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The Effect of Price Level and Price Type on Perceptions of a Restaurant

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ABSTRACT

Consumers are often drawn to certain products and services by pricing techniques. Four versions of an Italian restaurant menu were created to test the impact of price level and price type on people's perceptions of a restaurant. Two versions were inexpensive while two were more expensive. Within each condition, one was odd priced, with prices ending in .49 or .99, and the other was even priced, with prices ending in .50 or .00. Participants reviewed one menu and completed a survey, assessing the restaurant's quality-image and value-image and their willingness to try it. In Experiment 1 there was no time limit, while in Experiment 2 participants were allowed only one minute to review the menu which was then taken away before they filled out the survey. In both studies, the analysis revealed that people believed higher priced restaurants offered higher quality but less value and that they were less likely to try them. Odd pricing had no effect on any of the dependent measures, highlighting the need for further investigation of the circumstances under which this technique impacts consumers.

ARTICLE

The Effect of Price Level and Price Type on the Perceptions of a Restaurant

When deciding whether or not to buy a product, one of the first things a person typically sees is the price of the item. Often the only obvious difference between one brand of an item and another, price can affect people's perceptions of the quality and value of an item and can influence whether or not the item is purchased. The potential impact of various pricing strategies has been understood by marketing experts for years. Most consumers, however, are

blissfully unaware of the subtle power of such strategies and, therefore, are ill-equipped to guard against them. This study was designed to shed light on the extent to which consumers' perceptions of a restaurant are impacted by price level and price type.

Research has suggested that people may equate high prices with high quality (Dodds, Monroe, & Grewal, 1991) and that as a result, under some circumstances, high prices may lead to an increase in demand (Lambert, 1970). While the tendency to associate high prices with high quality may occasionally be a useful heuristic, this phenomenon puts consumers at the mercy of retailers. In his book *Influence*, Cialdini (1993) related an anecdote about how, counterintuitively, when a jewelry store raised its prices, sales increased. However, past research has not consistently demonstrated these effects of high prices. This experiment sought to investigate whether consumers would assume that a high-priced restaurant would offer better quality and whether, consequently, they would be more likely to try such an establishment.

In order to reduce the price image of an item, retailers often use a tactic called odd pricing. The most common definition for an odd price is a price that is just below a number ending in 0. Most odd prices end in .99, but .49 is another common ending (Kreul, 1982). Generally, odd pricing has been shown to increase people's perceptions of the value of a product, despite decreasing their perceptions of its quality. Lambert (1975) suggested that value is the ratio of quality to price. It can be inferred, then, that odd pricing decreases perceptions of price more than it decreases perceptions of quality, resulting in a higher value ratio. In addition, Stiving's (2000) study evidenced that while lower priced and lower quality products tended to be odd priced, their higher priced and higher quality counterparts actually tended to have even prices. These observations raise doubts about the efficacy of odd pricing for high priced and high quality products. No research was found that tested the interaction between odd pricing and price level; this experiment sought to fill this gap in the literature.

In terms of quality perceptions, we hypothesized that 1) As compared with low prices, high prices would lead to perceptions of A) higher quality and B) lesser value and 2) As compared to even prices, odd prices would lead to perceptions of A) lesser quality and B) greater value. With regard to likelihood to try the restaurant, we hypothesized that 3) In a high priced restaurant, even prices would lead to a greater likelihood to try than odd prices, but 4) In a low priced restaurant, odd prices will lead to greater likelihood to try than even prices.

Method

Participants

The population for this study was adults entering a local library in an upper-middle class neighborhood in New York, United States. Every person or group entering the library was approached and asked to participate, and participants were randomly assigned to view one of the four restaurant menus described below.

Materials

Four different versions of a menu were created. They were intended to represent a typical Italian restaurant menu and were created using items and prices modeled after Italian restaurants in the area. With the exception of the prices, every version was identical, containing exactly the same items in the same order and layout. The menus were printed on white paper, no descriptions were provided for any of the menu items, and no name was given to the restaurant. The menus were deliberately designed to be plain in order to ensure that the participants would be influenced, as much as possible, by only the prices of the menu items.

Price was the only aspect of the menus that varied. Two of the versions contained inexpensive prices that ranged from \$2.99 to \$13.00. One of these versions had even prices, ending in .00 or .50, and the other version had odd prices, ending in either .49 or .99. The prices on the other two versions, ranging from \$5.99 to \$26.00, were essentially double those of the corresponding items from the inexpensive menus. Again, one version was even priced, and the other was odd priced. Since one objective was to compare how a one-cent price difference between a round price and one just below it ending in a 9 would affect consumers' perceptions of a restaurant, all of the odd prices were exactly one cent less than the even prices for the respective items.

Attached to each menu was a survey that was created to test perceptions of the restaurant based solely on the menu. Three items dealt with quality-image, three with value-image, and three with likelihood to try the restaurant. An example of a question dealing with quality-image was, "How would you expect the overall quality of this restaurant to be?" A question dealing with value-image asked, "How good of a value do you consider this restaurant to be?" A question about participants' likelihood to try the restaurant was, "Do you think you would try eating at this restaurant?" All nine items were answered on a 7-point scale. The final three items on the survey asked about participants' age and gender, and how often they ate out.

