

Getting a Read on Market-Defined "Value"

Value-Based Pricing's emphasis on customers' perceptions of a product's overall value makes it the best method for optimizing both profitability and flexibility. Highly sophisticated models now exist for implementing VBP.

By Jerry Wind

Can we increase the price of our product? Should we lower our price in response to a competitive price reduction? Should we lower our price in anticipation of a new competitive entry? What should be the price points for the various products in our product line? How should we price an innovative product or service that establishes a new product or service category? And how should we price a routinely purchased product?

Answering these and similar questions while establishing a pricing strategy that will allow a firm to achieve its short- and long-term profit and share objectives, requires, at the minimum, information on:

- The consumer's perception of and preferences for the various products and service offerings at different prices;
- The competitors' offensive and defensive pricing and marketing strategies;
- The perceptions, preferences and expected actions of the distributors and other relevant intermediate marketing organizations;
- The expected environmental conditions; and
- The firm's own strategy and, in particular, its selected portfolio of target market segments, the positioning of its products and services, and its marketing and distribution strategies.

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An examination of these requirements clearly suggests that reliance on the still often-used price setting approach of *cost plus* is totally inappropriate. In this respect, the inputs for a pricing decision are no different than the inputs required for the establishment or change of the firm's overall marketing strategy.

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An alternative to the cost basis, and an attractive basis for setting the pricing decision, is value-based pricing. Value-based pricing assures pricing the product and service based on the *value* it is expected to deliver to its customers. This value reflects the consumers' trade-off between the expected benefits and cost of our product and those of the competitors.

The purpose of this article is to suggest that value-based pricing is conceptually the correct way of pricing products and services—the "why"—and that practical methods are available for determining consumers' perceptions of the value delivered by a product or service—the "how." Some suggestions for implementation follow.

The "Why" of Value-Based Pricing

Becoming customer/marketing oriented is

Exhibit 1. The "Why" of Value-Based Pricing

Value-based pricing assures that the selected price of a product or service:

1. Delivers to consumers the benefits of the product or service at an acceptable price and thus provides them value for their desired quality.
2. Is consistent with the product's positioning and thus helps establish the *brand's equity*.
3. Is consistent with the selected marketing and distribution strategy.
4. Reflects consumers' perceptions of competitors' pricing and offerings.
5. Recognizes the heterogeneity of any market and focuses on the best portfolio of market segments.
6. Reflects the important considerations of total life cycle cost of a product.
7. Reflects the changing market conditions (i.e., entry of a new competitor, changing economic conditions, etc.) and the product's current stage in its life cycle.
8. Reflects idiosyncratic product/market conditions (e.g., situations when the utility of a product depends on the number of users).
9. Recognizes the many aspects of pricing (i.e., the value of financing terms, of guarantees, etc.).
10. Helps the firm achieve short- and long-term share and profit objectives.

widely accepted as one of the requirements for assuring success and as a characteristic of successful firms. Being customer oriented requires, however, understanding the *value* the customer derives from a product or service and using this as the basis for pricing the product. Any other approach for pricing a product—whether the cost of producing and delivering the product or the current competitive prices—is incomplete and can serve only as a partial input to the pricing decision but not as the key and sole determinant of the product's price. In fact, pricing a product based on its cost is contrary to a solid marketing orientation.

Being customer oriented requires understanding the value the customer derives from a product or service and using this as the basis for pricing the product.

A good example for a value-based pricing is the way Wickes plc., a large European home-improvement retailer, prices the new products it develops. It first establishes what the consumers' needs are. For example, for a shower (in the U.K. it would be a shower with a pump to assure adequate water pressure) it identifies the value of such a shower to its potential customers, and it uses this information as a basis for setting a price target.

Once the customer-based product specifications and price target are established, Wickes seeks manufacturers who can produce the product at the target quality and cost level. The resulting products have been enthusiastically received by the market, meeting management's sales and profit expectations.

Value-based pricing (VBP) is used by an increasing number of firms—such as Dupont, which developed the Value-in-Use concept. With this approach, the firm sets its prices based on the value the product offers its users. Conceptually, VBP is the way a marketing-oriented firm should price its products and services. Exhibit 1 identifies the specific benefits of such an approach, which we will now examine one at a time.

