

Working Paper SERIES

Date May 9, 2012

WP # 0022MKT-448-2012

Price Promotion (In)consistency and Consumers' Brand Evaluations: The Role of Reference Prices

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Acknowledgements

The authors acknowledge the helpful input of Sharon Shavitt, Chris Janiszewski, Priya Raghubir, Lan Xia, Justin Kruger, Madhu Viswanathan, Tiffany White, and Himanshu Mishra. This research was partially supported by a research grant from the University of Texas at San Antonio College of Business.

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Abstract

Research suggests that consumers evaluate a brand that is promoted now but never before less favorably than a brand promoted now and also promoted consistently in the past because the former promotional behavior generates negative attributions. The present research examines the alternative possibility that a brand promoted inconsistently (vs. consistently) may be evaluated more favorably because it has a higher reference price. Three studies contrasting these two explanations reveal that when consumers' reference prices for the competing brands under consideration are similar, attributions drive evaluations. However, when consumers' reference prices for the competing brands differ, reference prices drive evaluations.

Keywords: reference price, adaptation level, price promotion, attributions, brand evaluations

JEL Classification Code: M31

Price Promotion (In)consistency and Consumers' Brand Evaluations:

The Role of Reference Prices

Consider two brands, A and B, in the same product category, that have the same regular price. Brand A has been sold at a discount regularly in the past, whereas brand B historically has not been discounted. A consumer now discovers that both brands are being offered at the same discounted price. Which brand would the consumer evaluate more favorably, A or B? Under what conditions would brand A be evaluated more favorably than brand B, and *vice versa*? From the perspective of brands A and B, this is a question of whether consistent or inconsistent price promotions result in more favorable brand evaluations, and that is the focus of the present paper.

The use of price promotions has increased dramatically in recent years (Musalem, Bradlow, and Raju 2008; Neslin 2002; Van Heerde and Neslin 2008). It is generally accepted that price promotions lead to short-term increases in unit sales by enhancing value (Blattberg and Neslin 1990; Neslin 2002). However, research also suggests that price promotions can potentially have negative effects on a brand's image, leading to more negative brand evaluations and reduced sales in the long term (Jedidi, Mela, and Gupta 1999). It would clearly be advantageous to be able to reap the short-term benefits of price promotions while avoiding the potential long-term costs, and thus researchers have attempted to identify variables that influence the relation between price promotions and brand evaluations. One such variable is the relative consistency with which a brand is promoted (Manchanda 1998; Swait and Erdem 2002). Promoting a brand regularly (e.g., high – low pricing) indicates consistent promotional behavior, whereas rare or first-time promotions indicate inconsistent promotional behavior.

This paper presents two theories that make opposing predictions about how promotion consistency influences consumers' brand evaluations. The first theory, focusing on attributional

reasoning, comes from previous research examining promotion consistency. This theory suggests that inconsistent promotions are especially likely to invoke negative attributions about the brand and thus should negatively impact brand evaluations. The second theory focuses on reference prices and adaptation-level theory. Although this theory has not previously been applied in the context of promotion consistency, its implications suggest that consistent promotions should reduce consumers' reference prices for the brand and thus would have the greatest negative impact on brand evaluations. We propose conditions when the psychological processes underlying each of these models are likely to prevail, thereby identifying conditions when consistent versus inconsistent promotions will produce the most negative impact on brand evaluations. The theories and their boundary conditions are then tested in three experiments.

Attribution Theory and the Negative Impact of Inconsistent Price Promotions

Attributions are people's explanations of ambiguous situations or events, and people often generate such explanations to feel increased control over their environment (Folkes 1988; Weiner 2000). These explanations often attribute responsibility for an event to the primary "actor" associated with that event (Gilbert and Jones 1986). For example, when consumers make attributions in relation to a price promotion, they are likely to prefer explanations based on some characteristic of the product or company associated with the promotion. Furthermore, explanations associated with price promotions are likely to focus on negative attributes of the company or brand (Lichtenstein and Bearden 1986; Manchanda 1998; Mela and Urbany 1997) and thus lead to negative brand evaluations. For instance, Manchanda (1998, p. 2) notes that in response to price promotions, attributions such as "They must not be doing well. That is why they are having all these sales" and "The headphones must be of cheap quality to be offering all these discounts" are likely. Similarly, Lichtenstein and Bearden (1986) found that attributions

related to price promotions are brand related and negatively valenced (e.g., “because the car is inferior,” and “because the car has poor styling”).

Social psychological research indicates that attributions are most likely to occur when people receive unexpected information (Jones and McGillis 1976; Kelley 1972) for two reasons: (1) unexpected information is more likely to catch our attention; and (2) even if expected information does catch our attention, there is typically little need to explain events that we already expected to happen. In this sense unexpected promotions would be more likely than expected promotions to trigger attributional thinking. Rare or first-time (i.e., inconsistent) price promotions deviate from a brand’s past promotion behavior, and are more unexpected. Thus, these promotions would likely prompt consumers to reevaluate the brand and engage in more attributional reasoning.

These propositions have been directly supported by existing research examining promotion consistency. That is, inconsistent promotions have been shown to trigger attributional reasoning (Manchanda 1998), the resulting attributions are usually negative (Scott and Yalch 1978; 1980; Tybout 1978; Tybout and Scott 1983), and thus inconsistent promotions encourage negative brand evaluations (Manchanda 1998; Raghurir and Corfman 1999). Conversely, consistent promotions are expected and are less likely to trigger attributions, thus allowing the brand to avoid the negative evaluations associated with inconsistent promotions (Manchanda 1998; Raghurir and Corfman 1999). The end result is that a brand that is price promoted inconsistently (vs. consistently) is more likely to induce attributional reasoning, which in turn is likely to negatively influence brand evaluations.

