operating Costs		\$8,000	\$8,000	\$8,000	\$8,000	\$8,000

Cost Difference	-\$10,000.00	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000
Discount Factor	1.000	0.833	0.694	0.579	0.482	0.402
Present Value	-\$10,000.00	\$5,831	\$4,858	\$4,053	\$3,374	\$2,814
Net Present Value	\$10,930.00					
Discount Rate	20%					

Cost of Ownership	BioTronics	Competitor
Price	\$60,000	\$50,000
Annual Usage Costs		
Analysis Cost	\$4,500	\$8,000
Equipment Uptime	\$1,000	\$2,000
Quality Control	\$1,250	\$2,000
Re-Work	\$500	\$1,500
Documentation	\$750	\$1,500
Total Annual Usage Cost	\$8,000	\$15,000



As shown in Figure 8-7, the competitor's product costs \$15,000 a year on the basis of the five usage costs considered. The BioTronics product has an annual operating cost of \$8,000. When we look at the net present value of the total cost of ownership for the BioTronics product using a 20 percent discount rate for the \$7,000 difference in annual usage costs for 5 years, we see that the net present value is \$10,930. This is the economic value that the BioTronics product offers. Over 5 years, a customer would save \$10,930 even though the purchase price of the BioTronics product is \$10,000 more. The bar graph shows the economic value (net present value) that the company creates at three other levels of price premium. BioTronics has a clear opportunity to capture a higher margin with a price premium while still offering a very compelling value proposition.

Perceived-Value Pricing

Some customer benefits are more difficult to quantify in terms of economic value, yet they have an important perceived value.¹² These perceived customer benefits give us

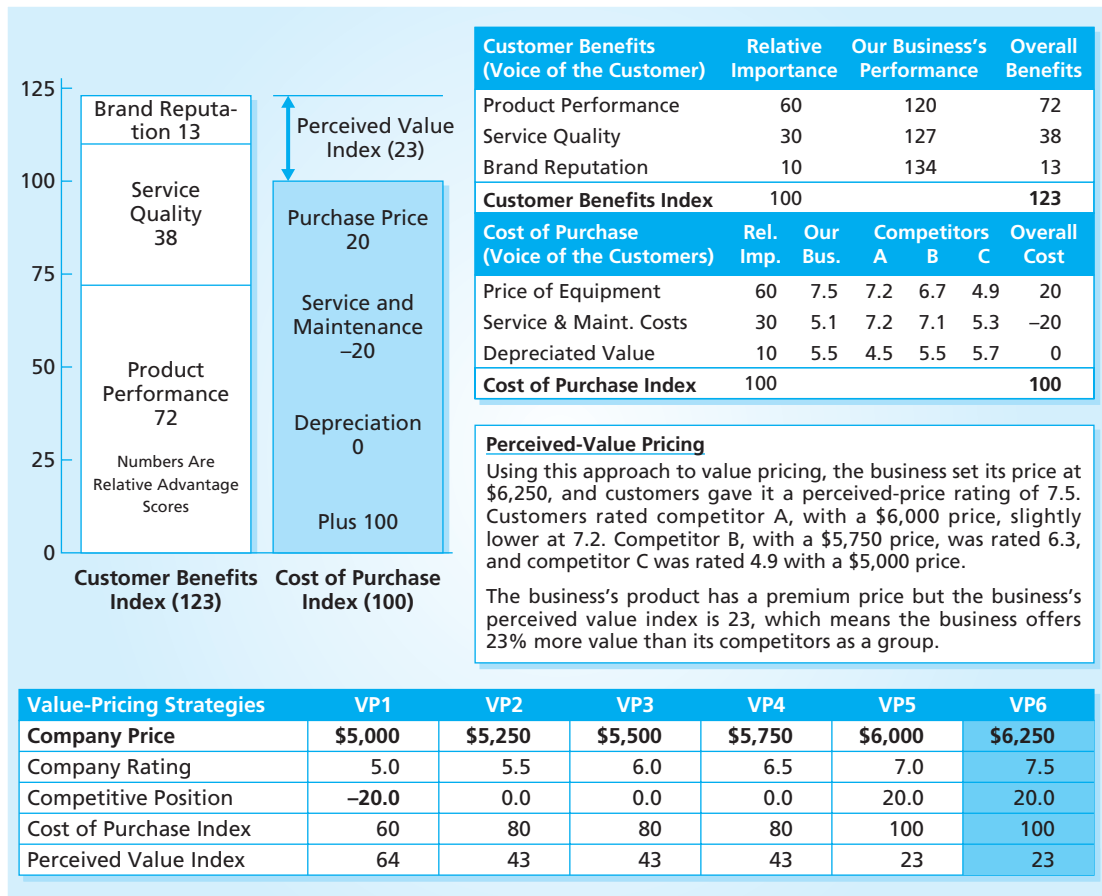
FIGURE 8-8 COMPETITIVE ADVANTAGE IS THE KEY TO VALUE PRICING

Product Performance (Voice of the Customer)	Relative Importance	Our Business	Competitors A B C			Product Advantage
Reliable Performance	50	7.3	7.5	5.4	6.7	17
Ease of Use	30	5.6	5.1	7.7	4.9	-10
Product Life	20	6.6	5.2	5.2	6.1	13
	100					120
Service Quality (Voice of the Customer)	Relative Importance	Our Business	Competitors A B C			Service Advantage
Parts Availability	60	7.2	6.3	4.3	6.7	20
Competent Service	20	6.5	6.8	6.6	5.5	0
Response to Problems	20	7.2	6.3	5.2	6.6	7
	100					127
Brand Reputation (Voice of the Customer)	Relative Importance	Our Business	Competitors A B C			Brand Advantage
Most Respected Brand	50	7.7	7.5	5.4	6.7	17
Known for Quality	50	7.5	6.7	6.6	3.5	17
	100					134

another approach to value pricing, known as *perceived-value pricing*. In Chapter 4, we learned to calculate and interpret the indexes for product performance, service quality, and brand reputation. For the business in Figure 8-8, the perceived benefits derived from product performance (120), service quality (127), and brand reputation (134) each outperform the competition. In this case, each area of perceived benefits is a source of competitive advantage. When the amounts are weighted by the relative importance of each source of benefits, as in Figure 8-9, the overall customer benefits value index is 123, a 23 percent advantage over competitors with respect to all perceived benefits. The perceived-value-pricing question is “How much of a price premium can the business charge and still deliver a meaningful level of customer value?”

We can answer this question by first considering other costs of purchase that are important to the customer. Figure 8-9 lists service and maintenance costs and the depreciated value (how fast the equipment depreciates in value) as two other components, in addition to price, of the total cost of purchase (life-cycle cost). The business has some advantage in the area of service and maintenance costs but no advantage in depreciated value. If the business were to price its equipment at \$5,000, it would have a cost advantage relative to its three competitors (60), resulting in a very high perceived value index of 64. Even an index of 25 would be good. The business, then, should not sell at a lower price but should set a price that results in a perceived value index close to 25.

As shown in the table at the bottom of Figure 8-9, increasing the \$5,000 purchase price by increments of \$250 up to \$5,750 lowers the perceived value index to 43. At a purchase price of \$6,000, the value index drops to 23, close to the target index of 25. The business chose the price of \$6,250, as it also produced a perceived value index of 23. At this price,

FIGURE 8-9 PERCEIVED-VALUE PRICING (PERCEIVED BENEFITS MINUS COST)

customers rated the price of equipment at 7.5. Competitor A, who offered a price of \$6,000, was rated at 7.2. Competitor A's product had a lower price but also had subpar customer benefits, as shown in Figure 8-8. Because its product has a higher price than that of all three competitors, the business must ensure that it communicates the value of its product's benefits so customers will know the higher price is more than offset by better value.

Performance-Based Pricing

If we were to ask a business's customers to name those things that most influence their purchase decisions, they would generally say *everything*. If we were to ask, "Is price important?" the answer would almost always be *yes*. So, what will customers pay for? And how do we determine whether our product has more value than our competitors' products at their prices?

Conjoint analysis, which was introduced in Chapter 4, is a method that marketing managers use to address these questions. The number of performance aspects that can be

FIGURE 8-10 PERFORMANCE-BASED PRICING—CUSTOMER PREFERENCES

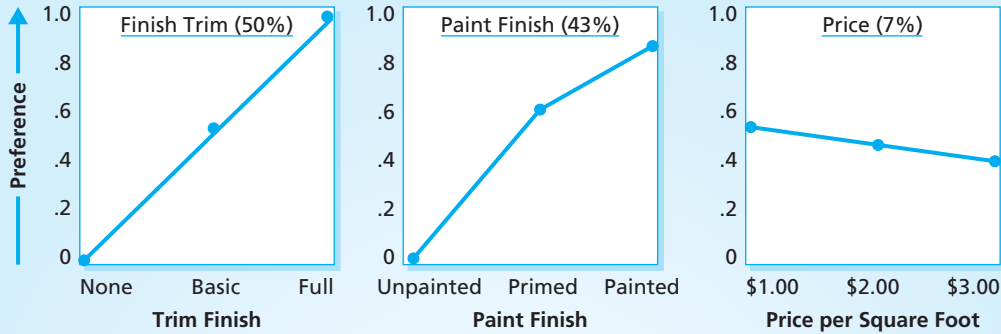
Performance and Price Levels			
Finish Trim	Paint		
	Unpainted	Primed	Color
None	\$1 sq. ft.	\$2 sq. ft.	\$3 sq. ft.
Basic	\$3 sq. ft.	\$1 sq. ft.	\$2 sq. ft.
Full	\$2 sq. ft.	\$3 sq. ft.	\$1 sq. ft.

