

**Management of store price images:  
How to lever store price image without actually adjusting prices**

Retailers are operating in a highly competitive arena, in which the perceived store price image is driving consumers' store choices. Despite its practical importance, research has hitherto not been able to provide a comprehensive explanation concerning the formation of store price image. The present study addresses this research deficit by developing a conceptual framework and empirically testing an integrated model of store price image and its antecedents. The empirical investigation identifies significant price-related antecedents (i.e., favorable inter-store price comparisons by customers, special offers, price guarantees), as well as significant non price-related antecedents (i.e., store size, store ambiance) of store price image. Hence, by actively managing the antecedents of store price image, a retailer might be able to lever store price image without necessarily sacrificing profitability. The integrated model developed in this study can make a significant contribution to a field of knowledge, which at present, is not well understood in both research and business practice.

## **1. Introduction**

Currently, many consumers tend to care less about indicating their social status when selecting a store. Rather, the choice of a store with a low store price level becomes more and more socially acceptable. Saving money on specific categories of goods is associated with an intelligent household budget management. Against this background, the store price level is an important driver of consumers' store choice (Levy et al. 2004): A low store price level will lead to more consumers favoring the respective retail store.

Given the extensive amount of products, consumers usually have to cope with an overload of price information, which forces them to focus on selected information, i.e. imperfect information. Consumers are neither able, nor willing to determine the objective store price level, but tend to rely on their individual perception of store price level (Büyükkurt 1986). This individual perception of store price level (i.e., store price image) can be seen as relatively stable in the course of time and is likely to differ from the objective store price level (Arnold, Oum and Tigert 1983; Nickel and Wertheimer 1979).

In contrast to classical price theory, which assumes perfect information about prices and rational consumers, it can be argued that consumers build their store price image on imperfect information. According to this view, the store price image is rather based on subjective impressions of consumers than on objective price levels (Büyükkurt 1986), which is in line with behavioral pricing research. This phenomenon provides an opportunity for retailers: By actively managing the store price image related perceptions of consumers, a retailer may be able to establish a low store price image. He may do so without necessarily having to reduce prices of all products, hence endangering margins and profitability. In order to successfully manage the store price image perceived among consumers, a retailer needs to understand the formation of store price image, i.e. the antecedents or drivers of store price image.

## **2. Review of the Literature on Store Price Image Antecedents**

Prior studies have focused on specific antecedents of store price image, such as product prices (Lenzen 1983; Nyström 1970), store characteristics (Baker et al. 2002; Grewal and Baker 1994; Nagle 1987; Thaler 1985), and advertising on prices (Cox and Cox 1990; Simester 1995).

These prior studies are limited in two ways: First, all of these studies examine only a very limited number of antecedents of store price image without including various antecedents of store price

image in a single, integrated model (Baker et al. 2002; Levy et al. 2004). From a managerial perspective, such an integrated model is needed, since it can provide insight into which antecedents have the strongest effect on store price image. Second, many results of these studies (Baker et al. 2002; Cox and Cox 1990; Grewal and Baker 1994) are limited due to methodological shortcomings. Most studies do not interview consumers in a real retail store (i.e., in a real-world shopping environment), but just use an experimental design with students. This focus on experiments may lead to a lack in external validity. There is a need for an application of a more realistic empirical design to investigate the antecedents of store price image.

Based on these research deficits, our study will examine the antecedents of store price image in an integrated model in order to figure out, which antecedents are the most important levers to improve store price image. Furthermore, our study relies on interviews with real consumers in a real-world shopping environment.

### **3. Conceptual Framework**

Based on previous research and related theories, we examine six antecedents of store price image in our study:

The *perceived amount of favorable inter-store price comparisons* refers to the quantity of items within a store, which, in the consumer's mind, have a price advantage compared to stores of competitors. The *perceived amount of special offers* relates to the perceived quantity of items within a store, which are offered at lower prices for a limited period of time. The *awareness of price guarantees* is the extent to which a consumer is conscious about store warranties to offer the lowest item prices (as compared to competitors). The *perceived store size* refers to the perceived physical extension of sales facilities, as well as to the perceived width of the product range. With the *perceived outskirts location of the store* we address the perceived geographical location of a store (town outskirts versus city center). Finally, the *perceived exclusivity of store ambiance* relates to sophisticated interior and the usage of attractive colors in the store as perceived by consumers.

