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A Study on Products Price, Shape Perception in Marketing Research

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ABSTRACT: Pricing a product is one of the most important decisions an organization can make. Marketing research has developed several different approaches to price optimization. They include product shape, its completeness, size perception, and consumption and price models. They have been especially fruitful in illuminating consumers' decision processes across multiple marketing-related domains, particularly those underlying valuation and choice. It represents an advance in testing previously unaddressable research questions notably, whether researchers can predict consumers' thought processes on the basis of some spatially distributed pattern. This work describes and compares several of these approaches related products.

KEYWORDS: Products, Price revenue, Market research, Product shape, Gabor-Granger Technique.

I. INTRODUCTION

Marketing research has long recognized the importance of price optimization. Survey research can help explore those pricing questions. Survey pricing evaluation can be thought of as a continuum that moves from quick and easy but less precise to complicate but more accurate methods, the physical shape of a product or container to estimate quantity, preferences, and how much to consume[2]. One of the hardest decisions an organization has to make is how to price its products [1]. Price a product too low and you may not cover your costs or generate profits. Prices are obviously important in consumer decisions. However, whether the price is seen before or after the product seems to change the way the product information is processed. Understanding changes in the brain's valuation processes provides novel insights about how the order in which pricing is presented can influence willingness to pay for different types of products. They include direct methods such as estimation of willingness to pay, indirect methods such as Gabor-Granger methods such as various discrete choice models. This finding is especially relevant to marketers (and consumers) in online shopping contexts, in which companies can control, to some extent, the order of the price and product information [3].

II. PRODUCT PRICING TECHNIQUES

There are methods for pricing the product models; among those methods we have discussed few methods here:

- Direct methods, including willingness to pay (WTP), or what price would you pay eliciting, and incentive aligned WTP techniques.
- Indirect methods, such as Gabor-Granger and extended van Westendorp models.
- Product/Price methods as like Discrete Choice.

Clive W. J. Granger, Nobel Prize winner in economics in 2003, is best known for his numerous papers and books on econometrics and time-series analysis [4]. To get data to test our theories and estimate models, we arranged with local supermarkets to conduct experiments in which we altered prices of popular products and recorded the change in sales. Indeed, their collaboration had been prolific and together they created the method now known as Gabor-Granger (or GG-models) price modeling [5]. They further acknowledge several current challenges for consumer and offer suggestions for addressing them. The GG-models have been used by other researchers as the foundation for other

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pricing optimization approaches. GG-models are based on data elicited from respondents on their willingness to pay for a product innovation, a service, or concept at various price points. In this work we consider some main features of the direct, indirect, and discrete choice models for finding optimal prices.

A. DIRECT METHOD:

Direct methods are based on willingness to pay (WTP) estimation. A simplest approach to pricing research consists in asking the consumers to directly state their WTP for a specific product through an open-ended question format. Fig.1. A modified version of WTP is called incentive-aligned WTP in which participants are obligated to purchase a product if the price drawn from a lottery is less than or equal.

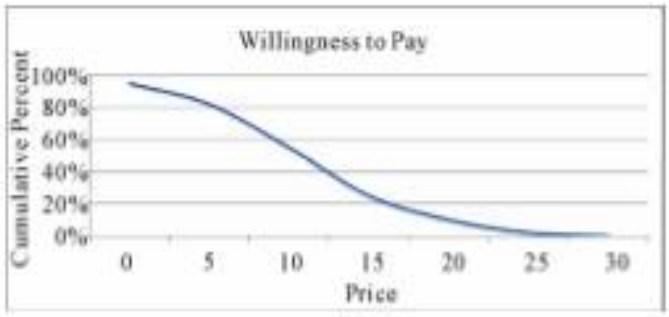

Fig.1. Percent of respondents by the price of product.

B. INDIRECT METHOD:

Indirect methods are generally more accurate than direct methods as respondents are faced with more realistic scenarios. These methods are quick and simple to administer and also derive information on why respondents chose not to buy a product. It is a convenient and practical pricing technique to determine the highest price a respondent is willing to pay for a given product. **Fig.2**, where a set of prices Rs.100, Rs.80, Rs.110 is used. A demand curve can be generated by calculating the cumulative frequency distribution of the highest prices respondents are willing to pay for a given product.