Creating Customer-Choice Alternatives		
Choice A • Finish Trim...None • Paint.....Unpainted • Price.....\$1 sq. ft.	Choice B • Finish Trim...None • Paint.....Primed • Price.....\$2 sq. ft.	Choice C • Finish Trim...None • Paint.....Painted • Price.....\$3 sq. ft.
Choice D • Finish Trim...Basic • Paint.....Unpainted • Price.....\$3 sq. ft.	Choice E • Finish Trim...Basic • Paint.....Primed • Price.....\$1 sq. ft.	Choice F • Finish Trim...Basic • Paint.....Painted • Price.....\$2 sq. ft.
Choice G • Finish Trim...Full • Paint.....Unpainted • Price.....\$2 sq. ft.	Choice H • Finish Trim...Full • Paint.....Primed • Price.....\$3 sq. ft.	Choice I • Finish Trim...Full • Paint.....Painted • Price.....\$1 sq. ft.

evaluated in a price-performance trade-off analysis is limited. But we can use a simplified design, with two performance drivers across three levels of performance and three levels of price, to determine the value that customers place on different levels of performance and different levels of price.¹³

Figure 8-10 illustrates three levels of performance for two areas of product performance and three levels of price for fiber-cement construction siding. Customers can purchase the siding without the finish trim, with basic trim, or with full trim, and they can buy the siding unpainted, primed, or painted. The three price levels that the customers are asked to consider are \$1, \$2, and \$3 per square foot. Although there are 27 possible combinations, the table in Figure 8-10 fairly represents these combinations with nine alternatives. Note that no performance level or price is repeated in any column or row. Using this set of hypothetical choices, the business asks a sampling of target customers to rank the nine alternatives from *most preferred* to *least preferred*. Using the conjoint measurement process explained in Appendix 4.1, we can derive the performance curves that are presented in Figure 8-11.

In this example, a sample of quality-conscious customers placed most value on trim (50%), second-most value on the siding's finish (43%), and least importance on price (7%).

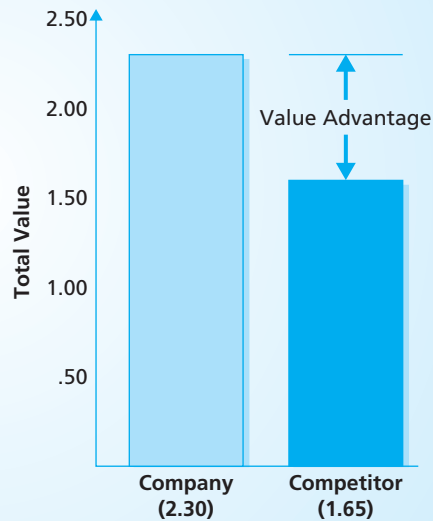
FIGURE 8-11 PERFORMANCE-BASED PRICING: QUALITY-CONSCIOUS CUSTOMERS


Performance-Based Value

Product Positioning	Finish & Trim	Paint Finish	Price	Value Score
Competitor	Basic	Primed	\$1.50	
Value-Added	0.5	0.6	0.55	1.65
Company	Full Trim	Painted	\$3.00	
Value-Added	1	0.9	0.4	2.30

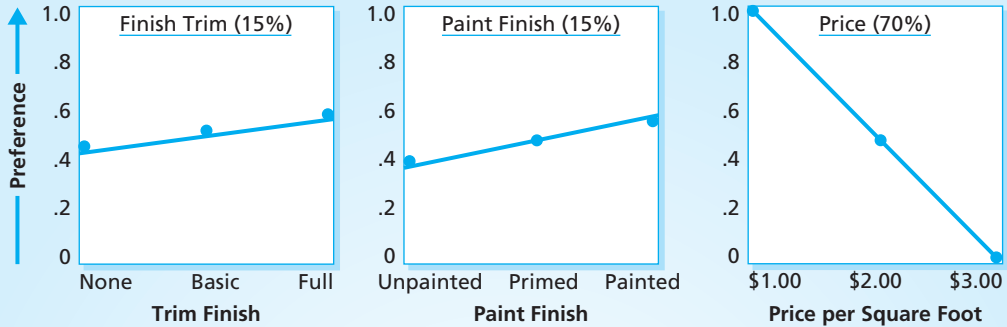
Value-Pricing Strategy

Using this approach to value pricing, the business set its price at \$3 per square foot. Although this price is twice that of a key competitor's, the competitor's product does not offer the high performance for which quality-conscious customers are willing to pay. In this example, performance, not price, is the value driver.



Value-Pricing Strategies	VP1	VP2	VP3	VP4	VP5
Company Price	\$1.00	\$1.50	\$2.00	\$2.50	\$3.00
Competitor Price	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50
Price Premium	-\$0.50	\$0.00	\$0.50	\$1.00	\$1.50
Total Value	2.50	2.45	2.40	2.35	2.30
Value Advantage	0.85	0.80	0.75	0.70	0.65
Percent Value Advantage	52%	48%	45%	42%	39%

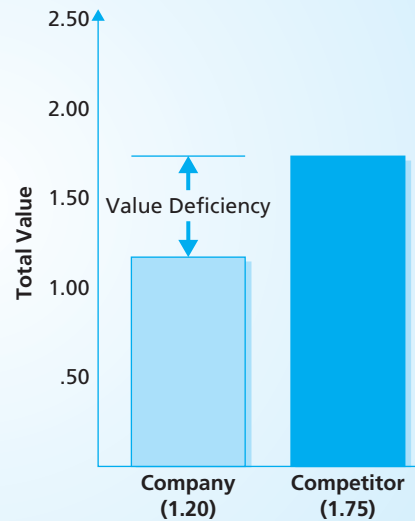
Using these results, the company can compare its competitive position with that of a key competitor. Currently the business offers full trim (1.0), a painted finish for the siding (0.9), and a price at \$3 per square foot (0.4). The business's value score is 2.30. Its key competitor offers a product with basic trim (0.5), primed siding (0.6), and a price of \$1.50 per square foot (0.55), resulting in a value score of 1.65. The difference (0.65) is the value advantage that the business has over its competitor.

FIGURE 8-12 PERFORMANCE-BASED PRICING: PRICE-SENSITIVE CUSTOMERS**Preference-Based Value**

Product Positioning	Finish & Trim	Paint Finish	Price	Value Score
Competitor	Basic	Primed	\$1.50	
Value-Added	0.5	0.5	0.75	1.75
Company	Full Trim	Painted	\$3.00	
Value-Added	0.6	0.6	0	1.20

Value-Pricing Strategy

The company, with the performance features it offers and its higher price, really cannot compete for customers in the price-sensitive market segment. The value driver is price, not performance. Customers place some value on performance but are unwilling to pay extra for it. As a result, the company has a value deficiency and would be wasting marketing resources by trying to attract customers in the price-sensitive segment.



Value-Pricing Strategies	VP1	VP2	VP3	VP4	VP5	VP6
Company Price	\$1.00	\$1.50	\$2.00	\$2.50	\$3.00	\$3.50
Competitor Price	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50
Price Premium	-\$0.50	\$0.00	\$0.50	\$1.00	\$1.50	\$2.00
Total Value	2.20	1.95	1.70	1.45	1.20	0.95
Value Advantage	0.45	0.20	-0.05	-0.30	-0.55	-0.80
Percent Value Advantage	26%	11%	-3%	-17%	-31%	-46%

For customers in the quality-conscious segment of the siding market, the current product has more value than the competitor's product even though it costs 65 cents more, on the basis of the customers' performance preferences and the customers' low level of price sensitivity. But in Figure 8-12, a different set of customer price-performance preferences yields a different set of performance curves for the market's price-sensitive

segment. In this case, the customer is highly price sensitive (70%) and places less importance (30%) on performance. The company's value for these customers is only 1.20, whereas the competitor offers a value of 1.75. The company's value deficiency is largely due to the higher price, which makes the product unattractive to customers despite its better performance. The company could elect to create a more basic product at a more competitive price to lessen its value deficiency, or it could simply decide not to compete in the market's price-sensitive segment.

Using sophisticated conjoint analysis software programs, we can add more dimensions of performance, and we can include more levels of performance in any given dimension.¹⁴ Conjoint analysis programs allow a business to test price-performance preferences and to evaluate its product's value on the basis of the business's competitive position.

For a business with a competitive price and a large value advantage, such an analysis would suggest that the business could charge more for its product and still offer a good value. On the other hand, a business with a competitive price and a large value deficiency would realize that its price is high relative to the value it offers. In this case, a business has three options: (1) lower its price to create a comparable value on the basis of positioning; (2) improve performance on the basis of customer price-performance preferences to a level that creates meaningful customer value; or (3) choose not to compete in this segment of the market.

CUSTOMERIZATION VALUE PRICING

Customerization value pricing requires unbundling price and performance features to levels of performance and price for the major aspects of performance. In Figure 8-13, a new laptop is available with the standard processor speed, a speed that is 1.5 times faster, or a speed that is twice as fast. The standard speed is offered at the computer's base price of \$500. If that's all a particular customer wants to pay, no performance upgrades would be added to the sale price.

In the example in Figure 8-13, the customer needed better performance than the base-priced computer offered and was willing to pay extra for certain upgrades. The upgrades the customer chose resulted in a purchase price of \$1,000. The reference price is the price charged for the flagship model, the laptop with all the performance upgrades the company offers. The reference price in this case is \$1,500. The customer who pays \$1,000 for the computer with just the needed upgrades may infer a savings of \$500, relative to the reference price of \$1,500.

Figure 8-14 presents five of the 6,561 possible price-performance laptops. Customerization value pricing allows customers to select the performance configurations that fit their needs and price budgets. We would expect very few customers to buy the flagship product. So why show it? It *needs* to be shown, because the full-featured product sets the reference price. Without it, customers would not see their savings. Any price-performance configuration that is purchased at a lower price has an inferred savings based on the difference between the reference price and the price paid.

