

## Price Image in Retail Management

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## **Price Image in Retail Management**

Consumer evaluation of products offered by a given retailer is often influenced by perceptions of the overall price level of all offerings from this retailer. Because of its direct impact on consumer choice, understanding and managing price image is of key importance to retailers. Despite its theoretical and managerial importance, however, very little research has explicitly explored the role of a retailer's price image in consumer buying behavior. Indeed, while we now know a great deal about how consumers evaluate individual prices, we know relatively little about how consumers form an overall impression of a retailer's price image. This article addresses this gap by offering a conceptual framework that draws on the existing research to identify the key antecedents and consequences of price image. Building on this framework, we advance a set of testable research propositions that serve as an agenda for future research.

Consumers form complex networks of associations about the stores at which they shop (Doyle & Fenwick, 1974/1975; Martineau, 1958; Myers, 1960). These nebulous bundles of associations can include almost any kind of information, ranging from quality of merchandise (Berry, 1969) and assortment size (James, Durand, & Dreves, 1976) to layout (Martineau, 1958) and store hours (Berry, 1969)—even assessments of corporate social responsibility (Brown & Dacin, 1997). Of all the dimensions of a store's image, price image has been identified as particularly important in influencing consumers' perceptions and behavior (e.g., Alba, Broniarczyk, Shimp, & Urbany, 1994; Buyukkurt, 1986; Simester, 1995). Retailers are justifiably concerned with managing price image (Fagnani, 2001), frequently using all of the marketing tools at their disposal in attempting to communicate the desired price level. To cite one extreme example, the upscale grocer Whole Foods has recently taken the extraordinary step of offering customers guided tours of the store to point out bargains (Martin, 2008).

Part of the problem retailers face in managing price image is the lack of well-supported theory on how consumers form a price image. Despite the importance of understanding how consumers form impressions of a retailers' overall price level, price image has not received the attention from marketing researchers that is merited by its importance to theory and practice (Blattberg, Briesch, & Fox, 1995). This paucity of research is especially surprising given the wealth of inquiry devoted to how consumers evaluate the prices of individual items (e.g., Berkowitz & Walton, 1980; Monroe, 1973). Indeed, we now know a great deal about how consumers' perceptions of individual prices can be influenced by local context (Adaval & Monroe, 2002; Janiszewski & Lichtenstein, 1999; Simonson, Nowlis, & Lemon, 1993), information encoding (Monroe & Lee, 1999; Mazumdar & Monroe, 1990), and comparison processes (Mazumdar & Monroe, 1992; Russo, Krieser, & Miyashita, 1975). In contrast, we know relatively little about how consumers integrate these individual price perceptions into an overall price image of a retailer.

Understanding how consumers form a price image is not simply a matter of making minor adjustments to our current stock of theories on how consumers evaluate individual prices. The link between actual prices and price image is complicated by many factors, not least of which is the overwhelming amount of price information available to consumers. Most retailers carry so many items that a thorough evaluation of prices within a single store is all but impossible for the typical consumer. Comparing prices across stores is even more difficult, since retailers often carry non-overlapping inventories (Stassen, Mittelstaedt, & Mittelstaedt, 1999) and change prices over time (Alba, Mela, Shimp, & Urbany, 1999).

The link between actual prices and price image is further weakened by the influence of non-price information used to draw inferences about price level, such as store ambiance (Buyukkurt & Buyukkurt, 1986) and price-match guarantee policies (Srivastava & Lurie, 2001), as well as the fact that evaluations of prices are frequently biased by contextual factors (Janiszewski & Lichtenstein, 1999) and previous beliefs (Russo, Medvec, & Meloy, 1996). The end result is that price image often bears very little resemblance to price reality (Brown, 1969).

This article explores the inter-related questions of how consumers form a retailer price image and how this price image impacts subsequent consumer behavior. We define price image within a theoretical framework that identifies its most important antecedents and consequences. This framework organizes the relatively small body of work that has been done in the area and provides direction for future research by advancing a set of testable propositions regarding the formation of price image.

### **THE CONCEPT OF PRICE IMAGE**

We define price image as a consumer's subjective impression of the overall price level of a retailer. Price image represents an evaluation of a set of prices relative to some standard, such as the price level (or perceived price level) of competing retailers. The relative nature of price image

judgments distinguish them from judgments regarding the absolute magnitude of the prices offered by a retailer (e.g., a “low-priced” car dealership where the least expensive car still costs tens of thousands of dollars has high absolute prices but a low price image). The relative nature of price image judgments also suggests that they are sensitive to the type of information included in the consideration set. To illustrate, a particular supermarket may be perceived as having a low price image until a discount supercenter opens down the street, at which point its price image increases.

A price image serves two primary purposes for consumers. First, by integrating all relevant price information as a single evaluation, price image serves as a succinct representation of a large body of information. In this way, it saves the time, effort, and resources necessary to recall a large volume of price information on individual items. Second, a price image can extend beyond the set of prices a consumer has already observed to inform expectations of unobserved prices. In other words, a price image is a useful tool in refining a consumer’s price expectations: Even before seeing the price, a consumer might expect a particular item to cost less at a store with a low price image than it would at a store with a high price image.

Price image is most important in situations where the actual price level is complex or ambiguous. Thus, if a marketplace has only a limited number of vendors carrying small, easily comparable assortments, price image is less important because consumers could simply compare all of the relevant prices before making their decisions. However, in situations where stores have large assortments, or where the assortments vary across retailers, consumers are able to make proportionally fewer direct price comparisons, making price image more important in consumer decision making.

The price image concept is most often used in reference to retailers, but it can also be applied to other types of brands, including those of manufacturers and service providers. For example, Bic pens are likely to have a low price image and Rolex watches are likely to have a high price image regardless of the retailer at which they are sold. Research on the psychological associations

consumers have with countries of origin (Maheswaran & Chen, 2006; Min Han, 1989) suggests that even countries and geographical regions may have an associated price image, which could transfer to offerings originating in those places. In the interest of brevity, this article focuses on retailer price image. However, many of the concepts and propositions advanced in this price image framework have more general application to brand price images.

In this article, we develop a conceptual framework that identifies the most important antecedents and consequences of price image (see Figure 1). We divide the antecedents of retailer price image into two groups: information that is directly related to price and information that is not. Price-based antecedents include the characteristics of the actual prices retailers charge for goods, such as price range and frequency and depth of price discounts. In this context, we propose that the influence of price antecedents on price image formation is a function of consumers' evaluation strategies, including whether consumers make internal or external reference price comparisons. The non-price antecedents of retailer price image include factors such as store policies and store ambiance. On the consequences side, the framework includes such behavioral outcomes as choice from a retailer and choice among retailers.

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Insert Figure 1 about here.  
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Since it would be unfeasible for any single framework to incorporate all the possible antecedents and consequences of price image, we used four guiding principles in developing this framework. First, we included factors that have been identified as important by previous research (e.g., price-match guarantees; Srivastava & Lurie, 2001, 2004). Previous research on price image formation can be grouped into two types: One type of research uses an impression formation paradigm (e.g., Alba et al., 1994; Alba et al., 1999; Buyukkurt, 1986; Hamilton & Chernev, 2007), often building on some variant of information integration theory (Anderson, 1974). According to this view, consumers form impressions by integrating disparate pieces of information into a single aggregate evaluation. An alternative approach is to treat price image formation as a heuristic process (e.g., Brown, 1969;

Brown & Oxenfeldt, 1972; Buyukkurt & Buyukkurt, 1986; Simester, 1995; Srivastava & Lurie, 2004), by which features of a store are evaluated to seek out signals or heuristic cues that determine whether a store fits into the “high-priced” or “low-priced” category.

These two types of theories—information integration and heuristic cues—tend to give an advantage to different types of information in the price-image formation process. Impression formation theories, while not explicitly limited to price information, tend to emphasize the importance of price in the formation of price image. This may be because of the relative ease of dealing with sets of numerical information (like prices) within an information integration paradigm (e.g., Levin, 1974, 1975). Heuristic cue theories, on the other hand, emphasize non-price factors over price information and tend to place more weight on store features that can act as heuristic cues. Although these views are not mutually exclusive, they tend to be treated separately. In developing this framework, we incorporated the insights from both information integration theories and heuristic cue theories in deciding which factors to include.

The second guiding principle for this framework was to include managerially relevant factors, including assumptions that figure prominently in managerial lay theories of price image formation (e.g., that consumers make frequent price comparisons across stores; Alba et al., 1994; Urbany, Dickson, & Sawyer, 2000). We also gave special consideration to factors that were under the purview of retail managers (such as the price composition of the product line), since these factors would be the most useful to retailers looking to manage their price image.

