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Cognitive, emotional and inferential paths from price perception to buying intention in an integrated brand price image model

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Abstract

A brand price image consists of associations related to the price positioning of a brand's product portfolio and has a filter function for price search and brand consideration. The branding literature usually analyzes brand images in general and a few studies have discussed variables related to dimensions of a brand price image. This paper aims to extend this fragmented literature by proposing an integrated framework that links cognitive, emotional and inferential dimensions of a brand price image with each other and with the buying intention. With this framework, we analyze how brand price-level perception influences the buying intention through different positive and negative paths and whether the strength of these paths differs between price tiers. We test our framework based on data from 581 young middle-class Brazilian respondents using structural equation modeling. Results reveal a negative net effect of a perceived low price level on the buying intention. Regarding intra-tier positioning, a more expensive price-level perception increases the buying intention in low price tiers, while a less expensive price-level perception has a positive effect in high-price tiers. We explain these effects by stronger price–quality inferences in low-price tiers and discuss implications for theory and practice.

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Introduction

Price images have gained increased importance in marketing practice and research. While most price image studies focus on retailers (e.g., Cheah et al. 2020; Hamilton and Chervev 2013; Koschmann and Isaac 2018; Larson et al. 2021; Lombart et al. 2016; Lourenco et al. 2015), fewer studies address brand price images (Popp and Woratschek 2017). Building on multidimensional price image models (Graciola et al. 2018; Zielke 2010), we define a brand price image as a multidimensional latent variable that includes cognitive, emotional and inferential associations related to the price positioning of a brand's product portfolio.

It is astonishing that price image research mostly focuses on retailers and less on product brands, as important parallels exist between these. Similarly to the products in a retail assortment, many different and sometimes diverse products are sold under a brand name. Independently of single products sold in a retail assortment or under a brand name, customers may have an idea if the retailer or brand is high or low priced, if it offers value for money and if prices are fair. Managing such price perceptions is extremely important for brand managers, as the brand price image can have an important filter function; it can determine customer preferences and purchase intentions before customers engage in a price information search for a particular product. Some customers who want to buy a new smartphone may, for example, never enter an *Apple* store and check *iPhone* prices if they perceive *Apple's* brand price image as too expensive. Other customers may not look for a low-price brand, because they expect low quality and low value. Hence, brand price images have a filter function for price search and brand consideration. Furthermore, the effects of brand price images (especially price-level perception) differ for brands positioned in high- and low-price tiers (Sivakumar 2003).

For managers, it is important to position the brand along the different price image dimensions. For this positioning, price-level perception plays an important role as it can influence purchase intentions directly, but also indirectly via various other price image dimensions (such as price fairness, positive emotions or quality inferences). A practically relevant question is therefore how alternative price level positions or changes in price-level perception (such as after introducing a premium or budget product line) influence purchase intentions. Furthermore, it is important to identify the most relevant positive and negative indirect effects of such changes, which managers can either emphasize or attenuate. Answering these questions requires an understanding of relationships between price image dimensions and their impact on relevant dependent variables, such as purchase intentions. Furthermore, it requires an understanding of how these effects differ between brands positioned in low- versus high-price tiers.

Analyzing brand price images is also relevant from an academic perspective as research on brand price images is scarce. Many studies measure and analyze brand images in general (Plumeyer et al. 2019). However, these studies often focus either on very specific brand associations (John et al. 2006; Schnittka

et al. 2012) or more holistic perceptions of overall brand image and consumer-based brand equity drivers (Ansari and Hashim 2018). Some studies have discussed variables related to dimensions of a brand price image, such as *price level* and *value perception* (e.g., Popp and Woratschek 2017; Wiedmann et al. 2018; Zeithaml 1988), *price fairness* (e.g., Homburg et al. 2005; Lu et al. 2020) or *price emotions* as mediators between perception and behavior (Peine et al. 2009). Studies on price as an information cue indicate that a favorable price-level perception (low-price level) may also have negative effects if low prices are associated with low *quality* (Palma et al. 2016; Völckner and Hofmann 2007) or lower *social status* (Ashworth et al. 2005).

All the research streams mentioned above focus on selected aspects of a brand price image, while an *integrated model is lacking*. A framework linking cognitive dimensions (e.g., price-level perception, value perception, fairness perception), emotional dimensions (positive and negative) and inferential dimensions (e.g., quality perception, social status) with each other and with shopping intention does not exist. This paper develops such a framework and addresses the following research questions:

1. How are different cognitive, emotional and inferential dimensions of brand price images linked with each other and how do they influence buying intentions?
2. Through which direct and indirect paths does price-level perception influence purchase intentions for brands and what is the net (total) effect?
3. Does the strength of these paths differ between low and high-price tiers, resulting in different net (total) effects?

The academic contribution of this study firstly lies in developing an integrated model that links different cognitive, emotional and inferential price image dimensions. Secondly, this study contributes to our knowledge on price level positioning as it shows how price-level perception influences shopping intentions via diverse paths. Some of these paths are complementary while others cancel each other out. Price-level perception (low price) may, for example, positively influence buying intentions via value perception, price fairness and positive emotions, while negative inferences via quality perception and social status have an attenuating effect. Thirdly, this study contributes to the literature by analyzing the question of whether the effect of price-level perception and the strength of model relationships differ between price tiers. Price–quality inferences may be stronger in low-price tiers (Völckner and Hofmann 2007), for example, resulting in a more negative net effect of low prices. Fourthly, this study analyzes price images in a branding context. Although retail research mostly found positive net effects of a low-price image (e.g., Babin et al. 2016; Graciola et al. 2018; Lombart et al. 2016; Zielke 2010), this might not necessarily hold for brand price images.

To address the aforementioned research questions, we develop an integrated brand price image framework and analyze it using structural equation modeling of price image data. In the next section, we develop the framework step by step, starting with cognitive price image dimensions, followed by price emotions and

price inferences. Based on this framework, we then discuss possible net effects of price-level perception and the moderating effect of price tiers. For testing the framework, we present the research design and methodology of our empirical study, followed by the results. The paper closes with a discussion of results, implications and limitations of the study.

Theoretical framework

The theoretical framework of this study integrates different research streams, such as research on retail price images (Graciola et al. 2018; Hamilton and Chervev 2013; Zielke 2010), value perception (Zeithaml 1988), price fairness (Homburg et al. 2005; Lu et al. 2020), the role of emotions in price-related contexts (Cakici and Tekeli 2022; Peine et al. 2009; Zielke 2011) and research on price as an information cue (Palma et al. 2016; Völckner and Hofmann 2007). We group the model variables into cognitive (price-level perception, value for money perception, price fairness), emotional (positive, negative) and inferential (quality perception, symbolic value) dimensions. Table 1 describes selected frameworks from prior literature considering at least three of our model variables. As Table 1 illustrates, previous studies have provided frameworks linking only some of these variables with each other. In particular, older studies with a product focus analyze the interplay between price, quality and value perception (Chang and Wildt 1994; Dodds et al. 1991; Dodds 1995; Teas and Agarwal 2000; Zeithaml 1988) or antecedents and consequences of price fairness (Campbell 2007; Xia et al. 2004). Older studies in retailing and services also focused on price level, quality and value (Baker et al. 2002; Varki and Colgate 2001), but then started to integrate emotions as mediators between cognitive price perception and outcome variables (Cakici and Tekeli 2022; Peine et al. 2009; Walsh et al. 2011; Zielke 2011, 2014). Several recent studies refer to the value dimensions suggested by Sweeney and Soutar (2001), such as price, quality, emotional and social value (Diallo et al. 2015; France et al. 2020; Rousta and Jamshidi 2020; Slack et al. 2020), but do not analyze relationships between these values. Also Graciola et al. (2018) considered several of the variables as antecedents of a store price image, but did not analyze relationships between them. Hence, an integrated brand price image model is lacking. Furthermore, the table illustrates that the relevant variables have been addressed in studies with a different industry focus, so that we can conclude that they are relevant for product brand, retail and service price images.