Procedure

As they entered the library, people were asked if they would participate in a study that involved rating a restaurant for a school project. After filling out consent forms, they were given both the menu and the survey and an unlimited amount of time to answer the questions. A second experiment tested the same hypotheses on the same population. The only difference between the experiments was that in the replication participants were given no more than one minute to review the menu.

Results and Discussion

The Effect of Price Level on Perceptions of Quality

As hypothesized, a higher priced menu was shown to create the impression of a higher quality restaurant. The most likely explanation for this effect is that price is generally seen as an indicator of quality. Higher quality items or brands are generally priced higher, and people have come to associate high price with high quality (Dodds et al., 1991). This experiment confirms this association, despite the lack of any other premium quality signals. It seems that the nature of a price-quality relationship may be product specific and that such a relationship may exist in the context of a restaurant. In Alpert, Wilson, and Elliot's (1993) study, quality evaluations were made with full knowledge of store and brand name, whereas the strongest price-quality relationship in Dodds et al. (1991) was seen when no brand or store name was included. The design of this study did not involve brand or store name. Therefore, it seems that the price-quality relationship may be stronger when product information is limited to price and weaker when buyers have knowledge of brand and store name. When little is known about an item besides its price, consumers should be particularly cautious about assuming that higher prices are necessarily indicative of higher quality.

Another reason participants may have associated price with quality is that they may have related higher price to a better overall dining experience. While it seems irrational to believe that one version of a product is of higher quality than an equivalent product simply because the former is priced higher (e.g., brand name vs. generic drugs), in the context of a restaurant, even if the food quality is no different, higher priced restaurants generally do offer better amenities, décor, and service. In fact, one of the items on the Quality Scale asked participants to evaluate the service of the restaurant, in some sense encouraging them to consider factors other than food when evaluating the restaurant's quality.

The Effect of Price Level on Perceptions of Value

A lower price level was demonstrated to increase the value-image of the restaurant in the minds of participants. This result is consistent with Dodds et al.'s (1991) finding that the strongest indirect price-value relationship existed when participants had no knowledge of store or brand name. In this experiment, price was the only information participants had to evaluate the restaurant so it had a large effect on perceptions of its value. To explain this indirect price-value relationship, it is helpful to return to the notion of value as the ratio of quality to price (Lambert, 1975). Though it was found that participants believed the higher priced restaurant to be of better quality than the lower priced restaurant, they may have felt that the higher priced restaurant did not offer enough of a quality upgrade from the lower priced restaurant to make the price increase worthwhile. Therefore, the value ratio for the higher priced restaurant was lower than that of the lower priced restaurant.

The Effect of Price Level on Likelihood to Try the Restaurant.

Finally, people reported that they were more likely to try the low priced restaurant than the high priced restaurant. This finding is consistent with the demand curve (Kreul, 1982). The obvious explanation for this finding is a greater willingness to try the restaurant that posed a lesser risk. Consumers knew nothing about the restaurant except the items on the menu and their prices. They simply may have been more open to trying the restaurant in which they would lose less if they did not have a good experience. This result is in accordance with participants' ratings of the lower priced restaurant as a better value. Value perception takes into consideration perceptions of both price and quality (Lambert, 1975) and has been shown to be a good indicator of willingness to try (Dodds et al., 1991).

Interestingly, this finding seems to contradict research that has shown high priced brands are favored when dealing with socially significant products (Lambert, 1970; Rachman, 1999). This discrepancy implies that the value of this restaurant may have been more important to consumers than its social significance. On the other hand, it is entirely possible that the restaurant's social significance was minimized by the exclusion of signals such as a familiar name, chef, or fancy address. This difference calls for further research about how such signals influence people's decisions to try or not to try a restaurant.

While the equating of low price with greater value and willingness to try makes sense, consumers' association of high price with high quality leaves them open to manipulation. It is critical that people

become cognizant of our tendency to assume that high price connotes high quality and learn to look for other, more substantive indicators of quality.

The Effect of Price Type

Counter to the hypotheses and many past studies (e.g., Bartsch & Paton, 1999; Schindler & Kibarian, 2001), odd pricing did not affect participants' perceptions of the quality or value of the restaurant in the first experiment. The second experiment was designed to eliminate the possibility that the lack of an odd pricing effect could be explained in terms of memory. Bettman (1979) posited that only the most important (or left-most) digits of prices are stored in short-term memory. As a result, the decimal portion of the odd price is often disregarded, creating the rounding down effect. In accordance with Bettman's (1979) suggestions, many past experiments in which odd pricing was shown to alter perceptions and create additional demand employed a design in which participants were allowed to view the prices for a limited amount of time and had to evaluate the prices from memory (e.g., Lambert, 1975; Schindler & Warren, 1989). While in the first experiment participants were shown the prices of the menu items for as long as they needed as is the case in real restaurants, in the second experiment they were allowed no more than one minute. Despite this alteration, no odd pricing effect emerged.