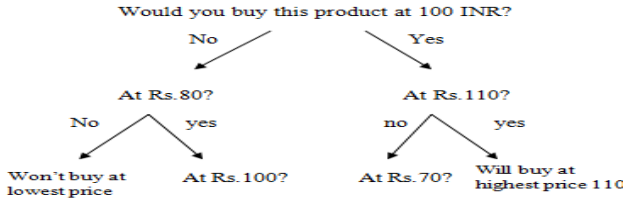

Fig.2. Scheme for price Eliciting

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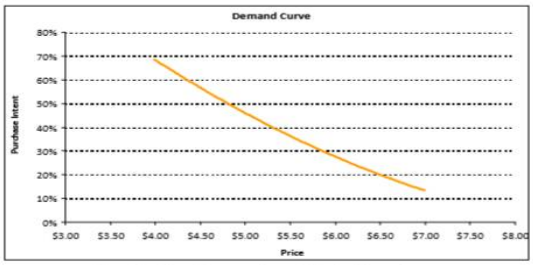

Figure 3. Gabor-Granger price model – the demand curve.

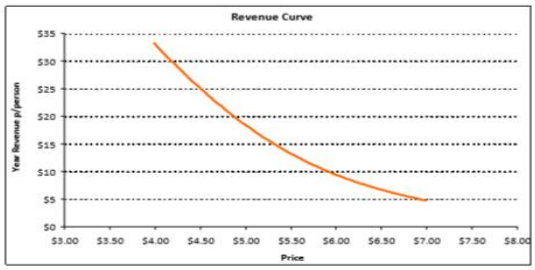

Figure 4. Gabor-Granger price model—the revenue curve.

C. PRODUCT/PRICE MODELS:

The next step for finding optimal prices is presented by various pricing techniques used in conjoint and discrete choice models (DCM) [6-9]. A simple DCM with price the sole variable, the so-called price challenger, is described in [34]. General conjoint and DCM methods typically include additional variables taking into account covariates of brands, size, demographics, etc. DCM is best in the situations when simulating immediate response to competitive offerings, especially brand and price studies, decisions are made on the basis of relatively few, well-known, concrete attributes, consumers make these decisions on the basis of competitive differences among attributes given, and we want to account for possible interactions between levels of different attributes.

III. **SIZE PERCEPTION**

In this work, we show that the “completeness” of the shape of a product can serve as a robust determinant of how people perceive, choose, and consume products. In general, we propose that consumers may use the heuristic that a complete unit contains more quantity than an incomplete one without accurately taking into consideration the actual item sizes. We define an item as complete if its shape appears to be a full unit of the product [2]. We define an item as complete if its shape appears to be a full unit of the product. Yet a complete unit also can depend on past experience and prior expectations about the typical shape of an item within a specific product category. We can make a distinction in this between items that are complete units and prototypes. A prototype for a category is always a complete unit, but a complete unit may not always be the prototype. The current research suggests a different type of motivation for liking and consuming a complete. We hypothesize that, keeping size and weight constant, people will perceive a completely shaped item to be larger than an incompletely shaped one because the complete one represents one unit, whereas the incomplete one equals less than one. Prior research on the “numerosity heuristic” has demonstrated that people are especially sensitive to the number of units when judging quantity and tend to ignore other important aspects, such as the size of each item [10]. This leads them to estimate that a constant amount of an object contains more quantity when it is partitioned into many smaller units than into fewer larger ones. [2]Consistent with our theory, we observed that the health care professionals chose more snack-sized sandwiches (average serving size > 2) when choosing from an assortment of incompletely shaped sandwiches (half sandwiches) compared with people choosing from a selection of completely shaped sandwiches (full sandwiches), even though the actual food quantity in each unit was the same (Study 1). In Study 2, we asked people to choose between incomplete and complete sandwiches of equal size (half vs. whole) or between bottles of shampoo (bottles with an aperture in their package vs. without). Study 3 uses a between-

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subjects design to demonstrate that size perceptions mediate the increased preference for completely versus incompletely shaped items. Study 4 uses a between-subjects design to show that the definition of a "complete" item is subject to people's expectations about a product. Similarly, consumers themselves may erroneously use the fact that the product is incompletely shaped as an excuse to eat more.

A. BASED ON STUDY; THE THEORETICAL BACKGROUND

Research based on product completeness

Research has shown that people desire completeness. If they do not believe that an experience is complete, they tend to feel psychologically unfinished or unresolved. Research on aesthetics and product design has also established that people enjoy stimuli that are complete. Although the aforementioned research suggests that consumers may prefer complete stimuli, there is evidence that this is not always the case. This is due to the positive affect consumers experience when they are able to resolve ambiguity.

Method

Forty-six people participated in this field study. Participants were from a Health Sector Management and Policy Executive Masters of Business Administration class, in which the average age was 40 years. made with wheat bread and 40% were made with white bread. Half the sandwiches were filled with turkey, one-third were filled with roast beef, and the remaining one-sixth was vegetarian. All sandwiches across the two conditions contained the same amount of turkey, roast beef, or vegetables, and all had equal servings of lettuce, tomatoes, and mustard. In addition to the 120 sandwiches, each food table offered 50 cookies and a bowl with salad. Two of our assistants sat nearby and pretended to be students working on their laptops while covertly tracking the participants' gender and total amount of food they took. The buffet tables were located in hallways where the presence of other students was common [10].

