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The Framing Effect of Price Format

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Existing evidence suggests that preferences are affected by whether a price is presented as one all-inclusive expense or partitioned into a series of charges. To explain this phenomenon, we propose a simple psychological mechanism whereby price format determines how many product attributes are actively processed at the time of valuation. Three studies support the hypothesis that price partitioning acts as an incentive to process multiple product dimensions. This process sometimes leads to the paradoxical overweighting of minor (but easy to evaluate) attributes that would be overlooked under an all-inclusive price format. The effect of price partitioning on demand can be detrimental or beneficial, consistent with existing conflicting findings in the literature and with variance in practice. Beyond its predictive and prescriptive implications, this theory contributes to the general notion that pricing might affect as much as capture perceived value.

Keywords: Price Format, Framing Effects, Information Processing, Attention

A common approach to evaluating consumer preferences is to assume that individuals have a utility function defined on multiple underlying product attributes or dimensions (Keeney and Raiffa 1993; Lancaster 1966). Price information then enters the consumer choice process indirectly through the budget constraint or, as is customary in conjoint analysis, directly as a separate observable attribute in the utility function (Green and Rao 1971; Srinivasan 1982; Winer 2005). Either way, the convention is that the role of price is to index the cost of making a purchase.

Although this framework has been usefully applied to a variety of marketing problems, recent research on the psychological aspects of pricing suggests that the role of price might be more complex than anticipated by standard economic principles. In particular, a number of studies have shown that the way price information is presented, termed price framing, often significantly influences perceptions of value (e.g., Anderson and Simester 2003; Gourville 1998; Heath, Chatterjee, and France 1995; Russo 1977).

The present research investigates the effects of framing prices alternatively as one *all-inclusive* expense or *partitioned* into a series of mandatory charges. We posit that price format determines the “depth” to which consumers analyze the various dimensions of an offer. Consumers presented with an all-inclusive price are expected to concentrate their evaluation on

¹ This paper is based on the first author's dissertation and he would like to thank the other members of his dissertation committee – John Deighton, John T. Gourville, and Elie Ofek – for their support and assistance through the evolution of the research.

the focal attribute of the transaction (a book, movie tickets, groceries, etc.). Consumers presented with a partitioned price, however, are expected to base their preferences on attribute-specific evaluations that lead to an increase in the amount of attention paid to secondary attributes (shipping and handling, booking service, delivery scheduling, etc.). This mechanism reflects the straightforward intuition that not every product dimension is equally salient at the time of purchase, and that the presence of multiple prices can re-sensitize consumers to elements of an offer they might otherwise overlook.

The predicted effect of price partitioning on preferences raises the question of how attribute evaluations aggregate to form overall judgments. Normatively, perceived gains and losses on individual attributes should compensate each other such that only the total price is relevant. However, existing research on information integration suggests that attribute evaluations can receive differential weighting depending on the confidence with which these judgments are held, with less weight assigned to more ambiguous evaluations. If true, this argument implies that firms may benefit simply by partitioning an expense such that the attributes easiest to evaluate are priced attractively.

The observation that preferences might be sensitive to price format has already generated some interest in the literature. Previous research argues consistently that partitioning an expense changes the way consumers process *price* information, but relies on different psychological mechanisms to predict whether the outcome influences demand positively (Ayres and Nalebuff 2003; Hossain and Morgan 2006; Morwitz, Greenleaf, and Johnson 1998; Xia and Monroe 2004) or negatively (Lee and Han 2002; Schindler, Morrin, and Bechwati 2005; Thaler 1985; Yadav and Monroe 1993). In the present research, we make the claim that price format affects the way consumers process the *benefit* side of market offerings (product dimensions, attributes, etc.). Adopting this alternative line of attack allows us to propose a more flexible framework that distinguishes circumstances under which price partitioning induces or suppresses demand.

Our theory can be summarized in two simple hypotheses. One, price components presented separately to a consumer activate a matching number of attribute evaluations. Two, integration of separate attribute evaluations to reach an overall assessment will be naturally biased in favor of the attributes whose prices are easier to evaluate. These hypotheses are justified in the next two sections and subsequently tested in three studies.

Background

In economics price reflects the monetary sacrifice a consumer makes to acquire a product or service (Stigler 1987). From the standpoint of the firm, price is supposed to *capture* rather than *shape* value. Consistent with this view, marketing tools for estimating consumer preferences generally treat price as if it has no influence on how a product's benefits are perceived. In conjoint analysis (Green and Rao 1971; Green and Srinivasan 1990), for example, rank order preferences are computed from a multivariate utility function in which price is a separate profile attribute (Bradlow 2005) that has only a main (negative) effect on preferences.

Recent behavioral research, however, suggests that shifts in preferences could be determined by the way prices are framed (Krishna et al. 2002; Winer 1988, 2005). Russo (1977), for example, demonstrated that consumer expenditure is affected by whether unit prices are shown

as separate tags or ordered lists. Other researchers have found that firms can benefit from communicating prices in percentages rather than absolute terms (Heath et al. 1995), reframing an expense into a series of ongoing charges (Gourville 1998), adding plausible comparative price information to an advertising message (Urbany, Bearden, and Weilbaker 1988), and even setting prices one cent below the nearest dollar value (Anderson and Simester 2003; Thomas and Morwitz 2005).

When considering the related question of whether firms should set an all-inclusive price for their products or partition the expense into a series of mandatory charges, a useful starting point is the theory of rational choice, which clearly predicts that the way prices are presented is irrelevant as long as the overall terms of exchange remain the same (Arrow 1982). In practice, however, the incidence of price partitioning is increasingly common.² Whereas in the past firms favored the use of single prices, today we see component charges not only in predictable settings such as Internet sites and catalogs (product *plus* shipping and handling fees, convenience charges, etc.), but also in unexpected circumstances, as when furniture stores break out the cost of sofa pillows, hotels assess fees for room keys, airlines itemize landing and refueling expenses, Christmas tree sellers separate the price of netting from that of trees, and so on.

Existing research on this topic lacks consensus on the likely impact of alternative price formats. One argument is that price partitioning *increases* demand. Morwitz et al. (1998), for example, suggest that consumers underestimate partitioned prices because they anchor on the larger expense (the base price) and adjust insufficiently for the remainder (the surcharge). The basis for this prediction is the notion that individuals trade off decision accuracy and cognitive effort before deciding how to process price information (Johnson and Payne 1985; Shugan 1980). The authors demonstrate in an auction task that participants charged a buyer's premium on their bids consistently paid more for the same item than those in a control group who were not assessed the premium. Further evidence of this processing heuristic and of the positive effect of price partitioning are provided by Hossain and Morgan (2006) in a field experiment on eBay and by Ayres and Nalebuff (2003) in the context of services. Finally, Xia and Monroe (2004) demonstrated that the size, nature, and number of surcharges might reduce, but will not reverse, this effect.³

Conversely, other papers have posited that price partitioning *decreases* demand. Most of this research is grounded in prospect theory (Kahneman and Tversky 1979) and mental accounting (Thaler 1985). Individuals are assumed to evaluate outcomes according to prospect theory's value function and, in line with mental accounting principles, perceive multiple losses as more punishing than a single loss of equal monetary value, which implies, in turn, that an all-inclusive price should be viewed more favorably than a partitioned one. Initial support for this hypothesis was provided in the context of gambles (Thaler and Johnson 1990). The behavioral literature on price bundling (Drumwright 1992; Gaeth et al. 1990; Johnson, Herrmann, and Bauer 1999; Yadav and Monroe 1993) similarly finds that listing the price of each bundle component

² A number of popular press articles discuss this trend. Examples include: Jennifer Bayot, "Fees Hidden in Plain Sight, Companies Add to Bottom Line," *New York Times*, 28 December 2002; Ellen Neuborne, "The Shipping Charge: Break It to Them Quickly," *BusinessWeek*, 29 October 2001; Gene Sloan, "Hotel Guests Hit with a Surfeit of Surcharges," *USA Today*, 15 August 2003; and Emily Thornton, "Fees! Fees! Fees!" *BusinessWeek*, 29 September 2003.

