

September 1975

Pricing Theory Revisited: The Small Business or "Peripheral" Market

John H. Jackson
University of Wyoming

Donald E. Vinson
Louisiana State University

Follow this and additional works at: <https://digitalcommons.georgiasouthern.edu/sbr>



Part of the [Business Commons](#), and the [Education Commons](#)

Recommended Citation

Jackson, John H. and Vinson, Donald E. (1975) "Pricing Theory Revisited: The Small Business or "Peripheral" Market," *Southern Business Review*. Vol. 1: Iss. 2, Article 3.

Available at: <https://digitalcommons.georgiasouthern.edu/sbr/vol1/iss2/3>

This article is brought to you for free and open access by the Journals at Digital Commons@Georgia Southern. It has been accepted for inclusion in Southern Business Review by an authorized administrator of Digital Commons@Georgia Southern. For more information, please contact digitalcommons@georgiasouthern.edu.

FEB 11 1976 PRICING THEORY REVISITED:

DA SOUTHERN COLLEGE

THE SMALL BUSINESS
OR "PERIPHERAL" MARKET

John H. Jackson

and

Donald E. Vinson

In the classical world of microeconomic pricing theory, the astute observer has little difficulty determining at what price the firm will sell its output. If one can assume (as economists are wont to do) that perfect competition is a "reasonable" assumption to make in explaining pricing behavior among the firms in a competitive market, it follows that the short-run equilibrium price level is that price at which the short-run quantities demanded and supplied are equal. At that equilibrium point, price will equal marginal cost for all firms that choose to produce rather than shut down their plants. Therefore, since firms can change their plant size, and either enter or leave the industry, the long-run equilibrium price a firm charges is the equivalent of its long-run average cost; it is all very elementary.

Unfortunately, business pricing policy is infinitely more complex, and at the same time, infinitely less sophisticated than the microeconomists' view of the marketplace would have us believe. Robert Heilbroner contends that there is not one market system in the United States but two. [7] One of these markets consists of the millions of enterprises that make up that portion of the economy known as "small business." There are roughly 12 million small businesses in America as opposed to only 1.5 million larger business corporations, which compose the second of Heilbroner's markets. Small business collectively employs roughly 40 percent of the American labor force compared to 25 percent that works for big business and 35 percent that works for non-profit organizations. These 12 million mini-businesses do not begin to match the economic power of the giant enterprises at the other end of the scale. Heilbroner, using the terminology of Robert Averitt, characterizes the small business sector as constituting the "periphery" and the giant organizations as composing the "center" of American business activity.

According to Heilbroner, the market structure at the center is characterized by an oligopolistic situation, while the periphery is nearer the economists' classical competition model. [7] This model implies a situation in which there are so many firms of roughly the same size that no individual firm can directly influ-

D. S. C. LIBRARY

ence market prices. If indeed this is the case, then the classical microeconomic pricing model must apply to the small firms rather than those in the "center" market. But an examination of the different mechanisms by which pricing decisions are actually made in the peripheral market reveals discrepancies with the economists' model.

The Economists' Demand-Oriented Pricing Approaches

The two most commonly noted approaches to demand-oriented pricing are (1) marginal analysis and (2) a modified form of break-even analysis.

Marginal analysis assumes that the firm is a profit-maximizer and knows the demand function and cost data for the products undergoing pricing considerations. Given these cost and demand functions, one can determine mathematically the price which will maximize profits, per period, for the firm. Sturdivant and his colleagues suggest that marginal analysis is a method of determining "the additional marginal unit for which marginal revenue equals the marginal cost of producing the additional unit." [13] If marginal revenue is greater than marginal cost, output should be continued until the next unit produced has a marginal cost greater than marginal revenue.

Even though marginal analysis may be quite useful for situations in which demand curves can be meaningfully estimated, it nevertheless contains some serious limitations for many practical business applications. It assumes, first, that the firm will always be a profit-maximizer. (The arguments here are well publicized.) Further, the model does not consider the reactions of people other than the immediate customers, or that the demand schedule for a particular product may be interrelated with other products produced by the firm. In addition, the marginal analysis approach to understanding pricing ignores nonprice variables while assuming that cost information is accurate and readily available — quite contrary to the situation that exists in many smaller business organizations.