The third guiding principle behind this framework was to identify not just unidirectional relationships between various factors and price image (e.g., higher average prices lead to higher price image), but, where possible, to identify moderators and boundary conditions of these associations. For this reason, we include a discussion of how consumers’ price evaluation strategies may moderate the influence of price information on price image (Figure 1). In addition,

many of the non-price antecedents and behavioral outcomes in this framework include a discussion of the conditions under which the proposed relationships are most likely to occur.

Finally, the fourth principle guiding the development of this framework was usability in facilitating future research on price image. Thus, the predictions relating antecedents to price image and price image to consequences were distilled into a set of testable propositions reviewed at the end of each section. These propositions are meant to summarize previous work and provide a starting point for the development of new theory.

### **PRICE-BASED ANTECEDENTS OF PRICE IMAGE**

The prices consumers are exposed to in a retail environment provide an important source of information that can be used in the creation of a price image. The different types of price information that consumers can use in forming a price image include item prices, price range, price context, and price discounts.

*Item prices.* One would expect that the actual prices a store charges would have a strong impact on price image. Price image is, after all, an impression of the overall price level, and so is meant to be representative of all of the prices a retailer charges. The simplest prediction one can make about the impact of item prices on price image is that price image is a function of the average price of products in a store such that as the average price increases [decreases], price image will also increase [decrease]. Furthermore, because price image is most often the result of a comparative judgment, as the average price increases [decreases] relative to that of competitors, price image will also increase [decrease]. Thus, even if a store does not change any of its prices, its price image may change if a competitor with much higher or lower prices opens up nearby (e.g., Singh, Hansen, & Blattberg, 2006).

The general prediction of the relationship between average price and price image is likely to hold regardless of what causes a shift in the average price, whether all of the prices change

(Buyukkurt, 1986), only some of the prices change (Buyukkurt, 1986), or options are added from a higher or lower price tier while leaving the prices of the original product line unchanged (Hamilton & Chernev, 2007). For example, practitioners have noted the relationship between the presence of a downscale option and a lower price image and so have pursued a strategy of adding low-priced items to their assortments. As one consulting firm noted, “a proven strategy [for lowering price image] is to offer an attractive opening price point in each category, which is often accomplished by aggressively pricing a quality private-label product” (A T Kearney, 2005, p. 10).

Price image can also be strongly influenced by a relatively small number of individual prices. Anything that would make a particular price more salient to the consumer is also likely to increase the impact of that price on price-image judgments (Anderson, 1974). We therefore predict that the prices of benchmark items, such as, frequently purchased items, big-ticket items, and goods commonly advertised by multiple retailers, are all likely to have a disproportionate influence on price image.

*Price range.* Consumers may also use the range of available prices as information in forming a price image. Understanding the impact of price range on price image is especially important, given that some of the common strategies that retailers use in managing their product lines affect the range of prices at a store. For example, carrying products from multiple price tiers (e.g., a good-better-best strategy) will result in a wider range of prices than a more specialized strategy in which a retailer carries a narrower range of merchandise. Retailers also affect their price ranges when they extend their product lines, for example, by adding a private label brand (Cotterill, Putsis, & Dhar, 2000; Sayman, Hoch, & Raju, 2002; also see Dhar, Hoch, & Kumar, 2001).

Pricing strategies that change prices over time can also influence perceptions of price range. Some stores typically charge relatively high prices but periodically feature deep discounts—referred to as a HILO strategy—while others consistently charge relatively low prices without discounting merchandise—an Everyday Low Price (EDLP) strategy (Hoch, Dreze, & Purk, 1994). It is expected

that a store with a high degree of temporal variance (e.g., a HILO store) would be perceived as having a wider range of prices than a store with a low degree of temporal variance (e.g., an EDLP store).

We propose that for some consumers a store with a wider range of prices will have a lower price image than an otherwise equivalent store with a narrower range of prices. This prediction is based on the notion that the presence of a low price may, by itself, serve as a heuristic cue that signals a low price image (A T Kearney, 2005). In other words, some consumers may seek to answer the question, “Can I find low prices here?” instead of the more demanding question, “Are the prices here low?” If consumers are more sensitive to low prices than high when forming a price image, then a wider range of prices will result in a lower price image than a narrow range of prices (holding the average price constant). Consumers who use more systematic processing would be less likely to use the simple presence of some low prices as a heuristic cue and would therefore be less likely to form a lower price image of stores with a wider range of prices.

*Price context.* Consumers do not evaluate prices in a vacuum. It has been well documented that consumers’ evaluations of individual prices are often influenced by the local context, including the prices of other options in the consideration set (Adaval & Monroe, 2002; Janiszewski & Lichtenstein, 1999; Monroe, 1973; Nunes & Boatwright, 2004; Russo, 1977). We propose that price context can likewise impact price image. We can make two general predictions about the impact of price context on the formation of price image: (1) The local context can influence consumers’ price perceptions, with the result that contexts which make the prices of chosen items seem lower [higher] will result in lower [higher] price images; (2) The price context can influence which option consumers choose to buy, with the result that contexts which increase [decrease] the chances of choosing less expensive options will result in lower [higher] price images.

To address the first prediction, some price contexts can impact price image by making prices easier to compare. For example, comparative price displays (e.g., shelf tags marked with a “compare

at” competitor’s price) reduce consumers’ perceptions of a given price by making it easier to compare prices across stores (Biswas & Blair, 1991). (Presumably retailers will only facilitate comparisons when it favors them, so we assume that easier comparisons always lead to lower price perceptions.) Other price contexts can lower price perception by making a high reference price salient. For example, displaying prices as a reduction on a previous price gives consumers a high salient reference price, thereby reducing consumers’ perceptions of the displayed price (Cox & Cox, 1990; Urbany, Bearden, & Weilbaker, 1988). The prices of non-chosen items in the decision set also form a context that can influence consumers’ price perceptions, such that a high-priced context will make a target price seem less expensive and vice versa (Adaval & Monroe, 2002; Janiszewski & Lichtenstein, 1999). Even incidental, unrelated prices have been shown to act as reference points, thereby impacting consumers’ price perceptions (Nunes & Boatwright, 2004).

In a similar vein, price context can influence price image by encouraging consumers to purchase more or less expensive items than they otherwise would have. Previous research has found that making price information easier to compare—either by providing lists of unit prices (Russo, 1977) or by changing the location of items on the store shelf (Dreze, Hoch, & Purk, 1994)—can influence which brands and sizes consumers purchase. The explanation given for these findings is that by changing the organization of information, retailers are changing the set of prices consumers compare in making their purchase decisions. This change in the price context will often lead to the purchase of larger sizes (i.e., options with lower per-unit prices) or cheaper brands. In both cases, making prices easier to compare is expected to lower price image. Changing the local consideration set by adding either high-quality or low-priced alternatives can also influence whether consumers choose a more or less expensive option (Nowlis & Simonson, 2000; Simonson et al., 1993), thereby influencing the price image consumers’ form.

*Price discounts.* Many retailers use temporary price discounts to increase store traffic and drive the sales of particular items (Chandon, Wansink, & Laurent, 2000; Goodman & Moody, 1970). Just like price context, price discounts can influence price image in two ways. First, price promotions can change price perceptions of chosen options. Second, price promotions can influence which option consumers select, often by encouraging the purchase of a more or less expensive option than would have been purchased if there had been no promotion.

In general, we propose that increasing price discounts will lead to a decrease in price image. This prediction holds both for cases in which a retailer increases the number of price discounts offered as well as cases in which a retailer increases the size of the discounts offered. In other words, increasing the frequency of price discounts will lead to a lower price image, as will increasing the depth of price discounts. However, frequency and depth of discounts may not be equally influential on price image formation. Alba and colleagues (1994) examined a scenario in which the prices of 60 individual grocery products were compared directly across stores. The average price of each store's list was identical, but one store was priced slightly cheaper on a large number of items (high frequency) while the other store was much less expensive on a small number of items (high magnitude). Although there were no real savings to be had from picking one store over the other, participants perceived the high-frequency store to have a lower price image. These findings parallel those of Buyukkurt (1986), who also found that shallow, high-frequency discounts tended to be more influential than deep, low-frequency discounts in price image formation.

Based on the discussion in this section, we make the following testable propositions regarding the impact of the price-based antecedents on price image:

P1: Price image is a function of the following price-based factors:

- a. average price of products in the store
- b. average price of products in the store relative to the average prices at competing stores

- c. prices of benchmark items (e.g., frequently purchased or big-ticket items)
- d. range of prices, such that a wider range leads to lower price image
- e. prices of options purchased, such that purchase of lower priced options leads to lower price image
- f. ease of comparing prices, such that easier comparison leads to lower price image
- g. local reference prices, such that higher reference prices lead to lower price image
- h. frequency of price discounts, such that higher frequency leads to lower price image
- i. depth of price discounts, such that deeper discounts lead to lower price image

### **EVALUATION STRATEGIES IN PRICE IMAGE FORMATION**

The influence of the pricing factors identified in the previous section are a function of the specific judgment strategies that consumers use with regard to price information. Many of the relationships identified in proposition P1 may be weakened or even reversed depending on the strategy that consumers use in gathering or evaluating price information. In this section, we identify three sets of judgment strategies consumers can use in forming a price image based on price information. These strategies include item or basket evaluations, internal or external reference price comparisons, and the use of memory-based or in-store price cues.