³ But see Lee and Han (2002) for an interesting discussion of the role of affect in this framework and Chakravarti et al. (2002) for an alternative explanation of the positive impact of price partitioning.

increased the negative impact of the loss of money associated with a transaction.⁴ Lastly, Schindler et al. (2005) combined prospect theory with perceptions of fairness to conclude that online retailers should avoid pricing the cost of delivery separately.

In the following section we advance a theoretical argument that can explain both a positive and a negative impact of price partitioning on demand. Whereas past research emphasized the relationship between price format and numerical processing of the price, the present argument explores how price format affects the way consumers process a product's multiple dimensions.

Price Format and Product Evaluation

To explain how price format influences perceptions of value we propose a simple psychological mechanism that links prices to the salience of product benefits. Consistent with the characterization of consumer decision making as a goal-directed, problem solving process (Bettman, Luce, and Payne 1998) that places primacy on goal-relevant criteria in order to economize on cognitive load without sacrificing accuracy (Gigerenzer and Goldstein 1996; Johnson and Payne 1985; Shugan 1980), we assume that consumers (1) hold a subjective ordering of product dimensions based on their relevance to the task at hand (Fishburn, 1974) – for example, they readily distinguish between focal and secondary attributes, and (2) employ a heuristic by which they form as many attribute evaluations as the number of prices presented to them. Specifically, whereas an all-inclusive price is expected to yield a single evaluative judgment based on the focal attribute of the transaction, a partitioned price is expected to highlight the presence of multiple benefits and raise the salience of secondary attributes that would otherwise be overlooked in order to reduce cognitive effort.⁵

Intuitively, this theory suggests that an important function of price is to “spell out” product benefits. If multiple prices alert consumers to the presence of multiple attributes, then all-inclusive and partitioned prices should differ in terms of the impact of *secondary* attributes in evaluation. For a product with clear focal and secondary attributes, variations in the perceived value of the latter should exert greater influence on preferences when the price is partitioned.⁶ Formally:

H1: The perceived value of a secondary attribute has a greater influence (positive or negative) on the overall assessment of a product when price is partitioned than when it is all-inclusive.

⁴ A point of contention in the literature is whether price partitioning and bundling are different phenomena. According to Morwitz et al. (1998, p. 453), the former involves the division of prices of *single* products, while the latter the collective pricing of *distinct* products. But others find this distinction irrelevant (e.g., Stremersch and Tellis 2002). We emphasize the framing effect of price presentation, whereas bundles are usually offered at some “special” price and therefore viewed as a vehicle for price discrimination (Guiltnam 1987; Schmalensee 1982).

⁵ Note that this process is also compatible with three of the most common mental “shortcuts” found in the literature: adopting overly myopic decision frames (Payne, Bettman, and Johnson 1992); eliminating information even when it is readily available (Kahneman and Tversky 1979; Russo and Doshier 1983); and sequential/lexicographical processing (Fishburn 1974; Yadav 1994).

⁶ Consistent with previous literature (Zeithaml 1988, p. 14), we define perceived value broadly as “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given.”

Two points need to be highlighted in association with H1. If, in fact, preferences are *more* sensitive to the perceived value of secondary attributes when price is partitioned, it should be possible to design an experiment whereby a change from all-inclusive to partitioned prices benefits a product's perception when the secondary attribute is attractive and damage it when a secondary attribute is not attractive. Also, if preferences are *less* sensitive to secondary attributes when price is all-inclusive, changes in these attributes could end up having little or no effect on product evaluation. We test H1 and these related implications in study 1.

If price partitioning leads to separate evaluations for each product attribute, the question naturally arises how these judgments are subsequently integrated to form an overall impression of the offer. Normatively, a straightforward addition of the gains and losses perceived on each dimension implies that aggregate judgments should be insensitive to price partitioning. However, existing research suggests that judgment integration is often subject to bias (Anderson 1971; Gaeth et al. 1990; Kahn and Meyer 1991). Borrowing from the literature on joint versus separate evaluation (e.g., Hsee et al. 1999), we propose that the weight of each product attribute will be determined by the *evaluability* of the price assigned to it. A price is considered to be more "evaluable" if the consumer is able to judge its desirability with greater confidence. This judgment depends on the precision (or ambiguity) of reference prices (Kalyanaram and Winer 1995; Lichtenstein, Bloch, and Black 1988; Monroe 1971). A price is more evaluable when a consumer's perception of what represents an attractive price is more precise, for example, when the range of market prices deemed acceptable is narrow. Conversely, a price is less evaluable when the range of market prices deemed acceptable is broad. Preference is expected to be biased towards attributes whose prices are easier to evaluate. This prediction is captured in our second hypothesis:

H2: Under price partitioning, the weight of an attribute in the overall assessment of a product is conditional on the evaluability of its price. In particular, the weight of an attribute is inversely related to the width of the range of acceptable prices for that feature.

We test H2 in study 2. The concept of evaluability is closely related to the notion of price uncertainty in marketing (Mazumdar and Jun 1993; Urbany and Dickson 1991) and cue validity in social psychology (Mellers, Richards, and Birnbaum 1992). Consistent with recent empirical evidence that suggests that consumers are overly responsive to peripheral expenses (Brynjolfsson and Smith 2003; Lewis, Singh, and Fay 2006), we believe that in many commercial settings (e.g. Internet sites, catalogs) the prices of secondary attributes that are more frequently encountered or more homogeneous across purchases than focal attributes are often easier to evaluate as a result. When such is the case, H2 yields the paradoxical effect of secondary attributes being overlooked under all-inclusive pricing and over-emphasized under price partitioning.

Whereas studies 1 and 2 examine the impact of price formats in terms of changes in participants' *overall* evaluation of products, study 3 tests H1 and H2 more directly by eliciting evaluations of *attributes* and verifying that the influence of focal and secondary attributes under each price format conforms to the foregoing theory.

Study 1: All-Inclusive versus Partitioned Prices

Our first study involved a series of experiments devised to test H1. The main analysis is presented in experiment 1a. Experiment 1b tested the robustness of these results by reminding participants that the two price formats are equivalent. Experiment 1c tested the assumption that the effect of price format is conditional on the relative salience of secondary attributes.

Experiment 1a: Air Travel

This initial experiment used a 2 (price format: all-inclusive, partitioned) \times 2 (perceived value of secondary attribute: bad deal, good deal) between-subjects design. The stimulus described a purchase situation in which participants were asked to choose between two air travel alternatives (appendix A). The focal attribute was one-way transit from Boston to San Juan, the secondary attribute in-flight entertainment and meal service.⁷ The first option, Airline A, was held constant across conditions and described simply by its long travel time (two flight segments for a total of 7 hours and 49 minutes) and price of \$165. The second option, Airline B, varied in line with the experimental design offering a shorter, non-stop flight (4 hours and 15 minutes) plus in-flight entertainment and meal service. The total expense of this alternative was framed either as one aggregate price of \$215 or individual charges of \$205 for the focal attribute and \$10 for the secondary attribute, which was manipulated by varying the type of benefit provided: one episode of a sitcom and refreshments (bad deal) versus six movie channels and a full-service meal (good deal).

After reading this scenario, participants were asked to indicate their choice intentions (1 = definitely Airline A, to 8 = definitely Airline B) and rate the overall attractiveness of each alternative (1 = very unattractive, to 7 = very attractive). To determine whether the perceived value of the secondary attribute was manipulated as intended we collected an attractiveness rating specifically for the in-flight entertainment and meal service (-3 = very unattractive, to 3 = very attractive).