A second method of demand-oriented pricing dealt with here is a modified break-even approach. (A more simple break-even approach to pricing will be discussed later.) Here, the demand curve for the product in question is incorporated into an analysis of various break-even points. [6] With the demand curve superimposed upon the break-even chart, the price analyst can select the price which represents the greatest distance between the total cost and total revenue curves. This approach to break-even analysis can be quite useful if it is possible to make estimates of the most likely demand at each price. This method does appear

more intuitively appealing to practical businessmen than the more obtuse method of marginal analysis. [1] It is doubtful, however, that this approach to pricing is widely followed in the peripheral market in this country because demand schedules at various prices are not readily available.

Beyond The Economists' Model

The determination of the peripheral firm's specific price does not occur in an academic vacuum insulated, *ceteris paribus*, from other pragmatic variables. Clearly factors such as the existence of other products in the line, the nature of the industry structure in which the company operates, the type of middlemen utilized to reach the ultimate consumer, and many other equally important conditions exert considerable influence upon the domain of price decision making. In addition, non-price variables, including ethical and legal considerations coupled with the forces of tradition, culture, and psychological expectations, further complicate the choice among price alternatives. Although all of these variables deserve substantial comment, their in-depth analysis is beyond the scope of this short paper. The purpose here is to review the various methods by which firms actually determine the price of their products. And, while there are numerous approaches to the problem of price determination, those most frequently identified by marketing professionals as particularly useful in price setting activities will be the subject of this discussion.

Accordingly, the basic methods selected for this review are the cost-oriented and competitive-oriented approaches to price determination; the economists' demand-oriented approaches have been noted. It must be remembered, however, that these distinctions serve only to identify the approaches generally and that they do not imply that they are mutually exclusive. The discussion also considers an aspect of price setting that the economists have completely ignored — the so called "psychological" pricing practices.

Cost-Oriented Approaches

Typically, a cost-oriented approach to pricing involves the calculation of those costs which can be directly and distinctly allocated to the product under consideration. Once these variable costs have been determined, a certain amount of "overhead" consisting of the particular product's share of fixed costs is calculated. Finally, some predetermined markup is added. As Alpert suggests, "these methods emphasize cost over demand considerations, although demand is sometimes loosely considered." [2]

Markup Pricing

Of all the cost-oriented approaches used, markup pricing — a favorite among wholesalers and retailers — is one of the most frequently seen. The method is actually quite simple: markups, which typically vary across product classes, are expressed as a fixed percentage of unit cost. A retailer, for example, might receive a shipment of magnetic recording tape, stereo tape recorders and wrist watches. To the invoice price, he may add a fixed percentage (e. g., 40 percent) for each watch, a different percentage (say 24 percent) for each box of recording tape and, finally, another (perhaps 10 percent) on each tape recorder.

A combination of factors generally determines the markup on a product classification. These include manufacturers' suggestions, industry tradition, expected turnover, the extent of pilferage associated with the product and the amount of service required to sell it. Markup pricing appears to be more of an art than a science — it is quite difficult to explain or justify the variations in markups across selected product categories. However, Lee Preston, in his study of pricing practices in the retail food industry, presented three commonly used "rules of thumb" which help to explain the wide dispersion of markups within common grocery product groups. He discovered that store managers felt (1) markups should vary inversely with unit costs; (2) markups should vary inversely with turnover; and (3) markups should be higher and prices lower on private brands than on nationally advertised manufacturers' brands. [10]

Cost-Plus Pricing

A second cost-oriented pricing method and one quite similar to the markup methods is commonly called cost-plus pricing. This method is frequently used by manufacturers and involves variable costs per unit augmented by some allowance or share of factory overhead. This "full cost" (variable cost per unit plus unit allocation for overhead) is then increased by some markup. Cost-plus pricing is often utilized in government negotiated contracts in which the consumption of the firm's products is guaranteed.