In sum, attributional thinking (i.e., looking for reasons for a behavior) is more likely when behavior is unexpected, out of the ordinary, inconsistent, or deviates from past behavior.

When a brand is promoted inconsistently (e.g., for the first time), the promotion represents a deviation from the brand's past pricing behavior. Because such deviations signal a change, consumers are more likely to believe that a reevaluation of the brand is in order. In contrast, for a brand promoted consistently in the past, a current promotion does not signal a change because it is consistent with past promotional activity; thus, promotions for such brands do not prompt attributional reasoning and therefore do not trigger negative brand evaluations (Raghubir and Corfman 1999). This application of attribution theory suggests that consumers will evaluate a brand promoted for the first time more negatively than a comparable brand that has been promoted consistently in the past.

Adaptation-Level Theory and Reference Prices

An alternative explanation for the relation between price promotions and brand evaluations is suggested by reference prices and adaptation-level theory. A reference price is an internal standard price or price range that consumers use to judge observed prices (Kalyanaram and Winer 1995; Monroe 2003). Applying adaptation-level theory (Helson 1964) to price perceptions is based on the assumption that consumers judge prices relative to their internal norms that represent the combined effects of present and past prices. That is, consumers' current reference prices for a brand are influenced by previous prices at which the brand has been sold or advertised as well as their expectations about future prices and their beliefs about what is a fair price (Grewal, Marmorstein, and Sharma 1996). Consumers evaluate an observed price of the brand relative to their reference price, and the magnitude and direction of the difference influences their judgments of the brand's price (Kalyanaram and Winer 1995). Every new price that a consumer encounters moves the reference price in its own direction. That is, the reference price is continuously changing as new prices are encountered.

Given that the reference price is based on previous prices seen by the consumer, the reference price of a consistently promoted brand is likely to be lower than that of a competing brand with the same non-promotional price that is on promotion now but has never been previously promoted. In support of this expectation, Lattin and Bucklin (1989) found a significant negative correlation between the brand's frequency of promotion and its reference price. Further, if consumers associate low reference prices with low quality (Grewal, Monroe, and Krishnan 1998; Grewal, Krishnan, Baker, and Borin 1998), they might judge a brand that has been consistently promoted in the past to be of lower quality than a comparable brand that has not been discounted prior to the current purchase occasion.

In other words, the fewer the promotional offers for a brand, *ceterus paribus*, the higher will be the consumers' reference prices for the brand. For instance, a consumer who sees a brand on promotion only once out of her 10 visits to the store likely will have a higher reference price for that brand than if she sees that brand discounted from the same regular price during five of the 10 visits. This higher reference price may lead to perceptions of better quality and more favorable evaluations for the inconsistently (vs. consistently) promoted brand.

Based on the preceding analysis, attribution theory and adaptation-level theory make opposing predictions about the relation between price promotion consistency and brand evaluations. One variable that is likely to be a crucial determinant of which processing mode is more prevalent is the diagnosticity of price information. Existing research using the attributional approach to examine the relation between promotion consistency and brand evaluations (Manchanda 1998; Raghurir and Corfman 1999) did not provide specific information about either the brand's retail price or the frequency with which the brand was discounted (i.e., only verbal descriptors were used, for example indicating that the brand had been "frequently"

discounted without precisely defining “frequently”). Under this approach, because reference prices for the brands are unavailable, it is difficult to use them as a cue for differentiating between brands, and thus participants should be more likely to rely on alternative evaluation cues such as attributions. We expect that if simple, diagnostic price information is provided in a conceptually similar paradigm, reference prices will become the dominant evaluation cue and thus participants’ brand judgments will follow the pattern predicted by adaptation-level theory. These arguments lead to the following prediction:

H1: Given a specified time period characterized by multiple purchase occasions, consumers will evaluate a brand that has been price promoted in a consistent pattern *less* favorably than a comparable brand that has been price promoted only once during the last purchase occasion. The relation between promotion consistency and brand evaluations will be mediated by consumers’ reference prices for the brand.

Although the preceding hypothesis illustrates our belief that reference prices influence the relationship between promotion consistency and brand evaluations, we do not intend to imply that reference prices will always be the dominant evaluation cue. Indeed, we believe that in order to fully understand the relation between price promotion consistency and brand evaluations, it is necessary to identify boundary conditions that determine whether inconsistent (and thus unexpected) price promotions will produce more negative brand evaluations than consistent promotions based on attributional processes or whether consistent (vs. inconsistent) price promotions will produce more negative brand evaluations based on adaptation-level processing. For example, as noted, previous research using the attributional paradigm suggests that attributional reasoning dominates reference price processing when specific price information is not provided and it is thus relatively difficult for consumers to use reference prices as a

diagnostic brand evaluation cue. It seems reasonable to speculate that reference prices might also be rendered non-diagnostic under other circumstances as well. For instance, reference prices might also lose utility as a cue for consumers who lack the math skills to estimate reference prices or for price streams that are computationally difficult (e.g., \$297.47 instead of \$300).