The six proposed antecedents in our model can be divided into three price-related antecedents, and three non price-related antecedents, which represent store characteristics (see Figure 1). Whereas a high value of the first group of antecedents might be difficult to realize without

reducing objective prices, an implementation of a certain value of the second category of antecedents can be reached regardless of the objective store price level. It is worthwhile to add that classical price theory, by assuming rational consumer behavior, has hitherto completely neglected these non price-related antecedents.

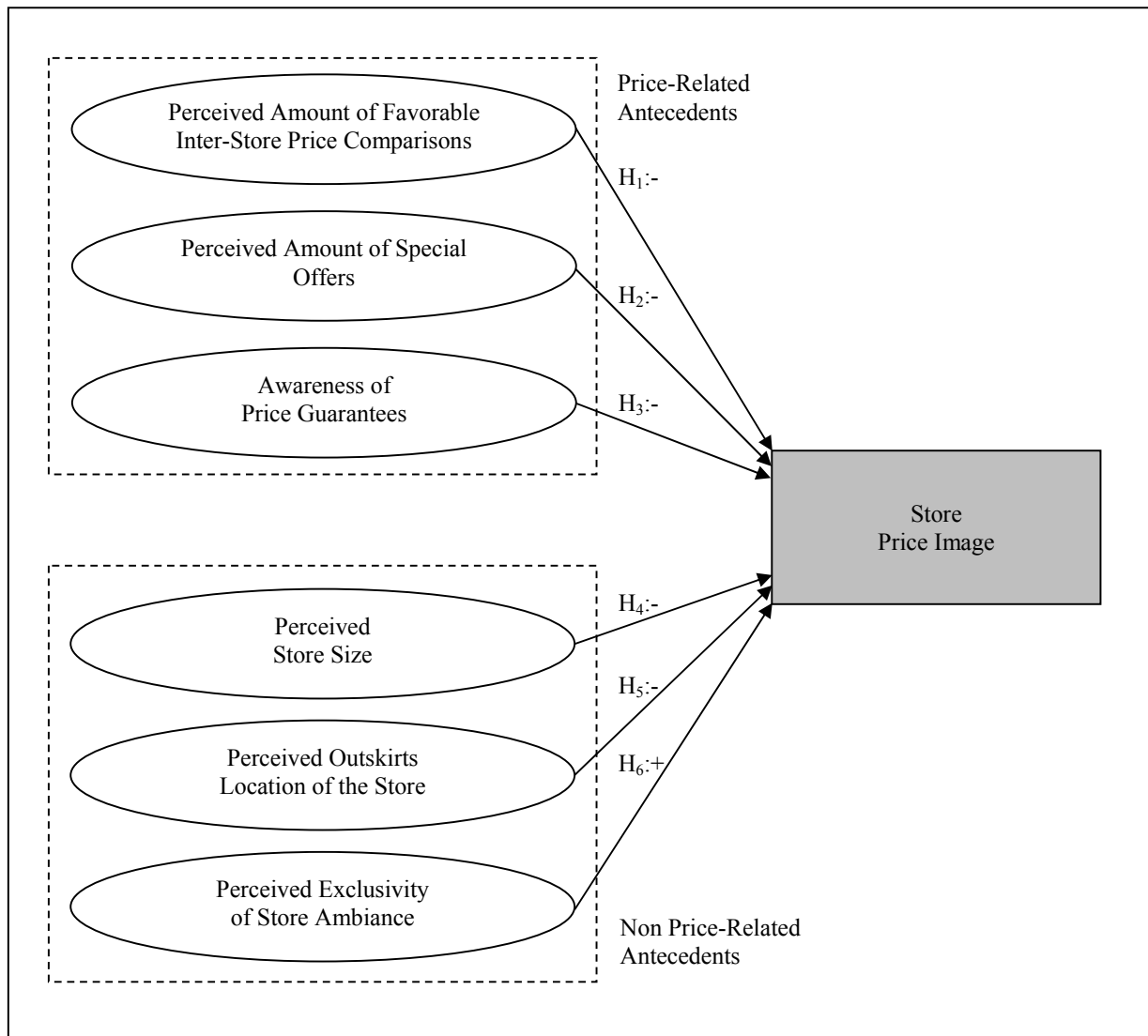


Figure 1: Integrated Model of Store Price Image and its Antecedents

#### **4. Development of Hypotheses**

First, we consider the amount of favorable inter-store price comparisons as an antecedent of store price image. According to information-integration theory (Smith 1993; Yamagishi and Hill 1981) item price judgments are first integrated and then transferred to a store price image. Over time, consumers learn about the price level of a retailer and continuously adjust their store price image based on item price comparisons. The more often consumers perceive specific items of a store to be cheaper than the equivalent items of competitors, the lower will their store price image be. Thus, we hypothesize:

H<sub>1</sub>: The higher the amount of favorable inter-store price comparisons, the lower the store price image.