If we used the basic laptop at \$500 as the reference price, then the customer would see any performance upgrades as an *added* expense. For our example in Figure 8-13,

FIGURE 8-13 CUSTOMERIZATION PRICE BASED ON PERFORMANCE

Product Features	Basic	Plus	Advanced
Processor Speed	X	1.5X	2X
Cost Adjustment	\$0	\$150	\$300
Memory (GB)	X	2X	4X
Cost Adjustment	\$0	\$100	\$200
Hard Drive (GB)	X	2X	3X
Cost Adjustment	\$0	\$50	\$100
Media Drive	CD-ROM	DVD	DVD+RW
Cost Adjustment	\$0	\$100	\$150
Operating System	Basic	Plus	Pro
Cost Adjustment	\$0	\$50	\$100
Carrying Case	None	Nylon	Leather
Cost Adjustment	\$0	\$50	\$100
Warranty	90 Days	1 Year	3 Years
Cost Adjustment	\$0	\$25	\$50

Customer Preference	Reference Price	Purchase Price
Base Price	\$500	\$500
Processor Speed	\$300	\$150
Memory	\$200	\$100
Hard Drive	\$100	\$50
Media Drive	\$150	\$100
Operating System	\$100	\$50
Carrying Case	\$100	\$0
Warranty	\$50	\$50
Total Price	\$1,500	\$1,000
Customer Savings	\$0	\$500

$$\begin{aligned}
 \text{Customer Savings} &= \text{Reference Price} - \text{Price} \\
 &= \$1,500 - \$1,000 \\
 &= \$500
 \end{aligned}$$



the customers would infer that they had to pay \$500 more over the basic laptop to get the performance they wanted. Numerous studies have researched the price impact of a top-down versus bottom-up price presentation.¹⁵ When prices are presented to customers from the top down, they tend to buy at a higher price point than when the price presentation is from the bottom up. The psychological reason is simple: the customer perceives one presentation in terms of savings (top down) and the other in terms of extra cost (bottom up).

PRODUCT LIFE-CYCLE PRICING STRATEGIES

Pricing from a market point of view is the primary pricing orientation of a market-based business. Different phases of the product life cycle, however, call for different pricing strategies. The same is true as a company's positioning evolves or business conditions change.¹⁶ Figure 8-15 shows eight pricing strategies and the phases of the product life cycle when businesses are likely to implement them. Each pricing strategy has its own positioning strategy and value proposition, and each pricing strategy affects profits in a different way. This section examines these pricing strategies—when and why to apply them, and how they impact profits.

FIGURE 8-14 FULL-FEATURE REFERENCE PRICE AND CUSTOMER VALUE

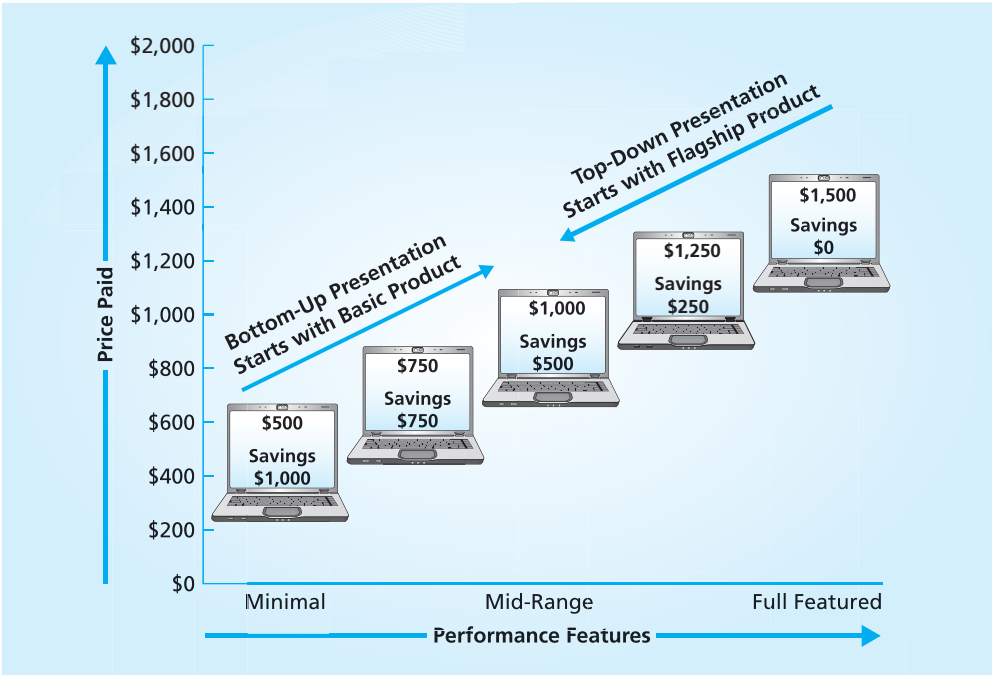


FIGURE 8-15 PRODUCT LIFE-CYCLE PRICING STRATEGIES



FIGURE 8-16 SKIM PRICING

Skim Pricing

Skim pricing is the strategy that businesses often implement during the early stages of the product life cycle, as illustrated in Figure 8-15. This is the phase when conditions can be best for a skim-pricing strategy. As summarized in Figure 8-16, when a business has a considerable and sustainable differentiation advantage in a quality-sensitive market with few competitors, and entry to the market is difficult, skim pricing is a viable pricing strategy. When it is feasible, skim pricing allows a business to penetrate a market systematically as the business builds production capacity. As demand in the high-priced segment becomes saturated, the price may be gradually lowered to attract more customers, eventually reaching a level that is affordable to most potential customers.

Often a business has a proprietary-product advantage relative to competition because it holds a patent for its product or because the product's capability cannot be duplicated for other reasons. In such cases, a business usually pursues a skim-pricing strategy well into the market's growth stage. The skim-pricing strategy, which is really a temporary premium-pricing strategy, can be highly profitable as long as it delivers superior customer value. A business can use a skim-pricing strategy until its competitors are able to match the business's source of competitive advantage. Many prescription drugs, for example, are protected under patents, and the patent holders charge premium prices. During the patent period, the pharmaceutical company has a price umbrella. It is protected from price rivalry because any would-be competitors cannot match the business's relative advantage.

Single-Segment Pricing

As its product moves into the growth stage of its life cycle, a business will need to find a way to lower the cost to potential customers in order to attract their purchase volume. But

this does not necessarily mean lowering prices. By considering the total cost of ownership that is incurred by target customers, a business can utilize *single-segment pricing*, which is a value-based pricing strategy, to produce an attractive savings (economic value) while maintaining a premium price. For example, in Figure 8-7, the price of BioTronics' product is higher than the price of its competitor's product, but the customer's total cost of purchase, or cost of ownership, is much lower than for the competitor's product. Because of lower usage costs over the life of the product, its value in use is higher than that of the competing product, and the customer saves money.

In other words, to use single-segment pricing, the company bases the price of a product on the attractive savings that customers realize over the life of the product, not just the costs of manufacturing and marketing the product. Customers are interested in overall savings, or economic value, and the higher the savings they realize, the higher the company may set the purchase price, regardless of manufacturing and marketing costs. In Chapter 4, we examined various ways that a business can lower the cost of ownership and achieve higher price levels while still creating a superior value for target customers. We need to keep in mind, too, that single-segment pricing, because it is based on value-in-use pricing, is only possible when the company has a good understanding of customer needs and competitors' positions. Customer and competitor knowledge along with a company's positioning, is where all value-based pricing starts.

Penetration Pricing

Businesses that are focused on building volume may use a *penetration-pricing* strategy. As illustrated in Figure 8-15, this pricing strategy is most likely to be employed during the market's growth stage when volumes are rapidly increasing in response to lower prices. The primary objective of penetration pricing is to build volume to drive down cost, as illustrated in Figure 8-17.

Penetration pricing is a mass-market strategy. It is most effective in the growth stage of the product life cycle because this is when product differentiation is diminishing, potential customers are price sensitive, many competitors or substitutes exist, and competitor

FIGURE 8-17 PENETRATION PRICING

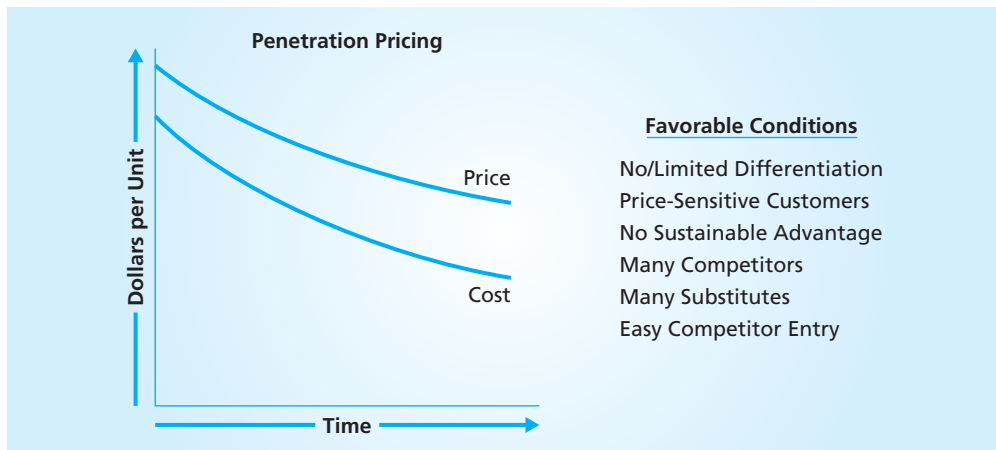
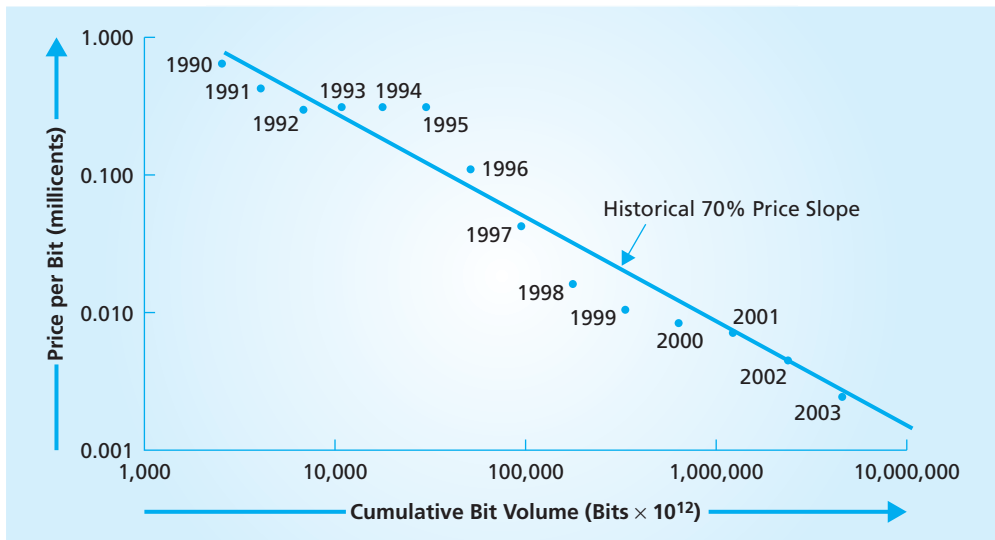


FIGURE 8-18 DRAM PRICE CURVE

entry is easy. The volume leader often can gain a cost advantage and continue to lower prices, discouraging competitor entry and encouraging competitor exit. A volume leadership position, then, enables a business to use penetration pricing to build market share.