Participants ($n = 210$) were registered members of a subject pool managed by the research center of a large U.S. business school. Because the same resource was used for all three studies, we describe logistical details only once. At the time of the experiment the general population of 5,447 members was, on average, 39% male and 31 years of age. Eighty-seven percent of the members had completed undergraduate education or higher. The participants, selected at random and recruited via e-mail, were informed that the poll involved hypothetical purchase decisions, that there were no right or wrong answers, and that they should consider only their own preferences. Participation was voluntary, with a \$5 payment upon completion. The experiment was carried out online.

A preliminary analysis of variance (ANOVA) indicated that the secondary attribute was manipulated as intended ($M_{\text{good deal}} = .91$, $M_{\text{bad deal}} = -.17$, $F(1, 206) = 20.59$, $p < .001$). Neither the

⁷ A separate pre-test ($n = 46$) provided evidence that these attributes were not equally significant: 74% ($\chi^2(1) = 10.52$, $p < .001$) of participants asked to rank the airfare and in-flight entertainment and meal service in order of importance listed the former first.

main effect of price format nor the interaction between the two independent factors was significant.

An ANOVA on the choice measure revealed a significant main effect of the perceived value of the secondary attribute ($F(1, 208) = 6.67, p = .010$). More important, this effect was qualified by the expected interaction with price format ($F(1, 206) = 9.52, p = .002$). For these data to support H1, two effects needed to be shown, (1) that preference for option B when the secondary attribute is attractive is significantly *higher* under a partitioned than under an all-inclusive price, and (2) that preference for option B when the secondary attribute is unattractive is significantly *lower* under a partitioned than under an all-inclusive price. Individual contrasts revealed precisely this pattern of results: participants offered a “good deal” on the secondary attribute were more inclined to choose option B when the price was partitioned ($M = 6.04$) than when it was all-inclusive ($M = 5.16, t(101) = 1.99, p = .049$), but the effect reversed when the secondary attribute was perceived to be a “bad deal” ($M = 4.20$ vs. $M = 5.33, t(105) = -2.37, p = .020$).

The outcome of the individual evaluation of option B was similar. The ANOVA showed a main effect of the perceived value of the secondary attribute ($F(1, 208) = 4.19, p = .042$), qualified by the interaction with price format ($F(1, 206) = 5.88, p = .016$). Consistent with H1, specific comparisons revealed the effectiveness of each price format to be contingent on the perceived value of the secondary attribute. For an attractive secondary attribute, participants evaluated option B more favorably when the price was partitioned ($M = 5.79$) than when it was all-inclusive ($M = 5.29, t(101) = 1.79, p = .077$), but for an unattractive secondary attribute participants evaluated option B less favorably when the price was partitioned ($M = 4.91$ vs. $M = 5.37, t(105) = -1.68, p = .096$).

An interesting empirical finding that corroborates our initial intuition involves the null effect of secondary attributes on preferences under an all-inclusive price. We believe our theory to be strengthened by the apparent insensitivity of both choice intention ($t(105) = -.32, ns$) and individual evaluation ($t(105) = -.25, ns$) to shifts in the perceived value of the secondary attribute. It turns out that participants responded “as if” receiving a better deal on this dimension did not influence their assessment of the overall offer.

That participants might have been surprised by the separate charge for the secondary attribute could potentially confound these results. Had this been the case because the practice was viewed as unusual, an expectations-based rather than information processing-based explanation would be supported. We addressed this eventuality by asking participants given partitioned prices whether they believed the format to be atypical (1 = not at all typical, to 7 = very typical) and whether they believed that firms should always present their prices in this manner (1 = strongly disagree, to 7 = strongly agree). Apparently, this alternative account is not responsible for the effects we observed: participants rated the format slightly atypical ($M = 3.82, t(102) = -1.12, ns$), but the values were not statistically different from the mid point of the scale, nor did participants seem to have strong convictions about how airlines ought to price their products ($M = 3.74, t(102) = -1.31, ns$).

Experiment 1b: Groceries

Would the results of the first experiment have been different had the participants been reminded that there is no real difference between the all-inclusive and partitioned prices? Although we do

not state a formal hypothesis for this question, the proposed theory suggests that making participants aware of a potential numerical processing mistake should not matter because different price formats influence the way consumers process a product's dimensions, not its price. To address this issue, we conducted a follow-up experiment in which participants ($n = 85$) were asked to compare two ways an online grocer could present its prices to customers (appendix B). The opening paragraph in the scenario alerted participants to the fact that these formats were equivalent in terms of total expenditure. It was then explained via an example that the price of a typical shopping basket (focal attribute) plus the price of the scheduling service (secondary attribute) could be shown either as one lump sum of \$95 (format 1) or as separate charges of \$86 and \$9 (format 2), respectively. A pre-test similar to the one conducted for experiment 1a confirmed that individuals ($n = 43$) perceived the shopping basket to be more important than the scheduling service (74%, $\chi^2(1) = 10.34, p < .001$). The perceived value of the secondary attribute was manipulated between-subjects by offering either a lengthy (8 hour), firm-selected time slot for delivery during working hours (bad deal) or a brief (1 hour), customer-selected time slot for delivery any time of the week (good deal).

We collected two preference measures. Participants were asked to indicate which format made the offer more appealing (1 = definitely format 1, to 7 = definitely format 2) and to rate the probability of purchase in each case (1 = very low, to 7 = very high). We also had participants evaluate the attractiveness of the scheduling service (-3 = very unattractive, to 3 = very attractive) and judge whether it was unusual for a grocer to price the scheduling service separately (1 = highly usual, to 7 = highly unusual). As expected, the manipulation check revealed the scheduling service to be viewed more favorably by participants when it represented a "good deal" ($M = .85$) than when it represented a "bad deal" ($M = -.66, t(83) = 4.39, p < .001$). We also confirmed that pricing the scheduling service separately was not perceived by participants to be unusual ($M = 3.81$ vs. 4, $t(84) = -.87, ns$), which ensured that any effect of price format could not be attributed to the "surprise" factor referenced earlier.

The results of the first experiment appear to generalize to situations in which individuals are conscious of the numerical equivalence of the two price formats. Instead of providing answers close to the indifference point on the scale, participants indicated the partitioned price to be more effective when the secondary attribute was attractive ($M = 4.66$ vs. 4, $t(40) = 2.35, p = .024$) and the all-inclusive price to be more effective when the secondary attribute was unattractive ($M = 3.25$ vs. 4, $t(43) = -2.68, p = .010$). We further observed that increasing the perceived value of the secondary attribute influenced the likelihood of purchase under a partitioned price ($M_{\text{good deal}} = 4.63$ vs. $M_{\text{bad deal}} = 4.05, t(83) = 2.00, p = .049$), but not under an all-inclusive price ($M_{\text{good deal}} = 4.05$ vs. $M_{\text{bad deal}} = 4.16, t(83) = -.31, ns$). Both results are consistent with H1.

Experiment 1c: Movie Tickets

The final experiment of study 1 was meant to test whether increasing the salience of secondary attributes could moderate the effect of price format on preferences. This possibility derives from our earlier assumption that product dimensions are ordered on the basis of their relevance to consumers and evaluated sequentially, with a propensity for secondary attributes to be ignored when the price is all-inclusive. Given two equally salient attributes, showing both price formats to lead to the same valuation would reinforce the notions that (1) considering the processing of product dimensions is critical to predicting the framing effect of price format, and (2) the

economics of cognitive effort is a plausible explanation for why secondary attributes were overlooked in the earlier versions of study 1.