A similar effect might be achieved even when reference prices are easy to compute if reference prices are rendered non-diagnostic by making them approximately equal across brands. Under these conditions, because reference prices do not enable differentiation between brands, consumers would be less likely to use reference prices as a brand evaluation cue. In turn, consumers would be more likely to rely on alternative cues such as attributions for making their brand evaluations. Further, as previously noted, research suggests that attributional processing is most likely to occur when an event is unexpected. Social psychological theory indicates that unexpectedness is a function of both the consistency with which an event occurs and the extremity of that event (Weiner 2002). Previous research in this domain (e.g., Manchanda 1998; Raghubir and Corfman 1999) has focused on consistency as an operationalization of unexpectedness, but increasing the extremity of price promotions (e.g., deep discounts) should also facilitate attributional processing. Hence, we theorized that using a scenario in which promotions are inconsistent and extreme (e.g., deep discounts) should increase the likelihood of attributional processing (also see Manchanda 1998, for a similar point). Specifically, making reference price equal for the brands under consideration, and increasing discount extremity should decrease the diagnosticity (and hence, the use) of reference prices and increase attributional processing. In contrast, when reference prices between the brands under consideration are discernable, and discounts are not extreme (reducing the likelihood of using

attributions), participants' brand evaluations will follow the pattern predicted by adaptation-level theory. Specifically,

H2: When reference prices are similar across brands and discount depth is extreme, consumers will evaluate a brand with consistent price promotions *more* favorably than a comparable brand that is price promoted only once during the last purchase occasion. This effect will be mediated by negative brand-related attributions.

H3: When reference prices differ across brands and discount depth is not extreme, consumers will evaluate a brand with consistent price promotions *less* favorably than a comparable brand that is price promoted only once during the last purchase occasion. This effect will be mediated by the brand's reference price.

Research Strategy

Because previous research has explained the influence of promotion (in)consistency on brand evaluations using attribution theory, the first two experiments focused on the predictions of adaptation-level theory (hypothesis 1). Both of these experiments used materials that were conceptually similar to those used by previous research based on attribution theory showing that unexpected (inconsistent) price promotions result in negative brand evaluations, except that specific, diagnostic price information was provided. As expected, providing this information produced a substantial change in results, such that adaptation-level theory rather than attribution theory provides a better account for the relation between promotion consistency and brand evaluations. Experiment 1 demonstrates a pattern of results that is in accord with adaptation level theory but not with attribution theory, namely that consistent price promotions result in the most negative brand evaluations, and also shows that reference prices mediate the relation between

promotion consistency and brand evaluations. Experiment 2 replicates the effects from experiment 1 using different product categories, a different operationalization of reference price, and a richer, more realistic product environment. Experiment 3 focuses on boundary conditions identifying when attribution theory versus adaptation-level theory provides the best explanation for brand evaluations. When reference prices are similar across brands and one brand has a deeper discount (but is discounted less frequently to maintain the same average price), inconsistent promotions result in the most negative evaluations; when these conditions are not present, our findings mirror those of the first two experiments in which consistent price promotions result in the most negative brand evaluations.

Experiment 1

Method

Respondents were 255 students (age range 18-24; 49% female) who received class credit in exchange for participation. Participants were presented with the weekly price of a brand of laptop computer for 15 weeks, then asked to evaluate the brand and estimate its reference price. Laptop computers were used because they are familiar to participants, their promotional behavior varies substantially across brands, and the cost and importance of laptop computers lead some consumers to track prices over an extended time period. Participants were randomly assigned to one of three conditions: in the inconsistent promotion condition, the brand was not promoted during the first 14 weeks; in the moderately consistent promotion condition, the brand was promoted in four of the first 14 weeks; and in the consistent promotion condition, the brand was promoted in 10 of the first 14 weeks. All brands were promoted during the fifteenth week. A pretest confirmed that promotions in the three conditions were perceived as differing in consistency. Based on another pretest, the regular and discounted prices used were \$1500 and

\$1250, indicating a discount of 16.67%, which is common for laptop computers. Participants were asked to observe the price of the laptop computer, then to answer questions pertaining to their evaluations and reference prices for the computer's brand. No brand name or attribute information was provided; the brand was referred to as "Brand X."

Brand evaluations were measured by asking participants to rate Brand X as superior quality, reliable, well-known, likeable, good, better, and preferred using 7-point disagree-agree scales ($\alpha = .92$). A factor analysis utilizing principal component analysis and varimax rotation revealed that all items loaded on a single factor. There are multiple ways to operationalize reference price (Klein and Oglethorpe 1987), but there is also a concern that carryover effects might influence price estimates if multiple operationalizations are used in succession (Janiszewski and Lichtenstein 1999). Thus, we used one operationalization of reference price in this experiment, "What is the most you are willing to pay for this brand?" (Kristensen and Garling 1997; White et al. 1994). In experiment 2, two different operationalizations were used to assess generalizability.

Results

An ANOVA revealed that brand evaluations followed a linear trend, being highest for the brand promoted inconsistently ($M = 4.62$), followed by the brand promoted moderately consistently ($M = 4.60$), and the brand promoted consistently ($M = 4.29$; $F(1, 251) = 5.25$, $p < .05$, $r = .14$). This result supports adaptation-level theory (H1). Contrasts revealed that the brand promoted consistently was evaluated significantly more negatively than the brands promoted inconsistently or moderately consistently (p 's $< .01$). Participants' reference prices also followed a linear trend ($F(1, 250) = 5.89$, $p < .05$, $r = .15$), being highest for the brand promoted

inconsistent ($M = \$1,400.78$) followed by the brand promoted moderately consistently ($M = \$1,351.22$), and the brand promoted consistently ($M = \$1,347.70$).