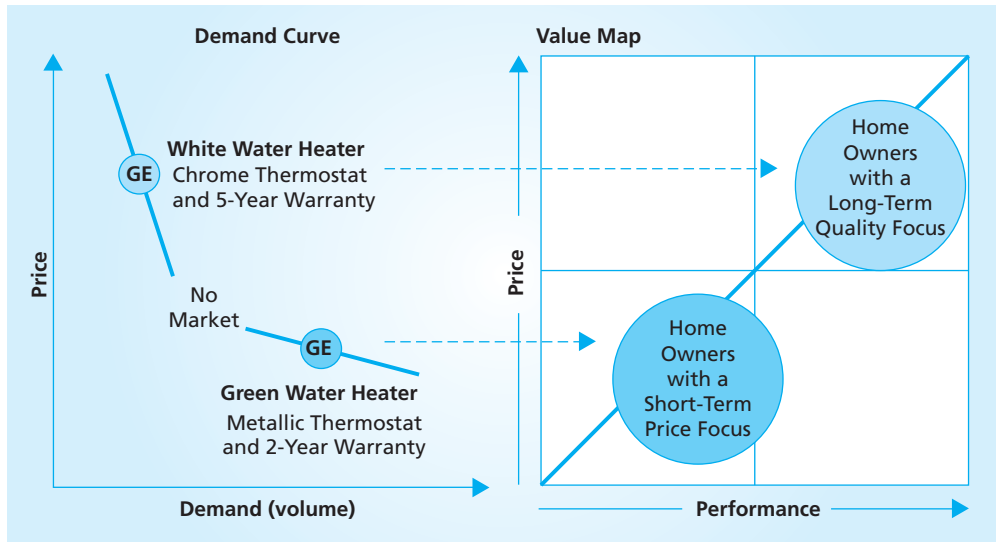
The price of dynamic random access memory (DRAM) chips is a good example of volume-sensitive pricing, as illustrated in Figure 8-18. In this product-market, prices decrease by 30 percent every time cumulative volume doubles.¹⁷ The DRAM chip maker that is lowest on the cost curve, because it has the highest volume, can price its product lower than competitors do and still maintain a desirable margin. In any market where cost reduction is volume sensitive and product differentiation is minimal, a penetration pricing strategy can be a viable path to market leadership and profitable growth.

Low-Cost-Leader Pricing

The maker of BIC pens and lighters has always tried to keep its costs as low as possible and to offer a price that no competitor can beat. Likewise, from its beginnings Wal-Mart has sought to establish itself as the low-cost leader in retail by using a variety of management systems for reducing its cost for the goods it sells and for minimizing operating expenses. Both BIC and Wal-Mart have a volume advantage that contributes to their cost-reduction efforts, but a market's low-cost leader does not need to be the market's volume leader. Companies with smaller volumes can gain a cost advantage by having highly efficient operations, using superior technology, having highly motivated employees, and outsourcing parts of their operations. Even a low-share business can move into the low-cost-leader position.

Multi-Segment Pricing

A primary goal of market segmentation is a form of market-based pricing known as *multi-segment pricing*. Customers in different segments of a product's market generally have different needs and different price sensitivities. A price-sensitive segment is

FIGURE 8-19 MULTI-SEGMENT PRICING—GE WATER HEATERS

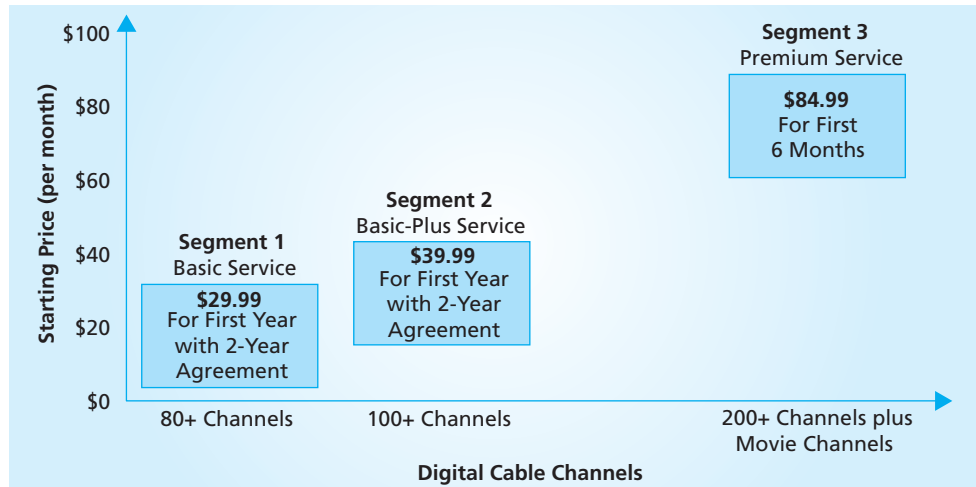
attracted to a product with a low price regardless of the product, service, or brand benefits offered by a higher priced model, whereas customers in a quality-conscious segment are willing to pay more for the additional benefits.

GE found that there was no middle market for household water heaters—just two segments at the high- and low-price points, as shown in Figure 8-19. The low-price segment consisted of buyers looking for a low-cost solution. GE served this segment with a green water heater that had a metallic thermostat and a 2-year warranty. The high-price segment was served with a white water heater that had a chrome thermostat and a 5-year warranty. In this quality-conscious segment, buyers seeking a reliable, long-term solution were willing to pay more for the higher quality product. GE performed well in both segments by providing GE-branded water heaters that met customer product needs at two price points.

To adequately serve the digital television cable market, Comcast has developed three segment-pricing strategies, as shown in Figure 8-20. Customers in the *basic service segment* pay \$29.99 a month with a 2-year agreement and have access to 80-plus digital channels. Customers in the *basic-plus segment* pay \$39.99 a month with a 2-year agreement and have access to 100-plus digital channels. Customers in the *premium service segment* pay \$84.99 for the first 6 months and have access to 200-plus digital channels and many additional movie channels. These three Comcast pricing strategies address customer price needs with three different levels of digital television cable service. As Figure 8-15 shows, multi-segment pricing is most likely to be used during the growth stage of the product life cycle.

Plus-One Pricing

As markets mature, competitors are able to emulate the best features of a business's product and, as a result, it becomes ever more difficult for the business's product to stand out as unique. To succeed in a mature market, a business needs some source of differentiation in

FIGURE 8-20 MULTI-SEGMENT PRICING—COMCAST DIGITAL CABLE SERVICE

order to maintain its product position. To do this, it can establish a plus-one product position¹⁸ in order to justify a value-based price with a slight premium relative to competing products.

Plus-one pricing can be used when a business's product position is the about the same as competitors' positions in every area of product and service quality, except that in one area of meaningful performance the business's product position is clearly superior. For example, Volvo first strives to meet customer expectations in all aspects of luxury-car performance. The company then uses safety as its plus-one product-differentiation strategy to set a value-based price relative to competing luxury cars. The safety features that Volvo has designed into its cars are the business's source of differentiation and are central to Volvo's product-price positioning and value proposition. On the other hand, Lexus uses performance as its plus-one pricing strategy, and Mercedes uses its reputation. As Figure 8-15 illustrates, a plus-one pricing strategy is the value-based pricing strategy that a business is most likely to use in the late stages of the product life cycle.

Reduce-Focus Pricing

As a market moves into its mature stage, prices and margins are often further eroded by intense competition. Because a business's product is still profitable in a mature market, it is not yet time for a harvest-pricing strategy. Instead, the business should apply a *reduce-focus pricing* strategy to manage price and improve profits.¹⁹

A reduce-focus pricing strategy calls for price increases with the intent of reducing volumes and market share in exchange for higher margins. After the first price increase, many price-sensitive customers leave, and subsequent price increases further diminish their numbers. The goal is to raise prices incrementally to the point where the best combination of volume and margin is achieved.