We develop our theoretical framework step by step, starting with cognitive perceptions, extending it by integrating mediating emotions and completing it by adding inferential constructs (Fig. 1). As a starting point, we link price-level perception, value perception and price fairness with each other and with the buying intention. Next, we consider that cognitive price perceptions cause positive or negative emotions, which mediate the impact of the former on the buying intention. Finally, we consider that the price level is not only an antecedent of value for money, but also signals the quality and symbolic value of the brand.

Table 1 Conceptual models in the literature

	PL[a]	V	PF	EG	EP	EN	Q	S	Focus
Baker et al. (2002)[c]	x	x					x		Retail
Cakici and Tekeli (2022)	x				x	x			Retail
Campbell (2007)	x		x	x					Product
Chang and Wang (2014)	x	x	x	x					Retail
Chang and Wildt (1994)	x	x					x		Product
Diallo et al. (2015)[b]		x		x			x	x	Retail
Dodds et al. (1991)	x	x					x		Product
Dodds (1995)	x	x					x		Product
France et al. (2020)[b]		x		x			x	x	Product
Graciola et al. (2018)[b]	x	x	x		x	x	x	x	Retail
Konuk (2019)		x	x		x		x		Service
Peine et al. (2009)		x	x		x	x			Service
Rousta and Jamshidi (2020)[b]	x			x			x	x	Service
Slack et al. (2020)[b]		x		x			x	x	Retail
Sweeney et al. (1999)	x	x					x		Product
Sweeney and Soutar (2001)[b]		x		x			x	x	Retail
Teas and Agarwal (2000)	x	x					x		Product
Tsai and Lee (2007)		x	x			x			Service
Varki and Colgate (2001)[c]	x	x					x		Service
Walsh et al. (2011)[c]	x			x			x		Retail
Xia et al. (2004)	x		x			x			Product
Zeithaml (1988)	x	x					x		Product
Zielke (2011)	x	x			x	x			Retail
Zielke (2014)		x			x	x			Retail

[a]*PL* price level, *V* value, *PF* price fairness, *EG* emotion general, *EP* positive emotion, *EN* negative emotion, *Q* quality perception, *S* symbolic value

[b]Analyzes only correlations between constructs or constructs as separate (unrelated) variables

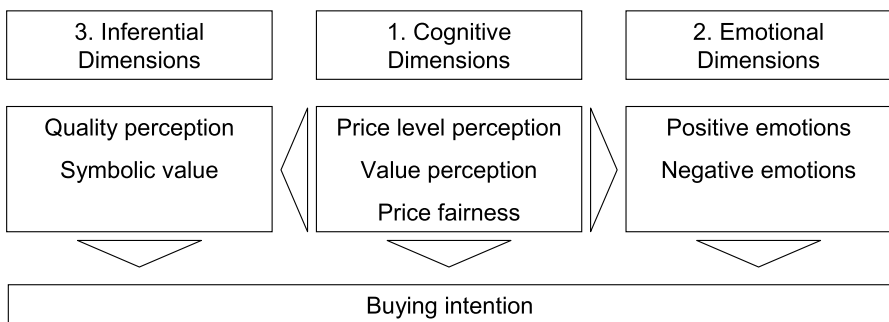[c]Quality is included, but the impact of price on quality perception is not modeled

Fig. 1 Framework development process and relevant image dimensions

Cognitive price perception

Research on retail price images has shown that price-level perception is a core price image dimension with a strong behavioral impact (e.g., Lombart et al. 2016). Price-level perception indicates if prices are perceived as high or low without taking quality differences or differences in other benefits into account. A strong price-level perception indicates that prices are perceived as being low. Unidimensional studies of price image focus solely on price-level perception (e.g., Hamilton and Chernev 2013; Koschmann and Isaac 2018; Larson et al. 2021; Lombart et al. 2016; Lombart and Louis 2014; Lourenco et al. 2015).

Multidimensional price image models include the perception of value for money as a further important cognitive dimension (Graciola et al. 2018; Zielke 2010). Several conceptualizations of value exist in the literature (Zeithaml 1988). Many studies distinguish utilitarian and hedonic value (e.g., Jones et al. 2006), while other studies include further motivational value dimensions, such as symbolic or social value (Diallo et al. 2015; Kim et al. 2019; Slack et al. 2020; Wiedmann et al. 2018).

Research on price images (Babin et al. 2016; Graciola et al. 2018; Zielke 2010, 2011) usually conceptualizes value as a one-dimensional construct that expresses the outcome of comparing sacrifices (e.g., prices) with benefits (e.g., quality). It seems reasonable to distinguish value perception as a sacrifice benefit-ratio from simpler perceptions of price level, quality perception and symbolic perception. Value is considered to mediate the impact of price-level perception on behavioral intentions at least partly (Babin et al. 2016; Teas and Agarwal 2000; Varki and Colgate 2001).

> We therefore summarize that price-level perception has a positive impact on value perception (H1) and that price level and value perception have positive direct effects on buying intention (H2, H3).

Price fairness is considered a third cognitive brand price image dimension. Price fairness can be defined as "a consumer's assessment and associated emotions of whether the price difference (or lack of difference) between a seller's price and the price of a comparative other party is reasonable, acceptable, or justifiable" (Xia et al. 2004, p. 3).

While price image studies have not focused on price fairness, many studies have analyzed price fairness in the context of price increases (Homburg et al. 2005; Lu et al. 2020) or elements of a pricing strategy (Homburg et al. 2014). However, when price increases have an impact on the perceived fairness of a marketing action, the general price level should influence price fairness as an image dimension. This is also supported by the dual entitlement principle (Kahneman et al. 1986). Although, in most cases, customers are not able to observe a firm's profit (Xia et al. 2004), they can use a lower price level as an indicator of lower company profits and thus perceive the price as fairer (Homburg et al. 2014).

Moreover, value perception can influence the perceived price fairness. According to equity theory (Homans 1961), customers compare their input (price) and output (benefit) with the input (cost) and output (charged price) of the exchange partner. Hence, customers may interpret good value for money as a beneficial input–output relation for themselves, while they may infer that the firm's profit margin is

calculated more tightly. Perceived value should therefore have a positive impact on price fairness (Herrmann et al. 2007). It should be mentioned that some studies also assume that fairness influences value. However, these studies use fairness mostly as a proxy for price-level perception (Kukar-Kinney et al. 2007; Xia et al. 2004). Therefore, we can justify a positive impact of value perception on perceived price fairness.

> We conclude that price-level perception and value perception positively influence price fairness (H4 and H5) and that price fairness has a positive impact on the buying intention (H6).