#### **Item versus basket evaluations**

One basic distinction that can be made in consumers' price image formation strategies concerns whether they evaluate prices individually or aggregated to the level of the shopping trip. On one hand, a consumer might make item-level evaluations, forming a price image by first subjectively evaluating each of the prices they encounter and then aggregating these individual price perceptions into an impression of the overall price level. On the other hand, a consumer might make a basket-level evaluation, forming a price image by evaluating the price of a whole

basket of commonly purchased items. In this case, the evaluations of individual prices are not as important as the final tally on the receipt.

There are several differences between these two strategies. Basket-level evaluations are limited to just those items that made it into the basket. Thus, the prices of any items considered for purchase but ultimately not selected would not be included in a basket-level evaluation. For this reason, price images stemming from item-level evaluations may be based on more price information than those stemming from basket-level evaluations. Basket evaluations are also less resource intensive and make fewer demands on memory. A consumer might evaluate dozens of prices on a single shopping trip but make just a single basket evaluation.

Consumers are obviously more likely to focus on basket prices when they have a well-defined basket reference price. Thus, this heuristic will be common only in situations where consumers shop frequently at a store (or at a type of store), regularly purchase multiple items in a single trip, and regularly purchase similar items. For stores that are patronized only occasionally or at which no regular set of items is purchased, the applicability of the basket-price heuristic to price image formation is severely limited. For this reason, basket-level evaluations seem especially well suited to forming price images of grocery stores, where consumers are more likely to shop frequently for a similar set of items.

The type of evaluation consumers are likely to use in forming price image may also be a function of how much they purchase in a given shopping trip. Bell and Lattin (1998) found that large basket shoppers (i.e., those with a relatively high probability of purchase in any given category) form price images consistent with basket-level evaluations, whereas small basket shoppers (i.e., those with a relatively low probability of purchase in any given category) form price images consistent with item-level evaluations.

We can make several specific predictions regarding how item and basket evaluations will moderate the influence of price-based antecedents on price-image formation. Evaluating item

prices individually tends to increase the attention consumers pay to the prices of individual offerings, thereby increasing the influence of especially salient products, such as frequently purchased or big-ticket items, on price image. For example, consumers who use item-based evaluations to form a price image are more likely to be sensitive to the price of a gallon of milk at a grocery store than consumers who use basket-level evaluations.

An item focus will also lead to greater sensitivity to factors that influence consumers' perceptions of individual prices. For example, contextual factors that make comparing prices easier, such as comparative price advertising formats (Della Bitta, Monroe, & McGinnis, 1981), or that provide salient external reference prices, such as when prices are marked as discounts from a previous price (Urbany et al., 1988; Nystrom, Tamsons, & Thams, 1975), will have more influence when consumers evaluate items individually relative to when consumers make basket-level evaluations.

Price images based on item-level evaluations will also be more sensitive to the range of prices available at a store (Adaval & Monroe, 2002; Janiszewski & Lichtenstein, 1999). Because basket evaluations restrict the price image to those items that make it into the basket, the potential impact of non-chosen options is reduced. We therefore expect that when forming a price image, factors based on non-purchased options, such as average prices and the range of prices in a store, will have a greater impact on consumers with an item focus than consumers with a basket focus.

Relative to basket-level evaluations, item-level evaluations will also increase a consumer's sensitivity to changes in the prices of individual items over time (Alba et al., 1999). Individual price changes will have a relatively small impact on the overall basket price. Thus, a \$0.20 increase in price is likely to be more noticeable relative to a \$1.00 bar of soap than to a \$100.00 weekly basket of goods. Additionally, assuming that the price adjustments are not a part of a systematic shift, most price adjustments will be a part of simultaneous upward and downward adjustments across the store. In other words, it is possible that in a real shopping environment, a \$0.20 increase on one item will be

offset by a similarly sized decrease on another item or combination of items in the consumer's basket. It is therefore possible that the impact of individual price adjustments will wash out at the basket level.

A focus on basket prices, on the other hand, will increase the influence of factors that affect the perceptions of aggregated prices. Thus, changes in the average price of items at the store level are likely to have a greater impact on price images formed by consumers evaluating basket prices than by consumers evaluating item prices. This is because relatively small changes at the level of individual prices might be more noticeable when summed up across all the items in a basket. Likewise, factors that encourage consumers to purchase more or less expensive items than they might otherwise buy would have a greater impact on consumers evaluating baskets than on consumers evaluating items. Promotions or contextual factors that change the likelihood of purchasing a less expensive option would therefore have a stronger influence for a consumer focused on basket prices.

Certain contextual and promotional factors can encourage consumers to save money on a per-unit basis, while encouraging them to spend more money overall. For example, when unit prices are salient, consumers may purchase the same brands in larger sizes (Russo, 1977), leading to a larger overall expenditure than usual even if they realized a savings on a per-unit basis. This could potentially result in a higher price image for those evaluating basket prices, since these consumers are more influenced by the impact of the larger size on the total basket price. On the other hand, those evaluating item prices are more influenced by the perception that they are getting a bargain by buying a larger size.

The discussion in this section leads to the following testable propositions about the influence of item versus basket evaluations on price image:

- P2<sub>A</sub>: Price images based on item-level price evaluations (relative to those based on basket-level price evaluations) are more sensitive to:
- a. prices of benchmark items (e.g., frequently purchased or big-ticket items)
  - b. ease of comparing prices, when comparing prices affects price perceptions

- c. external reference prices, when reference prices affect price perceptions
- d. range of prices
- e. changes in the price of an item over time

P2<sub>B</sub>: Price images based on basket-level price evaluations (relative to those based on item-level price evaluations) are more sensitive to:

- f. average price of products in the store
- g. the ease of comparing prices, when comparing prices causes the purchase of higher or lower priced items
- h. external reference prices, when reference prices cause the purchase of higher or lower priced items

### **Internal versus external reference price comparisons**

Because consumer price evaluations often result from comparing a given price with a reference point (Briesch, Krishnamurthi, Mazumdar, & Raj, 1997; Urbany & Dickson, 1991), price image is expected to be sensitive to the type of reference points consumers use in their comparisons. Previous research suggests that there are two types of reference price comparisons that may be important in price image formation: internal reference price comparisons, in which a price is compared with some subjective standard based on previous experience (Kalyanaram & Winer, 1995; Monroe, 1973; Rajendran & Tellis, 1994; Winer, 1986), and external reference price comparisons, in which a price is compared with other contemporaneously observed prices (Mayhew & Winer, 1992; Nunes & Boatwright, 2004) either within a store (e.g., the prices of other items in the category; Adaval & Monroe, 2002; Janiszewski & Lichtenstein, 1999) or across stores (e.g., the price of the same product at a competitor; Alba et al., 1994).

The most common account of internal reference price comparisons is based on Adaptation-Level Theory (Helson, 1964), which suggests that consumers adapt their reference prices according to previous exposure to prices of similar items. This adaptation level constitutes an

expectation of what an item should cost, and consumers evaluate the attractiveness of a price by comparing it with this expectation. External reference price comparisons, on the other hand, have been explained by range theory (Janiszewski & Lichtenstein, 1999), in which a price is evaluated relative to the end points of a salient range of prices, or as contrast effects (Lichtenstein & Bearden, 1989; Nunes & Boatwright, 2004), in which a price is contrasted with a single reference price.

We propose that internal and external reference price comparisons will lead to differences in the types of price information that are used in forming a price image. In general, internal reference prices are a function of previous exposure to the prices at different stores (Mayhew & Winer, 1992; Urbany et al., 2000), as well as to previous prices at a single store (Alba et al., 1999; Rajendran & Tellis, 1994). Because internal reference prices evolve based on exposure to previous prices, we propose that price images based on internal reference price comparisons will be more sensitive to changes in price over time than price images based on external reference price comparisons.

Internal reference prices have been shown to be highly correlated with the average price in the market (Urbany & Dickson, 1991). Consistent with these findings, we predict that price images based on internal reference price comparisons will be more sensitive to average prices than price images based on external reference price comparisons. Furthermore, price images based on internal reference price comparisons will obviously be more sensitive to those benchmark items for which a consumer is most likely to have a well-defined internal reference point.

