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# Consumer Perception of Price as an Indicator of Product Quality

*Implications of discovering "you get what you pay for" play an important role in marketing research.*

In March of 1945, Tibor Scitovsky addressed the Marshall Society at Cambridge. His topic was product quality. In his opening comments he noted that conventional demand theory is based on the assumption that all consumers possess perfect knowledge concerning their consumption decisions.<sup>1</sup> He noted that this implied that the consumer: (1) is an expert buyer, able to easily appraise product quality; (2) has a well-defined set of taste preferences; (3) is aware of all product purchase alternatives; and (4) is able to determine the appropriate marginal rate of substitution between different combinations of commodities to yield the highest possible level of utility. While these assumptions may be recognized as simplifications to aid in economic study, in reality they could not be less representative of the truth.

The real-world consumer of today suffers from lack of information concerning both purchase alternatives and product quality. In many cases the acquisition of such information is either impossible or too costly to obtain. The modern consumer is faced with the uncomfortable task of attempting to judge product quality through the use of imperfect knowl-

edge and with the aid of personal self-perceived quality criteria. The uncertainty associated with such a task stems from (1) uncertainty concerning the criteria that should be used, (2) uncertainty as to the degree of completeness and reliability of the information held in each criterion, and (3) uncertainty about the prediction value of each criterion.<sup>2</sup>

What are examples of such consumer-perceived quality criteria? A firm's size, its financial success, and even its age are often perceived by consumers as measures of quality.<sup>3</sup> Perhaps a more important measure of quality as perceived by the consumer is product price.<sup>4</sup> Economists (as well as many shrewd merchants) have long been aware of the concept of judging quality by price. A review of early writings reveals such explicit statements as the following by W. C. Mitchell (1912), J. M. Clark (1923), and C. D. Edwards (1940):

Surely no one can be expected to possess expert knowledge of the qualities and prices of such varied wares. The ease with which defects of materials or workmanship can be concealed forces the purchaser *to often judge quality by price.*<sup>5</sup>

A grocer takes prunes out of the same lot, divides

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them into two lots at different prices, perhaps glazing one with a wash of thin syrup, and very likely sells the more expensive lot the fast of the two.<sup>6</sup>

In other cases, he [the seller] uses his sales policy as a means to set prices higher than those of most rivals. The latter alternative is particularly probable in those markets in which the buyer is impressed with the importance of quality but has difficulty in identifying it, for there the high price may in itself be supposed to indicate that the goods are worth the money.<sup>7</sup>

Today, more than ever, the word *expensive* has come to connote quality in the mind of the consumer. The two concepts have almost become synonymous. The perception of price as an indicator of product quality is basically rational. It indicates a trust in the forces of supply and demand and is based on the assumption that prevailing market prices exist because they were found to be fair and reasonable. While theoretically this reasoning is sound, in actuality it contains one flaw. Market prices often are indicators of exactly what the uninformed consumer is capable of himself. That is, they are often simply the aggregate monetary expressions of the average opinion of other uninformed buyers.<sup>8</sup>

While interest in consumer perception of price as an indicator of quality is traceable back many years, surprisingly little research has been *directly* concerned with it. The purpose of this article will be to review and analyze the major efforts in this area while also commenting on resulting considerations in setting retail price and the implications they hold for the marketer.

### A Survey of Studies

The price-quality relationship suggested earlier lays the groundwork for many of today's marketing price decisions. Research in the area of consumer perception of price is relatively new. In a 1954 pioneering study, Harold J. Leavitt commented that to his knowledge there existed "no published research *directly* concerned with the consumer's interpretation of price."<sup>9</sup>

Since that time, at least five other studies concerning this topic have been published. Because these studies provide the bulk of the present knowledge in this area, they will each be reviewed.