Baron and Kenny's (1986) procedure was used to determine whether reference price mediated the relation between promotion consistency and brand evaluations. Regression analyses showed that promotion consistency significantly influenced both brand evaluations ($\beta = -.15, t = -2.41, p < .02$) and reference prices ($\beta = -.14, t = -2.30, p < .03$), but that when both promotion consistency and reference price were used to predict brand evaluations, promotion consistency was no longer significant ($\beta = -.11, t = 1.74, p > .08$) whereas reference price remained significant ($\beta = .21, t = 3.40, p < .001$). A Sobel's test supported the mediation (Sobel's $Z = 1.91, p = .05$), supporting the predictions of adaptation-level theory (H1).

Discussion

The results of this experiment suggest that a brand promoted consistently may be evaluated lower than a brand promoted moderately consistently or inconsistently, and that the effect of promotional behavior on brand evaluations is mediated by consumers' reference prices (H1). These findings are consistent with predictions based on adaptation-level theory but not with those based on attribution theory. Interestingly, the stimuli for experiment 1 are conceptually similar to those used in previous research that found support for attribution theory (e.g., Manchanda 1998; Raghubir and Corfman 1999), with the exception that experiment 1 included specific, simple numeric price values that could be used to differentiate between brands rather than verbal descriptors that do not provide such clear differentiation. Thus, the fact that the present results are not consistent with attribution theory suggests that providing price information that enables differentiation between brands facilitates an alternative cue that overrides attributional reasoning. The fact that reference prices mediated the relation between promotion

consistency and brand evaluations in experiment 1 indicates that the relevant alternative cue is likely to be the brand's reference price.

Experiment 1 is not definitive for several reasons. First, reservation price is only one operationalization of reference price, and it would be advantageous to replicate these findings using other measures of reference price. Second, experiment 1 used only one product category – laptop computers, and it would be useful to determine whether these findings generalize to other product categories. Third, experiment 1 provided only price information, whereas consumers usually have other information (e.g., brand attributes) available to them. Finally, each participant in experiment 1 only viewed prices for a single brand. It is often the case that consumers compare prices of several brands concurrently, which can influence their reference prices (Monroe 2003). Experiment 2 was designed to address these limitations.

Experiment 2

In experiment 2, participants were shown the prices of three brands rather than one. To extend the generalizability of the results, we used two different product categories– a desk (working table) and PDA, and two different measures of reference price. Further, each brand was described by several attributes (e.g., for the PDA: silver colored casing, leather case, AC 120 V (60 Hz) power) in addition to price.

Method

Eighty-six undergraduate students enrolled in business courses participated for class credit. The respondents ranged in age from 18 to 24, and 42% were female. A 3 (promotional behavior: inconsistent, moderately consistent, consistent; within subjects) x 2 (product category: desk, PDA; between subjects) mixed design was used.

Stimuli and Procedure. Participants were asked to assume that they needed to buy either a desk (working table) or a PDA and had narrowed their choice to three brands (A, B, or C). Because the price of these products is known to change frequently, “you decide to monitor the price of the three brands for a few weeks.” Thereafter, participants were shown the prices along with six other attributes (PDA) or seven other attributes (desk) for each of the three brands for 15 weeks. Attributes were counterbalanced for the three brands. Based on a pretest, the regular and discounted prices used were \$400 and \$300 for the desks, and \$300 and \$225 for the PDAs, implying a discount of 25%, which is common for such products. For the desk, each weekly price observation was shown on a separate page; for the PDA, weekly price observations were shown on an overhead projector (one slide per week). After viewing the prices, participants answered questions pertaining to brand evaluations and then indicated their reference prices. Manipulation of promotion consistency was similar to that in experiment 1.

Measures. Participants used 11-point scales (anchored by -5 and +5) to rate each brand on quality, reliability, reputation, liking, and favorability ($\alpha = .84$). Two measures of reference price were used. Participants were asked to indicate a “reasonable price” to pay for the three brands, as well as the “estimated average price of the brands during the 15 week period” (Kalwani and Yim 1992; Lattin and Bucklin 1989).

Results

Evaluations. Evaluations followed a linear trend, with the most positive evaluations for the inconsistently promoted brand followed by the moderately consistent and the consistently promoted brands, both for PDAs ($M_{inconsistent} = 3.58$, $M_{mod\ consistent} = 2.63$, $M_{consistent} = 1.00$; $F(1, 51) = 46.05$, $p < .001$, $r = .69$) and desks ($M_{inconsistent} = 3.57$, $M_{mod\ consistent} = 2.29$, $M_{consistent} =$

0.45; $F(1, 33) = 38.91, p < .001, r = .74$). For both product categories, all contrasts between consistency levels were significant (p 's $< .001$), supporting H1, as expected.

Reference Prices. Because the correlation between the two reference price measures was high ($r = 0.59, p < .001$ for PDAs; $r = .53, p < .001$ for desks) the two measures were pooled to form a reference price index. This index followed a linear trend with the highest reference price for the inconsistently promoted brand for both PDAs ($M_{inconsistent} = \$286.12; M_{mod\ consistent} = 261.14; M_{consistent} = \$240.57; F(1, 51) = 123.65, p < .001, r = .84$) and desks ($M_{inconsistent} = \$381.87; M_{mod\ consistent} = 340.28; M_{consistent} = \$306.16; F(1, 33) = 159.02, p < .001, r = .91$). For both product categories, all contrasts between consistency levels were significant (p 's $< .001$).