Price images based on external reference price comparisons, on the other hand, will be, by definition, more sensitive to contextual factors than price images based on internal reference price comparisons. Thus, we expect that relative to internal reference price comparisons, external reference price comparisons will result in price images that are more sensitive to the range of available prices at a store, as well as contextual factors that influence consumers' price perceptions

(e.g., comparative price displays) or that influence consumers' likelihood of choosing a less expensive option (e.g., providing unit prices).

The discussion in this section leads to the following testable propositions about the influence of internal versus external reference price comparisons on price image:

P3<sub>A</sub>: Price images based on internal reference price comparisons (relative to those based on external reference price comparisons) are more sensitive to:

- a. changes in the prices of individual items over time
- b. average price
- c. the prices of benchmark items (e.g., frequently purchased or big-ticket items)

P3<sub>B</sub>: Price images based on external reference price comparisons (relative to those based on internal reference price comparisons) are more sensitive to:

- d. price range
- e. the ease of comparing prices
- f. the frequency of price discounts
- g. the depth of price discounts

### **Memory-based versus in-store price cues**

The price information used to create a price image may be a result of either an in-store process, in which a price image is formed while the price cues are immediately available to the consumer (e.g., while a consumer is walking down the aisles of a store), or a memory-based process, in which a consumer recalls price information that is no longer immediately available (e.g., after a consumer has left the store). Previous research suggests that in-store judgments can differ in predictable ways from memory-based judgments of the same information (Hastie & Park, 1986). Building on previous findings, we propose that whether a price image is formed in store or based on price cues pulled from memory will moderate the importance of the predictions made in proposition P1.

We expect that the impact of the local price context will be stronger for an in-store price image than a memory-based price image. Thus, changes in the way offerings are displayed (e.g., with prices marked as a reduction on a previous price) or organized (e.g., by price or by brand) are likely to have a stronger impact on price images formed in the store. Likewise, the options that make up the consideration set but are not ultimately purchased are expected to have a stronger influence on in-store than on memory-based price image formation.

Consumers with the goal of forming an in-store price image may also be more motivated to gather price information in order to form a more accurate impression. In particular, these consumers may intentionally pay more attention to the full range of prices available in any given category. By the same logic, they may also be more motivated to pay attention to the average price of categories rather than focusing only on the prices of the options they intend to purchase. As such, we expect that in-store price image formation will be more sensitive to the range of prices available, as well as to average prices.

Memory-based judgments, on the other hand, are likely to be based on a smaller proportion of the overall information than are in-store judgments. This is because memory-based judgments are more effortful, requiring consumers to retrieve price information from long-term memory before making a judgment. In fact, consumers have demonstrated an extremely poor facility for retrieving price information (Dickson & Sawyer, 1990). This makes easy-to-recall price information, such as the prices of benchmark items (e.g., frequently purchased, frequently advertised, recently purchased or big-ticket items) especially likely to influence the memory-based formation of a price image relative to the in-store construction of a price image. An additional implication of the difficulty consumers have in recalling prices is that memory-based price images are more likely to be influenced by non-price factors (discussed in a subsequent section of this article) than price images formed in the store.

The discussion in this section leads to the following testable propositions about the influence of memory-based versus in-store price cues on price image:

P4<sub>A</sub>: Price images based on in-store price cues (relative to those based on memory-based price cues) are more sensitive to:

- a. the ease of comparing prices
- b. local reference prices
- c. the range of available prices
- d. the average price of products in a category or store

P4<sub>B</sub>: Price images based on memory-based price cues (relative to those based on in-store price cues) are more sensitive to:

- e. the prices of benchmark items
- f. non-price factors

### **Combined strategies**

The previous sections outlined three basic distinctions that can be made about the strategies consumers use in forming price images. It should be noted that these strategies are not mutually exclusive, but instead may be combined into more specific strategies, allowing for more precise predictions about how consumers form price images. For example, one way for consumers to judge the relative price level of a group of retailers is to directly compare the prices of a fixed set of specific goods across stores—what might be referred to as a direct price comparison strategy. Each of these direct price comparisons results in an evaluation, which may then be aggregated into an overall impression of the relative price levels of the stores. This direct comparison strategy combines several specific aspects of the evaluation dimensions previously discussed. In particular, this combined strategy unites a product focus with external reference price comparisons, in which the reference points are the prices of comparable goods at other stores. This strategy can be applied

both to an in-store price image formation scenario (e.g., comparing the advertised prices at two different stores) and a memory-based scenario.

This particular combined strategy seems to be a common lay theory among retailers regarding how consumers form price images. In a survey of grocery store managers, Urbany, Dickson and Sawyer (2000) found that the belief that consumers frequently compare prices across stores drives many retailer pricing decisions. This leads to intense price competition, with retailers quickly responding to competitors' price changes, especially on frequently purchased items. (Interestingly, Urbany, Dickson and Sawyer [2000] also find that the frequency of consumers' across-store price comparisons may actually be relatively low, at least in the grocery category.) This direct price comparison strategy has also influenced academic research on price image, which has examined how consumers form price image when given lists of equivalent prices at competing stores (e.g., Alba et al., 1994).

Additional combined strategies can be formed by creating specific constellations of the basic strategies previously defined. For example, a direct basket-comparison strategy could be defined by combining basket evaluations with external reference price comparisons in an in-store price image formation. Such a direct-basket comparison is possible when consumers are able to compare the prices of identical baskets of goods across stores. The Albertson's and Kroger grocery store chains have previously encouraged exactly such a price-image formation strategy by prominently displaying baskets of identical goods at the front of their stores, complete with the receipts and basket totals of several local competitors.

### **NON-PRICE ANTECEDENTS OF PRICE IMAGE**

Retail prices are only one source of information consumers can use in forming a price image. Using prices to form a price image can frequently entail extreme cognitive difficulty, in part because the prices at one store are often not consistently higher or lower than those of competitors.

For example, Brown and Oxenfeldt (1972) found that in a survey of 80 products across several retailers, any particular store was likely to have some offerings priced above the average and some priced below the average. Distractions in the in-store environment and the often harried nature of consumer shopping experiences may further increase the difficulty of thoroughly evaluating price information when forming a price image. Furthermore, the sheer volume and variety of offerings at many retailers makes comprehensive price evaluation and comparison extremely difficult. Since they are typically much easier to evaluate, non-price factors can also influence consumers' impressions of the overall price level of a store.

Because non-price information is less cognitively taxing, we expect that it will be most influential in those situations where consumers have previously been shown to rely on heuristic rather than systematic processing (Chaiken, 1980; Cacioppo & Petty, 1979). The idea that non-price information is easier than price information for consumers to process and use was supported by Buyukkurt and Buyukkurt (1986), who found that consumers were more likely to use non-price information in forming a price image when they were less experienced, under time pressure, did not enjoy shopping, or when they were less price sensitive. When consumers are motivated to engage in more effortful, systematic processing, the influence of non-price information is likely to be less influential unless it is backed up with supporting price information.

Consistent with signaling theory (Spence, 1973), we treat non-price information as a signal of imperfectly observable price-level information. These signals, or heuristic cues, may be either the result of a previously observed correlation between the cue and a price image (e.g., a consumer may note that stores with price-match guarantee policies also tend to have low prices) or the result of a logical connection between the cue and price image (e.g., a consumer may reason that stores with price-match guarantee policies must have low prices or they would lose money on redemptions) or both.

We divide non-price signals into two groups based on the type of inference consumers need to make when using the information to form a price image. Some signals allow consumers to make direct inferences about a retailer's prices. For example, consumers may interpret the presence of many customers at a store as a signal that the retailer's prices are likely to be lower than those of its competitors and, hence, attract more customers. In addition, there are also non-price signals that provide information about a retailer's cost structure. For example, a retailer may signal that it is maintaining a low overhead by having no-frills décor, such as unfinished cement flooring and warehouse shelving. Consumers may use these cost signals to form indirect inferences about the prices at a retailer (i.e., that a store is passing along the higher or lower costs in the form of higher or lower prices). In the following sections, we review both the price signals and the cost signals that influence price image, discuss the findings of relevant research, and advance a set of research propositions regarding the impact of non-price antecedents on price image.

### **Direct Inferences of Price Image: Price Signals**

Consumers can use a number of different price signals in making inferences about the overall price image of a store. These include advertising and promotions, price-level assertions, price-match guarantee policies, number of competitors, customer base, and product characteristics of the assortment.