Price emotions

In the psychological literature, the relationship between cognition and emotion was discussed extensively (Izard 1993; Lazarus 1982). Cognitive theories of emotions assume that emotions emerge as a consequence of cognitive appraisals of perceptions. In particular, goal congruence or motive consistency determine whether positive or negative emotions emerge (Roseman et al. 1990; Smith and Ellsworth 1985; Weiner 1985). When the perceived price level is congruent with the goal of saving money, for example, positive emotions such as enjoyment or happiness result. In contrast, when the perceived price fairness is incongruent with the goal of getting the product at an acceptable price, negative emotions such as anger emerge. Although the relationship between cognition and emotion is complex and discussed controversially (Koschate-Fischer and Wüllner 2017; Strack and Deutsch 2004), it seems in our context plausible that cognitive processes result in price level, value and fairness perceptions, which cause the anticipation of positive or negative emotions. Moreover, a comparative study on store perceptions found support for the cognition–emotion model (Chebat and Michon 2003), which is also more suitable from a practical perspective as it reveals antecedents of specific emotions and makes them predictable (Nyer 1997, p. 296). Therefore, we conclude that cognitive price image dimensions cause the anticipation of emotions. For reasons of parsimony, we concentrate on positive and negative emotions as two global dimensions (Cakici and Tekeli 2020; Honea and Dahl 2005; Peine et al. 2009).

Research in retailing and services has shown that emotions mediate the impact of cognitive price image dimensions on the buying intention and loyalty (Chaudhuri and Ligas 2009; Ligas and Chaudhuri 2012; Konuk 2019; Walsh et al. 2011; Zielke 2011). Previous research has particularly drawn attention to emotions in the context of price fairness or unfairness (Maxwell 2008; Xia et al. 2004). Researchers refer to equity theory and argue that changes in equity norms lead to perceptions of justice or injustice, which provoke positive or negative emotions (Namkung and Jang 2010).

Studies analyzing the impact of value perception and price fairness simultaneously show much stronger influences of price fairness on positive and negative affect (Peine et al. 2009). Hence, it seems that price fairness is related more closely to emotional reactions than price level and value perception. Price fairness should therefore directly influence positive and negative emotions, while price level and value perception have an indirect effect via fairness. For example, the price

fairness model by Xia et al. (2004) suggests that price fairness mediates the effect of price level comparisons on emotional consequences. According to affect evaluation and regulation theories, positive and negative emotion should then influence the buying intention toward a brand (Andrade 2005).

> We summarize that price fairness has a positive impact on positive emotion (H7) and a negative impact on negative emotion (H8). Positive emotion has a positive effect on buying intention (H9), while negative emotion has a negative effect (H10).

Price inferences

Price-level perception does not only influence value and the buying intention positively, as a favorable price level also serves as a cue for lower quality and symbolic value. Inference theory assumes that individuals use information cues to make inferences about certain objects in situations with incomplete information (Nisbett and Ross 1980). When customers are unable to judge the quality of a brand or product, for example, they may use the price as an information cue. Accordingly, several studies in the literature found a negative relationship between low prices and quality perception (Palma et al. 2016; Völckner and Hofmann 2007) and several recent studies still analyze determinants of its strength (Lalwani and Forcum 2016; Lalwani and Shavitt 2013).

Furthermore, research on the antecedents of value assumes that price and quality perception are both important antecedents of value perception (Baker et al. 2002). While price is an important sacrifice, quality is an important benefit of a brand purchase. Some models also assume that the impact of price level on value is partially mediated by quality perception (Chang and Wildt 1994; Teas and Agarwal 2000; Zeithaml 1988). Hence, low prices have a direct positive impact on value and a negative impact through quality inferences.

> We conclude that price-level perception has a negative effect on quality perception (H11), which has a positive impact on value perception (H12).

Price-level perception is also a cue for evaluating the symbolic value of a brand. The symbolic value refers to the brand's ability to signal social status and enhance the self-concept of its users (O'Cass and Frost 2002). High-price brands are associated with the high prestige and status of their users and therefore enhance their self-concept (Goldsmith et al. 2010; Lichtenstein et al. 1993). The same holds for brands with superior quality perception (Vigneron and Johnson 1999). Paying low prices, in contrast, can be associated with concerns about making an unfavorable social impression (Argo and Main 2008; Kim and Yi 2016). Hence, price-level perception (low prices) should have a negative impact on the symbolic value of a brand, while quality perception has a positive effect.

Furthermore, the symbolic value should be positively related to the general value perception of the brand. Impression management theory assumes that customers engage in prestige-seeking behavior to control their impression on others (Tedeschi 1981). They expect positive effects on social relationships from such behavior

(Wang and Griskevicius 2014). Hence, the value of a brand is not only formed by the price and quality perception, but also by factors related to the self-concept and brand prestige (Kim et al. 2019).

> We conclude that price-level perception (low prices) has a negative effect on symbolic value (H13), which has a positive impact on the general value perception (H14). The quality perception increases the symbolic value (H15). Finally, to complete our framework, we assume direct effects of the symbolic value (H16) and quality perception (H17) on the buying intention.

Figure 2 and Table 2 summarize H1 to H17, which constitute the final framework. Although existing studies have addressed some of these relationships, only their integration into an overall framework allows a thorough analysis of direct and indirect effects. Combining the single hypotheses in the framework leads to several potential indirect or mediation effects. We have already referred to the mediating roles of value, fairness, emotions and quality in the theory part. Because of the complexity of the model, we do not hypothesize each separate mediation effect and consider mediations through the separate single effects adding up to the respective indirect paths.

The net effect of price-level perception and the moderating role of price tiers

The model summarized in Fig. 2 shows that price-level perception particularly influences buying intentions for a brand via several paths. Price-level perception positively influences buying intentions via value perception, price fairness and resulting emotions, while it has negative effects via the inferential dimensions of quality perception and social status.

Research on retail price images has reported positive total effects of price-level perception on shopping intentions and related dependent variables (Babin et al.
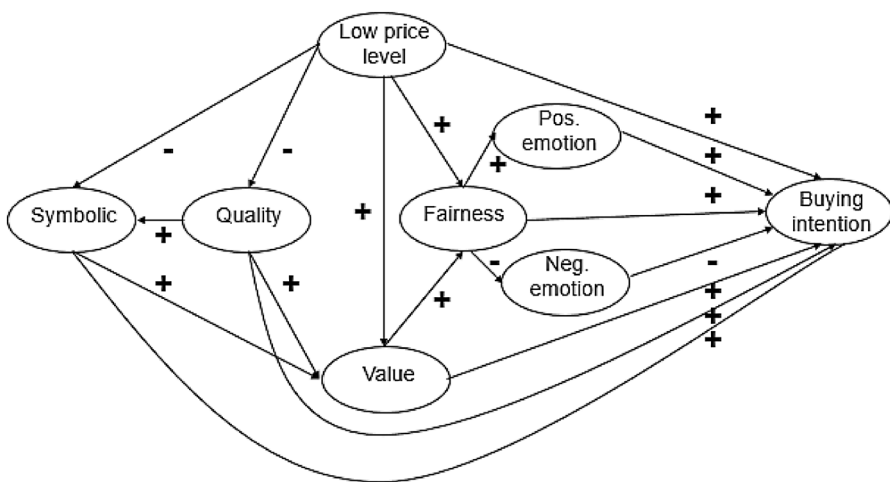