### The Leavitt Study — 1954

Conducted at the University of Chicago, the Leavitt study was concerned with comparing the size of price differences among similar products as they related to consumer-perceived product stereotypes.<sup>10</sup> Products used in the study varied in price from fifty cents to one dollar. In order to assure the selection of products with valid stereotypes, a number of randomly chosen preliminary subjects were presented with a list containing fifteen home products such as ice cream, bobby pins, and floor wax. They were then asked to place five of the fifteen products in each of the following three categories: (1) all brands pretty much alike, (2) in between, and (3) big quality differences from brand to brand.

An analysis of these results provided the researchers with four clear product stereotypes. Moth flakes and cooking sherry were seen by the majority of respondents as fitting into the "all alike" category. Floor wax and razor blades were most often placed in the "considerable difference" category. These four products were then used in the construction of numerous hypothetical product choice situations and were presented to the approximately sixty subjects taking part in the experiment.

In the designed hypothetical situations, each respondent was confronted with two unnamed product brands and supplied with four corresponding sets of prices in the following manner:

*Brand A at \$0.68 versus Brand B at \$0.72*  
*Brand A at \$0.66 versus Brand B at \$0.74*  
*Brand A at \$0.62 versus Brand B at \$0.78*  
*Brand A at \$0.52 versus Brand B at \$0.88<sup>11</sup>*

With price supplied as the only product differential, the respondents were asked to make a purchase decision. After making this decision they were asked to answer questions concerning the satisfaction of their choices and to rate the products in regard to any perceived quality differences that they felt existed.

With regard to the results, Leavitt reported four findings:

1) The sixty respondents classified the four household goods in the same categories as did the preliminary subjects. Floor wax and razor blades were seen as "quality-difference" products and cooking

sherry and moth flakes were seen as being in the "all alike" category.

2) Fifty-seven percent of the subjects chose to purchase the higher-priced floor wax, 30 percent chose the higher-priced razor blades, 24 percent chose the higher-priced moth flakes, and 21 percent chose the higher-priced cooking sherry.

3) "Psychological conflict" increased with the respondent's perception of quality differences. In the "considerable-difference" category, 38 percent of the respondents indicated doubt about their choice of floor wax and 20 percent did so for their choice of razor blades. However, in the "all alike" category, only 10 percent of the respondents felt doubt concerning their choice of cooking sherry and only 12 percent were doubtful concerning their choice of moth flakes.

4) Some relationship may exist between the tendency to choose high or low price product items and the amount of their differential.

these findings suggest that demand curves may not invariably be negatively sloped, that price itself may have more than one meaning to a consumer, and that a higher price may sometimes increase, rather than decrease, his readiness to buy. . . . One might guess that a high price may be an attracting instead of a repelling force for particular brands of many different kinds of items.<sup>12</sup>

### *The Tull-Boring-Gonsior Study — 1964*

The Tull-Boring-Gonsior study employed the same approach as that used in the Leavitt study ten years earlier.

Its purpose was to determine if his [Leavitt's] findings on the imputation of quality based on price could be duplicated with an added assumption given the respondent concerning the price of the brand of the product class 'you usually buy.'<sup>13</sup>

Following Leavitt, a questionnaire list composed of twenty household items, food items, and toilet articles was presented to 110 subjects. Items on the list included such things as aspirin, table salt, and toothbrushes. The subjects involved were asked to indicate whether they felt the market brands of the listed products were "essentially similar," "varied substantially," or whether they were "uncertain concerning brand similarities." The results of the questionnaire showed that brands of liquid shampoo and floor wax were seen as the most dissimilar.

Brands of table salt and aspirin were considered "essentially similar." These classes of goods were then selected for use in a series of simulated purchase decisions.

The actual simulated purchase decisions were conducted with the use of another questionnaire, listing four product classes and three alphabetized brand names. The study subjects were asked to assume their usual family shopping role. However, they were told to assume that the brand they usually purchased was unavailable. The price of the available alternative brands was the only information provided.