To address this question we extended the set-up of the first experiment to a 2 (price format: all-inclusive, partitioned) \times 2 (perceived value of secondary attribute: bad deal, good deal) \times 2 (importance of secondary attribute: low, high) between-subjects design. Participants ($n = 339$) were shown a single scenario involving the purchase of a movie ticket (focal attribute) using a telephone booking service (secondary attribute). The price of the transaction was either all-inclusive (\$10.25) or partitioned across the two attributes (\$8.75 and \$1.50, respectively). The booking service either required participants to queue at the box office to complete the transaction (bad deal) or permitted them to skip the queue and pick up the tickets at an automated machine (good deal). The importance of this secondary attribute was manipulated by telling participants either that the movie had been screening for weeks and the session was likely to be empty (low) or that the movie was premiering that night and the session was likely to be quite full (high).

Participants were asked to rate the transaction (1 = very bad deal, to 9 = very good deal), and the probability of purchase (1 = very low, to 9 = very high), and indicate whether they believed the offer to represent a “good buy” (1 = strongly disagree, to 9 = strongly agree). To test whether price format affected the amount of consideration paid to the booking service, we posed the following question: “How much attention do you think you paid to the telephone booking service when you evaluated the overall offer? (1 = very little attention, to 7 = a lot of attention).” Finally, to check our manipulations, we asked participants if they agreed with the statement “I consider the booking service to be a central component of the offer” (1 = strongly disagree, to 7 = strongly agree) and, as in experiments 1a and 1b, to rate this attribute’s attractiveness (-3 = very unattractive, to 3 = very attractive).

We present first the results of the two manipulation checks. Separate ANOVAs that included all the independent variables confirmed that participants perceived the secondary attribute to be more relevant when its importance was raised ($M_{\text{high}} = 4.79$, $M_{\text{low}} = 3.99$; $F(1, 337) = 15.98$, $p < .001$) and more attractive when its perceived value was increased ($M_{\text{good deal}} = .85$, $M_{\text{bad deal}} = -.80$; $F(1, 337) = 73.55$, $p < .001$). The direction of both results was as intended, and no other main, two-way, or three-way effects were statistically significant.

Given the high correlation of responses to the first three preference measures (Cronbach’s $\alpha = .88$), we decided to collapse the data into a single preference score. The results of an ANOVA on this measure revealed a main effect of the perceived value of the secondary attribute ($F(1, 337) = 10.64$, $p = .001$) and the two-way interaction with price format ($F(1, 335) = 2.82$, $p = .094$). Both effects were qualified by the expected three-way interaction $F(1, 331) = 5.81$, $p = .016$) as shown in figure 1.

Note that the pattern of responses when the telephone booking service was of *low* importance closely replicates that of the first experiment. Consistent with H1, changes in the perceived value of the secondary attribute had a greater impact on the overall assessment of the offer when the price was partitioned, a “bad deal” on the booking service hurt preferences more under a partitioned price ($M = 4.22$) than under an all-inclusive price ($M = 4.93$, $t(79) = 1.76$, $p = .083$), but the effect reversed when this attribute was viewed as a “good deal” ($M_{\text{partitioned}} = 5.57$ vs. $M_{\text{all-inclusive}} = 4.62$, $t(95) = 2.38$, $p = .018$).

For the four conditions in which the importance of the booking service was *high*, however, the outcome was noticeably different. Here it appeared that the overall assessment of the offer

took the secondary attribute into consideration when the price was partitioned as well as when it was all-inclusive. That is, we found no difference between price formats whether the booking service was perceived unfavorably ($M_{\text{partitioned}} = 4.58$ vs. $M_{\text{all-inclusive}} = 4.48$, $t(84) = .22$, ns) or favorably ($M_{\text{partitioned}} = 5.24$ vs. $M_{\text{all-inclusive}} = 5.43$, $t(84) = -.50$, ns), suggesting that for attributes that are equally important price format no longer affects the evaluation process.

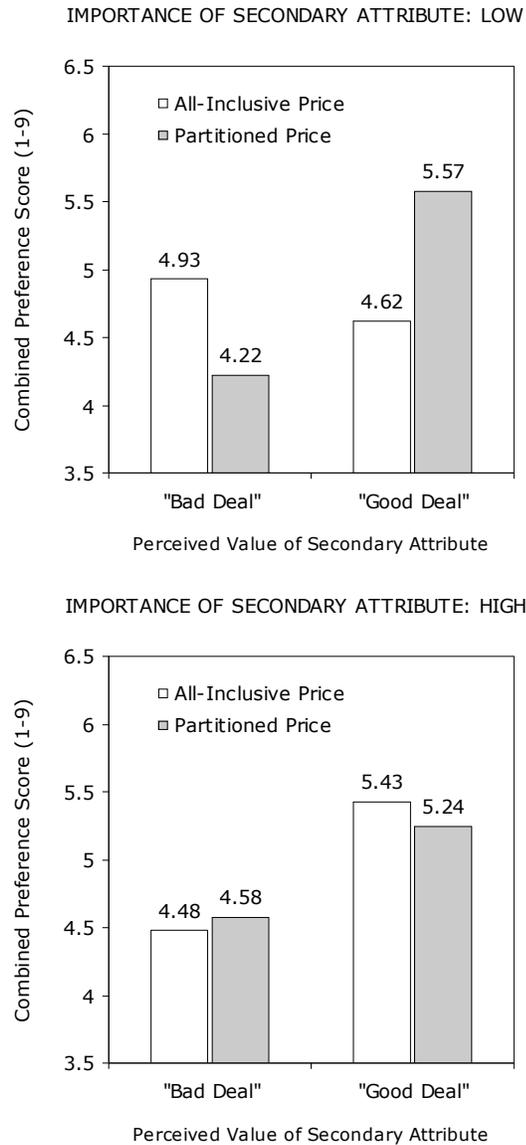


Figure 1 Study 1 (experiment 1c): Combined Preference Scores

Our final analysis involved the subjective measure of attention. An initial ANOVA showed a main effect of the importance of the secondary attribute ($F(1, 337) = 23.48$, $p < .001$) as well as a significant two-way interaction between this variable and price format ($F(1, 335) = 25.38$, $p < .001$). Specifically, in the more common event that an attribute such as the booking service is

relatively unimportant, presenting a partitioned price might be sufficient to induce individuals to attend more closely to its value ($M_{\text{partitioned}} = 5.50$ vs. $M_{\text{all-inclusive}} = 3.64$, $t(331) = 7.38$, $p < .001$). If the attribute is important, however, price format will not have a major effect ($M_{\text{partitioned}} = 5.47$ vs. $M_{\text{all-inclusive}} = 5.39$, $t(331) = .36$, ns). As expected, changes in the relevance of secondary attributes have no effect on attention when a price is partitioned ($t(331) = .15$, ns) but have a significant effect the price is all-inclusive price ($t(331) = -6.46$, $p < .001$).

Study 2: Integration Bias under Price Partitioning

Study 1 showed that secondary attributes tend to have a lesser or even negligible impact on preferences when price is all-inclusive. The objective of study 2 was to assess how much emphasis these attributes actually receive when price is partitioned. Normatively, individual attribute evaluations should “add up” without distortion and final preferences should not be affected by the way an expense is allocated across product dimensions. H2, however, predicts that the weight of attribute evaluations will be influenced by the relative evaluability of their prices. We tested this hypothesis in two experiments. In the first we elicit reference price ranges as a measure of price evaluability and find that they predict attribute weighting under price partitioning. In the second experiment, we manipulated this measure directly in order to isolate the causal role of evaluability and rule out a number of alternative explanations.