For example, in Figure 8-21, a chemical company's paint division was in a mature market with low margins.²⁰ In this case, the average for the margins across the product line was 20.5 percent. Just three of the products produced enough gross profit to cover their marketing and sales expenses. The reduce-focus pricing strategy resulted in the company's market share dropping from 11.7 to 8.6 percent. The share reduction corre-

FIGURE 8-21 REDUCE-FOCUS PRICING STRATEGY AND PROFIT IMPACT**Current Price Strategy and Performance**

Area of Performance (millions)	Silicon Pigments	Primary Products	Special Products	Basic Colors	Color Enhancers	Overall Total
Market Demand	100	167	154	96	556	1,073
Market Share	10%	12%	13%	26%	9%	11.7%
Volume	10.0	20.0	20.0	25.0	50.0	125.0
Price per Unit	\$4.50	\$2.80	\$1.60	\$0.80	\$0.60	\$1.46
Sales Revenues	\$45.0	\$56.0	\$32.0	\$20.0	\$30.0	\$183.0
Cost per Unit	\$3.50	\$2.00	\$1.30	\$0.70	\$0.54	\$1.16
Percent Margin	22.2%	28.6%	18.8%	12.5%	10.0%	20.5%
Gross Profit	\$10.0	\$16.0	\$6.0	\$2.5	\$3.0	\$37.5
Marketing & Sales Expenses	\$2.0	\$7.0	\$5.0	\$3.0	\$4.5	\$21.5
Net Marketing Contribution	\$8.0	\$9.0	\$1.0	-\$0.5	-\$1.5	\$16.0

Reduce-Focus Pricing Strategy and Performance

Area of Performance (millions)	Silicon Pigments	Primary Products	Special Products	Basic Colors	Color Enhancers	Overall Total
Market Demand	100	167	154	96	556	1,073
Market Share	8.6%	10.3%	10.7%	17.1%	6.0%	8.6%
Volume	8.6	17.2	16.5	16.4	33.4	92.1
Price per Unit	\$4.95	\$3.20	\$1.90	\$0.98	\$0.75	\$1.85
Sales Revenues	\$42.6	\$55.0	\$31.3	\$16.1	\$25.0	\$170.0
Cost per Unit	\$3.50	\$2.00	\$1.30	\$0.70	\$0.54	\$1.25
Percent Margin	29.3%	37.5%	31.6%	28.6%	28.0%	32.1%
Gross Profit	\$12.5	\$20.6	\$9.9	\$4.6	\$7.0	\$54.6
Marketing & Sales Expenses	\$2.0	\$7.0	\$4.5	\$2.0	\$3.0	\$18.5
Net Marketing Contribution	\$10.5	\$13.6	\$5.4	\$2.6	\$4.0	\$36.1

sponded with a drop in overall volume from 125 million to 92.1 million units. However, the average price for the product line increased from \$1.46 to \$1.85 per unit. More importantly, the average margin rose from 20.5 to 32.1 percent. This combination of volume and margin produced a gross profit of \$54.6 million, which was \$17.1 million higher than before the company implemented the reduce-focus pricing strategy. The company also curtailed the marketing and sales expenses for three products, which further increased marketing profits. As shown in Figure 8-21, the company's overall net marketing contribution more than doubled, from \$16 million to \$36.1 million.

Harvest Pricing

During the late stages of a product's life cycle, margins are often low and volumes flat or declining. The net result is poor profits with little prospect for improvement. Many businesses in this situation are in the decline phase of the product life cycle, as illustrated in Figure 8-15.

FIGURE 8-22 HARVEST PRICING AND PROFITABILITY

Market Situation	Price	Volume	Sales	Unit Cost	Margin per Unit	Gross Profit
Late in life cycle	\$10.00	10 million	\$100 million	\$10.00	\$0	\$0
15% price increase	\$11.50	7 million	\$80.50	\$10.00	\$1.50	\$10.5 million
10% price increase	\$12.65	6 million	\$75.90	\$10.00	\$2.65	\$15.9 million
10% price increase	\$13.92	6 million	\$83.52	\$10.00	\$3.92	\$23.5 million

On the basis of cost and the need for higher margins, such a business will raise prices in order to reduce volume even more quickly than is typical of the late stage of a product's life cycle. Subsequent cost-based price increases will result in higher margins as volume continues to fall. The business normally continues the sequence of price increases and volume reductions until it reaches a price that customers simply will not pay and exits the market.

Harvest pricing, however, has an interesting twist. In many instances a business will raise price to improve margins, expecting to lose volume. This was true for an automobile components manufacturer that raised prices 15 percent and lost the anticipated 30 percent of its business volume. A subsequent price increase of 10 percent, however, resulted in only a modest decrease in volume, and a third 10 percent price increase a year later resulted in no decrease in volume. At this combination of price and volume, the business had uncovered a profitable niche market and was able to manage price and volume to produce an attractive gross profit, as illustrated in Figure 8-22.

PRICING AND PROFITABILITY

Sales growth is an obsession in most businesses. Marketing and sales managers, as well as general managers and CEOs, generally believe that more is better: "If those in marketing can deliver more volume, more market share, and more sales revenues, then we can grow profits." This may be true in many cases, but managers need to be especially careful when using price to achieve this objective. Let's examine a fairly common business situation.

A business's senior management has challenged the marketing and sales team to grow sales revenues at a rate greater than 10 percent. The business's product-markets are price sensitive, and the marketing and sales team judges that a 10 percent price decrease would result in a volume gain of 25 percent, with sales revenues increasing from \$10 million to \$11.25 million, as shown in Figure 8-23.

FIGURE 8-23 PRICE-VOLUME SALES STRATEGY

Performance Factor	Metric	Current	Strategy	Impact
Market Demand	units	50,000	10% Price Decrease 	50,000
Market Share	%	20.0%		25.0%
Volume Sold	units	10,000		12,500
Average Selling Price	\$/unit	\$1,000		\$900
Net Sales	\$	\$10,000,000		\$11,250,000

FIGURE 8-24 PRICE–VOLUME STRATEGY AND PROFIT IMPACT

Performance Factor	Metric	Current	Strategy	Impact
Market Demand	units	50,000	10% Price Decrease 	50,000
Market Share	%	20.0%		25.0%
Volume Sold	units	10,000		12,500
Average Selling Price	\$/unit	\$1,000		\$900
Net Sales	\$	\$10,000,000		\$11,250,000
Unit Cost	\$/unit	\$700		\$700
Percent Margin	%	30.0%		22.2%
Gross Profit	\$	\$3,000,000		\$2,500,000

The problem with this sales-oriented approach is that the strategy would lose money! As the analysis in Figure 8-24 illustrates, this lower-price strategy would indeed grow sales revenues, but it would not grow gross profits. In fact, it would lead to a significant decline in profit. The 25 percent increase in volume would not offset a 33.3 percent reduction in margin. In this example, a pricing strategy to grow sales 12.5 percent would lower gross profit by almost 16.7 percent. Because all other fixed manufacturing, marketing, and operating expenses would not change, the pricing strategy would lower overall profit. Marketing strategies that deliver superior sales growth but fail to contribute to profit will eventually bankrupt a company.²¹ The lesson is that the goal of a pricing strategy should be to increase profit—not to increase sales or volumes.

To continue with our example, the first question the marketing and sales team should ask before changing the price is “How much volume do we need to maintain the current level of profitability?” As illustrated in the calculation that follows and in Figure 8-25, to maintain a gross profit of \$3 million, a strategy that lowers the product’s price by 10 percent would require a 50 percent share gain (from 20% to 30%), assuming there was no change in market demand. A 50 percent share gain would in turn produce a 50 percent volume gain. The required increases in share and volume are double those projected by the marketing and sales team.

FIGURE 8-25 PRICE–VOLUME PROFITABILITY

Performance Factor	Metric	Current	Strategy	Impact
Market Demand	units	50,000	10% Price Decrease 	50,000
Market Share	%	20.0%		30.0%
Volume Sold	units	10,000		15,000
Average Selling Price	\$/unit	\$1,000		\$900
Net Sales	\$	\$10,000,000		\$13,500,000
Unit Cost	\$/unit	\$700		\$700
Percent Margin	%	30.0%		22.2%
Gross Profit	\$	\$3,000,000		\$3,000,000

$$\text{Gross Profit} = \text{Market Demand} \times \text{Market Share} \times (\text{Unit Price} - \text{Unit Cost})$$

$$\begin{aligned} \text{Market Share Needed} &= \frac{\text{Gross Profit Desired}}{(\text{Market Demand})(\text{Unit Price} - \text{Unit Cost})} \\ &= \frac{3,000,000}{(50,000)(900 - 700)} = \frac{3,000,000}{(50,000)(200)} = \frac{3,000,000}{10,000,000} = .3 = \mathbf{30\%} \end{aligned}$$

Although it is often difficult to estimate price elasticities, we can accurately determine the price elasticity that is needed to produce a profitable pricing strategy. In the example we have been using, the business would maintain its current gross profit with a 10 percent price reduction and a 50 percent volume gain. The calculation that follows shows that the business's product has a price elasticity of -5 . This means that for every 1 percent price decrease, volume increases 5 percent. A 10 percent price decrease, then, would produce a 50 percent volume increase.

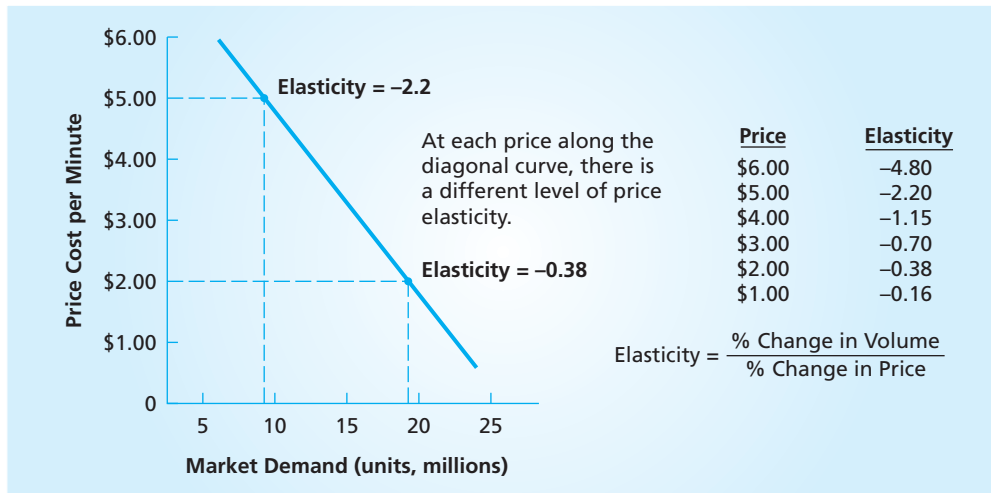
$$\begin{aligned} \text{Price Elasticity} &= \frac{\text{Percentage Change in Volume}}{\text{Percentage Change in Price}} \\ &= \frac{5,000 / 10,000}{-100/1000} = \frac{0.5}{-0.1} = \mathbf{-5} \end{aligned}$$

Price elasticity is almost always a negative number due to the inverse relationship between price and volume. As prices go up, volumes go down, and as prices go down volumes go up. The degree to which volume changes when price changes is the product's price elasticity, which is measured from zero (no price elasticity) to -10 (a very high level of price elasticity) and sometimes larger. A few products have a positive elasticity, such as prestige products that can see an increase in demand when their prices are increased. Price elasticities between zero and -1 are considered inelastic, as the percentage change in volume is less than the percentage change in price. Price elasticities between -1 and -10 are elastic because the percentage change in volume is greater than the percentage change in price. When the price elasticity equals -1 , we have unitary elasticity where the percentage change in volume is equal to the percentage change in price.

