Special Session Summary    Effects of Framing on Magnitude Perceptions of Prices

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SESSION OVERVIEW:
It is widely accepted that the perceived magnitude of price plays an important role in product choice and consumer decisions. A question that is of interest to researchers in pricing is whether the perceived magnitude of the price is the same as the nominal magnitude of the price. In this session, we present and discuss research that addresses this question. The three papers presented in this session address the basic research question: What factors cause consumers’ perceived price magnitude to differ from the nominal magnitude of the price? The first paper by Nunes and Drèze examines the effect of the currencies used to frame the price on consumers’ reactions to that price. More specifically, this paper examines how firms can strategically use prices issued in combinations of currencies (e.g., dollars and miles or points), and how the firm can alter the distribution of these points as well as the reward levels to maximize loyalty and willingness to pay. The second paper by Redden, Williams and Fitzimons examines whether prices are framed as a partitioned price (e.g., base price plus separate charge for shipping and handling) or as one aggregate price (e.g., total price including shipping) affects consumers’ perceptions of the price magnitude. Specifically, this paper focuses on the circumstances and the mediating variables that determine when partitioned prices lead to underestimation of the total product price. This paper suggests that consumers’ expectations with regard to whether the price will be offered as a partitioned price, will moderate the effect of this framing on magnitude perceptions and choice. The third paper by Thomas and Morwitz examines how the left digit in a price exerts an undue effect on consumers’ magnitude perceptions. Specifically, this paper examines whether changing the price of a product by one cent (which in turn changes the left digit of the price) can significantly alter the perceived magnitude of the price. This paper shows that even a one-cent change in price can impact perceived magnitude of the price under certain circumstances.

LONG ABSTRACTS

“The Pseudo-Sunk Cost Effect: How Varying Reward Levels Affects Prices in Alternative Currencies”
Joseph C. Nunes and Xavier Drèze

The immense popularity of loyalty programs has resulted in a variety of new “currencies” that people budget, save and spend much like money. For example, 100 million people worldwide collect frequent flier miles. After comparing the relevant figures with all of the notes and coins in circulation around the globe, the Economist (May 4, 2002, p. 62) proclaimed miles the “world’s second biggest currency” after the dollar. American Express is in the midst of a marketing blitz touting how points earned in its Membership Rewards program have no expiration and offer the greatest selection of “must-have rewards.” Yet, it is unclear how consumers value alternative currencies, or more specifically how reward redemption levels impact their valuations. As consumers are increasingly able to pay for goods and services such as airline travel, hotel stays and groceries in various combinations of currencies, understanding how shoppers respond to prices utilizing alternative currencies is becoming increasingly important to marketers.

Traditionally, consumers must accumulate enough of a particular currency (e.g., American Express Reward Points, Frequent Flier miles) to “earn” a reward. Previous research (Drèze and Nunes 2004) has outlined the conditions under which a combined-currency price, or a price issued in multiple currencies (e.g., $39 plus 16,000 miles) is preferred to a price issued in one currency. This research explores how the firm can manipulate reward levels and the distribution of currencies in order to increase customer loyalty and steer preferences between combined-currency prices and prices assessed in a single currency.

We conducted a series of studies and presented three experiments. Study 1 tests the effect of increasing versus decreasing fungibility (i.e., the ability to spend various increments) on a consumer’s drive to accumulate a currency (i.e., customer loyalty or retention) and choices regarding when and how to spend increments of that currency. Heath, Larrick and Wu (1999) have shown that people are willing to exert more effort as they approach their goal and less effort as they move away from a goal. Just as someone whose goal is to do 40 sit-ups would be expected to exert more effort to do their 39th sit-up than their 35th, 4,000 miles would mean more to someone with 20,000 miles than to someone with 10,000 miles, when the amount needed for a free ticket is 25,000 miles. We hypothesize that reward levels act as goals and that the marginal value of alternative currencies increases as consumers draw nearer to their goals. The result shows how the strategic setting of reward levels can affect the valuation of alternative currencies, and hence both (a) loyalty, and (b) the choice of pricing schedules when various options are issued in combinations of currencies.

Study 2 illustrates how bequeathing consumers with an endowment in an alternative currency can increase their propensity to make future purchases (loyalty) and the amount that they are willing to spend (willingness to pay). We find that those who would like to accumulate a reward that is most valuable when they are close to reaching a goal (e.g., Frequent Flier miles) are willing to work harder to get there. The result is that the firm can strategically use endowments to boost loyalty (i.e., customer retention) while holding the revenue objective (goal in the alternative currency) constant.