Fig. 2 Price image framework

Table 2 Summary of hypothesized paths

	Hypothesis	Cognitive	Emotional	Inferential	Hypothesized Direction
H1	Price level → value perception	X			+
H2	Price level → buying intention	X			+
H3	Value perception → buying intention	X			+
H4	Price level → price fairness	X			+
H5	Value perception → price fairness	X			+
H6	Price fairness → buying intention	X			+
H7	Price fairness → positive emotion		X		+
H8	Price fairness → negative emotion		X		−
H9	Positive emotion → buying intention		X		+
H10	Negative emotion → buying intention		X		−
H11	Price level → quality perception			X	−
H12	Quality perception → value perception			X	+
H13	Price level → symbolic value			X	−
H14	Symbolic value → value perception			X	+
H15	Quality perception → symbolic value			X	+
H16	Symbolic value → buying intention			X	+
H17	Quality perception → buying intention			X	+

2016; Diallo 2012; Graciola et al. 2018; Lombart et al. 2016; Zielke 2010), indicating that the positive effects cancel out negative inference effects. This can be explained by retail assortments that are often interchangeable, resulting in a smaller perceived variation in quality. As previous research has shown that the perceived variation in quality is positively related to the strength of price–quality inferences (Völckner and Hofmann 2007), such inferences should be low in retail sectors with comparable assortments (e.g., grocery retailing, where most image studies were conducted). Product brands, in contrast, differentiate themselves from other products by superior quality and status-related associations. Therefore, we expect stronger inference effects for product brands compared to retailers and as a consequence a negative net effect of the price-level perception on the buying intention.

In the brand price image model, the net effect of the price-level perception (low prices) on the buying intention is negative (H18).

As the net effect of the price-level perception may indicate that high-price tiers are preferable, more specific recommendations may evolve for intra-price tier competition (Sivakumar 2003). In particular, we can assume that the perceived variation in quality and the resulting quality risks are stronger in low-price tiers, resulting in stronger price–quality inferences (Völckner and Hofmann 2007) and negative effects of price-level perception (low prices) respectively. For high-price tiers, we usually find brands with strong brand equity and stable associations that do not change quickly as a result of a shift in price perception. Therefore, the negative

effects of price-level perception (low prices) should be stronger in low price tiers and alleviated in high-price tiers.

Moreover, the positive effects of price-level perception may differ between low- and high-price tiers. When the absolute amount of an expense increases (in high-price tiers), price savings may become more relevant. According to cognitive theories of emotions, a greater relevance of savings in high-price tiers should also result in stronger positive emotions (Bagozzi et al. 1999). Prospect theory (Kahneman and Tversky 1979) provides further support for stronger positive effects of price-level perception in high-price tiers. When the price perception of a brand in a high-price tier is above a reference standard, it is perceived as a loss. Because of the loss aversion effect, the utility function is very steep at this point, so changes in the price-level perception have strong effects (Sivakumar 2014). Furthermore, lower prices in high-price tiers address budget constraints, i.e., products in high-price tiers become more affordable (Allenby and Rossi 1991). Slight improvements in the price-level perception for high-price brands may therefore result in stronger positive emotions as the brands will be perceived as more affordable for customers with tighter budgets. This argument is also supported by findings in prior research that price reductions in high-price tiers steal shares from brands in low-price tiers (Allenby and Rossi 1991; Blattberg and Wisniewski 1989).

> In the brand price image model, the net effect of the price-level perception (low prices) on the buying intention is negative for low-price tiers and positive for high-price tiers (H19).

Research design and methodology

For analyzing our framework, the model variables were measured using scales from retail price image research that were adapted to the brand price image context (see Appendix 1). All items were measured on seven-point scales, ranging from strongly disagree to strongly agree.

In the questionnaire, a list of different brands was presented to the respondents. They were then asked to select one brand as a good example of a high-price brand and another as a good example of a low-price brand. They were instructed that it did not matter whether they liked or preferred the brands they selected. To explore the generalizability across product categories, two versions of the questionnaire were developed: one for computers and another for fragrances. These categories were selected to cover brands with different utilitarian and hedonic value.

The data were collected in 2013 in Southern Brazil (state of Rio Grande do Sul). After pre-testing, interviewers personally distributed paper and pencil questionnaires to young middle-class customers at a university campus in Brazil. These respondents are an important target group for the product categories analyzed in this study. The respondents filled in the questionnaires voluntarily without receiving any incentives. In total, 602 respondents completed the questionnaire (283 for the computer brands; 319 for perfume brands). After eliminating 19 incomplete questionnaires and outliers, the final sample included 581 questionnaires. The median age of the respondents was

between 25 and 30 years and 59.8% were male. The median net income of respondents corresponded to a typical Brazilian middle-class income (between R$ 1,001 and 2,000).

Results

The hypothesized model was tested using covariance based structural equation modeling (CB-SEM) with the software Mplus (Muthén and Muthén 2017). We used CB-SEM, which is usually recommended for theory testing, while PLS-SEM is often recommended for predictive exploratory research (Hair et al. 2017, p. 109). CB-SEM allows to test the overall fit of alternative model structures and provides several diagnostics, such as modification indices and expected parameter changes (Diamantopoulos 2011, p. 338). As normality checks (Shapiro–Wilk tests) of indicator variables yielded significant results ($p < 0.05$), we used the MLR estimator, which is considered robust against violations of the normal distribution assumption (Muthén and Muthén 2017, p. 668).

Validity checks and descriptives

Table 3 presents the means and standard deviations of model variables for the complete sample, the two price tiers and the two product groups. The table shows substantial and significant mean differences between low- and high-price tiers, while means for computers and fragrance are mostly quite similar.

As we used reflective measurement models, we checked internal consistency reliability, convergent and discriminant validity (Hair et al. 2017). All alpha values are larger than 0.70, indicating internal consistency of measurement models (see Appendix 1). Convergent and discriminant validity were checked based on a structural equation model, where all variables are correlated (CFI: 0.947, TLI: 0.938, RMSEA: 0.054, SRMR: 0.052, CMIN: 1502.95, DF: 346). All factor loadings are close to or exceed the level of 0.708 (Appendix 1) and the average variance extracted is larger than 50% for all constructs (Appendix 2), as recommended by Hair et al. (2017). Discriminant validity was assessed by the Fornell and Larcker (1981) criterion. For each construct, the average variance extracted is larger than any squared correlation with another construct (Appendix 2). We found no indication of common method bias based on a single factor test. We also checked multicollinearity issues by regressing the purchase intention on the independent variables. Variance inflation factors ranging between 1.23 (negative emotion) and 2.46 (quality perception) indicate no multicollinearity concerns.