The price elasticity of -5 is the elasticity that is needed for the business in our example to maintain current profits. To increase profits at a 10 percent price reduction, the price elasticity of the business's product would need to be larger than -5 (-6 for example). Price elasticities of this magnitude are rare, as would be a 10-point share gain with only a 10 percent price decrease. A very high price elasticity, such as -5 , indicates that buyers are extremely sensitive to price moves—they will buy far less if the price goes up and much more if it goes down.

PRICE ELASTICITY AND PROFITABILITY

In most markets, market demand and market growth depend on price level. High prices deter customers from entering a market, as we saw in Chapter 3, and low prices attract customers. As prices for cell phone service, DVD players, and computers have fallen,

FIGURE 8-26 TELECOMMUNICATIONS SERVICE PRICE ELASTICITY

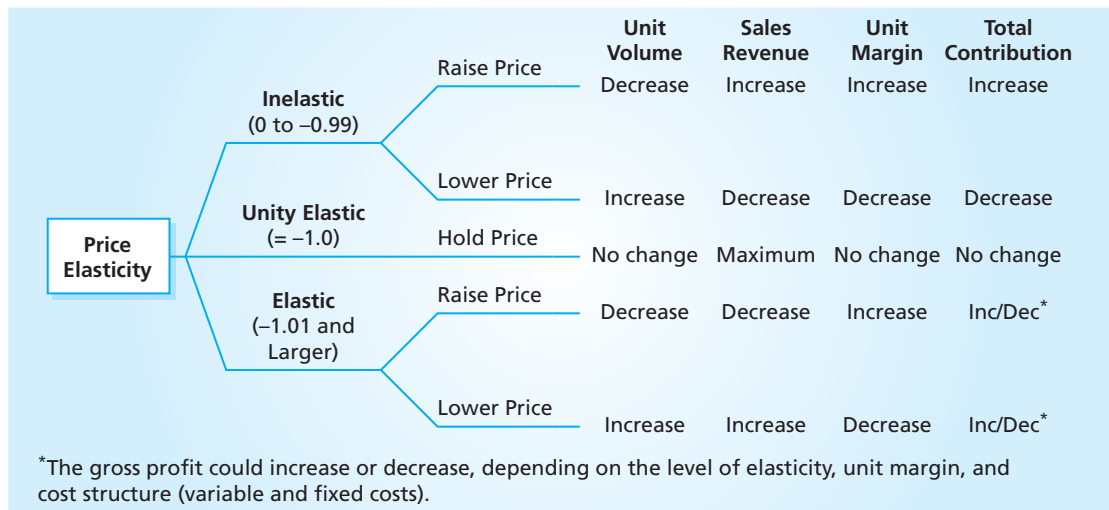
more customers have entered those markets. In one sense, price governs both the size of a market and how fast it will grow.

Figure 8-26 shows how market demand for voice messaging varies as a function of price. A telecommunications business that wants to limit initial demand for this service until it has the capacity to serve a large number of customers decides to price the service at \$5 per minute. This price produces an estimated demand of 9,000 customers in a particular geographic market. At this price, the price elasticity is -2.2 which means that for each 1 percent change in price, demand will change by approximately 2.2 percent. A 10 percent price reduction from \$5 to \$4.50 should yield a 22 percent increase in customer demand (from 9,000 to 10,980).

A business might continue to lower price to grow demand, but once the price elasticity reaches -1 , sales revenue has reached its maximum potential. At this point, a price change either up or down would lower sales revenue. This price point would be ideal for a nonprofit organization that conducts fundraising events, because the organization would be maximizing its revenues. A business, however, would price above or below this price point in an effort to maximize its profits.

Inelastic Price Management

As shown in Figure 8-27, when a price is inelastic, a price increase improves all aspects of performance. A price decrease, however, hurts sales, margins, and gross profit even though it increases unit volume. For example, Yellow Pages advertising is known to be price inelastic, with an elasticity of approximately -0.7 . What would be the consequence of a Yellow Pages business lowering the price on its \$100 ads by 10 percent? Assume the business normally sells one million of those ads and its variable cost is \$50 per ad. The results are a unit margin of \$50, sales revenues of \$100 million, and a gross profit of \$50 million.

FIGURE 8-27 PRICE ELASTICITY—VOLUME, SALES, AND PROFITABILITY**Current Price Situation**

Price per Ad = \$100	Variable Cost per Ad = \$50
Ad Volume = 1 million ads	Margin per Ad = \$50
Sales Revenue = \$100 million	Gross Profit = \$50 million

A decision to lower prices by 10 percent when the price elasticity is equal to -0.7 would produce the following performance:

Lower-Price Strategy

Price per Ad = \$90	Variable Cost per Ad = \$50
Ad Volume = 1.07 million ads	Margin per Ad = \$40
Sales Revenue = \$96.3 million	Gross Profit = \$42.8 million

The decision to lower price by 10 percent when prices are inelastic would lower margins by \$10 per ad, lower sales by \$3.7 million, and lower gross profit by \$7.2 million, even though volume would increase. This would be a disastrous pricing decision. A business that does not know that its price is inelastic could easily follow a strategy of lowering prices in response to competitor moves or customer concerns about price.

The correct strategy in this case would be to raise price, because the price is inelastic. A strategy to raise price by 10 percent when the price elasticity is -0.7 would produce the following estimate of performance:

Raise-Price Strategy

Price per Ad = \$110	Variable Cost per Ad = \$50
Ad Volume = 0.93 million ads	Margin per Ad = \$60
Sales Revenue = \$102.3 million	Total Contribution = \$55.8 million

This strategy would increase margins by \$10 per ad, sales by \$2.3 million, and gross profit by \$5.8 million. Knowing the correct direction to move the price improved this business's gross profit by 10 percent, although it meant giving up 70,000 ads. Although there was a loss of unit market share (number of ads sold), dollar market share improved significantly.

Elastic Price Management

Figure 8-27 also shows that arriving at a successful pricing strategy is more difficult when prices are elastic. Although sales revenues will increase with a price cut and decrease with a price increase, the change in gross profit will depend on the level of price elasticity. Though a price may be elastic, it may not be elastic enough to produce the volume increase that is needed to more than offset the margin decrease created by a price cut.²²

For example, let's assume that the price elasticity for the same Yellow Pages ad is -1.5 . This is clearly an elastic price, and one that could lead many businesses to lower price to grow sales and volume. However, as the following estimate shows, a strategy to lower price by 10 percent would lower the gross profit by \$4 million.

Lower-Price Strategy	
Price per Ad = \$90	Variable Cost per Ad = \$50
Ad Volume = 1.15 million ads	Margin per Ad = \$40
Sales Revenue = \$103.5 million	Gross Profit = \$46 million

A strategy to raise prices by 10 percent when the price elasticity is -1.5 would reduce the ad volume and sales revenue, but it would produce higher margins and a larger gross profit.

Raise-Price Strategy	
Price per Ad = \$110	Variable Cost per Ad = \$50
Ad Volume = 0.85 million ads	Margin per Ad = \$60
Sales Revenue = \$93.5 million	Total Contribution = \$51 million

The biggest challenge in using price elasticities is not performing the calculations; it is estimating a value for price elasticity. Every time a business changes its price, it has the opportunity to compute the actual price elasticity. It must do this computation, because market conditions change and those changes affect price elasticity.

PRICE AND BREAK-EVEN ANALYSIS

Break-even analysis is generally viewed as an accounting concept, but it is extremely useful in evaluating the profit potential and risk associated with any pricing strategy or marketing strategy.²³

Price and Break-Even Volume

For a given pricing strategy and marketing effort, it is useful to determine the number of units that need to be sold in order to break even—that is, to produce an operating income equal to zero. Let's assume a business has a margin per unit of \$2 and total fixed expenses (marketing, sales, general, administrative, and other pre-tax expenses) of \$50 million. We see immediately that the business needs to sell 25 million units in order to break even: A margin of \$2 per unit on 25 million units produces \$50 million, the amount needed to equal the fixed expenses and give the business a zero operating income.

An actual business's fixed expenses and margin per unit are not likely to be round numbers that would make it easy to compute the break-even volume in our heads, so let's extrapolate a formula for calculating the break-even volume from the formula that we used for figuring the operating income.

$$\text{Operating Income} = \text{Volume} \times \text{Margin per Unit} - \text{Fixed Expenses}$$

$$\begin{aligned}\text{Volume} &= \frac{\text{Operating Income} + \text{Fixed Expenses}}{\text{Margin per Unit}} \\ &= \frac{\$0 + \$50 \text{ million}}{\$2 \text{ per unit}} \\ &= \mathbf{25 \text{ million units}}\end{aligned}$$

To calculate the break-even volume, we want to set the operating income equal to zero in the equation. A zero used as an addend (a number that is added to another number) does not affect the outcome of the calculation, so we can simplify the formula. The lower the break-even volume is relative to manufacturing capacity or expected sales volume, the greater the profit potential for a product or business.