In Study 3, we explore some traditional mental accounting phenomena that are robust with regard to dollars, and how consumers respond when analogous choices are presented in alternative currencies. The results reveal mixed support for the expected results given previous findings in mental accounting.
“Price Partitioning: No One Likes Surprises”
Joe Redden, Gavan Fitzsimons and Patti Williams

Marketers frequently break a product’s price into two required components, such as $70 plus $10 shipping and handling. This practice has been referred to as partitioned pricing (Morwitz, Greenleaf, and Johnson 1998). The assumption is that product demand will increase when the price is presented as two separate components, as people will not accurately calculate the total cost and will make decisions based upon a lower perceived price. Since every firm does not present their prices this way in practice, there are likely conditions under which partitioning is not beneficial. While past research has investigated the phenomenon (e.g., Morwitz, et. al. 1998), questions remain regarding how consumers process this information and circumstances under which partitioned prices may be more or less beneficial to marketers. This research uses consumer expectations to explain when price partitioning can provide an advantage, and when partitioning can be detrimental.

Morwitz, Greenleaf, and Johnson (1998) have shown that consumers will increase product choice under a partitioned pricing regime. They attribute this to a lowered perceived cost due to either under-adjustments from the base price anchor, or the absence of any adjustment due to the cognitive effort required. Chakravarti, et. al. (2002) recently found that mental accounting helps explain different partitioning behaviors. By partitioning a specific attribute, marketers encourage a mental accounting comparison for that attribute and can position a product more favorably.

Although these results focus on the positive benefits of partitioning, a number of theories suggest that partitioning could have potential costs. First, people may view the additional surcharge as a loss, in which case prospect theory (Kahneman & Tversky, 1979) would suggest decreased product demand due to a segregation of losses. Second, marketers may trigger reactance (Brehm 1981) in consumers who feel their options have been reduced by forcing them to pay for an attribute they thought they were already getting. Third, an additional fee that is not typical for that product could increase the attention paid to the price (Goodstein 1993) and cause consumers to focus more on the price and exert the mental effort to perform the necessary addition.

When a customer expects the surcharge item to already be included in the base price, these potential costs will become more salient. Most of the existing partitioning studies have involved attributes which are customarily priced in a partitioned fashion (e.g., shipping, warranties). However, consumers will expect some attributes to be included with the base price, such as a fee for speaking with a bank teller or flying standby on a flight (NY Times Dec. 28, 2002). These expectations will be based upon previous experience with the category, the array of choices in a consideration set, etc. We have used this idea of expectations to explain existing results, as well as suggest moderating conditions and new effects.

A first study has found several key results supporting the expectation story. The study chose an ambiguous attribute (web features) to partition for the price of a cell phone. The expectations about whether this attribute should be in the base price were measured, rather than manipulated. Subjects always saw a control phone with a single lump-sum price and were randomly given a second phone that either had partitioning or a single lump-sum price of the same amount. The dependent variables were product choice likelihood and recall of total cost. Product choice was significantly lower than a combined price when price partitioning was not expected. Cost recalls suggest a reactance or attention mechanism at work as most recalled prices were near the base price or near the accurate total price (i.e., very few recalled prices were in between the base and total price). Further, a number of subjects appeared to mistake the partitioned price for an optional fee. If this misinterpre-
symbol to mental magnitudes imposes a cost on the speed of mental calculations when the numbers being compared are close to each other. The closer the numbers being compared, the greater is the difficulty in discriminating the numbers on the internal analog scale. Consequently, the closer the numbers being compared, the greater is the likelihood of the left digit effect.

Domain Invariance. Domain invariance refers to the property that the underestimation of nine-ending numbers is not restricted to the domain of prices; it manifests with other multi-digit numbers also. Past research has often attributed the popularity of nine ending prices to perpetuated retailing practices (Gabor 1977, Gabor and Granger 1964, Schindler 1991). Based on a survey of published material and informal conversations with consumers and retailers, Schindler (1991) proposed a list of fourteen meanings that price endings are likely to communicate to consumers. These meanings can be broadly classified into two groups: price-related meanings (such as “low price,” “discount price”), or meanings concerning non-price attributes of the product or retailer (such as “low quality”). However, if consumers’ favorable response to nine ending prices is solely on account of the images of ‘discount’, ‘low price’ etc. evoked by these prices, then these effects should be confined to the domain of prices. On the contrary, if these effects are, at least partly, due to the influence of left-to-right processing during the magnitude encoding of multi-digit numbers, then these effects should remain invariant to changes in domain. Drawing on the premise that left to right processing is a fundamental characteristic of multi-digit encoding, we predict that left digit effect and its interaction with distance effect will manifest in all nine ending numbers and not just prices. (It may be noted that we are not ruling out the image effects phenomenon in price cognition; rather, our suggestion is that nine ending numbers can be underestimated even when these numbers are not associated with images of low magnitudes.)

The question whether consumers respond differently to a price that is a cent lower than the nearest round figure is interesting from a theoretical as well as managerial perspective. From a theoretical perspective, the answer to this question will contribute to the literature on cognitive responses to numerical stimuli. The answer will be germane to researchers debating whether numbers are processed analogically or digitally (Dehaene, Dupoux and Mehler 1990; Hinrichs, Yurko and Hu, 1981).

References