Experiment 2a: Compact Discs and Books

To help us develop the stimuli for this experiment we conducted a pre-test in which 81 participants were asked to complete a short questionnaire involving one of two online transactions: a compact disc (CD) plus shipping and handling, or a book plus shipping and handling. For each attribute, participants had to estimate three market prices: minimum, maximum, and expected. Expected prices were rounded down to the nearest dollar value, while minimum and maximum prices provided an indication of the range of acceptable prices. To support comparisons of price evaluability across attributes, we expressed each interval as a proportion of the expected price.

The experiment itself manipulated a single factor, type of partition, across six between-subjects levels labeled as follows: +\$3/- \$3, EP/EP, -\$3/+ \$3, -\$6/+ \$6, -\$9/+ \$9, and all-inclusive (appendix C). The first five partitions featured attribute prices that amounted to the same total expense. The labels refer to the price difference on each attribute (focal first, secondary second) from the expected price, which is marked EP (see table 1). Each participant was shown only one scenario per transaction (CD and book).⁸ The focal attributes were a CD (expected price: \$15) and a book (expected price: \$24); the secondary attribute in both cases was standard shipping and handling (expected price: \$4). After reading each scenario, participants ($n = 255$) were asked to rate the offer (1 = very bad deal, to 9 = very good deal) and indicate probability of purchase (1 = very low, to 9 = very high) and whether the transaction represented a “good buy” (1 = strongly

⁸ The within-subjects allocation of stimuli was randomized across participants and did not result in significant effects (main or interaction).

disagree, to 9 = strongly agree). These scales were highly correlated (CD: Cronbach's $\alpha = .95$; Book: Cronbach's $\alpha = .93$), so we analyzed the data using a combined preference score.

The rationale for using this design to test H2 is as follows: if the *total* price of a transaction is held constant, any increase in the price of one attribute implies a decrease of equal magnitude in the price of the other attribute. By monitoring how different types of partitions affect product evaluation, therefore, we can verify whether greater emphasis is accorded to attributes with more evaluable prices.

From the pre-test we know that the perceived range of prices (adjusted by the expected price) for shipping and handling is narrower than that for a CD ($M_{CD} = .59$ vs. $M_{shipping} = .44$, $t(86) = 2.64$, $p = .010$) or book ($M_{book} = .66$ vs. $M_{shipping} = .52$, $t(72) = 2.16$, $p = .034$). Therefore, given that the price of shipping and handling appeared more evaluable, to support H2 we needed to show that the overall assessment of the transaction improved as the portion of the expense allocated to shipping and handling gradually diminished.

Evaluations of the two offers fluctuated greatly as the same total expense was redistributed across attributes. The difference between the first and last price partitioning conditions, for example, was large: $M_{+\$3/-\$3} = 5.16$ vs. $M_{-\$9/+\$9} = 1.99$, $t(87) = 7.09$, $p < .001$ (CD); $M_{+\$3/-\$3} = 4.94$ vs. $M_{-\$9/+\$9} = 2.94$, $t(85) = 4.36$, $p < .001$ (book). More important, we ran a polynomial contrast on the five conditions that used a partitioned price and found that increasing the portion of the expense allocated to the secondary attribute lowered preference scores (table 1). The linear trend was highly significant in both scenarios and in the direction anticipated by H2 (CD: $F(1, 254) = 79.38$, $p < .001$; Book: $F(1, 254) = 16.34$, $p < .001$).

Table 1 Study 2 (experiment 2a): Experimental Conditions and Combined Preference Scores

Type of partition*	Compact Disc			Book		
	Price of attribute		Preference score	Price of attribute		Preference score
	Focal	Secondary		Focal	Secondary	
+\$3/-\\$3	\$18	\$1	5.16	\$27	\$1	4.94
EP/EP	\$15	\$4	4.45	\$24	\$4	4.26
-\\$3/+\\$3	\$12	\$7	3.17	\$21	\$7	3.33
-\\$6/+\\$6	\$9	\$10	1.88	\$18	\$10	3.49
-\\$9/+\\$9	\$6	\$13	1.99	\$15	\$13	2.94
All-Inclusive	\$19		4.34	\$28		4.17

*Remember that the total expense is held constant across the six conditions. The labels for the different types of partitions should be interpreted as follows: EP/EP = price of both attributes reflects the Expected Price indicated in the pre-test.

-\\$6/+\\$6 = price of focal component is \$6 cheaper than expected. Price of secondary attribute is \$6 more expensive than expected.

In a subsequent analysis we ran a series of contrasts to compare preference scores in the all-inclusive and partitioned price conditions with the objective of replicating the findings from study 1. Consistent with H1, we found that (1) an all-inclusive price is preferable when the secondary attribute is priced *higher* than expected (CD: $M_{-\$3/+\$3} = 3.17$ vs. $M_{all-inclusive} = 4.34$, $t(80) = -2.61$, $p = .010$; Book: $M_{-\$3/+\$3} = 3.33$ vs. $M_{all-inclusive} = 4.17$, $t(85) = -1.76$, $p = .080$), (2) a partitioned price is preferable when the secondary attribute is priced *lower* than expected (CD:

$M_{+\$3/-\$3} = 5.16$, $t(85) = 1.89$, $p = .061$; Book: $M_{+\$3/-\$3} = 4.94$, $t(87) = 1.65$, $p = .100$), but (3) neither format is preferable when the secondary attribute is priced as expected ($M_{EP/EP} = 4.46$, $t(83) = .26$, ns; Book: $M_{EP/EP} = 4.26$, $t(82) = .18$, ns).

Overall, the results of this experiment provide initial evidence that evaluability, as measured by the relative range of acceptable prices, determines which attribute receives greater attention under price partitioning. However, at least four alternative explanations could also account for this outcome. First, there might exist a positive correlation inferred between the price of the focal attribute and its perceived quality. Second, attention to shipping and handling might be a simple demand effect induced by unusual price levels for this service (e.g., \$10 or \$13 in the stimuli). Third, if participants initially processed focal attributes as gains and secondary attributes as losses, then loss aversion is also a viable alternative explanation. Finally, the effect could be a consequence of the relative magnitudes of the two attribute prices, equal absolute changes in the lesser price of shipping and handling being more salient. We addressed these potential confounds with a second experiment that manipulated directly the reference price range of each attribute.

Experiment 2b: Christmas Trees

In the previous experiment, whether an attribute's price was difficult or easy to evaluate was inferred from the data collected in a pre-test. In the present experiment we manipulated evaluability by varying the range of prices considered by participants. This manipulation enabled us to test whether the overall assessment of a product under various price partitioning scenarios was determined by changes in the evaluability of attribute prices, as predicted by H2, in a context where competing explanations noted above have been neutralized.

To achieve this we first had to identify a product category in which the range of acceptable prices for both types of attributes was broad. We decided to use Christmas trees (focal attribute, expected price: \$40) plus netting (secondary attribute, expected price: \$6.50). A pre-test ($n = 43$) identical to the one conducted in experiment 2a elicited these expected prices and, more important, confirmed our intuition regarding the range of acceptable prices considered by participants for each attribute ($M_{tree} = 1.70$ vs. $M_{netting} = 1.61$, $t(84) = .24$, ns). Having established this baseline condition, we were able to increase evaluability as required by providing participants with a narrower reference price range for one or both attributes. Marketing studies often use external price information to reduce individual differences in subjective evaluations (e.g., Heath et al. 1995; Kaicker, Bearden, and Manning 1995; Mazumdar and Jun 1993; Schindler et al. 2005). We introduced this information to participants as having been learned through previous research. For example, in the condition in which only the evaluability of the focal attribute was increased the stimulus included the following sentence: "From the research you conducted you found that the price of Christmas trees generally varies from \$38 to \$42."