Even though many firms adhere to markup and cost-plus pricing practices, both methods possess inherent limitations, among which are: (1) difficulties in allocating costs among products; and (2) fallacious assumptions that estimated sales and production will actually be fulfilled at price levels resulting from cost-plus pricing. This method obviously ignores the concept of price elasticity. Anything like "maximum" profits, when resulting from a pricing procedure which merely adds a "fair"

markup to either full costs or invoice costs, is likely to occur by coincidence at best. [2]

Conventional Break-Even Pricing

Another method of price determination based upon cost orientation is the break-even analysis which is unlike the demand-oriented break-even method mentioned earlier. In a cost-oriented situation, the pricing executive attempts to relate the firm's total costs and revenue to quantity sold, for the purpose of determining the "probable effects on profits of alternative courses of action, including price adjustments." [5] In the typical break-even model, it is assumed that the total costs incurred in the manufacture of a product can be delineated into fixed and variable costs. If this is the case, break-even represents a quick method of determining to what degree profits vary with output. Essentially, one ascertains unit contribution to profit and overhead (average selling price per unit minus variable cost per unit) and then divides the amount of total fixed costs by this figure. The quotient represents the number of units required to break-even at the specified price with the associated costs. Thus, this procedure can be utilized to compute the effect on the break-even point of changes in fixed costs or in unit contribution as a result of raising or lowering the selling price. Alpert suggests that break-even does not indicate what price is best; it merely indicates the number of units which must be sold at each price in order for the firm to "break-even." [2]

Target Pricing

A final and frequently seen method of cost-oriented pricing is called "target rate of return pricing." Here, only a minor alteration to the traditional break-even model is required; the pricing analyst needs only to increase the fixed cost figure used in break-even by the profit figure required from invested capital before taxes. Fundamentally, the required profit figure is treated as simply another fixed cost. With this method, fixed costs are incremented by this amount and the break-even point is computed for each price reflecting the target rate of return required by the firm.

The principle weakness in both of the above mentioned break-even models (conventional and target) is that they do not incorporate demand considerations into the analysis. Further, the effects of competitors' strategies, market conditions and forms of non-price competition are generally ignored. Nevertheless, break-even analysis is considered to be an extremely useful tool for the student of pricing. It allows consideration of unit contributions rather than "full" costs, and at the same time permits

price decisions to compare "the likelihoods that various break-even points will be achieved at proposed price and cost mixtures." [2]

Competitive-Oriented Approaches

Of the competitive-oriented approaches to pricing, "ballpark" pricing and "follow the leader" pricing are the most frequently discussed in the marketing literature on pricing. [1] [5] [13] [9] In these approaches to pricing, the competition's reactions to prices are considered and, as the name of the general category implies, these reactions have a major influence on the price established by the firm.

Ballpark pricing is an attempt to price a specific product at, or very near, the average price charged by the industry. In situations where costs and demand are difficult to estimate, management may find comfort in targeting towards the collective wisdom of the industry.

"Follow the leader" pricing is a similar practice, but with this method the firm merely sets its price at the level established by the industry leader. This pricing method is often referred to as "administered" pricing and exists in the peripheral as well as the center markets. Although one could provide strong arguments for the multitude of weaknesses in the competitive-oriented approaches, the extent of structural influences in today's market environment lends a certain amount of credence to the wisdom of these practices.

Pricing And The Consumer

These forms of price determination are not presented as an all inclusive list. The purpose is to present major, commonly-used price determination methods that contrast with the economists' view of pricing in the peripheral market. But consideration of pricing in America would be incomplete without a brief look at the very evident results of "psychological" pricing practices.

The economists' law of demand tells us that there is an inverse relationship between the availability of a product or service and its price. Furthermore, it is usually assumed that the demand curve expressing this generalization is smooth and convex to the origin and slopes downward to the right. Economists admit that there are a few exceptions to this theory but, for the vast majority of demand situations, it appears to be an accurate statement of consumer purchasing behavior. In essence, it is assumed that the "rational" consumer would prefer to purchase at lower than at higher prices.