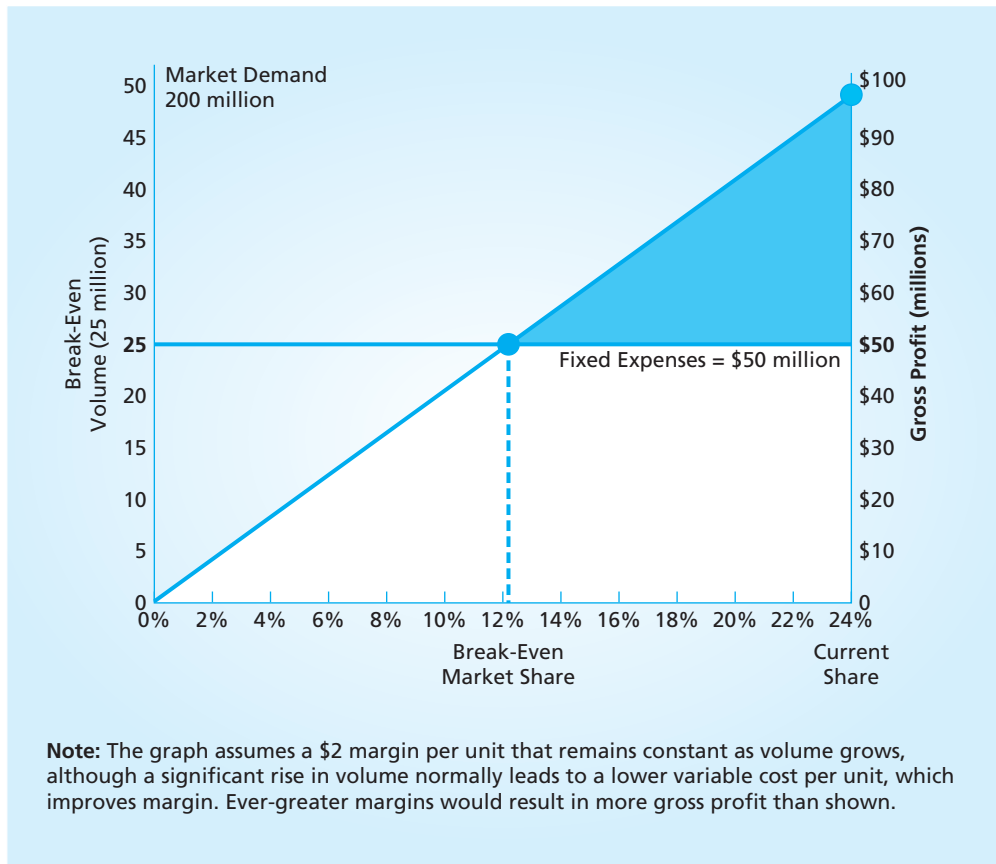
$$\text{Break-Even Volume} = \frac{\text{Fixed Expenses}}{\text{Margin per Unit}}$$

Price and Break-Even Market Share

Because break-even volume is an unconstrained number, we must consider whether the break-even volume is reasonable. Market share, in contrast, is constrained between 0 and 100 percent, and so break-even market share provides a better framework for judging profit potential and risk. Computing the break-even market share requires only that we divide the break-even volume by the size of the target market.

$$\text{Break-Even Market Share} = \frac{\text{Break-Even Volume}}{\text{Market Demand}}$$

If the break-even volume is 25 million units and the market demand for the product is 200 million units per year, then the break-even market share would be 12.5 percent. The business has a 24 percent market share, which is 11.5 share points above the break-even

FIGURE 8-28 BREAK-EVEN VOLUME AND BREAK-EVEN MARKET SHARE

point, as shown in Figure 8-28. If the business had only a 15 percent share of its target market, the risk of a loss would be greater because the business's share would be closer to the break-even share.

PRODUCT LINE PRICING

As a business adds more products to its product line, it enhances sales growth but also increases the risk of cannibalizing existing product sales. It is necessary, then, to know both a product's price elasticity and the degree to which it has cross-price elasticity with other products. Products that have a positive cross-price elasticity are substitutes; lowering the price of one product will decrease the demand for the other product. Products that have a negative cross-price elasticity are complementary products; lowering the price for one product will increase the demand for both products. Because the margins may be different for alternative products in a product line, a business needs to give careful consideration to any price change to ensure that the total profits for the entire product line will increase.

FIGURE 8-29 PRICE ELASTICITIES AND CROSS-PRICE ELASTICITIES OF COMPETING DETERGENTS

Brand	Share (%)	Wisk	Tide	Surf	Era	Solo	Cheer	Bold	All	Fab
Wisk	22.7	-1.37	0.31	0.37	0.23	0.11	0.12	0.09	0.08	0.07
Tide	21.5	0.33	-1.39	0.37	0.23	0.11	0.13	0.09	0.08	0.07
Surf	19.5	0.48	0.46	-1.91	0.33	0.16	0.16	0.12	0.11	0.09
Era	13.5	0.36	0.33	0.39	-1.57	0.11	0.12	0.10	0.08	0.07
Solo	5.9	0.36	0.34	0.41	0.25	-1.78	0.13	0.11	0.10	0.07
Cheer	4.9	0.46	0.47	0.47	0.31	0.15	-2.20	0.12	0.13	0.09
Bold	4.4	0.49	0.44	0.49	0.34	0.18	0.16	-2.32	0.11	0.10
All	3.6	0.48	0.46	0.50	0.32	0.17	0.20	0.12	-2.36	0.10
Fab	3.6	0.50	0.50	0.49	0.33	0.16	0.17	0.14	0.12	-2.41

Elasticities: A 1% price change in the brand column creates the percent change in market share for each row of brands.

Pricing Substitute Products

When it extends its product line, a business must recognize that some cannibalization will occur if customers can easily substitute one product in the line for another. Figure 8-29 shows the price elasticities and market shares for nine laundry detergents, along with their cross-price elasticities.²⁴ The results of this empirical study illustrate the price elasticity of each brand of detergent, as well as the cross-price elasticity of substitutes. As shown, the cross-price elasticities are much higher for the higher-share brands.

- **Tide Price Increase:** A 10 percent increase in Tide's price would lower Tide volume by 13.9 percent and increase the volume of Surf by 3.7 percent.
- **Surf Price Decrease:** A 10 percent decrease in Surf's price would increase Surf volume by 19.1 percent and lower Tide volume by 4.6 percent.

To fully understand the effects of product line substitutes, let's examine two types of coffee sold in the same coffee shop: the shop's regular coffee, priced at \$1.50 a cup, and a specialty coffee, priced at \$2.50 a cup. The regular coffee is price elastic (elasticity equal to -2), whereas the specialty coffee is inelastic (-0.8). Regular coffee drinkers generally would be inclined to switch to the specialty coffee if the specialty coffee price were lowered, as the cross-price elasticity is 0.4. However, specialty coffee drinkers generally would not be inclined to switch to regular coffee if the price for the specialty coffee were raised, as the cross-price elasticity is 0.2. Although many pricing strategies could be tested, a 10 percent increase in the price of the specialty coffee should increase the coffee shop's monthly gross profit.

Pricing Complementary Products

Of course, products that complement a certain product will also be affected whenever that product's price changes. Software, printers, and scanners are products that complement

personal computers, and so the demand for these products varies with the price of personal computers. If the cross-price elasticity between PCs and spreadsheet software were 0.6, then for each 1 percent change in the price of PCs, there would be a 0.6 percent change in the demand for spreadsheet software. If computer industry prices decrease by 10 percent, the demand for spreadsheet software should go up by 6 percent. Conversely, if the price of personal computers were to increase by 10 percent, the demand for spreadsheet software would go down by 6 percent.

■ Summary

Customer value and business profitability depend on effective pricing strategies. High prices do wonders for margins but often result in low customer value, especially when a product's perceived benefits are less than its perceived price. In competitive markets where product differentiation is high, value-based pricing presents a pricing logic that is designed to deliver superior value for customers and high profitability for businesses.

Market-based pricing starts with customer needs, competitors' positions, and the business's product positioning and then works backward to margin. In contrast, cost-based pricing starts with the cost of the product and a desired margin and then works forward to a market price. Cost-based pricing often leads to under- and overpricing in markets where significant product differentiation is possible. But in markets where differentiation is minimal and customers are price sensitive, cost-based pricing can be a viable approach to pricing. In this chapter we presented five value-based pricing methodologies:

1. **Value-in-Use Pricing**—Price is set to provide customers with an attractive savings after considering the ownership costs of acquiring, owning, using, maintaining, and disposing of a product.
2. **Life-Cycle Value Pricing**—Price is set with respect to the total cost of ownership over the life cycle of a product on the basis of the net present value of the difference between the company's and a competitor's total costs of ownership.
3. **Perceived-Value Pricing**—Price is set on the basis of the value that customers realize when they compare the price and benefits of the company's product with those of a key competitor's product.
4. **Performance-Based Pricing**—Price is set on the basis of customer preferences for different levels of price and performance and taking into consideration how the company and competitors are positioned with respect to delivering both price and performance.
5. **Customerization Value Pricing**—Price is set by unbundling a product's features or performance levels, placing a price on each, and then allowing customers to select the ones they want. The price of the top-performing product serves as the reference price. Customers who buy the product with only the features they desire have an inferred savings relative to the reference price.

Different value-based and cost-based pricing strategies are especially suitable for particular phases of the product life cycle. During the early stages of the life cycle, skim pricing, single-segment pricing, and penetration pricing are usually the appropriate strategies. As markets enter their growth phase, many companies focus on multi-segment value-added pricing, whereas low-cost leaders create value with a low price. As its product

moves into the mature phase of the life cycle and becomes more commoditized, a business may use a plus-one strategy to differentiate the product on the basis of a benefit that is meaningful to customers. Other businesses may pursue a reduce-focus pricing strategy in an effort to shed price-sensitive customers to the point where a price-volume combination yields lower sales but higher profits. In the decline stage of the product life cycle, a business may need to pursue a harvest-pricing strategy, raising prices systematically and reducing its marketing effort in anticipation of exiting the market. But after implementing a harvest-pricing strategy, some businesses discover a profitable niche market that prompts a return to premium pricing.