This second experiment, thus, employed a 3 (type of partition: +\$5/-\\$5, EP/EP, -\\$5/+\\$5) \times 4 (increased price evaluability: secondary attribute only, focal attribute only, neither attribute, both attributes) between-subjects design. The first factor, type of partition, was manipulated across three levels such that one condition used the expected attribute prices collected in the pre-test and the other two shifted allocation of the total expense by \$5 in both directions. The second factor, increased price evaluability, was manipulated by providing a narrow reference price range as noted above. For the Christmas tree this range was \$38 to \$42, for netting \$6 to \$7. Participants ($n = 531$) were presented with the same three preference measures as in the first

experiment (Cronbach's $\alpha = .90$). For each attribute, they were asked to rate how confident they would be making a purchase decision given the price shown in the stimulus (1 = not at all confident, to 9 = very confident).

To test whether price evaluability was manipulated as intended we ran ANOVAs on the confidence scores of both attributes. As expected, for both the Christmas tree and netting, the only significant effect was that of increased price evaluability (Christmas tree: $F(3, 527) = 6.60$, $p < .001$; netting: $F(3, 527) = 8.59$, $p < .001$). Independent contrasts confirmed that the inclusion of a reference price range for either attribute increased participants' confidence in making their purchase decisions (Christmas tree: $M_{\text{present}} = 5.85$ vs. $M_{\text{not present}} = 4.98$, $t(527) = 4.28$, $p < .001$; netting: $M_{\text{present}} = 5.58$ vs. $M_{\text{not present}} = 4.57$, $t(527) = 5.08$, $p < .001$).

According to H2, each price evaluability condition should have a different impact on a product's overall assessment. As the price of the secondary attribute gradually increases, but the total expense remains constant, we would expect product value to:

- (1) *Decrease* if a reference price range is provided only for the secondary attribute (same pattern as in experiment 2a),
- (2) *Increase* if a reference price range is provided only for the focal attribute,
- (3) Remain *constant* if no reference price range information is provided, and
- (4) *Peak* at expected prices when a reference price range is provided for both attributes (this inverted-U relationship follows if we assume, a la Kahneman and Tversky (1979), that any deviation from the expected prices causes a loss on one attribute and a gain on the other, and that the loss looms larger than the gain).

The key results of this experiment are displayed in figure 2. We collapsed the three preference measures into a combined score and conducted trend analyses for each of the four price evaluability conditions. Consistent with the first prediction, participants given a narrow reference price range for netting evaluated the offer less favorably as the price of that attribute increased ($M_{+\$5/-\$5} = 5.93$, $M_{\text{EP/EP}} = 5.65$, and $M_{-\$5/+\$5} = 3.51$; $F(1, 136) = 30.35$, $p < .001$). Conversely, the evaluation of participants given a narrow reference price range only for the Christmas tree gradually increased ($M_{+\$5/-\$5} = 4.72$, $M_{\text{EP/EP}} = 5.49$, and $M_{-\$5/+\$5} = 6.31$; $F(1, 123) = 17.46$, $p < .001$). Also as expected, no linear trend was observed in the absence of price information ($M_{+\$5/-\$5} = 5.12$, $M_{\text{EP/EP}} = 5.47$, and $M_{-\$5/+\$5} = 5.56$; $F(1, 140) = 1.20$, ns), but a specific reference price range for both attributes produced an inverted-U ($M_{+\$5/-\$5} = 5.53$, $M_{\text{EP/EP}} = 6.00$, and $M_{-\$5/+\$5} = 5.19$; $F(1, 128) = 2.99$, $p = .086$).

These four distinct patterns of results are consistent with H2: increasing the evaluability of an attribute's price coincided with an increase in the weight of that attribute under price partitioning. Note that the alternative explanations enumerated at the end of the previous experiment would have successfully predicted the first result (as they did in that experiment) but not the other three.

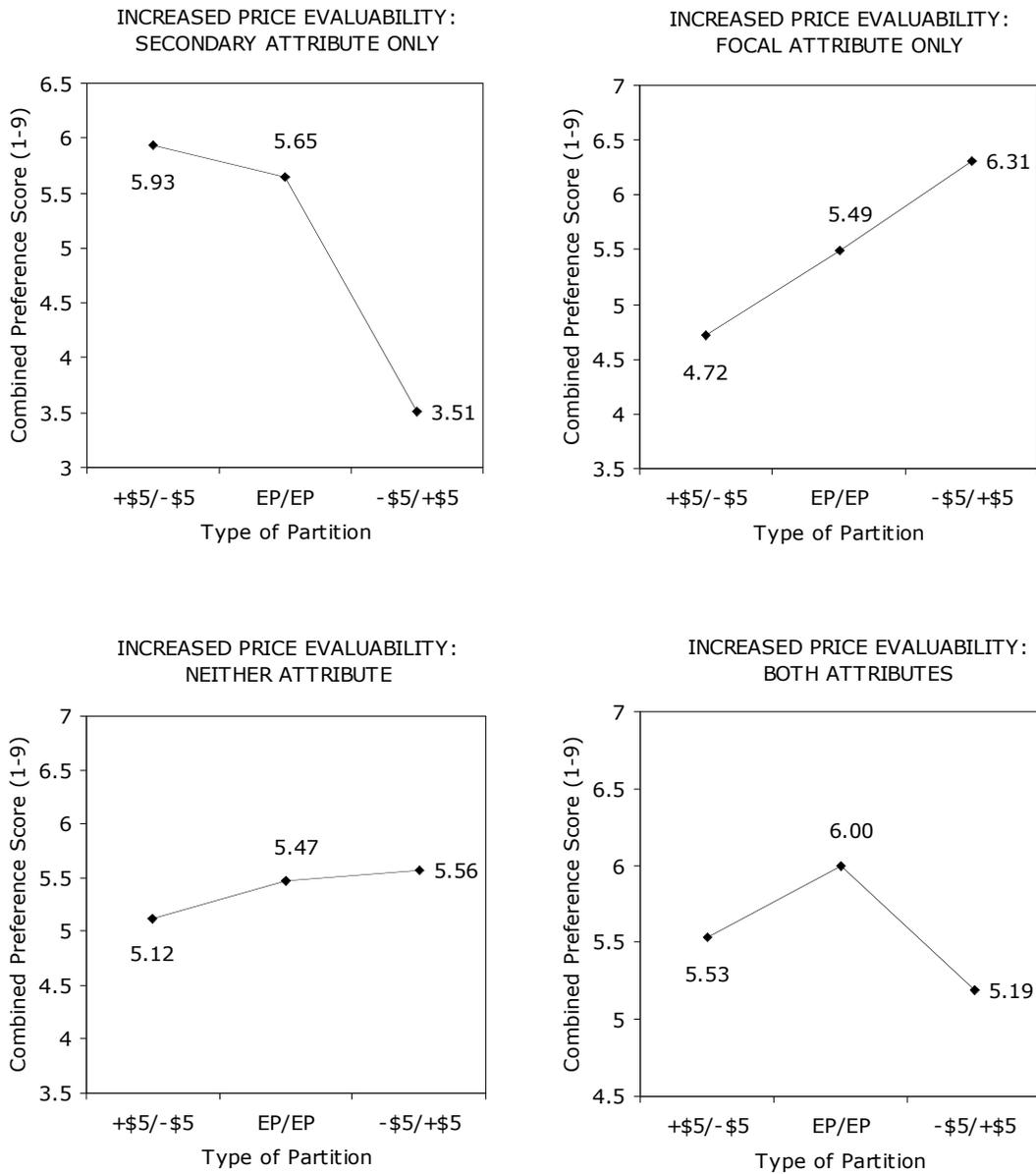


Figure 2 Study 2 (experiment 2b): Combined Preference Scores

Study 3: Capturing Preferences Using Attribute-level Evaluations

Central to both H1 and H2 is the notion that the relative weight of focal and secondary attributes may shift depending on which price format firms decide to follow. But given that the preceding experiments relied on variations in participants' *product* evaluations to demonstrate what is essentially an *attribute*-level process, the following study was conceived to more directly test the relationship between price format, attribute weighting, and product value. Specifically, the goal was to test whether attribute-level evaluations could be combined as proposed by our theory to predict overall preferences for products. Recall from study 1 that secondary attributes seem to

have little or no effect on product evaluation under an all-inclusive price, and from study 2 that secondary attributes seem to exert a major impact on preferences when the expense is partitioned *and* the price of these features is easy to evaluate. We decided to focus on these two results in an effort to demonstrate the predicted swing in attribute weights.