Testing the hypothesized framework

The model fit is acceptable (CFI: 0.938, TLI: 0.930, RMSEA: 0.058, SRMR: 0.089, CMIN: 1703.21, DF: 356); Fig. 3 and Table 4 present the results. As hypotheses and the resulting framework are based on theoretically justified causal effects, we also interpret structural coefficients as directional effects. However, we would also like to

Table 3 Means and standard deviations of model variables

	Total		Low-price tier		High-price tier		Difference
	Mean	SD	Mean	SD	Mean	SD	p
Price-level perception	3.50	2.05	5.11	1.37	1.89	1.17	.000
Value perception	4.25	1.43	3.87	1.48	4.63	1.27	.000
Price fairness	4.38	1.51	4.85	1.48	3.90	1.38	.000
Positive emotion	2.78	1.51	3.07	1.57	2.50	1.38	.000
Negative emotion	2.36	1.60	1.98	1.42	2.74	1.68	.000
Quality perception	4.63	1.87	3.35	1.58	5.92	1.08	.000
Symbolic value	2.72	1.87	1.76	1.18	3.69	1.93	.000
Buying intention	3.42	1.89	2.80	1.82	4.04	1.75	.000
	Computer		Fragrance				Difference
	Mean	SD	Mean	SD			p
Price-level perception	3.48	1.99	3.50	2.11			.850
Value perception	4.22	1.37	4.27	1.47			.531
Price fairness	4.27	1.48	4.46	1.53			.025
Positive emotion	2.90	1.47	2.68	1.53			.014
Negative emotion	2.51	1.63	2.23	1.56			.003
Quality perception	4.66	1.82	4.60	1.91			.537
Symbolic value	2.74	1.85	2.70	1.89			.767
Buying intention	3.44	1.79	3.39	1.97			.682

point out that cross-sectional correlational data does not include causal information and that the reported effects must be correctly interpreted as relationships (Pesämaa et al. 2021).

Results show that price-level perception positively influences value perception (H1: $\beta = 0.50$; $p < 0.000$). Furthermore, price level and value perception both have a positive effect on price fairness (H4: 0.55, $p < 0.000$ and H5: 0.58, $p < 0.000$). However, value perception is the only cognitive dimension that directly influences the buying intention (H3: 0.30, $p < 0.000$) while the direct effects of price-level perception (H2: 0.03, $p = 0.459$) and price fairness (H6: -0.01, $p = 0.868$) are not significant.

Although price fairness has no direct effects on the buying intention, it has indirect effects through positive emotions. Price fairness increases positive emotions (H7: 0.37, $p < 0.000$) and attenuates negative emotions (H8: -0.21, $p < 0.000$). However, only the positive emotions influence the buying intention (H9: 0.26, $p < 0.000$), while the impact of negative emotions is not significant (H10: -0.03, $p = 0.350$).

Regarding inferences, price-level perception (low prices) has a strong negative impact on quality perception (H11: -0.71, $p < 0.000$) and symbolic value (H13: -0.21, $p < 0.000$), which both influence the value perception (H12: 0.79, $p < 0.000$; H14: 0.22, $p < 0.000$). Furthermore, quality perception influences the symbolic value (H15: 0.39, $p < 0.000$). While the quality perception also
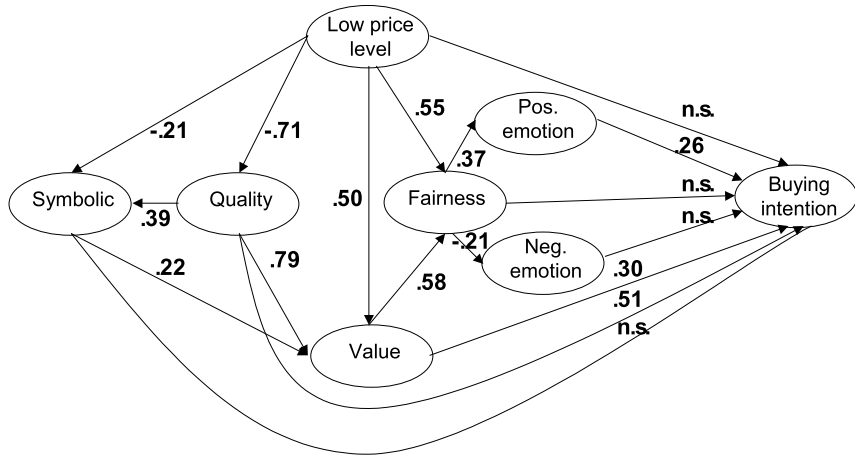
n.s.: not significant at p=.050

Fig. 3 Results (basic model)

influences the buying intention directly (H17: 0.51, $p < 0.000$), the symbolic value shows no such effect (H16: 0.01, $p = 0.842$).

To sum up, the results mostly support our framework. Exceptions include the missing direct effects of price level and fairness on the buying intention (H2 and H6). Neither negative emotions nor symbolic value had any direct impact on the buying intention (H10 and H16). However, price level, fairness and symbolic value influence the buying intention at least via indirect effects. This draws attention to the total effects of the model variables.

Total effects

An analysis of the total effects shows that the total effect of price-level perception is negative (-0.34, $p < 0.000$), indicating that negative effects via quality perception and symbolic value are stronger than positive effects via value perception, price fairness and positive emotions. These results support H18. Quality perception, in contrast, has the strongest total positive effect on the buying intention (0.82, $p < 0.000$), underlining the serious negative consequences of quality inferences for brands. However, value perception (0.35, $p < 0.000$) and positive emotions (0.26, $p < 0.000$) also display strong and significant total effects on the buying intention. The effects of fairness and symbolic value are much smaller, but still significant (0.09, $p = 0.024$; 0.08, $p = 0.018$). Only the total effect of negative emotions is not significant (-0.03, $p = 0.350$).

Table 4 SEM results for the hypothesized and refined model

	Hypothesis	Basic		Refined	
		Beta	Sig	Beta	Sig
H1	Price level → value perception	.50	.000	.50	.000
H2	Price level → buying intention	.03	.459	.02	.602
H3	Value perception → buying intention	.30	.000	.30	.000
H4	Price level → price fairness	.55	.000	.54	.000
H5	Value perception → price fairness	.58	.000	.58	.000
H6	Price fairness → buying intention	− .01	.868	.00	.937
H7	Price fairness → positive emotion	.37	.000	.25	.000
H8	Price fairness → negative emotion	− .21	.000	–	–
H9	Positive emotion → buying intention	.26	.000	.26	.000
H10	Negative emotion → buying intention	− .03	.350	–	–
H11	Price level → quality perception	− .71	.000	− .71	.000
H12	Quality perception → value perception	.79	.000	.79	.000
H13	Price level → symbolic value	− .21	.000	− .21	.000
H14	Symbolic value → value perception	.22	.000	.22	.000
H15	Quality perception → symbolic value	.39	.000	.39	.000
H16	Symbolic value → buying intention	.01	.842	− .01	.780
H17	Quality perception → buying intention	.51	.000	.51	.000
N1	Price level → positive emotion	–	–	.29	.000
N2	Symbolic value → positive emotion	–	–	.32	.000
Total effects					
	Price level	− .34	.000	− .32	.000
	Value perception	.35	.000	.34	.000
	Fairness	.09	.024	.07	.090
	Positive emotion	.26	.000	.26	.000
	Negative emotion	− .03	.350	–	–
	Quality perception	.82	.000	.84	.000
	Symbolic value	.08	.018	.15	.000

Adapting the proposed model

Before conducting subsequent analyses, the proposed model was adapted for two reasons. First, as the negative emotion had no impact on the buying intention, it was dropped from the model for economic reasons. Secondly, we wanted to explore any effects that were not hypothesized, but increase the model fit. To identify such effects, we divided the data set into two sub-samples (similar to Baker et al. 2002). Model changes resulting from the first sub-sample were validated with the second sub-sample. Based on modification indices, Chi-square difference tests and theoretical considerations, two paths were added.