Changes in price affect both volume and margin. A price decrease that grows volume and sales but results in a decrease in total contribution adversely affects a business's profits. The goal of any pricing strategy should be to grow or at least maintain profits. A business always needs to determine beforehand how a price change will affect gross profit.

Because price affects margin, and because a certain level of fixed expenses is needed to achieve a certain level of market penetration, a business needs to assess the profit potential and risk of any pricing strategy it considers. A break-even volume analysis is helpful in assessing profit potential and risk, but not as helpful as a break-even market share analysis. Because a business's market share is always constrained between 0 and 100 percent, whereas volumes are unconstrained, the break-even market share is a better relative index by which profit potential and risk can be judged. Break-even market share enables a business to gauge the profit potential and risk of a pricing strategy by considering the target share in light of the difference between the business's current share and its break-even market share. For businesses that are operating below the break-even point, a market share break-even analysis will also show the feasibility of achieving a break-even volume within a market context.

Price-volume relationships are made more complex by varying degrees of price elasticity. Price elasticity is a measure of price sensitivity among buyers. When prices are inelastic, price increases reduce volume but increase sales revenue and profits. Price decreases in this situation increase volume but reduce sales revenue and lower profits. When prices are elastic, a price decrease will increase volume and sales revenue, but profits may go down if margins are low.

Product line pricing decisions need to consider cross-price elasticity. The price elasticity for a product may signal a particular pricing strategy, but when there is cross-price elasticity between products in the same line, a business needs to carefully analyze the profit impact of a price change. The demand for products that are substitutes will change in the direction of the price change of the substitute. The demand for complementary products will change inversely to a price change in the product they complement.

■ Market-Based Strategic Thinking

- 1 How could cost-based pricing lead to a price that is lower than the one customers would have paid? How does this affect the profit of a business?
- 2 How could cost-based pricing lead to a price higher than target customers are willing to pay? How does this affect the profit of a business?
- 3 How does value-based pricing differ from cost-based pricing? What should a business do if the value-based price is not high enough to deliver desired levels of profitability?

- 4 How would an earth-moving equipment manufacturer use value-in-use pricing to determine the customer value of its product?
- 5 How would the earth-moving equipment manufacturer use the net present value of a customer's total cost of ownership to set a value price?
- 6 How would Toyota use perceived-value pricing to set a price for the Prius? How would Toyota select a specific price that delivered a meaningful customer value?
- 7 At what price would the Prius not have any perceived customer value?
- 8 How could Toyota use performance-based pricing to determine a price that would create a good value for customers and a good price for Toyota?
- 9 How could Subaru use customerization pricing for the Subaru Outback and benefit from a top-down price presentation of price-performance options?
- 10 Why would Apple use a skim-pricing strategy for a new Apple product?
- 11 What kind of pricing strategy is single-segment pricing? Why is single-segment pricing used early in the growth stage of the product life cycle?
- 12 Why would a business use a penetration-pricing strategy instead of a single-segment strategy? How does the penetration-pricing strategy create customer value?
- 13 How does a low-cost-leader-pricing strategy differ from a penetration-pricing strategy?
- 14 Why would a business use multi-segment pricing early in the late-growth stage of the product life cycle?
- 15 What is plus-one pricing and why is a business more likely to use it in the mature stage of the product life cycle?
- 16 What is reduce-focus pricing? How can a business possibly be more profitable with fewer customers and lower volumes?
- 17 Why would a business use harvest pricing? Why do many businesses using harvest pricing never exit the market?
- 18 How would a business estimate the price elasticity needed for a price decrease that would maintain the current level of profits?
- 19 Why should a business always raise price when it is inelastic?
- 20 When price elasticity is -1.5 to -2 , why would a price reduction result in larger volumes, higher market share, and greater sales but lower profits?
- 21 Why is break-even market share more useful than the break-even volume?
- 22 What happens to a substitute product when the price of another product in a business's product line is increased by 10 percent when the cross-price elasticity is 0.4? Why would a business intentionally shift sales volume from one product to another in its product line?
- 23 What happens to a complementary product when the price of the product that it complements is decreased by 10 percent and the cross-price elasticity is 0.4?

Marketing Performance Tools and Application Exercises

The four interactive marketing performance tools and the application exercises outlined here will add to your understanding of value-

based pricing, pricing strategies, price elasticity, and break-even analysis. To access the tools, go to **rogerjbest.com**. For the questions,

you can enter the data presented to obtain the answers. You may also enter other data to see the results, and you can save your work. The figure numbers in parentheses are related examples in Chapter 8, but the lettered instructions pertain to the online exercises.

8.1 Value-in-Use Pricing (Figure 8-6)

- A. The ownership costs for a business's products that extend the life of machine fluids appear in the first example. Assess the economic value for several price points and select a price that creates a meaningful value for customers.
- B. In this example, let's assume that the usage cost for the business's product is further reduced to \$2.50 per pound. How would this affect customer value and the perception of the value price of \$2.45?

8.2 Perceived-Value Pricing (Figures 8-8 and 8-9)

- A. Assume the business can improve its ease of use from a 5.6 rating to a 7.5 rating. How would this change the overall benefits and customer value at the current price of \$6,250?
- B. With this higher ease-of-use rating, how would the customer value index change if the business raised its price to \$6,500 and the business's rating on price of equipment increased from 7.5

to 8.0? Would you recommend this price increase?

8.3 Performance-Based Value Pricing (Figures 8-11 and 8-12)

- A. Replace the existing data with two car performance factors each with three levels of performance (e.g. <20 MPG, 25 MPG, and >30 MPG) and a price factor with three price levels (e.g. \$20,000, \$25,000 and \$30,000). Then rank the nine alternatives from 1 (most preferred) to 9 (least preferred) and interpret the performance and price curves.
- B. Input the product positioning (position on each performance factor and price) for your company auto and competing auto. Interpret the value index for each automobile and how each might influence market share.

8.4 Price-Volume Pricing (Figures 8-23 to 8-25)

- A. The price elasticity for personal computers is estimated to be -2 . For the PC manufacturer shown, evaluate the sales and profit impact of a 10 percent price increase and a 10 percent price decrease.
- B. For each pricing strategy, determine the break-even market share and discuss the profit risk associated with it.

Notes

1. Quotation from the Value Pricing and Profitable Growth Workshops led by R. Best, 1995–2005.
2. "Step Aside Apple Fans, Apple Needs to Sell Tablets to the PC Crowd," *Retrevo Blog* (February 23, 2009): <http://www.retrevo.com/content/blog/apple-tablets-pc-users>, retrieved December 2010.
3. P. Noble and T. Gruca, "Industrial Pricing: Theory and Managerial Practice," *Marketing Science*, 18, 3 (1999): 435–54.
4. G. Cressman, Jr., "Commentary on Industrial Pricing: Theory and Managerial Practice," *Marketing Science*, 18, 3 (1999): 455–57.
5. R. Best, "Marketing Excellence Survey," <https://www.mes.executiveboard.com/Public/Default.aspx>, retrieved September 2004.
6. A. Cleland and A. Bruno, *The Market Value Process* (San Francisco: Jossey-Bass, 1996): 106; and D. Kirkpatrick, "The Revolution at Compaq Computer," *Fortune* (December 14, 1992): 80–8.
7. E. Sullivan, "Value Pricing," *Marketing News* (January 15, 2008): 8.
8. M. Morris and G. Morris, *Market-Oriented Pricing* (Lincolnwood, IL: NTC Business Books, 1990): 93–100.

9. R. Dolan and H. Simon, *Power Pricing* (New York: Free Press, 1966): 82–3.
10. T. Nagle and J. Hogan, *The Strategy and Tactics of Pricing* (Upper Saddle River, NJ: Prentice Hall, 2006): 27–44.
11. G. Smith and T. Nagle, “A Question of Value,” *Marketing Management* (July–August 2005): 39–43.
12. B. Gale, *Managing Customer Value* (New York: Free Press, 1994).
13. J. Morton and H. Devine, “How to Diagnose What Buyers Really Want,” *Business Marketing* (October 1985): 70–83.
14. J. Axelrod and N. Frendberg, “Conjoint Analysis,” *Marketing Research* (June 1990): 28–35; P. Green and V. Srinivasan, “Conjoint Analysis in Marketing Research,” *Journal of Marketing* (October 1990): 3–19; D. Wittink and P. Cattin, “Commercial Use of Conjoint Analysis,” *Journal of Marketing* (July 1989): 19–96; and A. Page and H. Rosenbaum, “Redesigning Product Lines with Conjoint Analysis,” *Journal of Product Management* (1987): 120–37.
15. K.N. Rajendran and G. Tellis, “Contextual and Temporal Components of Reference Price,” *Journal of Marketing* (January 1994): 22–34; C. Donoho, “Purchase Price and Order of Presentation” (Unpublished Dissertation, University of Oregon, 1991).
16. T. Nagle and J. Hogan, *The Strategy and Tactics of Pricing* (Upper Saddle River, NJ: Prentice Hall, 2006): 265–74.
17. *California Technology Stock Letter* (February 4, 1999): 4.
18. G. Moore, *Inside the Tornado* (New York: HarperCollins, 1985).
19. K.R. Harrigan, “Strategies for Declining Industries,” *Journal of Business Strategy* (Fall 1980): 20–34.
20. G. Seiler, “Colorful Chemicals Cuts Its Losses,” *Planning Review* (January–February 1987): 16–22.
21. G. Smith and T. Nagle, “Financial Analysis for Profit-Driven Pricing,” *Sloan Management Review* (Spring 1994): 71–84.
22. R. Dolan and H. Simon, *Power Pricing* (New York: Free Press, 1996): 222–41.
23. T. Nagle and J. Hogan, *The Strategy and Tactics of Pricing* (Upper Saddle River, NJ: Prentice Hall, 2006): 175–204.
24. G. Tellis, “The Price Elasticity of Selective Demand: A Meta-Analysis of Econometric Models of Sales,” *Journal of Marketing Research* (November 1988): 331–41.