Pricing a product or service using VBP assures that the product delivers to the consumers the benefits they want at an acceptable price and pro-

vides the value for their desired quality. Products and services are bought by consumers for the benefits (problem solutions) they offer. In selecting a product or service, consumers are therefore confronted with two sets of trade-offs: (a) a trade-off among the various benefits a product can offer—e.g., a good-tasting product that is high in calories vs. a poor-tasting but low-calorie substitute, and (b) a trade-off between the bundle of benefits and cost of the product.²

Assessing the trade-offs is at the core of VBP and assures that the price is likely to be perceived by consumers as offering them the value they seek from the product.

This focus on perceived consumer value is also a critical component of any quality improvement program, since it defines quality as perceived by consumers (as a result of the trade-off between the delivered benefits and price). This suggests, for example, that value and quality can be established at any price points and not only for expensive products.

VBP assures that price is consistent with the product's positioning, and it thus helps to establish the brand's equity. A product positioning—consumers' reasons for buying and using a product instead of its competitors'—is the foundation for any marketing strategy. In general, positioning strategies, which reflect consumers' perceptions of a product on the benefits they seek, tend to center on any of the following four bases for positioning:

- a. *Performance benefits*—The degree to which the product or service works and meets the specific functional usage requirements and expectations of the target segment.
- b. *Convenience*—The convenience in buying, delivering, storing, preparing and using the product, monitoring its performance, and disposing of it.
- c. *Cachet*—The degree to which the product or service helps achieve for the customer prestige/social acceptability/self-esteem or self-actualization.
- d. *Price value*—The degree to which the product offers the right price value.

Price can be the sole basis for positioning (typically as the low-price offerings, but occasionally as the most expensive premium product). In this case, it is obvious that the price should be perceived as offering the desired value. In the more common situation in which the firm selects a non-price positioning (any of the three other bases for positioning) it is critical that the price is perceived as consistent with the positioning and thus offers the desired value.

The higher the perceived value of a product and its positioning, the higher the likelihood of continued consumer loyalty to the product and thus the product's brand equity. Therefore, measures of the consumer value of a brand (reflecting both the product's promise and delivery) can serve also as one of the measures of brand equity.

VBP assures that the price is consistent with the selected marketing and distribution strategy. The overall positioning of a product is not determined by the product alone—and not even by the entire product and service offering. All the accompanying marketing and distribution strategies—advertising, public relations, and specific distribution—affect the perceived positioning of the product and service.

If, for example, the marketing strategy calls for exclusive distribution through prestigious stores, a high price may be required to help establish an overall prestigious positioning of the product. VBP will help assure that the selected price is consistent with the entire marketing and distribution strategy through the consumer's value perception.

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VBP reflects the consumer's perception of the competitors' pricing and offerings. Consumer determination of the value of a brand reflects not only their satisfaction from the specific brand but also their perception (and experience) with competing brands. Thus, the measure of consumers' perception of a product's value reflects

their perception of the current and expected competitive market conditions.

VBP recognizes the heterogeneity of any market and focuses on the best portfolio of market segments. All markets are heterogenous. All product/markets have some consumers who are very price sensitive and others who are less sensitive to prices. This suggests the need for segmenting the market and selecting the target segment(s) for the firm.

The most effective segmentation (reflecting a combination of product usage and benefits sought) typically includes price as one of the benefits. Benefit segmentation, and its associated segmentation based on the perceived value of a given product, is therefore critical for determining the product line of the firm—a single product to reach a single segment or a multiple product line to reach multiple segments.

VBP assures that the price is consistent with the selected marketing and distribution strategy.

VBP reflects the consideration of total life cycle costing. In many cases, the purchase price is only a small part of the total life cycle costs of the product. For a car, for example, other costs include those for its operations (including fuel and insurance) and maintenance.