*Advertising and promotions.* Advertised prices can serve as a signal of the store's overall price level, such that consumers will form low [high] price images of stores running advertisements that feature low [high] prices (Simester, 1995). Even advertising a lower boundary on prices (e.g., "Prices starting at \$299" or "\$10 and up") can serve as effective signals of overall price level (Shin, 2005). Advertising also occurs within the store environment in the form of promotions, such as shelf-talkers and end-cap displays. Consumers frequently use these advertising promotions as a heuristic cue signaling savings, even when the promotions are not accompanied by actual

reductions in price (Inman, McAlister, & Hoyer, 1990; McKinnon, Kelly, & Robison, 1981). Thus, advertising and promotions of any type are likely to lead to a decrease in price image.

Even the amount of advertising in which a retailer engages can serve as a signal of price image. Among grocery stores, retailers that advertise more frequently in the newspaper (e.g., every week rather than twice a month) are perceived to have lower overall price levels (Brown, 1969; Buyukkurt & Buyukkurt, 1986). Likewise, retailers that advertise a greater number of specific items in their advertisements have lower price images than those that include fewer items in their ads (Buyukkurt & Buyukkurt, 1986).

The signal value of advertising is influenced by the diagnosticity of the advertised price information. For example, due in part to consumers' generally poor memory for specific prices (Dickson & Sawyer, 1990), comparative price advertising may be more effective in influencing a price image (Cox & Cox, 1990). Thus, an advertisement that compares the price at a rival store or that presents a price as a reduction from a previous level tends to strengthen the signal value of the advertised price. Similarly, advertisements featuring frequently purchased items, for which consumers are more likely to have a clearly defined reference price, increase the signal value of the advertisement relative to advertisements featuring infrequently purchased items (Cox & Cox, 1990).

The signal value of advertisements is also expected to vary as a function of consumers' access to actual price levels and the retailer's motivation to accurately communicate price level. Thus, in situations where consumers have full knowledge of a retailer's actual price level, advertising will serve as a relatively weak signal of price image (Simester, 1995). Conversely, advertisements are expected to serve as strong signals of price image when retailers incur some kind of penalty for not communicating price level accurately (Shin, 2005). For example, when a retailer incurs some kind of selling cost (e.g., providing test drives, product demonstrations, free samples, etc.), there is an incentive to communicate price image accurately to discourage consumers unlikely to buy at the actual price level.

Price-level assertions. One strategy retailers use to signal a low overall price level is to simply claim that their prices are lower. The taglines of some retailers are designed to communicate a low price image through sheer insistence. For nearly two decades, the phrase “Always Low Prices. Always!” adorned Walmart’s signage, storefronts, and advertising. Target’s long-time tagline, “Expect More. Pay Less.” is similarly resolute in communicating its low prices. Some retailers even choose to signal low prices with their choice of name: Food-4-Less, Best Buy, Value City, Priceline.com, etc.

Assertions of price level are expected to be effective signals under the same conditions that advertising specific prices serves as an effective signal. In general consumers are likely to use declarations of low prices as signals of lower overall price levels. However, these signals are expected to be stronger when consumers do not have full price information and when retailers incur a selling cost associated with serving consumers who are unlikely to buy at the retailer’s actual price level.

*Price-match guarantees.* Many retailers have implemented official store policies designed to reassure consumers that their prices are competitive. One popular policy is the price-match guarantee. In its simplest form, the price-match guarantee promises that if a customer makes a purchase then later discovers a lower price at a competitor, the guarantor will refund to the customer the difference in prices. Price-match guarantees are obviously intended to serve as a signal of low prices, with more generous guarantees serving as stronger signals (Biswas, Pullig, Yagci, & Dean, 2002; Desmet & Le Nagard, 2005).

In addition to serving as direct signals of price image, price-match guarantees can also influence price image indirectly by influencing consumers’ perceptions of a retailer’s prices—potentially reinforcing a low price image by distorting price perceptions to keep them in line with the previously formed price image (Russo et al., 1996). Consistent with this prediction, previous research suggests that the presence of a price-match guarantee increases consumers’ estimates of the average and the lowest market prices for a product (Lurie & Srivastava, 2005). Thus, a given

price is likely to be evaluated as lower at a store with a price-match guarantee than the same price at an equivalent store without such a guarantee.

The signal value of a price-match guarantee has been found to vary as a function of several factors. Srivastava and Lurie (2001) found that consumers were more likely to form a lower price image of a retailer with a price-match guarantee than of one without, but that this effect was reduced for high-ticket items. Thus, when the base price of a product is low, consumers are more willing to accept that a price-match guarantee indeed indicates a low price relative to competitors. As the base price increases, consumers have more to gain from diligently searching out the best price—thereby reducing the need to use a price-match guarantee policy in forming price images.

The effectiveness of price-match guarantees in influencing price image has also been shown to be contingent on consumer beliefs regarding the behavior of other consumers (Srivastava & Lurie, 2004). When consumers believe that there are very few other consumers in the market that will engage in extensive price search, the effectiveness of a price-match guarantee as a signal of price image is greatly reduced. In this context, vigilant customers act as a market disciplinary mechanism, checking prices across stores to enforce the guarantee by making it expensive (in terms of dollars or reputation) to charge higher prices than competing retailers. Thus, when the disciplinary mechanism is weak (i.e., when few consumers engage in across-store price comparisons), the signal value of a price-match guarantee policy is weakened.

Number of competitors. One basic tenet of market economies is that increased competition tends to drive down prices. It therefore stands to reason that consumers may use the number of competitors in an industry or in a geographical area as a signal of price image, such that stores with a large number of competitors will have a lower price image than equivalent stores with fewer competitors. At one extreme, consumers tend to form a high price image of a monopolist, simply because it is the only firm

in the market. Following the same logic, a retailer in competition with only two other stores might be perceived to have a higher price image than an equivalent retailer in competition with eight other stores.

It is important to note that the actual number of competitors is not as important as the perceived number of competitors. In other words, the impact of competition on price image will be a function of how consumers' view the structure of the market, and not necessarily how firms, governments, or the press view the market's structure. In particular, perceived competition is a function of how consumers categorize retailers. Consumers who group larger sets of retailers together into categories, will perceive a given retailer to have more competitors than will consumers who use more finely drawn categories.

*Customer base.* Consumers frequently make judgments about products based on their evaluations of the people that use them. For example, when consumers are unsure what attribute level might best match their needs, they can use the preferences of others as a guide when making their choices (Prelec, Wernerfelt, & Zettelmeyer, 1997). In addition, a consumer's decision about when to adopt or discontinue use of a product is influenced by whom the consumer sees using it (Berger & Heath, 2007). In the same way, consumers may use their perceptions of the type of consumer shopping at a store to draw conclusions about the store's price level: A store full of well-off consumers may serve as a strong signal that the store has high prices, just as a retailer that serves customers who are less well off may be perceived as being low-priced. This argument is based on the well-documented "halo effect" (Nisbett & Wilson, 1977), with the perceived socioeconomic status of a store's customers influencing the formation of a price image.

It should again be noted that perception may not align with reality. In other words, it may not be the case that stores serving poorer customers have lower prices. In fact, there is some evidence that the opposite may be true. Research indicates that some types of retailers (e.g., large grocery stores) are much less frequent in poorer neighborhoods (Zenk et al., 2005) and that this reduced competition leads to higher prices (Chung & Myers, 1999). Thus, if price image were based on a

complete empirical analysis of actual prices, consumers might conclude that, at least in some retail categories, the presence of customers of a lower socioeconomic status is actually a signal of higher price image. However, if price image is based on less complete information, consumers may use a store's customers as a signal of price level—regardless of its factual accuracy.

In addition to using the perceived wealth or socioeconomic status of customers as signals of price image, consumers may also use the number of consumers shopping at a store as a signal of overall price level. Consumers may assume that lower priced stores are likely to appeal to a broader base of customers than higher priced stores. If this is true, then a consumer would form a lower price image of a store packed with customers than an otherwise equivalent store with very few shoppers. Some evidence exists to support this proposition. Buyukkurt and Buyukkurt (1986) report that a grocery store described as having few shoppers on Saturdays was predicted to be more expensive than a store described as having a large number of shoppers on Saturdays.

*Product characteristics.* Another signal of price image is the constitution of the products a retailer carries. For example, consumers can realize a per-unit savings by purchasing larger sizes (e.g., buying a larger box of detergent means a lower price per ounce). That consumers can save money by buying big is now well ingrained in conventional wisdom. Because consumers know that buying larger sizes can result in per-unit savings, they may use the package sizes carried by a retailer as a signal of price level. In other words, stores that offer large or bundled packages may be seen as having lower overall prices than otherwise equivalent stores that offer only smaller sizes.

This connection between package size and price image is especially interesting because it runs contrary to the basket price consumers would pay for equivalent offerings. In other words, consumers buying a fixed list of items would probably pay a higher basket price at a store where the package sizes are very large than if they were to buy the same brands at a store where the

package sizes are smaller. However, because the per-unit prices are lower for larger packages, these consumers may still form a lower price image of the store with the larger packages sizes.