One possibility is that odd pricing may reduce the quality perception of products only if the most important attribute is high quality. This conditional effect can be inferred from the results of Schindler and Kibarian (2001) who showed that odd pricing only reduced quality perceptions of products in stores that were considered high in quality and had no effect on the perceived quality of products from other stores. Although one restaurant was markedly more expensive than the other, neither was exceptionally so, given the affluence of the community. Therefore, value may have been more of a factor than quality in shaping people's likelihood to try either restaurant. The price may not have been sufficiently high to create the impression of a restaurant of such high quality that the lure of value is virtually eliminated. Using the same community, it would be interesting to test the effect of odd pricing on quality perceptions of an extremely expensive restaurant, where it is likely that the expectation of high quality is the main reason one would try it.

In addition, the relative affluence of the community may have negated the odd pricing effect, because the apparent price difference between an odd price and its corresponding even price may not have produced a significant enough downward distortion to create a difference in value perceptions of the restaurant. If the

study had been conducted in an area in which participants were not willing to spend as freely, the slight rounding down caused by the odd prices may have had a larger impact on their perceptions of value.

The predicted interaction between odd pricing and price level on likelihood to try the restaurant also failed to emerge. The observation that retailers tend to use even prices over odd prices in pricing expensive goods (Stiving, 2000) suggests that retailers expect odd pricing to reduce the demand for high priced items. The lack of such an interaction illustrates that odd pricing, even when used on the more expensive restaurant menu, did not negatively impact the participants' reported likelihood to try it. However, it is possible that the more expensive restaurant was simply not expensive enough to be hurt by its association with odd pricing.

An odd pricing effect may have failed to emerge because consumers are becoming savvier. Marketing professor Stephen Brown points out numerous advertising techniques that no longer work because buyers know the tricks of the trade. He believes consumers today welcome upfront, gimmick-free sales pitches (Brown, 2003). Buyers may no longer be fooled by odd prices, or they may be wary of odd pricing and be turned off by it. Walmart is a value-conscious store that does not use traditional odd pricing. Its recent advertising campaign features prices ending in all different digits, instead of the conventional 5 or 9 endings. Such prices may appear lower than odd prices by creating the impression of prices that have reduced to the lowest possible level. It would be interesting to compare the impact of traditional odd prices to those with such unusual endings to see if consumers have found a way to compensate for many pricing tactics or, alternatively, if the Walmart approach effectively circumvents consumers' defenses.

In the past, odd pricing has been shown to create a positive kink in the demand curve, caused by greater-than-expected increases in demand for the one-cent price reduction. This experiment showed that price level has a much greater impact on participants than odd pricing. In addition, it demonstrated an instance in which odd pricing had no effects on perceptions of a restaurant or participants' willingness to try it, highlighting a need to study the conditions under which the effect does emerge. The results suggest that small businesses, especially individual restaurateurs that are unlikely to conduct their own market research, should think twice before employing odd pricing, as this technique may simply be causing them to lose money. Most importantly, this study should serve to caution consumers against concluding that higher prices are necessarily indicative of higher quality and to call attention to the

need to recognize and not fall prey to marketers' widespread use of pricing strategies.

References

- Alpert, Frank, Beth Wilson and Michael T. Elliot (1993), "Price Signaling: Does It Ever work?" *Journal of Consumer Marketing*, 10 (4).
- Bartsch, Robert A. and Vivian I. Paton (1999), "The Presence of Odd Pricing in the Texas State Lottery," *Journal of Applied Social Psychology*, 29 (November), 2394-2409.
- Bettman James R. (1979), "Memory Factors in Consumer Choice: A Review," *Journal of Marketing*, 43 (Spring), 37-53.
- Brown, Stephen (2003), "Marketing to Generation®," *Harvard Business Review*, (June), 16-17.
- Cialdini, Robert B. (1993), *Influence: The Psychology of Persuasion*, New York: William Morrow.
- Dodds, William B., Kent B. Monroe and Dhruv Grewal (1991), "Effects of Price, Brand, and Store Information on Buyers' Product Evaluations," *Journal of Marketing Research*, 28 (August), 307-319.
- Kreul, Lee M (1982), "Magic Numbers: Psychological Aspects of Menu Pricing," *Cornell Hotel and Restaurant Administration Quarterly*, 23 (August), 70-75
- Lambert, Zarrel V (1970), "Product Perception: An Important Variable in Price Strategy," *Journal of Marketing*, 34 (October), 68-71.
- Lambert, Zarrel V (1975), "Perceived Prices as Related to Odd and Even Price Endings," *Journal of Retailing*, 51 (Fall), 13-22.
- Rachman, Gideon (1999), "Christmas Survey: The Price Puzzle," *The Economist*, 353 (8150), 95-97.
- Schindler, Robert M. and Thomas M. Kibarian (2001), "Image Communicated by the Use of 99 Endings in Advertised Prices," *Journal of Advertising*, 30 (Winter), 95-99.
- Schindler, Robert M. and Lori S. Warren (1988), "Effect of Odd Pricing on Choice of Items from a Menu," *Advances in Consumer Research*, 15, 348-353.

Stiving, Mark (2000), "Price-Endings when Prices Signal Quality,"
Management Science, 46 (December), 1617-1630.

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