The experiment itself consisted of a 2 (price format: all-inclusive, partitioned) \times 2 (type of evaluation: product-level, attribute-level) between-subjects design. Participants ($n = 141$) were presented with a purchase situation involving cellular telephone service. The focal attribute was a monthly calling plan of 500 minutes (\$45); the secondary attributes were roaming (\$4.5) and interstate connection (\$4.5) services. A pre-test ($n = 43$) confirmed that the range of acceptable prices (expressed as a proportion of expected prices) for the secondary attributes was in fact narrower than that for the focal attribute ($M_{\text{focal}} = .87$ vs. $M_{\text{secondary}} = .65$, $t(84) = 1.99$, $p = .050$). Depending on the condition, the total expense was framed either as one aggregate price (\$54) or as three separate charges. Participants were asked to assess either the overall offer (product-level evaluation) or each of the three attributes individually (attribute-level evaluation). All evaluations were made using a 10-point scale (1 = highly unattractive, to 10 = highly attractive).

To examine the participants' relative weighting of the calling plan and roaming and interstate connection services, we first integrated the attribute-level ratings following four straightforward rules-of-thumb or algorithms consumers might use when making multi-attribute judgments (table 2). Each algorithm represented a different distribution of attribute weights, ranging from complete reliance on the focal attribute to complete reliance on the secondary attributes. We then compared the four "calculated" scores obtained from these algorithms to actual product-level evaluations made by a different group of participants. Our theory predicted that under an all-inclusive price the two algorithms that placed greater emphasis on the focal attribute, *focal attribute only* (FA) and *monetary worth weighting* (MW), would generate preference scores that closely resembled actual evaluations. Under price partitioning this result was expected with the two algorithms that placed greater emphasis on the secondary attributes, *equal weighting* (EW) and *secondary attributes only* (SA).

Table 2 Study 3: Algorithms for Integrating Attribute Evaluations

Type of algorithm	Label	Weight of calling plan	Weight of roaming	Weight of interstate connection
Focal attribute only	FA	1	0	0
Monetary worth weighting	MW	.834	.083	.083
Equal weighting	EW	.334	.333	.333
Secondary attributes only	SA	0	.500	.500

Figure 3 displays actual and calculated product evaluations for each price format. The two panels exhibit different patterns of results. Under an all-inclusive price (top panel) the calculated scores diverge from the actual evaluation as the weight placed on the focal attribute gradually decreases. Under a partitioned price (bottom panel) the calculated scores converge to the actual evaluation as the weight placed on the secondary attributes is gradually increased. Specifically, participants shown an all-inclusive price gave the overall offer a rating of 5.22, and although

both the FA ($M = 5.39$, $F(1, 71) = .11$, ns) and MW ($M = 5.55$, $F(1, 71) = .45$, ns) algorithms generated preference scores that were indistinguishable from this evaluation, the EW ($M = 6.02$, $F(1, 71) = 3.03$, $p = .086$) and SA ($M = 6.33$, $F(1, 71) = 5.33$, $p = .024$) generated scores that were significantly higher. When the price was partitioned the actual evaluation was 5.30, and although both the FA ($M = 6.56$, $F(1, 68) = 7.55$, $p = .008$) and MW ($M = 6.34$, $F(1, 68) = 5.78$, $p = .019$) algorithms now generated preference scores that differed significantly from this rating, the EW ($M = 5.67$, $F(1, 68) = .89$, ns) and SA ($M = 5.22$, $F(1, 68) = .04$, ns) no longer did.

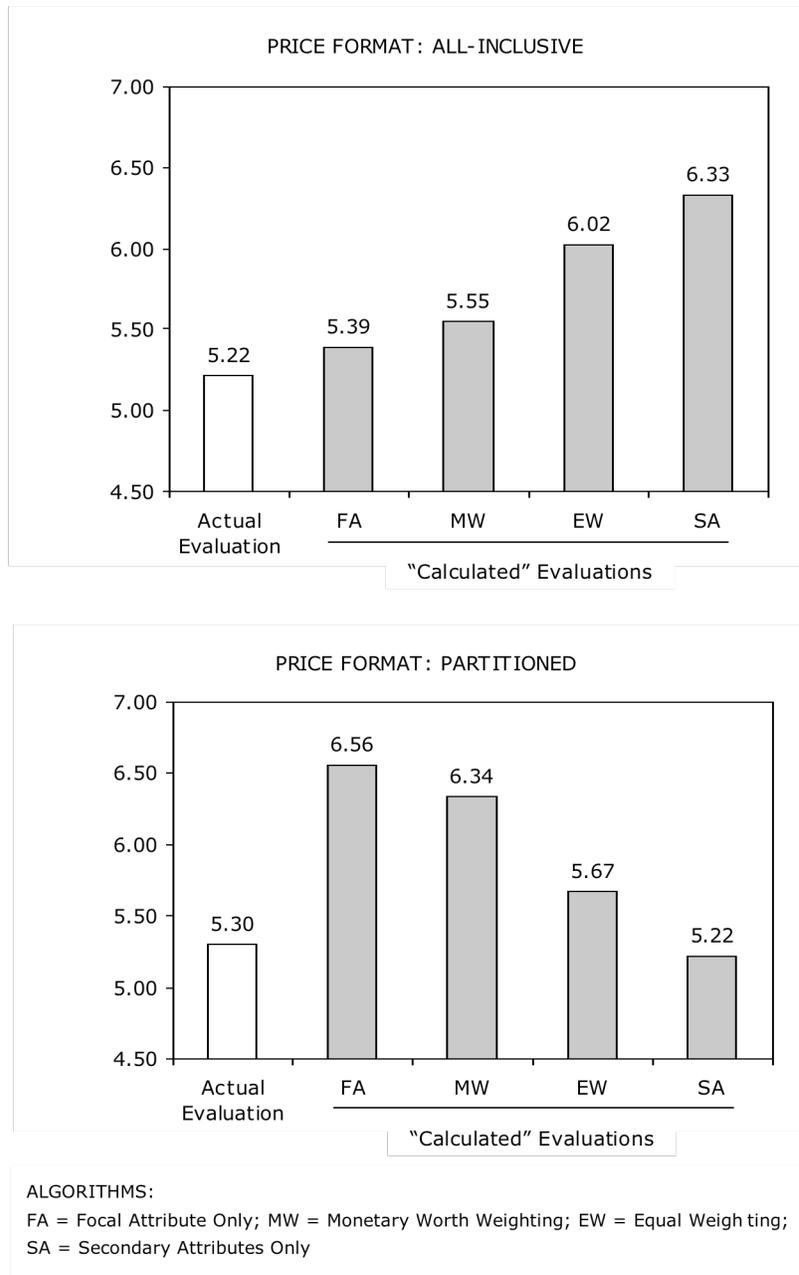


Figure 3 Study 3: Actual vs. “Calculated” Product Evaluations by Price Format

Collectively, these results demonstrate that a simple, arbitrary change in price format can occasion a stark contrast in preference formation. They also validate the approaches used in studies 1 and 2. It appears that consumers “anchor” their preferences for everyday products on the attribute that is easier to evaluate when a partitioned price is encountered and on the focal attribute when the price is all-inclusive. Interestingly, the potential for a considerable swing in attribute weights brings to mind the normative question of which of the two price formats better approximates consumers’ “rational” preferences. On the basis of relative monetary worth, all-inclusive prices would clearly seem to provide the best fit inasmuch as the “correct” thing would be to place little emphasis on secondary attributes.