In addition to using different-sized packages of the same brands as a signal of price image, consumers may also use differences in the types of brands retailers carry. Thus, a store that carries more national brand-name products tends to have a higher price image than a store that carries more private label, generic or off-brand merchandise (Buyukkurt & Buyukkurt, 1986). The impact of branded vs. unbranded products extends beyond the proportion of each on the store shelves, but can also be influenced by which type of product retailers choose to promote in their advertising. Specifically, stores that exclusively feature national name brands in their advertisements have been shown to send a signal of higher storewide prices than stores with ads that feature unbranded products—holding the actual prices in the advertisements constant (Cox & Cox, 1990).

Based on the discussion in this section, we can make the following testable propositions regarding the impact of signals of retailer prices on price image:

P5: Price image is a function of the following signals of retailer prices:

- a. advertised prices
- b. advertising and promotion frequency, such that higher frequency leads to lower price image
- c. assertions of price level
- d. presence of a price-match guarantee policy
- e. perceived number of competitors, such that more competitors lead to lower price image
- f. socioeconomic status of a retailer's customer base, such that lower status leads to lower price image
- g. perceived number of customers, such that more customers lead to lower price image
- h. package size of its offerings, such that larger sizes lead to lower price image

- i. proportion of national brands carried relative to private label, generic, or off-brand merchandise, such that fewer national brands lead to lower price image

### **Indirect Inferences of Price Image: Cost Signals**

In this section we discuss the impact of cost structure signals on consumers' formation of price image. Consumers may use these cost signals to form indirect inferences about the prices at a retailer. Thus, a consumer may form a price image of a retailer by assuming that it is passing along high or low costs in the form of higher or lower prices. These cost signals include cost structure assertions, ambiance, store and assortment size, and service quality.

*Cost structure assertions.* Just as retailers sometimes claim to have low prices, they also at times trumpet their low cost structure. These claims are often presented as a reason to believe a claim of low prices. For example, retailers may sell “factory-direct” or “direct to consumers,” thereby keeping costs low by “cutting out the middle-man.” Alternatively, a retailer might advertise its lower cost of goods sold by declaring that it sells only overstock, discontinued, volume-discounted, or “scratch and dent” merchandise. Some retailers even work low-cost claims into their names: Big Lots, Overstock.com, Costco, etc.

Retailers may also assert a high cost structure, especially as a way of reinforcing claims of high quality. For example, a retailer may declare that its goods are “hand-made” (as opposed to the typically less expensive machine made goods) or “locally grown” (as opposed to the typically less expensive produce purchased from a larger geographic market). Likewise, a retailer might signal high costs by communicating the high costs of its raw materials (e.g., “genuine Italian leather”). In general, assertions of a low [high] cost structure are associated with lower [higher] price images.

*Store ambiance.* Retailers selling comparable offerings can vary widely in terms of in-store ambiance. For example, a consumer looking to re-carpet a living room could buy substantially similar products from a wholesaler's warehouse—a space with bare concrete floors, open rafters, and forklifts driving up and down the aisles—or from an interior designer's studio—a space with marble floors,

chandeliers, and fashionable overstuffed seating. Retailers have many reasons for deciding how to decorate their store space, but one powerful effect of décor is to signal consumers about their price level. Expensive décor signals high retailer costs that are likely to result in higher prices, whereas bare-bones furnishings signal a low-cost structure that may result in a lower overall price level. In many cases, the signal value of the ambiance is likely to be larger than the actual cost difference between more expensive and less expensive décor. In other words, the higher prices at a store with an upscale ambiance are likely to be higher than just what is needed to cover the actual costs of more expensive furnishings.

Previous research has recognized the importance of store ambiance on price image formation. Brown (1969; Brown & Oxenfeldt, 1972) found that expensive interiors were a strong predictor of a price image. “Untidy” stores, on the other hand, were very likely to have a low-price image. Buyukkurt and Buyukkurt (1986) confirmed these results, finding that “elegant store décor and lighting” signaled high price image, and “untidy, messy” interiors signaled low price image.

*Store and assortment size.* High-volume retailers often have a cost advantage over retailers that have lower sales volumes and aren't able to take advantage of economies of scale. Although sales volume is hard to observe directly, consumers may use the more easily observable store size as a signal of sales volume. By this logic, larger stores are likely to have larger sales volumes and, therefore, lower cost structures and lower price images. Brown (1969) uncovered several links between store size and price image. Specifically, respondents reported that the single strongest signal of high price image was store size, such that smaller grocery stores were perceived to have higher prices. Brown's results also indicate that supermarkets located in “large shopping centers” tended to have a low-price image, suggesting that not just the size of the store but also the size of the surrounding shopping environs can influence consumers' perceptions of price level.

Buyukkurt and Buyukkurt (1986) found similar correlations between store size and price image. Survey respondents indicated that a store described as “one of the largest food retailers in the city” was

likely to have lower prices than “one of the smaller food retailers in the city.” Likewise, being part of a large chain of stores were found to lead to a lower price image than being a family-owned, independent store, presumably because large chain stores reap the cost benefits of high-volume retailers.

In contrast to the lower costs associated with high sales volumes, carrying larger assortments (i.e., more options within a particular product category) is often associated with higher retailer costs. Assortment size may, therefore, also serve as a signal of retailer costs, such that stores with a limited selection within any given category are perceived to have a lower cost structure than stores with a wide within-category selection. Thus, a store with larger assortments tends to have a higher price image than an equivalent store with more limited assortments.

There is a notable exception to the links between store and assortment size and price image. For retailers selling on the internet, physical store size is meaningless, and assortment size loses its value as a signal of retailer costs. Consumers are aware of the cost savings associated with not keeping a physical stock in a retail space, allowing online retailers to cultivate a low price image with assortments that dwarf anything possible in a brick and mortar store.

*Service quality.* Another cost retailers incur that can be passed along to consumers is a competent work force. As a general rule, the higher the level of service provided by a retailer’s employees, the more expensive it is to retain an adequate number of those employees (and keep them well trained and happy). Thus, consumers may use the level of service quality as a signal of retailer costs, and make an indirect inference about the overall price level. Specifically, a store with a high level of service quality is also likely to have a high price image. In support of this contention, consumers have previously indicated that a store in which a sales person is easy to find is likely to have higher prices than a store where it is hard to find help (Buyukkurt & Buyukkurt, 1986). In addition, a shorter wait in the checkout line, additional services, and longer store hours are all associated with a higher price image (Brown, 1969; Buyukkurt & Buyukkurt, 1986).

Based on the discussion in this section, we can make the following testable propositions regarding the impact of signals of retailer costs on price image:

P6: Price image is a function of the following signals of retailer costs:

- a. assertions of cost structure
- b. store décor, such that less expensive appointments lead to lower price image
- c. store size, such that larger stores lead to lower price image
- d. assortment size within a given category, such that smaller assortments lead to lower price image
- e. service quality, such that lower quality leads to lower price image

### **BEHAVIORAL OUTCOMES OF PRICE IMAGE**

There are three categories of behavioral outcomes of price image. First, price image can impact consumers' expectations of the prices they encounter. This includes consumers' price perceptions and judgments of price fairness. Second, price image can influence consumers' choices from a store, including which option consumers' are likely to prefer, how many options they are likely to buy, as well as consumers' likelihood of deferring purchase of a preferred option. Third, price image can influence consumers' choice among retailers.

#### **Expected Prices**

By definition, consumers expect to pay more for the same item at a store with a high price image than they would for a similar item at a store with a low-price image. As we argue in this section, this expectation can, in turn, influence consumers' perceptions of the prices at a given store, as well as their evaluations of the fairness of those prices.

*Price perceptions.* Price image may influence price perceptions in one of two ways. First, consumers may use store price image as a judgment heuristic that replaces evaluation of a price

relative to a reference point. The result is an assimilation effect, in which a price is perceived to be lower at a low-price image store and higher at a high price image store. For example, imagine that a consumer shopping at a low-price image store sees a cordless phone priced at \$50. If the consumer does not have a clear reference point for cordless phones, he may assume that \$50 is a low price, since the store has a low price image. On the other hand, if the consumer were to see the same phone at the same price at a store with a high price image, he may assume that \$50 is a high price. The second way in which price image influences price perceptions is by shifting the consumer's reference price (Biswas & Blair, 1991; Monroe, 1973; Rajendran & Tellis, 1994). Since consumers expect higher prices at stores with a high price image, they may be willing to accept higher prices at a high-price image store than they would at a store with a reputation for lower prices (Thaler, 1985).