Psychological Pricing Practices

There are, however, intriguing situations in which this economic interpretation of consumer decision-making does not appear appropriate. Persons who set prices are well aware that there are instances in which various "psychological" pricing practices can be utilized to stimulate greater sales. These practices are not predicated upon economic theory but, instead, appeal to certain "quirks in the buyers psyche" or imply the use of psychological strategy by the price setter in arriving at his price. [2]

Psychological pricing has been defined as a deliberate attempt to create an illusion about the price of a product in the mind of the buyer. [5] The amount of knowledge about the subject is meager at best, but evidence exists to indicate "that consumers are not so simply motivated as the economists' demand curve implies." [11] Myers and Reynolds, in their treatment of price as a variable in consumer behavior, suggest that consumers look for signs or expectations in a product which lead them to anticipate a certain level of quality of performance. [8] The price of a product may be a very important sign in many purchasing situations, and manufacturers and retailers employ a variety of strategies to capitalize upon the consumer's "sign expectations."

Magic Pricing

One of the most frequently utilized methods of psychological pricing is referred to as "magic" or "odd" pricing. Middlemen or manufacturers attempt to set the retail price of the product just under some round figure in the belief that consumers will perceive the product as more advantageous than if priced at the even figure. Odd prices are one or two cents below the next highest price point (e. g., \$.29, \$.49, \$.99, \$2.98). Beckmar and Davidson point out that the one and two cent reductions are most commonly applied to products valued at four dollars or less. Beyond that point and up to fifty dollars, odd prices are more generally expressed in five-cent reductions from the even price (e. g., \$4.95, \$10.95, \$49.95). For products of considerable value, the magic prices may be presented with the odd ending expressed in dollars rather than cents (e. g., a color television set advertised at \$398.00).

Supposedly, the original intent of odd pricing was to force retail clerks to make change for customers and thereby insure the recording of each transaction on the cash register. However, the consumer's bill at the cash register may or may not terminate in an odd figure with today's sales taxes and current

methods of retailing almost preclude the possibility of a sales not being rung up.

Nevertheless, many manufacturers, wholesalers and retailers still adhere to the practice of setting magic prices. In one study, over thirty thousand products in seventy cities were reviewed. The findings indicated a rather amazing tendency — only three out of the ten possible numbers were used as terminal digits in retail food pricing. Sixty-four percent of all brand price occurrences ended with the number nine, nineteen percent ended in the number five, and nine percent had the number three as the terminal digit.

The rationale given for odd pricing is mixed, but one typically hears that consumers feel the odd ending retail prices have been lowered as much as possible. Some retailers contend that consumers perceive \$2.98 as just two dollars and a few pennies rather than three dollars. Further, some practitioners suggest that odd ending prices possess some "magical" attributes relative to other prices. More articles can be sold, for example, at \$.17 than at \$.14. The seventeen cent price suggests a reduction from twenty cents while the fourteen cent item suggests only a reduction from fifteen cents. [2] Finally, certain price endings are said to connote certain things to consumers. Consumers have come to expect prices ending in nine or five to represent product bargains at the retail level. On the other hand, even ending prices, especially with high priced merchandise, connote quality. Stanton and Alpert both indicate that expensive clothing and jewelry, for example, are rarely associated with odd prices. [12] [2]

The empirical evidence that is available seems to indicate that "magic" prices may be an effective selling device for some products, but not necessarily for a general array of goods and services. Ginzberg in 1936 attempted to discover if odd prices were more effective in stimulating sales than the nearest even-ending price — his results were inconclusive. [4] Nearly thirty years later, two British economists conducted a similar study and concluded that consumers may be conditioned to expect certain price endings for certain products. [3] Hence, the evidence supporting "magic pricing" is nebulous at best.