A key departure from the Leavitt study was to provide the subjects with a reference price, that is, the price of the brand "you usually buy." It was felt that the addition of a reference price equaling that of the lowest-priced hypothetical brand provided would give each subject a similar reference point for his purchase decisions.<sup>14</sup> If considerable purchase differences still occurred between "essentially similar" and "varied substantially" products, it was felt that the belief that price acts as an indicator of quality would be confirmed.

The findings of the experiment showed that 49 percent of the subjects indicated that they would have purchased "vary substantially" brands of liquid shampoo while 46 percent would have chosen the "vary substantially" floor wax. Only 28 percent would have chosen the higher-priced table salt, and only 26 percent the higher-priced aspirin.

Tull, Boring, and Gonsior indicated it appeared evident that since only price information was provided concerning each product, the respondents who chose the higher-priced brands must have perceived the products available for selection as completely different products, all of which possessed a higher quality. The authors concluded that their findings paralleled those of the Leavitt study; both experiments suggest that consumers do perceive price as an indicator of quality.

### *The Gabor-Granger Study — 1966*

Conducted at the University of Nottingham, England, the purpose of this study was

to demonstrate that price serves as an indicator of qual-

ity with far greater frequency than is generally believed and that the recognition of this phenomenon can lead to a better understanding of consumers' market behavior.<sup>15</sup>

The study was quite detailed and mathematically rigorous. It involved a questionnaire method of analysis with 3,191 respondents. Each respondent was quizzed on his upper price limit (the point above which he felt an article to be too expensive) and his lower price limit, (the point at which he might suspect the quality of an article). Products used in the study included two unidentified household articles, two unidentified food items, nylon stockings, and carpet.

The results of the sample were divided into socioeconomic groups. Although no purchase percentages were given for any item, the authors summarized their findings by stating:

what is interesting is not so much the fact that consumers exist who would not be deterred by a very low price for a given article, but rather that this phenomenon is not ubiquitous. . . . We felt . . . [price] would act as an indicator of product quality for a wide range of commodities, such as textile products, simply because their quality cannot be ascertained by sight and owing to constant changes in technology and fashion, past experience is of little use in this respect. The reputation of the manufacturer, the brand and the shop do, of course, matter, but it would be difficult to deny that a reputation for high quality and high price go together.<sup>16</sup>

### *The McConnell Study — 1968*

The fourth study reported was conducted by J. Douglas McConnell at the Stanford Research Institute. The stated hypothesis to be tested

was that, in the absence of more directly observable cues, consumers accept price as a product characteristic correlating highly with product quality and will alter their perception of a product on the basis of the cues supplied. In other words, it was believed that Ss [subjects] would perceive the higher priced brands as being of higher quality even though the actual product was identical for all brands.<sup>17</sup>

The study began with the selection of sixty adult students. The group had a median age of twenty-seven years with a range of twenty-one to fifty-five years. Their median family income was \$5,000 with a range of \$2,500 to \$15,000. Unlike the "paper and pencil tests" reported earlier, the subjects of the study were asked three times a week for

eight consecutive weeks to select one of three brands of beer (actually the identical product except for brand name and stated price). They were to consume the beer at any time of their choosing but before making their next choice. At the completion of their twenty-fourth trial and the eighth week, the respondents were given a questionnaire to complete. They were asked to rate the three brands of beer on a five-point, Likert-type scale and to choose from a list of twelve words such as *tangy*, *full-bodied*, *flat*, and *watery* the three words which they felt best described each product.

A contingency table analysis was used to evaluate the questionnaire results and to determine the relationship between each beer's rating and its price level. The findings indicated that the higher-priced beer was preferred to both the medium-and lower-priced beer. It received a total point score of 133 as compared to 117 and 109 respectively for the medium-and lower-priced beers.<sup>18</sup> An analysis of the descriptive word choices also showed the lower-priced beer to be the most unfavorably described.