A second antecedent of store price image refers to special offers. Prior research has found that consumers seem to associate special offers with a low store price image (Cox and Cox 1990). Based on these results, we argue that consumers perceive the store price image to be low, if they perceive a high amount of special offers. Furthermore, it has been shown, that the amount of special offers has a stronger impact on store price image than the magnitude of special offers (Alba et al. 1994). Against this background, we formulate:

H<sub>2</sub>: The higher the perceived amount of special offers, the lower the store price image.

Given the extensive supply of products and price labels within a store, and the high amount of different retailers in most markets, consumers often face uncertainty concerning the objective price level of a store and are confronted with high costs of price information search. Against this background, many consumers are receptive towards price guarantees of retailers (Zeithaml 1988), which they interpret as a signal for a low store price level (Biswas et al. 2002; Srivastava and Lurie 2004). Signaling theory states that signals are more credible, if untrue signals lead to negative consequences for the sender of the signal (Kirmani and Rao 2000; Spence 1974). A low price guarantee leads to costs for the retailer, if consumers detect that the retailer's prices are actually higher than those of competitors (e.g., costs of refund). Hence, price guarantees have the potential to be perceived as credible signals for low prices. Therefore, we propose:

H<sub>3</sub>: The higher the awareness of price guarantees, the lower the store price image.

A high store size is likely to correspond with cost advantages due to a high sales volume and a high turnover of goods. For example, a high sales volume offers retailers opportunities for economies of scale and enhances their bargaining power against suppliers. We argue that consumers are aware of these cost advantages of bigger stores. Given intensive price competition among retailers, it is likely that realized cost advantages are subsequently passed along to consumers. Hence, consumers will associate a large store size with a low store price level (Brown 1969; Shankar and Bolton 2004). Consequently, we predict:

H<sub>4</sub>: The larger the perceived store size, the lower the store price image.

Similar to store size, the location of a store indicates important cost implications (Davies 1993). Consumers will expect stores which are located in central areas of the city to have higher costs (e.g., due to higher rental fees) as compared to stores on the outskirts of the city. Thus, we postulate:

H<sub>5</sub>: The stronger the perceived outskirts location of the store, the lower the store price image.

According to adaption-level theory (Helson 1964) contextual factors shape the individual's reference frame when elaborating new stimuli such as price information (Baker et al. 2002). Extending this finding to our conceptual framework, consumers are likely to infer that store price image is higher in an exclusive upscale store than in a store with basic interior (Thaler 1985). Hence, we hypothesize:

H<sub>6</sub>: The higher the perceived exclusivity of store ambiance, the higher the store price image.

## **5. Research method**

We used a survey methodology for data collection, which took place in the German food retailing market in 2005. The sample of our research study consisted of 194 face-to-face interviews with consumers in four hypermarkets of two major players in the German food retailing market. After having conducted pre-test interviews, we surveyed consumers in the stores of two retailers. In order to provide sufficient variance of store price image in the sample, one of the two chosen retailers is typically associated with a rather high store price image, whereas the other retailer represents a rather low store price image (however, respondents were asked to indicate their

individual perception and therefore there was a significant amount of variance with regard to store price image). The sample of respondents showed a good representation of age and income (control variables) in reference to the German population, but a somewhat higher participation of females.

We followed standard psychometric scale development procedures (Gerbing and Anderson 1988). Scales for our study consisted of newly generated items and items that had been used previously. Where a new scale was developed, we were guided by construct definitions and scales used in prior research (e.g., Srivastava and Lurie 2004). The scales' psychometric properties were assessed by means of criteria based on confirmatory factor analysis. If necessary, the item pools were purified by dropping items with low reliabilities. The resulting values for coefficient alpha of above 0.7 for all constructs, suggest for each of the constructs a reasonable degree of internal consistency between the corresponding indicators (Nunnally 1978). Furthermore, we tested multi-correlation of our linear regression model. Following a recommended procedure by Aiken and West (1991), all predictor variables were "centred" by subtracting the corresponding mean from each variable which however did not affect their interpretation power. The various influence factors (VIF) in our model did not exceed 1.340, thus, the recommended value of under 5 was met (de Vaus 2002).