General Discussion

The principal objective of this paper has been to investigate the impact of price format on product evaluation and to suggest a simple mechanism that explains why partitioning an expense might (or might not) be advantageous. We find that price format influences the amount of attention consumers invest in the various product attributes, all-inclusive prices discouraging complete processing of secondary attributes, and partitioned prices often re-sensitizing consumers to these dimensions. Although stimulating a deeper product assessment before purchase might seem desirable a priori, we have demonstrated a potential paradoxical effect whereby individuals sometimes weigh excessively secondary features to which a price is assigned. Informing consumers of what they “get for the money” through price partitioning might or might not be good business practice and many firms will prefer that their products be valued holistically, with most attention placed on the focal attribute.

Study 1 demonstrated that alternative price formats exert a systematic effect on how individuals process secondary attributes such as shipping and handling, in-flight entertainment, telephone booking services, and so forth. A follow-up experiment confirmed that the stimulating effect of price format becomes irrelevant when these attributes gain importance. Study 2 built on this finding by exploring the impact of different partitions of the same total expense. A bias was noted towards the attribute with greater price evaluability. Experiment 2a, which identified as more evaluable the price of shipping and handling, revealed product evaluations to gradually worsen as the cost of this attribute increased despite a compensating reduction in the price of the focal attribute. This result was refined by a follow-up experiment that manipulated price evaluability directly, yielding a more complete pattern of results inconsistent with alternative explanations. Study 3 conducted a more direct test of the underlying mechanism proposed in our theory by measuring the value of each attribute independently, and how these impressions combined to predict overall preferences.

Although it might seem reasonable to suspect that not every transaction is best framed with the same price format, the existing literature on this topic has not yet discussed more general conditions that could determine the preferability of partitioned over all-inclusive prices and vice versa. We believe that a contribution of this paper is a more flexible, intuitive framework that supports contingent predictions on a case-by-case basis. In addition, our approach provides one example of how information processing theories and behavioral decision research can be brought

together to study marketing problems. Together with other researchers (Johar, Maheswaran, and Perracchio, 2006), we believe this to be a fruitful and interesting avenue for developing our understanding of consumer decision-making.

More broadly, our studies demonstrate price to be not simply an independent cause of disutility, but also a determinant of the degree to which consumers assess product benefits. Our results are thus consistent with other recent efforts that posit price to be a stimulus or incentive for consumers to consider the full set of contingencies implied by their choices (Shiv, Carmon, and Ariely 2005; Wathieu and Bertini, forthcoming).

Finally, this paper complements research on how consumers make inferences from firm behavior (e.g., Kahneman, Knetsch, and Thaler 1986) by suggesting that price format might be an effective means of channeling a consumer's attention from one type of attribute to another. Our results might suggest that firms that compete on the basis of a differentiated focal attribute should distract consumers from irrelevant secondary attributes by posting all-inclusive prices, and that firms that offer commoditized products might use partitioned prices to capitalize on the attractiveness of secondary features and distract from any weaknesses in the main value proposition.

Appendix A Study 1 (Experiment 1a): Sample Stimulus

Imagine that you need to buy a one-way ticket for a trip from Boston to San Juan. For the departure date you want, only two well-known airlines cover this route. Airline A does not offer direct service between the two cities. Details and fare information for Airline A are as follow.

Depart Boston, 12:15pm - Arrive Atlanta, 4:09pm (duration 3hr 54m)
Depart Atlanta, 4:50pm - Arrive San Juan, 8:04pm (duration 3hr 14m)
Price: \$165

Airline B does offer direct non-stop service between Boston and San Juan. Flight and fare information for Airline B are as follow (total price is itemized below).

Depart Boston, 11:55am - Arrive San Juan, 4:10pm (duration 4hr 15m)
Price: *\$215 including in-flight entertainment (6 movie channels) and a full-service meal*
\$205 + \$10 for in-flight entertainment (6 movie channels) and a full-service meal
\$215 including in-flight entertainment (1 episode of a sitcom) and refreshments (coffee or tea)
\$205 + \$10 for in-flight entertainment (1 episode of a sitcom) and refreshments (coffee or tea)

Please answer the following questions

[All conditions:]

1. Which airline will you fly with?
(1 = definitely Airline A; 8 = definitely Airline B)
2. Please rate the attractiveness of each offer:
Airline A
(1 = very unattractive; 7 = very attractive)
Airline B
(1 = very unattractive; 7 = very attractive)
3. Please rate the attractiveness of the in-flight entertainment and meal service in this scenario.
(-3 = very unattractive; 3 = very attractive)

[Price partitioning conditions only:]

4. How typical is it for airlines to separate the price of in-flight entertainment and meal service?
(1 = not at all typical; 7 = very typical)
5. Please evaluate this statement: "Airlines should always separate the price of in-flight entertainment and meal service from the price of the ticket."
(1 = strongly disagree; 7 = strongly agree)

Appendix B Study 1 (Experiment 1b): Sample Stimulus

In the following situation we are interested in understanding your response to alternative ways of presenting price information. The alternatives described below are equivalent in terms of total price but differ in how this price is broken up. Think about how you would react if you were facing this situation and then answer the accompanying questions.

Consider the following situation:

An online grocer is trying to decide between two ways of pricing their service. This store has a good reputation, a wide selection of products, and reliable service. The shopping basket in the example shown below is the same in both cases and represents one week of groceries for an average customer. The only thing that changes is how the price is itemized:

Format 1: \$95, including a scheduling service fee

Format 2: \$86 plus a \$9 scheduling service fee

The scheduling service fee contributes to the cost of arranging time slots and having the goods delivered.

... *Deliveries are Monday to Friday only and customers are assigned a 4-hour time slot between the hours of 9AM and 5PM.*

... *Deliveries are seven days a week and customers can choose a 1-hour time slot between the hours of 7AM and 8PM.*

Please answer the following questions

1. In your opinion, which of these two formats makes the offer look more appealing?
(1 = definitely Format 1; 7 = definitely Format 2)
2. Imagine a decision was made to use Format 1. Rate the probability that you would buy.
(1 = very low; 7 = very high)
3. What if the grocer decided to use Format 2 instead? What would your rating be now?
(1 = very low; 7 = very high)
4. Please rate the attractiveness of the scheduling service in this scenario.
(-3 = very unattractive; 3 = very attractive)
5. Do you think it is unusual for online grocers to charge a scheduling service fee?
(1 = highly usual; 7 = highly unusual)

Appendix C Study 2 (experiment 2a): Sample Stimulus

Imagine that you are interested in buying the new book by your favorite author. The book, a hardcover novel, is currently on the bestseller list. The online store you usually buy from offers this book for ...

... *\$28 dollars, including standard shipping and handling (5-10 business days).*

... *\$27 dollars, plus a \$1 charge for standard shipping and handling (5-10 business days).*

... *\$24 dollars, plus a \$4 charge for standard shipping and handling (5-10 business days)*

... *\$21 dollars, plus a \$7 charge for standard shipping and handling (5-10 business days).*

... *\$18 dollars, plus a \$10 charge for standard shipping and handling (5-10 business days).*

... *\$15 dollars, plus a \$13 charge for standard shipping and handling (5-10 business days).*

Please answer the following questions

1. Please evaluate this statement: "I consider this offer a good buy."
(1 = strongly disagree; 9 = strongly agree)
2. Do you perceive this to be a good or bad deal?
(1 = a very bad deal; 9 = a very good deal)
3. The probability that I would buy from this seller is ...
(1 = very low; 9 = very high)

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