In summarizing his findings, McConnell states, price was used [by subjects] as a cue to product quality. With a physically homogeneous product and unknown brand names (which had so little meaning that many never used them), the highest priced brand was perceived as being a 'better quality' product than the other two brands.<sup>19</sup>

### *The Stafford-Enis Study — 1969*

The intention of the Stafford-Enis study was "to clarify further the product-quality perception problem by extending research in this area to include an independent variable other than price."<sup>20</sup> Included in their research was not only the independent variable price, but also a store name associated with each product.

The study contained two basic hypotheses. They were:

- 1) Taken separately, each of the independent variables — price and store information — will significantly influence product quality judgments.
- 2) The joint (interactive) effect of the two independent variables will also significantly influence the perception of product quality.<sup>21</sup>

The product used for study in the experiment

was household carpet. Four identical samples of carpet were presented to each of the study's 178 subjects. The samples were similar in texture, weave, and color, but were individually identified as being from either a high or low prestige store and as either high or low priced.

All subjects received the four possible combinations of high-low price and high-low prestige carpet samples. They were asked to rate the quality of each on a five-point continuum from very high quality to very low quality.

The results of the study suggested that consumer perception of price as an indicator of quality depends upon a number of factors — in this instance, store prestige and price. A fixed-effects, factorial analysis of the quality rating results showed that the higher-priced samples were preferred, receiving a mean score of 3.53 as compared to the lower-priced samples' mean score of 2.87. It also showed that the high prestige samples were preferred, receiving a mean score of 3.25 as compared to the low prestige samples' mean score of 3.15.

In evaluating these findings, the authors stated that the "use of the symbol *high* before price and prestige resulted in higher mean quality ratings than did use of *low*. This indicates that a *high* cue is perceived as relating directly to product quality."<sup>22</sup>

In making any culminating comments concerning the findings of these five briefed studies, it seems clear that there is one point upon which they all agree: price often seems to be perceived as an indicator of product quality by the consumer. Tibor Scitovsky and earlier writers hinted at this; Harold Leavitt began the first research on the idea; Tull, Boring, and Gonsior confirmed Leavitt's findings; Gabor and Granger added further validity to the belief, later followed by first McConnell and then Stafford and Enis. What seems to have been suspected for so many years, now seems to have been proven.

### Marketing Implications

For well over 150 years, price has been the predominant variable used in determining consumer demand. Its position in this role has been assured by numerous historical, social, and technical factors. Historically, its primacy can be traced to the

economist Adam Smith. Socially, as a price mechanism, it offers a complete rationale for the free enterprise system in which price acts as a cue for the allocation of scarce resources. Technically, and especially in regard to marketing, price as opposed to quality has proven to be the simpler means of market analysis.

Prices are quantitative, unambiguous, and unidimensional, whereas product quality, product image, customer service, promotion and similar factors are qualitative, ambiguous, and multidimensional. It is easier to speculate about what customers would do if price rose by five percent than if quality rose by five percent; in fact, it is not even easy to define what is meant by a quality improvement of five percent.<sup>23</sup>

Benson P. Shapiro has offered a four-part explanation for the use of price as an indicator of product quality.<sup>24</sup> He first sees price as an easy means of product measurement. It is concrete, and as the five earlier mentioned studies seem to indicate, consumers trust price much more than their own evaluation of product worth. Second, Shapiro refers to a study by Richard N. Cardozo which finds that product satisfaction depends in part on the amount of effort the consumer has expended to obtain the product.<sup>25</sup> Following this finding, Shapiro believes that it is reasonable to assume that many people view the expenditure of money as being similar to the expenditure of effort. Thus, the more a consumer spends on a product (seeing price and quality as related), the more he will like it.

### Veblen Effect

Third, price is seen as important because of the snob appeal it offers. Having reached a point where it is almost synonymous with quality, some people feel that status alone requires the purchase of the most expensive brands of all products.<sup>26</sup> This is often referred to as the *Veblen effect*.