Results

We hypothesized that men would eat more than women in general. Given this assumption, we assigned the class with more male students to the complete shape condition, presenting a conservative test of our hypothesis because we predicted that people would eat fewer sandwiches in the "complete shape" condition. There were 24 participants (70.8% male) in the complete shape condition and 22 in the incomplete shape condition (50%male). As we hypothesized, across both conditions men ($M = 3.04$) took significantly more sandwiches than did women ($M = 2.39$; $t(44) = 2.63$, $p < .05$). the complete one (M incomplete= 3.23 vs. M complete= 2.38; $t(44) = 3.80$, $p < .0001$). There was no significant interaction between completeness and gender ($F(1, 42) = .46$, $p > .50$).

B. MEDIATION STUDY

The based on the product in two ways of customer consumes it that is whether they choose incomplete one or complete. Here, we demonstrate that increased size perceptions act as a mediator for participants' greater likelihood to buy completely shaped (vs. incompletely shaped) products. To indicate how likely they would be to buy this product. The number of servings question served as our measure of perceived quantity. For the bread, the complete version was a full roll, and the incomplete version had a hole in the middle (**Fig.3**, Panels A and B). Using the same external sample of 190 participants. For the bread, participants in the complete condition thought that the bread was complete 81.4% of the time, whereas those in the incomplete group thought the bread was complete 44.2% of the time. These proportions are significantly different (Wald $c2(1) = 9.13$, $p < .005$).

Method

This study was completeness: complete vs. incomplete & product: bread vs. cheese) between-subjects design. One hundred twenty people participated in this computer-based study in exchange for course credit. For this experiment, participants were told that they would be asked to look at an image of a product and to answer some questions. Each participant was exposed to one of the four potential stimuli combinations.

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Fig.3

Results

In Size perceptions, as we expected, a between-subjects analysis of variance (ANOVA) showed a significant effect of completeness (M complete= 2.18 vs. M incomplete= 1.18; F(1, 116) = 20.12, p< .0001) and a non-significant role of product type (M cheese= 1.60 vs. M bread= 1.77; F(1, 116) = .56, p> .45) on number of servings estimated in the product. This result provides strong support for H1, which posits that people will believe that the complete-shaped items contained more quantity than their incomplete-shaped counterparts.

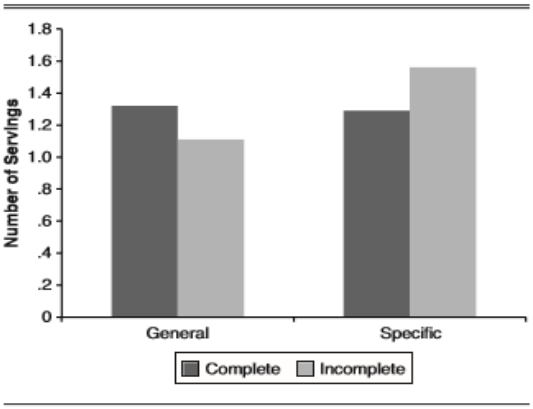

Fig.4 Role of Size on Perception

IV. CONCLUSION

This study paper is about the product's price, size perception and we conclude that, everyday products that people see and buy on a regular basis. Despite this familiarity and the ubiquity of incompletely shaped items in the marketplace (e.g., cheeses, sandwiches, breads, fruits), our findings demonstrate that consumers are susceptible to size estimation biases caused by the degree of product shape completeness. Some marketers seem to be aware of this effect at some level. For example, Baskin Robbins sells ice cream cake in three presentations. In our study which suggests that well-meaning diet rules can be misapplied and lead to overconsumption. In the end, if consumers want to rationalize their behavior, using an "eat only half" rule can be viewed as license to let their guard down and mindlessly eat. And coming over pricing the products, there are a multitude of approaches one can take and the exact method we recommend depends on the particular circumstances of the request. We described main features of Gabor-Granger and other

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techniques. The discrete choice techniques are much more flexible and accurate because they try to replicate real market conditions as close as possible, but on the other hand—they are complicated and require nearly always a separate study because of the data setting and the needed intensive design support.

V. FURTHER IMPLEMENTATION

On firstly, the research people should explore whether explicit packaging labeling can reduce this preference for completeness that results in inaccurate perceptions of relative serving sizes. We believe that this may be a persistent bias that is difficult to correct because we have preliminary evidence that the error exists even when actual quantity amounts are clearly marked. Also that other aspect of a product's shape, such as asymmetry or imperfection, may also affect size estimations in a similar way as the completeness effect. The further research should investigate additional ways in which the completeness effect could affect perceptions other than size estimations and product pricing; the pricing research is one of the core methodologies in custom research.

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