The results for the refined model are presented in Table 4. They indicate that the price-level perception and symbolic value both have a direct impact on positive

emotions (0.29, $p < 0.000$; 0.32, $p < 000$). This underlines the important mediating role of positive emotions in the model. The fit indices of this refined model are also considerably better compared to the initial one (CFI: 0.950, TLI: 0.941, RMSEA: 0.057, SRMR: 0.053, CMIN: 1187.80, DF: 255).

Moderating effects of brand price level

The moderating effects of brand price level were analyzed using a multiple group analysis and a subsequent comparison of the differences between path coefficients. The multi-group model performs significantly better than a model where the structural parameters are restricted to be equal across groups ($\Delta\chi^2 = 90.20$, $\Delta df = 17$, $p < 0.000$), while parameters in the measurement model were mostly invariant across groups (metric and scalar invariance).

The results of the multi-group analysis are presented in Table 5. In low-price categories, the price-level perception has a stronger effect on the quality perception, indicating stronger price–quality inferences (-0.35 vs. -0.20; $\Delta p = 0.007$) and quality perception has a stronger direct effect on the buying intention (0.57 vs. 14; $\Delta p < 0.000$). Furthermore, the positive effect of price-level perception on positive emotions is stronger in high-price categories (0.02 vs. 0.18; $\Delta p = 0.046$) and the effect of price fairness on positive emotions is much stronger (0.12 vs. 0.40; $\Delta p < 0.000$). This result explains the very different total effect of price-level perception on the buying intention. While the price-level perception (low prices) reduces buying intentions in low-price categories, it increases buying intentions in high-price categories (-0.22 vs. 0.17, $\Delta p < 0.000$). This result clearly supports H19.

Discussion and implications

The aim of this paper was to develop an integrated brand price image model that shows how price-level perception influences the buying intention directly and indirectly through cognitive, emotional and inferential variables. It further aimed to analyze whether these positive and negative paths differ between price tiers.

The results mostly support our framework. Firstly, they show strong relationships between the cognitive price image dimensions: price-level perception, value perception and price fairness. In particular, the price level and value perception are both strong antecedents of the perceived price fairness.

The results also confirm the important mediating role of positive emotions. While we hypothesized only a direct impact of the price fairness on positive emotions, the refined model also revealed direct effects of the price-level perception and symbolic value. Hence, a low-price level can directly result in positive emotions and not only via fairness.

Moreover, the negative emotion surprisingly did not affect the buying intention for brands. This is astonishing as the research on retail price images has shown strong negative effects of negative price emotions on shopping intentions (Zielke 2011). Research on price fairness has also revealed that negative emotions influence

Table 5 SEM results for low- and high-price brands

	Hypothesis	Low-price tier		High-price tier		Difference test
		Beta	Sig	Beta	Sig	Sig
H1	Price level → value perception	.34	.000	.28	.000	.633
H2	Price level → buying intention	− .04	.371	.04	.393	.225
H3	Value perception → buying intention	.22	.000	.44	.000	.014
H4	Price level → price fairness	.32	.000	.16	.000	.024
H5	Value perception → price fairness	.53	.000	.69	.000	.005
H6	Price fairness → buying intention	− .03	.565	.03	.743	.563
H7	Price fairness → positive emotion	.12	.038	.40	.000	.000
H8	Price fairness → negative emotion	–	–	–	–	–
H9	Positive emotion → buying intention	.22	.000	.29	.000	.166
H10	Negative emotion → buying intention	–	–	–	–	–
H11	Price level → quality perception	− .35	.000	− .20	.000	.007
H12	Quality perception → value perception	.58	.000	.52	.000	.382
H13	Price level → symbolic value	− .08	.082	− .03	.455	.909
H14	Symbolic value → value perception	.14	.009	.25	.000	.917
H15	Quality perception → symbolic value	.44	.000	.13	.024	.408
H16	Symbolic value → buying intention	− .04	.383	− .02	.604	.622
H17	Quality perception → buying intention	.57	.000	.14	.007	.000
N1	Price level → positive emotion	.02	.697	.18	.000	.046
N2	Symbolic value → positive emotion	.33	.000	.30	.000	.001
Total effects						
	Price level	− .22	.000	.17	.000	.000
	Value perception	.22	.000	.54	.000	.000
	Fairness	.00	.993	.14	.051	.099
	Positive emotion	.22	.000	.29	.000	.166
	Negative emotion	–	–	–	–	–
	Quality perception	.73	.000	.45	.000	.263
	Symbolic value	.06	.198	.20	.000	.365

behavioral intentions (Peine et al. 2009; Tsai and Lee 2007). However, negative price emotions might be more relevant in retail, where competition is strongly driven by price. Furthermore, studies on price fairness and emotions often analyze the impact of specific negative incidents, resulting in more immediate emotions compared to the remembered or anticipated emotions in price image measurements. In the context of brand price images, high prices are further often accompanied by strong brand equity, making the negative price emotions less relevant.

The results also show that the price-level perception has strong negative inference effects via quality perception and symbolic value. An analysis of the total effects of price-level perception revealed a negative net effect. Contrary to retail research (Babin et al. 2016; Diallo 2012; Graciola et al. 2018; Lombart et al. 2016; Zielke

2010), a perception of lower prices reduces buying intentions for product brands. This can be explained by the strong inference effects that cancel out the positive effects of the price-level perception. However, the results are more differentiated for intra-price-tier competition. In the lower price tier, a more expensive price-level perception increases the buying intention, while in the high-price tier, a less expensive price-level perception has a positive effect. We can attribute this result to stronger price–quality inferences in low-price categories. In high-price categories, customers may have stronger general quality associations that do not change quickly as a result of a lower perceived price level.

Management implications

The results have several implications for brand managers. Firstly, managers can use the proposed model to analyze their brand price image and the respective images of their competitors. They should control the perception of various price image components, which are connected with price-level perception and mediate its impact on the purchase intention. Secondly, the results help brands to fix their price positioning and understand the consequences of changes in price-level perception. They show, for example, that a positioning in high-price tiers results in stronger purchase intentions than a positioning in low-price tiers. Furthermore, in the low-price tier, a more expensive price positioning is beneficial, while in the high-price tier, a less expensive price positioning is preferable. Brand managers should therefore develop strategies to adapt the price-level perception accordingly. Thirdly, the results reveal various positive and negative indirect effects of price-level perception on the purchase intention, which brand managers can emphasize or attenuate. In low-price tiers, for example, it is extremely important to attenuate the negative relationship between low prices and quality.

We now discuss these management implications in more detail for high- and low-price tiers, supplement them with recommendations that are more tangible and provide examples.

High-price tiers: As quality and symbolic inferences cancel out the positive effects of a low-price level, it seems to be beneficial to position brands in higher price tiers. However, in the high-price tier, quality and symbolic inferences become weaker, suggesting a lower price perception compared to other high-price tier brands. Here, it is important to note that changes in the brand price-level perception do not necessarily require changes in actual product prices (Hamilton and Chernev 2013), but may require changes in the product portfolio through downward brand extensions (Goetz et al. 2014). A brand such as *Apple*, for example, can introduce a lower-priced product line to improve its price level image without worrying about negative inference effects. The same may hold for high-price car brands, such as Mercedes or BMW, when they introduce smaller and less expensive cars to their portfolio. Obviously, quality-related and symbolic brand associations with high-price brands are so strong that they are not affected by small changes in the price-level perception. As the relationship between price-level perception and positive emotions is also stronger for high-price brands, managers may address this effect

via an emotional communication of means reducing the perceived price level. They may also consider promotions and special deals, which have been shown to create positive emotions (Schindler 1989, 1998).