## **6. Empirical Results**

In Table 1 we report standardized regression coefficients corresponding to our hypotheses testing. The fit of the overall linear regression model showed a high explanation of variance, i.e., F-Value of 22.74 and adjusted  $R^2$  of .37. For all hypotheses, the corresponding parameter is significant at the .10 level, except  $H_5$  (perceived outskirts location of the store).  $H_1$ ,  $H_2$ , and  $H_4$  are even significant at the .01 level. Given these results, we can empirically show the extraordinary importance of perceived amount of favorable inter-store price comparisons ( $H_1$ ), perceived amount of special offers ( $H_2$ ), and perceived store size ( $H_4$ ) in forming store price image. Concerning  $H_5$  (perceived outskirts location of the store), an explanation for the lack of empirical evidence might be insufficient variance in the sample.

**Table 1: Results of the Linear Regression Analysis**

Antecedents	Hypothesized direction	Store price image		VIF
Perceived Amount of Favorable Inter-Store Price Comparisons	–	-.29	***	1.340
Perceived Amount of Special Offers	–	-.29	***	1.163
Awareness of Price Guarantees	–	-.16	**	1.181
Perceived Store Size	–	-.24	***	1.322
Perceived Outskirts Location of the Store	–	-.02	n.s.	1.249
Perceived Exclusivity of Store Ambiance	+	.14	*	1.155
Constant		.57	n.s.	
F-Value		22.74	***	
R <sup>2</sup>		.38		
R <sup>2</sup> adjusted		.37		
*** p≤ 0.01    ** p≤ 0.05    *p≤ 0.10    n.s. = ‘not significant’				

## **7. Discussion and Managerial Implications**

Our research objective was to conceptually discuss and to empirically test an integrated model of the antecedents of store price image. More specifically, we were interested in identifying drivers of store price image, which are not primarily price-related. Furthermore, we addressed the research question which antecedents have the strongest effect on store price image. On an overall basis, our conceptual considerations are mainly supported.

Our three price-related antecedents proved to be important antecedents of store price image. Thus, they undoubtedly play a major role in shaping consumers' store price image. Given the strong impact of inter-store price comparisons of consumers on store price image, retail managers should consider competitive pricing as a priority. In this context, it is important to note, that it is the amount of favorable inter-store price comparisons and not the magnitude of item price comparisons which influences store price image. Future research needs to further investigate which product items are most important for consumers and different consumer segments when comparing prices among stores.

Of further interest is the finding that a high amount of special offers (indicating a promotional high-low pricing strategy) has a somewhat stronger effect on store price image than consumers' awareness of price guarantees (indicating an every-day-low-price strategy). A possible explanation for this result can be seen in retailers' intense communication of special offers and their salient visibility within many stores. Thus, special offers might serve as stronger signals than price guarantees among consumers. Hence, our findings indicate that when aiming at lowering store price image, it might be more effective for a retailer to pursue a promotional high-low pricing strategy. As both antecedents (amount of special offers and awareness of price guarantees) show a significant effect on store price image, a retailer should check if some form of combination of both retail pricing strategies might be feasible.

With regard to non price-related antecedents of store price image (antecedents related to store characteristics), we were able to show that the perception of store size and store ambiance are important antecedents of store price image. From a managerial perspective, store price image antecedents related to store characteristics are of special interest, as they offer an opportunity to

establish a low store price image among consumers without actually having to reduce prices. Given our results that perceived store size has the strongest non price-related effect on store price image retailers should integrate this finding in their management of price perceptions. For example, a retailer might check if an actual enhancement of store size is feasible, or might implement measures to increase the perceived store size by optimizing category management and interior (e.g., by enlarging product range or intensive use of mirrors).

Another potential lever to lower store price image is the perceived exclusivity of store ambiance. However, in addressing this parameter, retailers need to pay special attention, as lowering the exclusivity of store ambiance might lower store price image but might simultaneously have a negative impact on other drivers of store success (e.g., consumer's shopping convenience/experience, consumer spending, consumer satisfaction, or consumer loyalty). Future research should explore this trade-off, i.e. determine the net effect resulting from positive effects through a lower store price image, and potential negative effects in terms of other drivers of store success.

Furthermore, it would be interesting to examine moderating effects on the relationship between antecedents and store price image. For example, a possible moderator of the relationship between non price-related antecedents and store price image might be customers' price interest: Customers with a high price interest might rely stronger on price-related antecedents as on store characteristics when forming their store price image.

Finally, given an increasingly international approach of many retailers, an intercultural sample could further improve our understanding of store price image formation. Our study was conducted in a single country among consumers with similar cultural backgrounds. Future studies could interview consumers from different cultural backgrounds, and examine, if the perception of store price images is influenced by antecedents in different ways.

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