Price Lining

A second form of psychological pricing generally described in the pricing literature is referred to as "price lining." In price lining, the manufacturer "backs away" from the already established retail price or the price felt to be psychologically attractive for the pertinent target market. Once the appropriate retail

price has been decided upon, the manufacturer considers his expected marketing and materials costs and then determines the characteristics and the quality which will be built into the product. In other words, the price comes first and then the product characteristics are determined. For example, adhering to the nickel price, both Hershey's chocolate candy bars and Wrigley chewing gum were diminished in size during the last few years before retreat from the nickel price.

Tradition plays a tremendous role in price lining practices. The belief that customers **insist** upon a particular price has made many manufacturers fearful of deviations away from the "necessary" pricing point. As a result, prices for certain products tend to cluster at some points while avoiding others. This is particularly apparent in the automobile industry in which price lines tend to focus on the "low price," "intermediate market" and the "luxury field." [2] Although consumer reaction has been given as the reason for this phenomenon, the specific price "tradition" (especially in the center market) is more likely a function of oligopoly industry structures and the kinked demand curve than consumer tastes and preferences! The consumer-based explanation is probably more accurate in the peripheral market.

Prestige Pricing

The final form of psychological pricing to be discussed is prestige pricing. The firm attempts in this pricing form to increase its sales by advertising its high price as an asset. It is basically an attempt to allow consumers to participate in what sociologist Thorstein Veblen termed "conspicuous consumption." In addition to allowing the buyer to purchase "snob" appeal, the manufacturer may be able to "trade-up" other products in his line. The high-priced, quality product may "rub off" and add prestige to other products the company offers at relative "bargain" levels. Prestige pricing is frequently seen in luxury type consumer products and in segments of the industrial market where product reputation is high.

Summary

The concept of psychological pricing and a review of currently used pricing practices present an interesting departure from the classical parameters of microeconomic theory. Although economists' admit that there are exceptions to the downward-sloping, conventional demand curve, the model is still the tool used in most introductions to the subject of pricing in the peripheral market where, supposedly, the classic competitive model is most accurate. This treatment of pricing practices makes no claim of total coverage of a very complex and difficult area, but is

intended to provide an alternative view for those individuals who really believe the microeconomic pricing model.

REFERENCES

- [1] "Airline Takes the Marginal Route," **Business Week**, April 20, 1963.
 - [2] Alpert, Mark I., **Pricing Decision**, Scott, Foresman, Glenview: 1971.
 - [3] Gabor, Andre and Granger, C. W. J., "Price Sensitivity of the Consumer," **Journal of Advertising Research**, December 1964, 40-44.
 - [4] Ginzberg, E., "Customary Prices," **American Economic Review**, June 1936, 296.
 - [5] Harper, Donald V., **Price Policy and Procedure**, Harcourt, Brace and World, New York: 1966.
 - [6] Hawkins, E. R., "Price Policies and Theory," **Journal of Marketing**, January 1954, 234.
 - [7] Heilbroner, Robert, **The Making of Economic Society**, Fourth Edition, Englewood Cliffs: Prentice-Hall, 1972, pp. 120-127.
 - [8] Myers, James H. and Reynolds, William H., **Consumer Behavior and Marketing Management**, Houghton Mifflin, Boston: 1967, 47.
 - [9] Oxenfeldt, A. R., **Pricing for Marketing Executives**, Wadsworth, Belmont, California: 1961.
 - [10] Preston, Lee E., "Profits, Competition, and Rules of Thumb in Retail Food Pricing," University of California Institute of Business and Economic Research, Berkeley: 1963, 31.
 - [11] Shapiro, Benson P., "The Psychology of Pricing," **Harvard Business Review**, July-August 1968, 14-25.
 - [12] Stanton, William J., **Fundamentals of Marketing**, Third Edition McGraw-Hill, New York: 1971, 475-476.
 - [13] Sturdivant, F. D., et al., **Management Analysis in Marketing**, Scott, Foresman, Palo Alto: 1970, 455-475.
-

Dr. Jackson is an Assistant Professor of Business at the University of Wyoming. Dr. Vinson is an Assistant Professor of Marketing at Louisiana State University.