Baron and Kenny's (1986) procedure was used to determine whether reference prices mediated the relation between promotion consistency and brand evaluations. Separate regression equations showed that promotion consistency significantly predicted brand evaluations (PDAs: $\beta = -.59, t = 8.97, p < .001$; desks: $\beta = -.61, t = 7.32, p < .001$) and reference prices (PDAs: $\beta = -.74, t = 13.78, p < .001$; desks: $\beta = -.78, t = 11.74, p < .001$). When both promotion consistency and reference price were used to predict brand evaluations, the effect of promotion consistency decreased substantially (PDAs: $\beta = -.39, t = -4.06, p < .001$; desks: $\beta = -.30, t = 2.34, p < .05$), whereas that of reference prices remained significant (PDAs: $\beta = .27, t = 2.79, p < .01$; desks: $\beta = .40, t = 3.20, p < .005$). Sobel tests indicated reference price significantly mediated the relation between promotion consistency and brand evaluations for both PDAs (Sobel's $Z = 2.73, p < .01$) and desks (Sobel's $Z = 3.08, p < .005$), supporting H1.

Discussion

For both the desk and PDA product categories, and with different measures of reference price than in experiment 1, the inconsistently promoted brand was evaluated more favorably than

the brand promoted moderately consistently, which in turn was evaluated more favorably than the consistently promoted brand. Furthermore, the relationship between promotion consistency and brand evaluations was mediated by participants' reference prices. These findings are consistent with the predictions based on adaptation-level theory but not with those based on attribution theory.

Our first research goal was to demonstrate that adaptation-level theory can explain how price promotion consistency might influence consumers' brand evaluations. The results of the first two experiments indicate that an inconsistently promoted brand is evaluated more favorably than a brand that is promoted either consistently or moderately consistently. However, previous research using conceptually similar stimuli has shown the opposite effect, namely that attributional processes cause inconsistent (and thus unexpected) price promotions to have a more negative effect on brand evaluations than consistent promotions. Accordingly, our next objective was to test boundary conditions that determine when adaptation-level and attribution processes influence brand evaluations (i.e., to test H2 and H3).

In experiment 3, we provided relevant information to support both attributional and adaptation-level reasoning processes, but in one condition, we decreased the utility of reference prices by making the reference price equal for the three brands, and enhanced the likelihood of attributional processing by increasing discount depth. Under these circumstances with stronger cues for attributional reasoning and reduced utility of reference price information, we expect to find evidence for attribution-based processing (H2). In contrast, when reference prices are dissimilar (and hence, diagnostic) and discount depth is not extreme, we expect to find evidence for adaptation level theory (H3).

Experiment 3

Method

Participants, Design, and Stimuli. One hundred and thirteen undergraduate students participated in exchange for class credit. Participants were told that three brands of laptop computer had just been introduced, and they were shown the prices of the brands for six weeks simultaneously. A 3 (promotion consistency: consistent, moderately consistent, inconsistent; within subjects) X 2 (reference price: same, different; between subjects) mixed design was used. Based on the assumption that participants' reference prices would be close to the mean of the observed prices (Janiszewski and Lichtenstein 1999), the same and different reference price conditions had equal or unequal average prices, respectively (see table 1). In the same reference price condition, discount depth was manipulated together with consistency, with the most extreme discount depth in the inconsistent promotion condition.

----Insert table 1 about here----

Measures. As in the previous experiments, participants evaluated and provided reference prices (average price) for the three brands separately. Negative brand-related attributions were measured using 7-point items assessing participants' beliefs that the brand promoted because it has few customers, was not selling well, and because consumers stopped buying it (cf. Lichtenstein and Bearden 1986; Manchanda 1998). A factor analysis using principal component analysis and varimax rotation revealed that the items loaded on a single factor ($\alpha = .77$).

Results: Same Reference Price Condition

A GLM with brand evaluations as repeated measures, and condition (same vs. different reference prices) and promotion consistency (inconsistent, moderately consistent, consistent) as independent variables revealed a significant interaction ($F(2,110) = 32.34, p < .001$). Hence, the results of the two reference price conditions are analyzed separately.

Manipulation Checks and Brand Evaluations. In the same reference price condition, an ANOVA revealed that the participants' reference prices for the three brands did not differ significantly ($M_{\text{consistent}} = \1392.71 , $M_{\text{moderately consistent}} = \1396.64 , $M_{\text{inconsistent}} = \1413.08 , $F(2, 53) < 1$), indicating that the manipulation of same reference price was successful. Brand evaluations followed a linear trend, being highest for the brand with shallow and consistent promotions ($M = 2.75$) followed by the brand promoted moderately consistently ($M = 2.37$), and the brand with deep and inconsistent promotions ($M = 2.20$; $F(1, 55) = 5.36$, $p < .05$, $r = .30$). Follow-up contrasts indicated that the consistently promoted brand was evaluated significantly more favorably than the other two brands (p 's $< .05$). These results, depicted in figure 1, are consistent with attribution theory (H2) but not with adaptation level theory.