A correct VBP assures that the value of the product reflects the entire product life cycle costs. This is often referred to as EVC—Economic Value to the Customer. EVC compares the total product costs against the total cost of the product the customer is currently using.¹ These total costs include start-up costs and post-purchase costs of maintenance and operation, and they definitely should reflect the product's durability, reliability, and the benefits of warranties and guarantees. Whereas total life cycle cost is becoming a common practice in an increasing number of industrial situations, it is still quite rare in consumer product markets.

¹ Forbis, John L. and Mehta, Nitin T. 1979, "Economic value to the customer," *McKinsey Staff Paper* (Chicago: McKinsey & Co., February), pp. 1-10.

VBP reflects changing market conditions. The value of a product often reflects the impact of changing environmental conditions on consumers' perception of value. In uncertain economic conditions, the value of a product may be perceived as significantly lower than the value of the same product in a more favorable economic scenario.

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Other environmental changes—such as the increased concern for environmental issues—the green revolution—can be reflected in consumers' willingness to pay more for products from companies trying to protect the environment. In fact, a recent Gallup study (*Advertising Age*, September 25, 1989) found that close to 90% of consumers are willing to pay more for products or packaging made environmentally safe.

VBP reflects idiosyncratic product/market conditions. The value of a product reflects the idiosyncratic conditions of the product and market. For example, consider a new product such as Electronic Mail. The value of such a product is obviously a function of the number of its users. Any pricing strategy should be designed to reflect this fact.

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VBP recognizes the many aspects of pricing. The value of a product measures the value of such price-related factors as terms of payments, various allowances for trade-in, guarantees, help in barter, offset and countertrade, reduction of exchange rates risks (whenever appropriate), and reduction of inventory requirements.

VBP allows the firm to achieve its short- and

long-term profit and share objectives. Understanding the value a product offering has for the target segment allows a firm to develop a product offering that meets both the consumer target price and the firm's own target profit.

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Furthermore, since VBP can be applied to all the intermediate marketing organizations, the final pricing decision can reflect the value the product offers to all the relevant actors in the marketing value chain.

Taking these and similar factors into account provides a more realistic assessment of a product's value as guidelines for its pricing.

The "How" of Value-Based Pricing

The most common approaches to estimating consumers' perceived value of a product are the following:

1. Direct price assessment. This includes both the price consumers will be willing to pay for a product and consumers' perceptions of the product's price. Of special interest is the comparison of the perceived price with the price consumers are willing to pay.
2. Direct perceived value assessment of a product. This often involves a constant sum allocation of 100 points among a number of competing products in a way that best reflects the consumers' perceptions of the relative value of each product.
3. Indirect assessment of value by inferring it from consumers' overall preference ranking of the product and its competitors. This data can be mapped (using joint space multidimensional scaling algorithms), suggesting value as a function of the distance of the brand from the consumer's ideal point and the competing brands.²

4. Indirect determination of value by asking consumers to (a) assess the relative importance of the key product attributes/benefits, and (b) rate the various products on these attributes.

Multiplying the perceived position of the product on each attribute by the attribute's weight produces a total score that can be viewed as the product's value. The advantage of this approach is that it also provides diagnostic insights into the strengths and weaknesses of the product in relation to its competitors. These data can be mapped (using any number of multidimensional scaling algorithms), providing better insights into the perceived components of value.

Whereas these approaches to the determination of consumer-perceived value can be applied to both current and new products, in determining the value of a product offering (as related to its price elasticity) it is important to distinguish between the case of an established product and a new product offering. Econometric approaches for the determination of the price elasticity of a product can be applied only to established products.

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In determining the value of new products (either at the concept or product prototype stages) three sets of approaches (corresponding to three of the major types of new product forecasting models) have been utilized:

1. Test-market-based approaches (e.g., News, Tracker).
2. Pre-test-market-based approaches (e.g., Assessor).
3. Concept-test-based approaches (especially those based on conjoint analysis studies).

Field experiments such as test markets are the most accurate way to assess consumers' price

² Wind, Yoram J., *Product Policy: Concepts, Methods and Strategies* (Addison-Wesley, Reading, MA, 1982).