Low-price tiers: Some brands may also consider a positioning in a low-price tier to address more price-conscious customer segments. Here, our results recommend that these brands should try to carefully increase their perceived price level to reduce possible inference effects. Some low-price car brands have introduced larger and higher priced models to their portfolio, for example. If a brand aims to maintain a low-price positioning, another possibility would be the reduction of inference effects. Skoda, for example, actively communicates its relationship with Volkswagen and thereby benefits from positive carry-over effects. Quality inferences can also be reduced via money-back guarantees or the communication of product test results. Furthermore, brands positioned in low-price tiers can communicate the efficiency of their business model to compensate negative inference and attribution effects. Companies can also reduce symbolic inferences by creating a favorable and unique brand image, such as Hennes and Mauritz (H&M) and IKEA. However, it should also be noted that these brands have at least a medium and not the lowest price positioning in the low-price tier, which tallies with our results.

Research implications and limitations

The results have several implications for future research. Firstly, we have suggested a price image framework for brands, which considers the interplay between cognitive, emotional and inferential dimensions. The model integrates different research streams (see first paragraph in the theoretical framework section) and structures them by distinguishing cognitive, emotional and inferential price image components. The suggested brand price image framework can also serve as a basis for various extensions.

Secondly, the results show how the price-level perception influences purchase intentions directly, but also via diverse indirect paths. The results underline that it is insufficient to analyze the impact of price perceptions on behavioral intentions without considering the effects via emotions and inferences. The results also reveal that the net effect of the price-level perception depends on the strength of positive and negative indirect effects that partially cancel each other out. Hence, future research on the impact of price-level perception should consider these indirect paths and shed more light on the conditions under which some of the reported indirect effects become stronger or weaker. Future studies might also analyze which external drivers influence the different price image dimensions (for example changes in the product portfolio).

Thirdly, the results of our study illustrate that price image dimensions play a different role for inter vs. intra-price tier competition. For inter-tier competition (overall sample), we found that the price-level perception negatively influences the buying intention, indicating that a positioning in a high-price tier is advantageous. Regarding intra-tier competition, the price-level perception has a positive impact in high-price tiers, indicating that a low-price positioning in

a high-price tier is most promising. Future research should also consider the differences between inter- and intra-price tier competition to a greater extent.

Fourthly, another research implication concerns the effects that differ from results reported in retail studies. This underlines the comment by Ailawadi and Keller (2004) that the application of branding principles differs between retail and product brands. In the brand price image model presented in this paper, the net effect of the price-level perception was negative compared to the positive effects in retailing. This underlines that we cannot generally transfer our knowledge of retail price images to brands. Future studies might extend this approach by analyzing the net effects of price-level perception in different industries. Our results indicate that quality and symbolic inferences particularly determine the strength of this net effect.

Although our results have important research implications, some limitations should be mentioned. We conducted the study in one country and collected data for only two product categories. However, we focused on younger middle-class consumers, which are an important target group for many brands. Furthermore, this target group is internationally oriented and therefore expected to behave in a relatively similar manner in different countries. Regarding the selection of product categories, we deliberately selected a more functional category (computers) and a more hedonic product category (fragrances). A comparison of these product groups shows that the pattern of findings is similar.

We have further concentrated our hypotheses and results reporting on direct and total effects. Because of the complexity of the model, we did not formally test for the various indirect effects, including several serial mediations. Future research might pick out some of these serial mediations and analyze them more formally.

A final limitation is the cross-sectional nature of the data. We therefore developed the model carefully based on established theories (theories on value formation, dual entitlement principle, equity theory, cognitive theories of emotions and inference theory). Nevertheless, causal effects in the structural equation model must be interpreted with caution, as they are based on correlational data. Future research should supplement our results with experimental studies manipulating model variables.

Data availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Code availability Not applicable.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

Ailawadi KL, Keller KL (2004) Understanding retail branding: conceptual insights and research priorities. J Retail 80(4):331–342. https://doi.org/10.1016/j.jretai.2004.10.008

Allenby GM, Rossi PE (1991) Quality perceptions and asymmetric switching between brands. Mark Sci 10(3):185–204. https://doi.org/10.1287/mksc.10.3.185

Andrade EB (2005) Behavioral consequences of affect: combining evaluative and regulatory mechanisms. J Consum Res 32(3):355–362. https://doi.org/10.1086/497546

Ansari A, Hashim NMHN (2018) Brand image and equity: the mediating role of brand equity drivers and moderating effects of product type and word of mouth. Rev Manag Sci 12(4):969–1002. https://doi.org/10.1007/s11846-017-0235-2

Argo JJ, Main KJ (2008) Stigma association in coupon redemption. J Consum Res 35(4):559–572. https://doi.org/10.1086/591102

Ashworth L, Darke PR, Schaller M (2005) No one wants to look cheap: trade-offs between social distinctiveness and the economic and psychological incentives to redeem coupons. J Consum Psychol 15(4):295–306. https://doi.org/10.1207/s15327663jcp1504_4

Babin BJ, Borges A, James K (2016) The role of retail price image in a multi-country context: France and the USA. J Bus Res 69(3):1074–1084. https://doi.org/10.1016/j.jbusres.2015.08.023

Bagozzi RP, Gopinath M, Nyer PU (1999) The role of emotions in marketing. J Acad Mark Sci 27(2):184–206. https://doi.org/10.1177/0092070399272005

Baker J, Parasuraman A, Grewal D, Voss GB (2002) The influence of multiple store environment cues on perceived merchandise value and patronage intentions. J Mark 66(2):120–141. https://doi.org/10.1509/jmkg.66.2.120.18470

Blattberg RC, Wisniewski KJ (1989) Price-induced patterns of competition. Mark Sci 8(4):291–309. https://doi.org/10.1287/mksc.8.4.291

Cakici AC, Tekeli S (2022) The mediating effect of consumers' price level perception and emotions towards supermarkets. Eur J Manag Bus Econ 31(1):57–76. https://doi.org/10.1108/EJMBE-12-2020-0344

Cambell MC (2007) "Says Who?!" How the source of price information and affect influence perceived price (un)fairness. J Mark Res 44(2):261–271. https://doi.org/10.1509/jmkr.44.2.261

Chang S-H, Wang K-Y (2014) Investigating the antecedents and consequences of an overall store price image in retail settings. J Mark Theory Pract 22(3):299–314. https://doi.org/10.2753/MTP1069-6679220305

Chang T-Z, Wildt AR (1994) Price, product information, and purchase intention: an empirical study. J Acad Mark Sci 22(1):16–27. https://doi.org/10.1177/0092070394221002

Chaudhuri A, Ligas M (2009) Consequences of value in retail markets. J Retail 85(3):406–419. https://doi.org/10.1016/j.jretai.2009.05.006

Cheah J-H, Waller D, Thaichon P, Ting H, Lim XJ (2020) Price image and the sugrophobia effect on luxury retail purchase intention. J Retail Consum Serv 57:102188. https://doi.org/10.1016/j.jretconser.2020.102188

Chebat J-C, Michon R (2003) Impact of ambient odors on mall shoppers' emotions, cognitions and spending: a test of competitive causal theories. J Bus Res 56(7):529–539. https://doi.org/10.1016/S0148-2963(01)00247-8