The result of this shift in reference prices is a contrast effect, such that a given price seems - more expensive at a low-price image store and less expensive at a high price image store. Returning to the previous example, a consumer shopping at a low price image store may have a lower *a priori* reference point for a cordless phone than would the same consumer shopping at a store with a high price image. As a result, the consumer might consider a \$50 phone expensive if he sees it at a low price image store (because he has a lower reference price), whereas he might consider the same price more attractive at store with a higher price image.

It should be noted, of course, that these two predictions run in opposite directions, such that price image can lead to an assimilation effect when it is used as a heuristic and to a contrast effect when it influences a consumer's reference price. One factor that may determine which of these two effects influence price perceptions is the degree to which a consumer's reference price is articulated. When consumers have a very poorly articulated reference price (i.e., when they have only a vague idea of how much an item should cost) they may be more likely to use price image as a heuristic, substituting price image for an evaluation of the price. When consumers have a more clearly articulated reference price, on

the other hand, they may be more likely to use their price image-adjusted reference price in evaluating prices. The impact of price image on consumer price perceptions is a fruitful area for future research.

*Price fairness.* Consumer perceptions of the fairness of the prices they pay have recently received a great deal of attention, both in the popular press and in consumer research. Fairness is defined as “a judgment of whether an outcome and/or the process to reach an outcome are reasonable, acceptable, or just” (Xia, Monroe, & Cox, 2004, p. 1). Price fairness is, therefore, a judgment of whether a set price is reasonable, given the process used to set the price. Consumers who believe they are being charged too much may stop buying from a retailer or even actively spread negative information about a seller (Campbell, 1999). In some cases, such as when vendors increase prices of especially vital goods like gasoline or medicine, angry consumers may even demand that legislators step in and protect them from what they perceive as unfair treatment (e.g., Jafonsky, 2006).

Price image can impact perceptions of price fairness by changing consumers’ expectations, such that a given price would be less likely to be perceived as unfair as the price image of the retailer increases. In other words, consumers would be more likely to perceive a high price as unfair at a store with a low price image than at a store with a high price image. Price image is likely to moderate perceptions of price fairness for several reasons. First, higher price image leads to higher expected prices, meaning a given price is less likely to be perceived as unreasonable or unacceptable at a high price image store because the price is more in-line with consumers’ expectations. Second, differences in price image across stores are likely to decrease the perceived similarity of various transactions. Previous research has found that price differences across transactions are more likely to lead to differences in perceived fairness when the transactions are similar (Xia et al., 2004). Finally, higher prices are considered fair when they are justified by higher seller costs (Bolton, Warlop, & Alba, 2003). To the extent that a high price image is often (though not always) associated with a higher retailer cost

structure, higher prices are likely to be perceived as more fair at high price image stores than at low price image stores.

### **Choice From a Retailer**

In addition to guiding consumers in their choice among retailers, price image may also influence the choices consumers make within a store. In particular, we examine the potential influence of price image on two types of in-store consumer decision making: product choice and purchase likelihood.

*Product choice.* Price image is likely to influence consumers' choices in one of two ways. First, consumers may use price image as a judgment heuristic, bypassing price evaluations by shifting all of their price perceptions in the direction of the price image (e.g., assuming that all the prices in a low price image store are low). If the price perceptions of a set of options all shift down, the higher priced options in the set will seem less expensive, thereby increasing the probability that higher priced options will be chosen. In other words, if a consumer perceives all the prices at a store with a low price image to be lower, it will make even the higher priced options seem more reasonable. The result will be an increase in the probability that more expensive options at a store with a low price image will be chosen relative to those in a store with a high price image.

The second way in which price image influences consumers' preferences for more or less expensive options is by changing consumers' reference prices. Deciding whether or not to buy a more expensive option is often based on a comparison between the price and an internal reference point. Consumers may adjust their reference prices based on the price image of the retailer at which they are shopping, such that they increase their reference points in high price image stores and decrease them in low price image stores. Lowering a consumer's reference price will decrease the attractiveness of a high-priced option, thereby decreasing the probability that the consumer will purchase a more expensive option. When consumers use price image to adjust their reference

points, the result will be a decrease in the choice share of more expensive options at a store with a low price image relative to a store with a high price image.

The influence of price image on consumers' within-store decision making is an extremely important area for further research. In addition to the theoretical importance and the obvious practical significance for retailers, knowing how price image affects preferences for more or less expensive options can also provide a powerful tool for the study of price image using purchase data. The only attempts at examining price image through empirical modeling have used store choice as the dependent measure (e.g., Bell & Lattin, 1998). A robust theory predicting the impact of price image on consumer choice would allow for a great deal of flexibility in using actual purchase data to investigate price image phenomena.

*Purchase volume.* Previous research has documented that when consumers perceive a particular product to be a value they will often stockpile, purchasing a larger-than-usual number of units (Blattberg et al., 1995; Mela, Jedidi, & Bowman, 1998). Because price image can influence consumers' perceptions of shelf prices, we predict it will also influence their purchase volume. In particular, when consumers are at a store with a low price image, they will be more likely to stockpile. The only exception to this prediction was discussed in the previous section: when a low price image causes consumers to lower their reference prices, they may actually perceive some of the prices a store with a low price image as being less attractive. Thus, when consumers' reference prices are influenced by a low price image, their propensity to stockpile will be reduced.

*Purchase likelihood.* Consumers may use price image to help them decide whether to purchase an item at the offered price or whether to continue shopping and try to find a better deal elsewhere. Often consumers will not know the exact price competitors charge for a given offering and so must make a judgment about the probability of finding a better price at another retailer. Consumers may conclude that there is a high probability of finding a lower price somewhere else if they are at a store

with a high price image, but a low probability if they are at a store with a low price image. These probability judgments have implications for both price search and purchase likelihood. Specifically, consumers will be more likely to discontinue a price search at a store with a low price image than at a store with a high price image (Srivastava & Lurie, 2001) and more likely to defer purchase at a store with a high price image than at a store with a low price image (Hamilton & Chernev, 2007).

### **Choice Among Retailers**

One of the consequences of price image that is of most interest to marketing practitioners and researchers alike is its impact on store choice. Retailers are often interested in managing their price images out of fear that consumers will leave for other stores perceived to have lower prices (Fagnani, 2001; Martin, 2008). In general, one would expect consumers to prefer a store with a lower price image to an equivalent store with a higher price image. In fact, several researchers have used store choice as a dependent variable when measuring price image based on the assumption that consumers tend to prefer lower price image retailers (e.g., Alba et al., 1994; Bell & Lattin, 1998; Buyukkurt & Buyukkurt, 1986).

Although consumers express a general preference for lower prices, it is clearly not always the case that consumers will choose a low price image retailer over one with a higher price image. For example, when consumers have the goal of splurging or when they are seeking a store with better service or higher quality goods, they may choose a store with a higher price image. Consistent with this reasoning, Hamilton and Chernev (2007) confirm that preference for lower price image stores can indeed be reversed when participants are given the goal of spending money.

Based on the discussion in this section, we can make the following testable propositions regarding the behavioral outcomes of price image:

P7: Price image influences the following consumer judgments and behaviors:

- a. price expectations

- b. price perceptions, such that a lower price image will lead to lower perceptions when consumers use price image as a substitute for price evaluations and higher perceptions when price image influences internal reference prices
- c. perceptions of price fairness, such that a lower price image will lead to decreased perceptions of fairness for high prices
- d. purchase of upscale items (relative to downscale items), such that a lower price image will lead to increased purchase of upscale items when consumers use price image as a substitute for price evaluations and to decreased purchase of upscale items when price image influences internal reference prices
- e. purchase volume, such that a lower price image will lead to larger purchase volumes
- f. extent of price search, such that a lower price image will lead to less price search
- g. likelihood of purchase deferral, such that a lower price image will lead to lower likelihood of deferral
- h. store choice, such that a lower price image will lead to increased store preference

## **GENERAL DISCUSSION**

Price image is of great concern for marketing managers because of its influence on myriad consumer judgments and behaviors, including expected prices, price perceptions, evaluations of price fairness, store choice, purchase likelihood, and preference for more or less expensive items. Recent increased competition in the form of retailer “category killers” have arguably made price image more important for retailers than ever before (Singh et al., 2006). Yet, despite its obvious practical and theoretical significance, the subject of price image has received very little attention from marketing researchers (Blattberg et al., 1995). Retailers actively seeking to establish a particular price image are left without a robust theory on which to base their decisions. Furthermore, the impact of many common retail practices on price image has not been adequately investigated. As a result, retailers may be making short-term decisions that inadvertently damage their long-term price image strategies

(A T Kearney, 2005). Consumers are also left unaware of the factors that could bias their price-image formation, which is potentially detrimental to consumer welfare.