**Exhibit 2. The "How" of Value-Based Pricing
(Four Conjoint Analysis Based Approaches)**

1. The conventional full profile conjoint analysis studies.²
2. An adaptation of a conditional logit model to the estimation of competitive price demand relationships—ELASTICON.³
3. A hybrid conjoint model for price demand estimation.⁶
4. A price demand (PRIDEM) model and associated decision support system for optimal price determination.⁷

elasticity; however, such experiments are subject to severe difficulties, especially when one wants to experiment with a large number of stimuli. Therefore, lab experiments such as pretest market simulations and surveys based on conjoint analysis-based designs have been the most

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effective approach for determining the value consumers assign to various product and service offerings. Conjoint analysis studies^{2,3} have been widely employed in thousands of commercial and numerous academic studies.

Since these studies can be applied to both concepts and products and are the most powerful set of tools for determining the value consumers are likely to see in a product/service offering, the rest of this article will focus on this approach. Four types of conjoint analysis studies have been developed and employed in pricing studies. These are listed in Exhibit 2 and described below.

The Conventional Conjoint Analysis Strategies

In many of the conventional full profile conjoint analysis studies, price is included as one of the variables. Consider, for example, the list of factors and levels used in a study of various

The ELASTICON model is a convenient and powerful way of establishing the price elasticity of any segment of consumers to a set of established and new product offerings.

financial planning packages represented in the left-hand panel of Exhibit 3. In this example, price was one of seven factors studied. The study involved 300 consumers, each of whom received 18 hypothetical financial planning products following an orthogonal array design. Each of the concepts was evaluated on a five-point, intention-to-buy scale. The data were analyzed using regression analysis and resulted in utility functions for each of the factors and levels. Since the utility functions were developed at the individual levels, the consumers were clustered to identify the key benefit segments.

The right-hand panel of the exhibit presents the utility function of two of the resulting segments. An examination of the exhibit suggests that the two segments vary in the price elasticity as well as in their utility for the various product offerings.

² Green, Paul E. and Wind, Yoram J. 1975b, "New ways to measure consumers' judgment," *Harvard Business Review*, Vol. 53 (July-August), pp. 107-117.

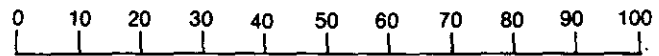
³ Green, Paul E. and Srinivasan, V. 1989, "Conjoint analysis in marketing research: A review of new developments," Working Paper, The Wharton School of the University of Pennsylvania.

⁵ Mahajan, Vijay; Green, Paul E.; and Goldberg, S. M. 1982, "A conjoint model for measuring self- and cross-price demand relationships," *Journal of Marketing Research*, Vol. 19, pp. 334-342.

⁶ Green, Paul E. and Krieger, Abba M. 1990, "A hybrid conjoint approach for price demand estimates," Working Paper, The Wharton School of the University of Pennsylvania.

⁷ Green, Paul E. and Krieger, Abba M. 1989, "Modeling competitive pricing and market share: Anatomy of a decision support system," Working Paper, The Wharton School of the University of Pennsylvania.

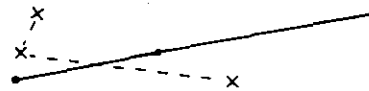
Exhibit 3. Illustrative Factors and Levels and Utility Functions for Two Segments in a Conjoint Analysis Study of New Financial Planning Concept



A new financial counseling service which:

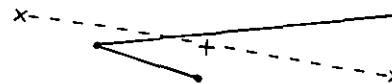
A. Offers:

1. Long-term financial planning.
2. Short-term income and expense mgmt.
3. Both.



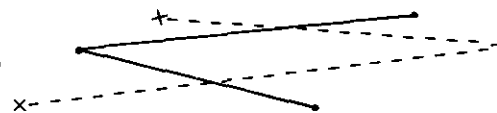
B. Based on data provided by you in a:

1. Self-administered questionnaire.
2. Telephone call.
3. Personal interview.



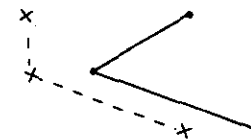
C. A report is provided based on analysis which is:

1. Computerized.
2. Conducted by a professional analyst.
3. Done with the help of "do-it-yourself" instructions.



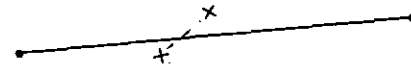
D. The report is provided:

1. Once, with no follow-up.
2. Once, with automatic annual follow-up at a moderate fee.
3. Once, with follow-up upon your request at a moderate fee.