----Insert figure 1 about here----

Mediating Role of Attributions. In separate regression equations, promotional behavior significantly predicted brand evaluations ($\beta = -.30$, $t = -2.08$, $p < .05$), and attributions ($\beta = .52$, $t = 4.46$, $p < .001$). When both promotion consistency and attributions were entered in the model to explain brand evaluations, attributions were significant ($\beta = -.17$, $t = 2.09$, $p < .05$) but promotion consistency became non-significant ($\beta = -.10$, $t = -1.30$, $p > .19$; Sobel's $Z = 1.89$, $p < .06$). This analysis indicates that participants' attributions mediated the relation between promotion consistency and brand evaluations. As noted earlier, reference price was unrelated to promotion consistency, and thus did not mediate the relation between promotion consistency and brand evaluations. These results support attribution theory (H2) but not adaptation-level theory.¹

¹ One could argue that attributions may be an artifact of the method used, such that brand evaluations may have influenced attributions (instead of *vice versa*). To test this possibility, we examined the mediating role of brand evaluations in the relationship between promotion consistency and attributions, and found that the β coefficient associated with promotion consistency in explaining attributions did not change when brand evaluations were added to the model. A Sobel's test confirmed that brand evaluations did not mediate the relationship between promotion consistency and attributions

Results: Different Reference Price Condition

Manipulation Checks and Brand Evaluations. In the different reference price condition, the reference price was highest for the brand promoted inconsistently ($M = \$1470.38$), followed by the brand promoted moderately inconsistently ($M = \$1435.65$), then by the brand promoted consistently ($M = \$1386.57$). The means followed a linear trend, $F(1, 53) = 221.55, p < .001; r = .80$), indicating that the manipulation of different reference price was successful. As hypothesized, brand evaluations were highest for the brand promoted inconsistently ($M = 3.42$), intermediate for the brand promoted moderately inconsistently ($M = 2.25$), and lowest for the brand promoted consistently ($M = 1.23$; again following a linear trend, $F(1, 56) = 63.37, p < .001, r = .72$). For both reference prices and brand evaluations, contrasts indicated significant differences between each level of promotion consistency (all p 's $< .001$). These findings are consistent with adaptation-level theory but not with attribution theory.

Mediating Role of Reference Prices. As in experiments 1 and 2, promotion consistency significantly predicted brand evaluations ($\beta = .49, t = 7.20, p < .001$), and reference prices ($\beta = .64, t = 10.63, p < .001$). When reference price and promotion consistency were both included in the model predicting brand evaluations, the effect of reference price was marginally significant ($\beta = .13, t = 1.47, p < .07$), and the effect of promotion consistency decreased ($\beta = .39, t = 4.28, p < .001$), providing evidence for partial mediation. These results replicate the findings of the first two experiments in that when participants' reference prices for a brand differ significantly, these reference prices mediate the relationship between promotional behavior and brand evaluations. Unlike in the same reference price condition, attributions did not mediate this relationship. When brand evaluations were regressed on attributions and promotion consistency, the former was non-

significant ($\beta = .05, t = .52, p > .60$), whereas the latter was significant ($\beta = 1.08, t = 6.81, p < .001$). These results are consistent with adaptation-level theory but not with attribution theory.

Discussion

The results from the different reference price condition replicate the adaptation-level effects shown in experiments 1 and 2 and indicate an inverse relationship between promotion consistency and brand evaluations. However, in the same reference price condition in which participants could not distinguish between the brands using reference prices, participants relied on attributional processes and showed a preference for the brand with shallow but consistent promotions over brands with deeper but less consistent promotions.

It should also be noted that an alternative explanation for the findings of experiments 1 and 2 results from the fact that the promotion consistency manipulations also manipulate promotion frequency (i.e., consistent promotions were frequent, whereas inconsistent promotions were infrequent). Thus, it could be the case that promotion frequency rather than promotion consistency is driving the observed effects. However, the results from the same reference price condition of experiment 3 undermine that alternative explanation. If promotion frequency is driving brand evaluations, the consistently promoted brand (which had the highest promotion frequency) should have been evaluated more negatively than the brands that were promoted moderately consistently or inconsistently. However, brand evaluations followed exactly the opposite pattern, such that the consistently promoted (and most frequently promoted) brand was evaluated most favorably. This evidence suggests that promotion frequency is not responsible for the difference in evaluations of the three brands.

Another potential alternative explanation for the findings is that, in the different reference price condition, participants might have generated attributions based on reference prices and

these attributions might have influenced evaluations (i.e., the path from reference prices to evaluations is mediated by attributions). However, the data do not support this explanation; when brand evaluations were regressed on both reference price and attributions, reference price was significant ($\beta = .12, t = 4.94, p < .001$), but attributions were not ($\beta = -.11, t = -1.10, p > .27$). A Sobel's test confirmed that attributions did not mediate the relationship between reference price and brand evaluation (Sobel's $t = 1.00, p > .31$). Furthermore, if attributions were driven by reference prices, attributions about the three brands in the same reference price condition should not have been different, which was not the case.

Another potential limitation of the findings in the same reference price condition involves the depth of the discount for the inconsistently promoted brand: the inconsistently promoted brand was offered at a discount of 40% (\$600), which is larger than typical discounts on laptop computers. The results of experiment 3 remain theoretically useful even if such a large discount is necessary to create the degree of unexpectedness required to invoke attributional processing, but these results would have more practical value if they also occur when the largest discounts are within the typical discounting range for the product type.

A pilot study ($N = 45$) was conducted to further examine this limitation. The procedure was similar to the same average price condition of experiment 3, with two pricing variations where the maximum discount depth was 16.9% (variation 1) or 25% (variation 2; see Table 2). These discounts are typical for the product category. Based on a new pretest, the retail price of the laptop computers was also reduced to \$1200. Pricing variation did not interact with promotion consistency in predicting brand evaluations; thus, the data were collapsed across the two pricing variations. Results indicated a linear trend with the highest brand evaluations for the consistently promoted brand ($F(2, 43) = 4.84, p < .05$). Contrasts revealed that the consistently

promoted brand was evaluated more favorably ($M = 8.08$) than both the brand promoted moderately consistently ($M = 7.64$, $t(44) = 3.03$, $p < .005$) and the inconsistently promoted brand ($M = 7.56$; $t(44) = 1.83$, $p < .07$). These results are consistent with those from the same reference price condition of experiment 3, and demonstrate that attributional reasoning can be invoked even when all discounts are within the typical range for the product category.