This article addresses this gap in the marketing literature by offering the first comprehensive review of the price-image literature, synthesizing the relatively small body of current knowledge on this important topic. More important, we organize previous research within a conceptual framework that identifies the main antecedents and consequences of price image (see Figure 2). On the antecedent side, we identify two classes of factors that influence price-image formation: price-based antecedents and non-price antecedents. Price-based antecedents include those factors that are directly related to price information, such as the range of available prices and the context in which prices are evaluated. The impact of these factors on price image is moderated by the particular evaluation strategy consumers employ, such that the influence of price factors may be weakened or even reversed depending on whether consumers make item- or basket-level evaluations, use internal or external reference points, or use memory-based or in-store price cues.

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Insert Figure 2 about here.  
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There are two groups of non-price antecedents: price signals, which facilitate direct inferences about retailer price levels, and cost signals, which facilitate indirect inferences about price levels. Because overall price levels are difficult for consumers to observe, they may use price signals—such as advertising, price-match guarantee policies and number of competitors—as stand-ins for actual price level. Consumers can also use signals of a retailer’s cost structure to draw inferences about price level by reasoning that costs (or savings) may be passed along to consumers. Information that can signal retailer cost structure include such factors as store ambiance, store size, and service quality.

The framework also includes the key behavioral outcomes of price image. In particular, there are three groups of information-processing and decision-making outcomes that price image is likely to influence. First, price image, by definition, impacts the prices consumers expect to find at

a particular retailer. Based on these price expectations, price image can influence consumers' price perceptions, as well as their perceptions of price fairness, such that a price considered fair at one retailer might be considered unfair at a retailer with a different price image. Second, price image influences consumers' choices from a store, including which option consumers' are likely to prefer as well as the likelihood of deferring purchase of a preferred option. Third, and perhaps of most interest to marketing practitioners, price image influences consumers' choice among retailers.

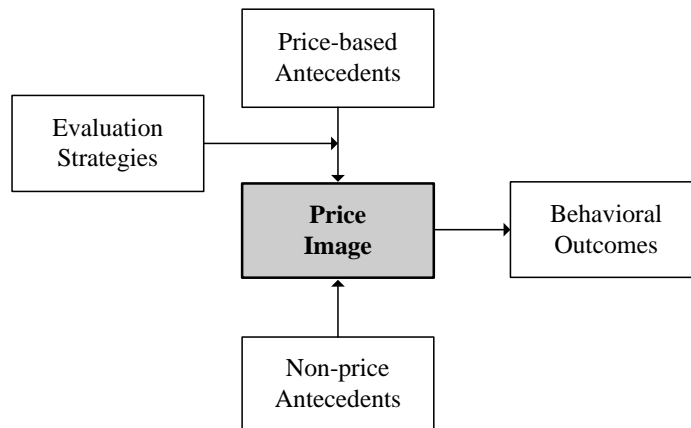
One goal of this article is to spur additional research on price image. To this end, this article includes a list of testable research propositions meant to encourage further research on price image. In addition to the propositions previously listed, there are several additional promising areas of future research on price image. The antecedents identified in this article were largely discussed in isolation (though we did frequently discuss likely moderators). For the sake of brevity, there was no attempt made to investigate how these factors might interact with each other. However, it is very likely that the antecedents identified in this article interact in interesting and important ways in the formation of price image. For example, how do consumers cope with conflicting information of different types when forming a price image? What kind of price image would a consumer form of a store where the prices of a few key items are perceived to be inexpensive but the store's décor is very upscale? Do price-based antecedents always trump non-price antecedents when there is a conflict? Or do other factors determine which type of information receives more weight on a situation-by-situation basis? Examination of interactions between the various antecedents of price image is a promising area for future research.

This article identified the important factors that drive the formation of a price image. An important question for many retailers is how to change a price image that already exists in the minds of consumers. Changing a price image is likely to be a function of many of the same price and non-price antecedents as forming a price image, but it may also differ in important ways. For example, previous research suggests that it is extremely difficult for consumers to change an impression once it has been

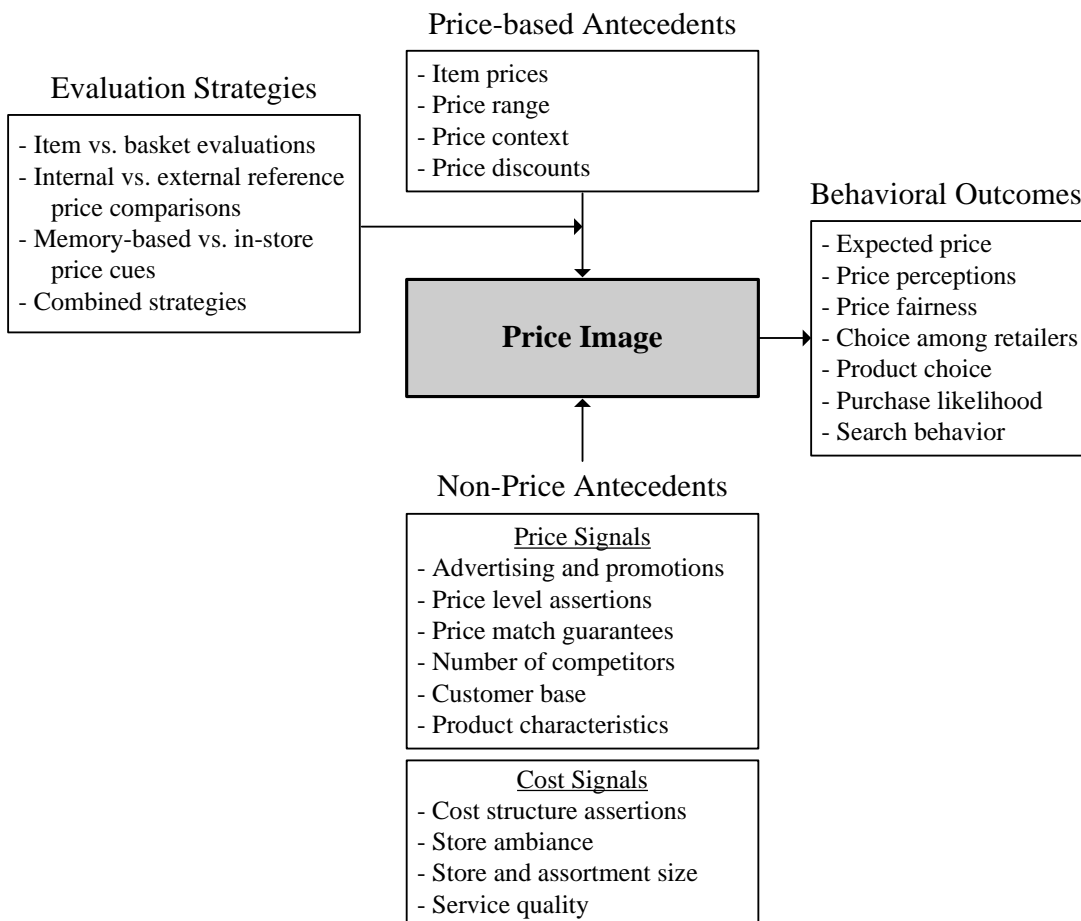
formed. To illustrate, once a link between a brand name and product quality has been established, it can inhibit the acquisition of other, more diagnostic information, such as the link between a particular feature and product quality (van Osselaer & Alba, 2000). In addition, consumers may interpret new information in such a way as to confirm previously held beliefs or preferences (Russo et al., 1996). As argued in this article, consumers may interpret new price information so that it conforms with a pre-established price image (i.e., an assimilation effect). All this suggests that established price images may be extremely sticky and that consumers will be unlikely to change them. Given the apparent difficulty in changing established price images, an important area for future research is to identify those situations in which consumers update price images and the mechanisms by which these updates occur.

Another important area for investigation is the accuracy of consumers' price images. As made abundantly clear in this article, the processes by which consumers form price images are fraught with potential biases. These biases could easily cause consumers to form price images that bear no resemblance to price reality. In one of the only investigations of price image accuracy, Brown (1969) found wild variation across the five cities he surveyed, with respondents in one city reporting price images that were extremely accurate and respondents in three cities reporting price images that had absolutely no correlation with actual price levels. In a follow-up study, Brown (1971) tested the relationship between price-image accuracy and 20 socioeconomic, attitudinal, and behavioral variables but found no strong predictors of price-image accuracy. In other words, there were no groups of shoppers that were especially adept at forming price images that matched actual price levels. It remains an open question whether there are certain consumer characteristics or shopping situations that will consistently increase the accuracy of price images. Given the obvious implications for consumer well-being, the topic of consumer price-image accuracy is another worthwhile area for future research.

**FIGURE 1: CONCEPTUAL FRAMEWORK OF PRICE IMAGE (OVERVIEW)**



**FIGURE 2: CONCEPTUAL FRAMEWORK OF PRICE IMAGE (COMPLETE)**



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