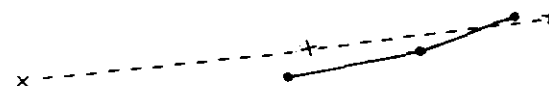
E. Selling tie-ins:

1. Will not be done.
2. A broker will contact.



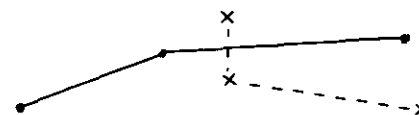
F. Price:

1. \$50
2. \$100
3. \$150



G. You will find out about this service, which is distributed by a nationally known brokerage firm:

1. Through the mail.
2. From advertisements.
3. From a broker.



SEGMENT A

SEGMENT B

Exhibit 4. Illustrative Data Collection for an Elasticon Study

You have seen descriptions of hotel/motels. Let's assume:

- You are on your usual non-convention business trip to suburban or residential areas of cities and towns (not the airport and downtown of major cities) in a southern or western state.
- All the hotels/motels you just read about are available and equally accessible to you.

As you know, hotels can vary in their prices. Based on recent information, the prices shown on this card reflect current conditions. Given this information and all you know about the hotels that you just read about, please divide the 10 points across the five hotels/motels based on how likely you are to stay at each. You may arrange the points in any way you wish. The more points you give to any hotel/motel, the more likely you are to stay there. You would give 0 points to any hotel/motel where the chances are very low that you would stay.

La Quinta:
\$30.00 = _____

Marriott:
\$40.00 = _____

Newer Holiday Inn:
\$40.00 = _____

Older Holiday Inn:
\$35.00 = _____

Hampton:
\$30.00 = _____

Total 10

Please make sure the total adds to 10 points.

Now, we plan to show you additional cities. Each city will have the same 5 hotels but their prices may vary.

In addition, the individual utility functions were input into a computer simulation, resulting in a brand switching matrix for each of a number of selected new products against a set of competing products. The computer simulation established the share of choices for each of a number of possible products selected by management, reflecting consumers' utility for the various product attributes and price. In this case, any product concept will be "chosen" if it gets a higher total utility than any of its "competing" products.

In other more recent applications, instead of a simulation the resulting utility function (for the product attributes and price) are input into an optimization program resulting in recommended optimal product offerings and specific price.

The ELASTICON Model

The ELASTICON model⁵ is a convenient and powerful way of establishing the price elasticity of any segment of consumers to a set of established and new product offerings. Consider, for example, the pricing of hotel services. As part of a large study to design the optimal hotel offerings for "Courtyard by Marriott," an ELASTICON task and analysis was conducted.⁶ The data collection is outlined in Exhibit 4, with Exhibit 5 illustrating the results.

The data collection involved the presentation of a base case of four established hotels at their current prices and a concept of a new hotel—Hampton—which was described separately on a large number of attributes (see Exhibit 4).

The hybrid approach has recently been extended to incorporate multiple suppliers with particular emphasis on competitive price relationships.

The profiles are designed following an experimental design in which the price levels are unique to each hotel. The respondents' task involved allocating a constant sum—10 nights across the various hotels given the price for each

⁵ Wind, Yoram J.; Green, Paul E.; Shifflet, Douglas; and Scarbrough, Marsha, "Courtyard by Marriott: Designing a hotel facility with consumer-based marketing models," *Interfaces*, Vol. 19, No. 1 (January-February 1989), pp. 25-47.

hotel. The data were analyzed using a conditional logit model to estimate the parameters, and the resulting output is illustrated in Exhibit 5.

An examination of Exhibit 5 highlights the findings on the following criteria:

1. Assuming the prices specified in the reference conditions, the expected share of nights for the new product—Hampton—is 29% among the pleasure segment.
2. Given various other prices of Hampton and its competition (the price options are listed under the alternative price conditions), one could identify the impact on Hampton's share of changes in Hampton's prices.
3. Given various price changes of the competitors, the program also outlines the cross elasticity of demand—i.e., what is the impact of a change in the price of each of the competitors on the share of Hampton.