----Insert table 2 about here----

General Discussion

Theoretical and Substantive Contributions

Previous research examining the impact of promotion consistency on brand evaluations has focused on negative attributions associated with inconsistent promotions. However, because previous research did not include price information, the influence of reference price as a competing evaluation cue was not examined. The present experiments show that, when prices are provided and enable differentiation between brands, consistent promotions can result in more negative brand evaluations than inconsistent promotions. Specifically, (a) consistent promotions result in lower reference prices than inconsistent promotions, (b) lower reference prices are associated with negative brand evaluations, and (c) reference prices mediate the relation between promotion consistency and brand evaluations. These results were observed in three experiments using different measures of reference price, different product categories, and irrespective of whether brands were presented individually or collectively. Moreover, consistent support was found for this explanation despite the fact that attributional cues should have influenced the relation between promotion consistency and brand evaluations in the opposite direction.

The only exception to this effect was observed when reference prices were equalized across brands and attributional reasoning was facilitated by increasing discount depth to enhance

unexpectedness. Under these conditions, (a) inconsistent promotions result in more negative attributions than consistent promotions, (b) negative attributions are associated with negative brand evaluations, (c) negative attributions mediate the relation between promotion consistency and brand evaluations, and (d) reference prices did not mediate the relationship, indicating that they were not responsible for the different evaluations. These results are consistent with attribution theory but cannot be explained by adaptation-level theory (also see Campbell 1999 for the role of attributions in other pricing contexts).

Collectively, the three experiments attest to the robustness of the key findings. We have established the mediating role of reference prices using three different measures: “the most you are willing to pay for this brand” (experiment 1), “reasonable price to pay for the brand” (experiment 2), and the “estimated average price of the brand” (experiments 2 and 3). The results also were invariant across three different product categories: laptop computers (experiments 1 and 3), and desks and PDAs (experiment 2). Similar results were obtained by providing only price information or by providing prices along with several other product attributes, as well as by exposing consumers to the prices of either one brand or several brands (in experiments 1 and 2, respectively). The results were also invariant across sequential (experiments 1 and 2) versus simultaneous (experiment 3) presentation of prices.

This research extends price promotion research in several ways. First, it demonstrates that both attribution theory and adaptation-level theory can explain the relation between promotion consistency and brand evaluations when pricing information is present. Second, we identify conditions under which each theory provides the best explanation. Specifically, attribution theory appears to have the most predictive power when consumers cannot differentiate between the brands on the basis of their reference prices and when discounts are deeper and thus more

unexpected, whereas adaptation-level theory is more applicable when consumers' reference prices differ across brands. Third, this research provides the first clear demonstration of the mechanisms underlying the relation between promotion consistency and brand evaluations by demonstrating that reference prices mediate this relation under adaptation-level processing and negative attributions mediate this relation under attributional processing.

Managerial Implications

Contrary to prior research (e.g., Manchanda 1998; Raghubir and Corfman 1999), our findings suggest that managers of inconsistently promoted brands need not be overly concerned about the negative impact of a single price promotion if consumers' reference prices for the brand are higher than that of competing brands (e.g., for premium vs. economy brands in the same product category). Participants in this research evaluated the inconsistently promoted brand more favorably than a consistently promoted brand when their reference price for the former brand was higher.

Our findings also suggest that when consumers' reference prices for competing brands do not differ, an inconsistently promoted brand is more likely to generate negative attributions, and hence might be evaluated less favorably than a consistently promoted brand. Managers of such a brand would then need to be concerned about whether a one-time price promotion would have a negative effect on consumers' perceptions of the brand. Depending on the underlying conditions and consumers' prior knowledge about the brands and previous price promotion activity, a price promotion could be a double-edged sword. When the conditions are right, the price promotion could be beneficial, but when the conditions are wrong, the price promotion could be harmful to the brand's image.

Limitations and Directions for Future Research

Although this research makes several important contributions to behavioral price research, some aspects of the experiments might limit generalizability of the findings. For instance, the experiments use simulations that might not be as involving as real shopping behavior. Further, the experiments were performed in relatively stimulus-poor laboratory settings; consequently, respondents might have paid more attention to the prices and descriptions of the brands than they normally would. Field research is needed to examine use of price information in more naturalistic settings (e.g., Inman, McAlister, and Hoyer 1990). Future research should also examine other boundary conditions where attribution theory versus adaptation-level theory best account for the results. For example, existing research suggests that attributional thinking is more likely when an unexpected behavior (e.g., inconsistent promotion) is more salient (Scott & Yalch, 1978; 1980). Experiment 3 manipulated salience through promotion depth, but other salience manipulations are also possible (e.g., announcing the promotion as a first time ever discount or perceptually vivid graphics associated with the discount). Alternatively, because reference price is a quantitative cue, it might be possible to impair adaptation-level processing by manipulating price history to make reference price more difficult to calculate (e.g., by using variable discount depth or computationally difficult prices).

Finally, we do not claim that the two theories presented here are the only explanations of how promotional behavior influences brand evaluations. Future research should examine the effects of other factors to enhance our understanding of how and when price promotions affect consumers' brand evaluations.