Fourth, Shapiro feels that the prospective consumer must balance the extra expense of a few dollars or cents against the assumed risk of purchasing a lower-priced, poorer-quality product. Therefore, the relationship between cost and quality has an even larger bearing on individual customer perception of risk.

Reviewing Shapiro's four-part explanation for the use of price as an indicator of product quality, im-

plications for the marketer loom great. Conventional demand theory, once taken unquestionably, is now faced with complications. As Leavitt suggested in his study, the traditional demand curve may not invariably be negatively shaped. Price has come to have at least two meanings to the consumer: (1) as a measure of cost, and (2) as an indicator of quality. Higher prices that increase consumer readiness to buy may sound uneconomic but may not be unrealistic. Oswald Knauth reports the following example to verify this point:

In one case a retailer was able to purchase hosiery, having a normal market value of \$2.00 per pair, for 65 cents a pair, and offered it at \$1.00. A mere handful of customers responded. Why? Reasons were searched; the values were unquestioned, the advertising was forceful, the day fair. But the price of \$1.00 suggested just that value, as this is a normal price for medium-grade hosiery. Two weeks later, the same goods were advertised at \$1.14, which suggested higher value, with an enormous response.<sup>27</sup>

What types of goods are likely to possess positively sloped demand curves? By judging the previously presented studies, it would appear that there should exist between competing goods large consumer-perceived quality differences. The goods should meet Cardozo's test for effort; they should bear status and be prestigious. In addition, it would be helpful if the goods were difficult to judge in regard to everything except price.

What type of consumer would most likely perceive price as an indicator of quality? By drawing further on previously presented material, it would seem that the person who was trying to achieve status and who could afford to incur the risk of using price as an indicator of quality might fall into this category. The occasional consumer who is not knowledgeable in a product area might fall into this category. For example, consider the untrained consumer interested in the purchase of a technical camera accessory. Price might provide his most readily accessible index of quality.

The price-quality concept also has relevance with respect to new product pricing. The decision whether to price a new product at market, below market, or above market is often a choice between penetration pricing and cream-skimming.

Cream-skimming is a high-price policy generally used on a temporary basis for a new product. It

is a technique designed to skim the cream off of a market before adopting a high-volume, low-price penetration strategy.<sup>28</sup> One of the benefits of cream-skimming results from the aura of exclusiveness that can result from its initial high price.

If such is possible, it may be explained in a large part by the consumer-perceived, price-quality relationship that has been explained here.

### *Summary and Conclusion*

The field of marketing has been experiencing an increasing awareness of the behavioral sciences. The area of consumer perception, as a branch of the behavioral sciences, presents a vast region of unexplored knowledge that on first indication appears to be just leaking its secrets. The apparent relationship between price and perceived quality, as indicated by the work of Leavitt, Tull, Boring, Gonsior, Gabor, and Granger, seems to have opened the path for the wider-scoped approaches of McConnell and Stafford and Enis.

The McConnell study took the topic of quality-price perception from the classroom experiment to the actual simulated customer product testing stage. Stafford and Enis broadened their research to include the variable of store image. Their findings and the findings of the people before them confirm the suspected consumer-perceived, price-quality relationship. Of prime importance in this area is the fact that their research springs open the doors on a multitude of other unanswered questions. The relationship between perceived quality and such things as the physical characteristics of a product, its brand name, and even its packaging are all areas of needed research.

If the consumer-perceived characteristics of a product can be systematically identified, marketing may achieve its first full view inside the highly touted "black box." Such a framework would provide the beginning for a new stage of pricing policy and perhaps a new era for marketing inventiveness.

The realization that it took ten years (1954-1964) for Tull, Boring, and Gonsior to follow-up Leavitt's research is at first discouraging. However, the seven years since that time (1964-1971) have seen at least three major studies performed in the area. By all indications, interest in this area is just build-

ing momentum and support. For years the phrase, "you get what you pay for," has been a part of the American language. Now its perceived implications are undisputedly a part of marketing research.

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