The ELASTICON approach is relatively easy to implement and in its various applications offered management useful consumer-based input for their pricing decision.

The Hybrid Conjoint Analysis Model

Hybrid conjoint analysis models extend the conventional conjoint analysis models by combining part worths estimated from self-explicated data with information obtained from full profile task. This procedure greatly simplifies the respondents' task and allows the incorporation of very large numbers of factors and levels.⁹

The PRIDEM model, with its associated decision support system, allows the determination of an optimal pricing strategy.

The hybrid approach has recently been extended to incorporate multiple suppliers with particular emphasis on competitive price relationships.⁶ This model combines the concepts of a regular hybrid model with the concept underlying the ELASTICON model. The data collection tasks of this approach are quite demanding but can be applied in special cases.

Exhibit 5. Illustrative (disguised) Results of the ELASTICON Study

Business Segment

Reference Conditions:

Newer Holiday @ \$40/night	Share of Nights 29.0%
Newer Marriott @ \$40/night	
LaQuinta @ \$30/night	
Older Holiday @ \$35/night	
Hampton @ \$30/night	

Alternative Price Conditions:

Newer Holiday @ \$35/night
 Newer Marriott @ \$35/night
 LaQuinta @ \$22/night
 Older Holiday @ \$27/night
 Hampton @ \$22; \$26; \$35/night

Self Price/Demand Relationships:

- If Hampton is priced at \$22, add 9.3 points to Hampton's share.
- If Hampton is priced at \$26, add 5.3 points to Hampton's share.
- If Hampton is priced at \$35, subtract 7.8 points from Hampton's share.

Other Price/Demand Relationships:

- If LaQuinta is priced at \$22, subtract 1.7 points from Hampton's share.
- If Newer Holiday is priced at \$35, subtract 1.2 points from Hampton's share.
- If Older Holiday is priced at \$27, subtract 2.9 points from Hampton's share.

The PRIDEM Decision Support System for Optimal Price Determination

The latest conjoint analysis model for establishing consumer perceived value of a product's offering is the PRIDEM model.⁷ This model, with its associated decision support system, allows the determination of an optimal pricing strategy (conditional on fixed levels for price and non-price attributes of competitive products, including cost estimates).

The model and its initial application offers a conjoint analysis based approach to estimating consumer utilities for the various product attributes and price and incorporates it in a decision

⁹Green, Paul E., "Hybrid conjoint analysis: An expository review," *Journal of Marketing Research*, Vol. 21, No. 2, May 1984, pp. 155-159.

support system that helps management decide on an optimal pricing strategy.

Conclusions

Kotler, in his widely used *Marketing Management* text, states: "An increasing number of companies are basing their price on the product's perceived value. They see the buyers' perception of value, not the seller's cost, as the key to pricing. They use the non-price variables in the marketing mix to build up perceived value in the buyers' minds. Price is set to capture the perceived value."¹⁰

Value-Based Pricing is the correct approach to pricing a product by any marketing-oriented firm. While cost provides the *floor* for any price, and competitors' pricing offers a reference point for the consumer trade and firm, it is the expected value of the product which should determine the product's price.

Value-Based Pricing requires input on consumers' perception of the value of the product

¹⁰Kotler, Philip, *Marketing Management: Analysis, Planning, Implementation, and Control*, Prentice Hall, Englewood Cliffs, NJ, 1988.

vs. its competitors. A number of research methods are available for accurately determining consumers' values and can be easily implemented.

The advancement in methods, especially the conjoint analysis-based approaches by Paul Green and his colleagues, have outpaced the management practice of all but the most sophisticated firms.

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What is required, therefore, is management recognition that it is the *consumer* (and trade) perception of value that counts, not its own costs or perceptions. Given this recognition, and utilizing available methods for estimating consumers' values, will enhance any firm's ability to achieve its short- and long-term profit and share objectives. ■