Conclusion

We have argued for the importance of considering reference prices in understanding the influence of price promotion consistency on brand evaluations. The results of three experiments

consistently support the critical role of reference prices. Nevertheless, when reference prices are unavailable or not diagnostic, we observed that attributional processes are stronger determinants of brand evaluations. In other words, the question of whether a company can safely reap the short-term benefits of price promotions without suffering significant long-term disadvantages is best answered by “it depends.” When reference prices are readily available and distinguishable between brands, it appears that first time promotions impact the brand less than consistent promotions. However, when reference prices do not clearly differentiate between brands, first time promotions can have a greater negative impact the brand’s image than consistent promotions.

Table 1: Prices Used in Experiment 3 (Main Study; in Dollars)

Week	Same reference price condition			Different reference price condition		
	Shallow and consistent	Moderate	Deep and inconsistent	Brand promoted consistently	Brand promoted moderately consistently	Brand promoted inconsistently
1	1500	1500	1500	1500	1500	1500
2	1300	1200	1500	1300	1500	1500
3	1500	1500	1500	1500	1300	1500
4	1300	1500	1500	1300	1500	1500
5	1500	1500	1500	1500	1500	1500
6	1300	1200	900	1300	1300	1300
Mean ^a	1400	1400	1400	1400	1433.33	1466.67

^aThe mean was not shown to participants.

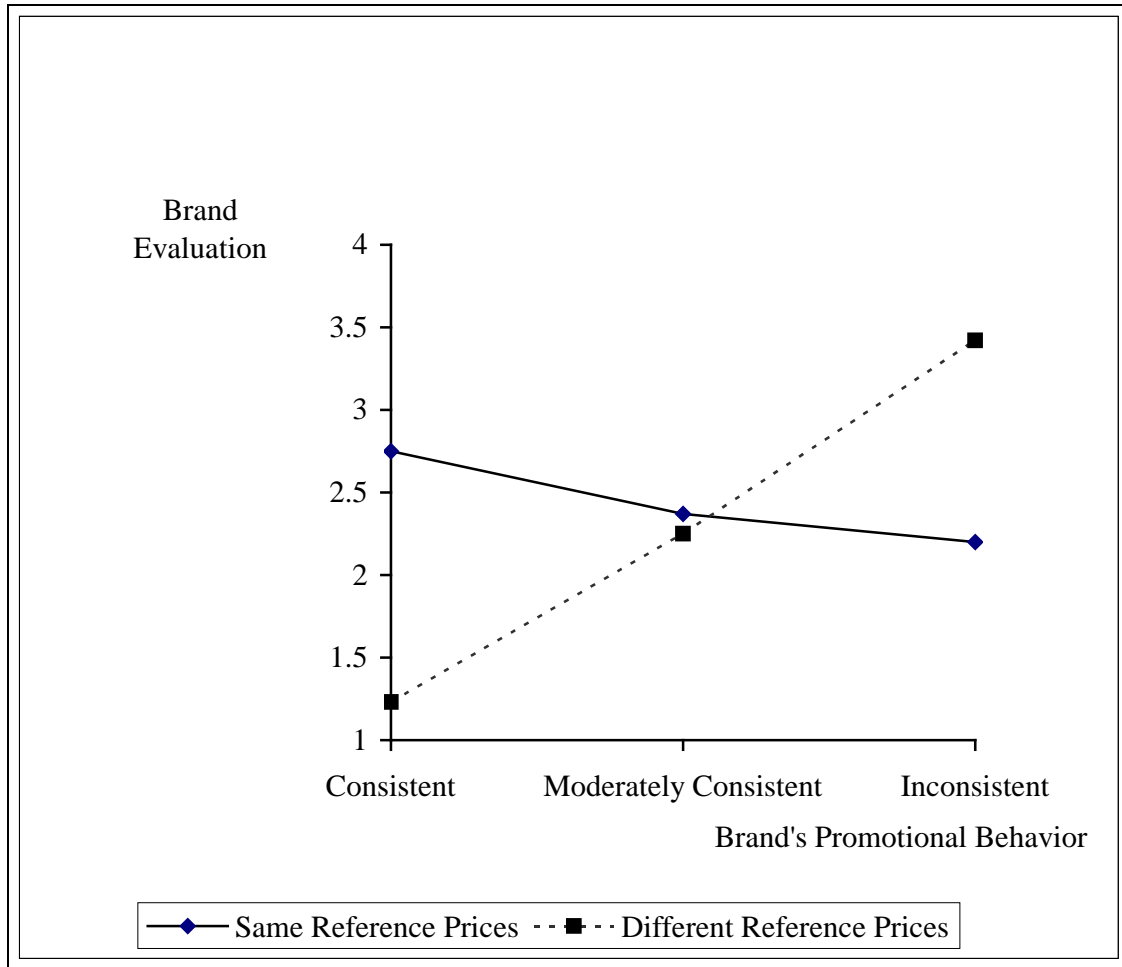
Table 2: *Prices Used in Experiment 3 (Pilot Study; in Dollars)*

Week	Variation 1 ^b			Variation 2		
	Shallow and consistent	Moderate	Deep and inconsistent	Shallow and consistent	Moderate	Deep and inconsistent
1	1200	1200	1200	1200	1200	1200
2	1132	1099	1200	1100	1200	1200
3	1200	1200	1200	1200	1050	1200
4	1132	1200	1200	1100	1200	1200
5	1200	1200	1200	1200	1200	1200
6	1132	1099	997	1100	1050	900
Mean ^a	1166	1166.33	1166.67	1150	1150	1150

^aThe mean was not shown to participants.

^bIn variation 1, using whole dollar values caused a slight difference in average prices across conditions; however, the average prices were lowest for the brand with shallow and consistent promotions, making this a slightly “stronger test” of attribution theory.

Figure 1: Mean Brand Evaluations in Experiment 3.



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