Diallo MF (2012) Effects of store image and store brand price-image on store brand purchase intention: application to an emerging market. J Retail Consum Serv 19(3):360–367. https://doi.org/10.1016/j.jretconser.2012.03.010

Diallo MF, Coutelle-Brillet P, Rivière A, Zielke S (2015) How do price perceptions of different brand types affect shopping value and store loyalty? Psychol Mark 32(12):1133–1147. https://doi.org/10.1002/mar.20851

Diamantopoulos A (2011) Incorporating formative measures into covariance-based structural equation models. MIS Q 35(2):335–358. https://doi.org/10.2307/23044046

Dodds WB (1995) Market cues affect on consumers' product evaluations. J Mark Theory Pract 3(2):50–63. https://doi.org/10.1080/10696679.1995.11501684

Dodds WB, Monroe KB, Grewal D (1991) Effects of price, brand, and store information on buyers' product evaluations. J Mark Res 28(3):307–319. https://doi.org/10.1177/002224379102800305

Fornell C, Larcker DF (1981) Structural equation models with unobservable variables and measurement error: algebra and statistics. J Mark Res 18(3):382–388. https://doi.org/10.1177/002224378101800313

France C, Grace D, Iacono JL, Carlini J (2020) Exploring the interplay between customer perceived brand value and customer brand co-creation behaviour dimensions. J Brand Manag 27:466–480. https://doi.org/10.1057/s41262-020-00194-7

Goetz DM, Fassnacht M, Rumpf K (2014) Extending downward is not always bad: parent brand evaluations after brand extension to higher and lower price and quality levels. J Brand Manag 21(4):303–324. https://doi.org/10.1057/bm.2014.9

Goldsmith RE, Flynn LR, Kim D (2010) Status consumption and price sensitivity. J Mark Theory Pract 18(4):323–338. https://doi.org/10.2753/MTP1069-6679180402

Graciola AP, De Toni D, Zanchet de Lima V, Milan GS (2018) Does price sensitivity and price level influence store price image and repurchase intention in retail markets. J Retail Consum Serv 44:201–213. https://doi.org/10.1016/j.jretconser.2018.06.014

Hair JF Jr, Matthews LM, Matthews RL, Saarstedt M (2017) PLS-SEM or CB-SEM: updated guidelines on which method to use. Int J Multivar Data Analysis 1(2):107–123. https://doi.org/10.1504/IJMDA.2017.087624

Hamilton R, Chernev A (2013) Low prices are just the beginning: price image in retail management. J Mark 77(6):1–20. https://doi.org/10.1509/jm.08.0204

Herrmann A, Xia L, Monroe KB, Huber F (2007) The influence of price fairness on customer satisfaction: an empirical test in the context of automobile purchases. J Prod Brand Manag 16(1):49–58. https://doi.org/10.1108/10610420710731151

Homans GC (1961) Social behavior: its elementary forms. Harcourt, Brace and World

Homburg C, Hoyer W, Koschate N (2005) Customer reactions to price increases: do customer satisfaction and perceived motive fairness matter? J Acad Mark Sci 33(1):36–49. https://doi.org/10.1177/0092070304269953

Homburg C, Totzek D, Krämer M (2014) How price complexity takes its toll: the neglected role of a simplicity bias and fairness in price evaluations. J Bus Res 67(6):1114–1122. https://doi.org/10.1016/j.jbusres.2013.05.049

Honea H, Dahl DW (2005) The promotion affect scale: defining the affective dimensions of promotions. J Bus Res 58(4):543–551. https://doi.org/10.1016/S0148-2963(03)00145-0

Izard CE (1993) Four systems of emotion activation: cognitive and noncognitive processes. Psychol Rev 100(1):68–90. https://doi.org/10.1037/0033-295X.100.1.68

John DR, Loken B, Kim K, Monga AB (2006) Brand concept maps: a methodology for identifying brand association networks. J Mark Res 43(4):549–563. https://doi.org/10.1509/jmkr.43.4.549

Jones MA, Reynolds KE, Arnold MJ (2006) Hedonic and utilitarian shopping value: investigating differential effects on retail outcomes. J Bus Res 59(9):974–981. https://doi.org/10.1016/j.jbusres.2006.03.006

Kahneman D, Tversky A (1979) Prospect theory: an analysis of decision under risk. Econometrica 47(2):263–291. https://doi.org/10.2307/1914185

Kahneman D, Knetsch JL, Thaler R (1986) Fairness as a constraint on profit seeking: entitlements in the market. Amer Econ Rev 76(4):728–741

Kim HK, Yi Y (2016) The effects of impression management on coupon redemption across cultures. Psychol Mark 33(7):573–583. https://doi.org/10.1002/mar.20898

Kim S, Ham S, Moon H, Chua B-L, Han H (2019) Experience, brand prestige, perceived value (functional, hedonic, social, and financial), and loyalty among GROCERANT customers. Int J Hosp Manag 77:169–177. https://doi.org/10.1016/j.ijhm.2018.06.026

Konuk FA (2019) The influence of perceived food quality, price fairness, perceived value and satisfaction on customers' revisit and word-of-mouth intentions towards organic food restaurants. J Retail Consum Serv 50:103–110. https://doi.org/10.1016/j.jretconser.2019.05.005

Koschate-Fischer N, Wüllner K (2017) New developments in behavioral pricing research. J Bus Econ 87(6):809–875. https://doi.org/10.1007/s11573-016-0839-z

Koschmann A, Isaac MS (2018) Retailer categorization: how store-format price image influences expected prices and consumer choices. J Retail 94(4):364–379. https://doi.org/10.1016/j.jretai.2018.08.001

Kukar-Kinney M, Xia L, Monroe KB (2007) Consumers' perceptions of the fairness of price matching refund policies. J Retail 83(3):325–337. https://doi.org/10.1016/j.jretai.2007.03.005

Lalwani AK, Forcum L (2016) Does a dollar get you a dollar's worth of merchandise? The impact of power-distance belief on price–quality judgments. J Consum Res 43(2):317–333. https://doi.org/10.1093/jcr/ucw019

Lalwani AK, Shavitt S (2013) You get what you pay for? Self-construal influences price–quality judgments. J Cons Res 40(2):255–267. https://doi.org/10.1086/670034

Larson JS, Hamilton R, Parker JR (2021) Where you shop affects how you choose: retailer price image and the importance of enriched versus comparable attributes. J Assoc Consum Res 6(1):130–141. https://doi.org/10.1086/710249

Lazarus RS (1982) Thoughts on the relations between emotion and cognition. Am Psychologist 37(9):1019–1024. https://doi.org/10.1037/0003-066X.37.9.1019

Lichtenstein DR, Ridgway NM, Netemeyer RG (1993) Price perceptions and consumer shopping behavior: a field study. J Mark Res 30(2):234–245. https://doi.org/10.1177/002224379303000208

Ligas M, Chaudhuri A (2012) The moderating roles of shopper experience and store type on the relationship between perceived merchandise value and willingness to pay a higher price. J Retail Consum Serv 19(2):249–258. https://doi.org/10.1016/j.jretconser.2012.01.006

Lombart C, Louis D (2014) A study on the impact of corporate social responsibility and price image on retailer personality and consumers' reactions (satisfaction, trust and loyalty to the retailer). J Retail Consum Serv 21(4):630–642. https://doi.org/10.1016/j.jretconser.2013.11.009

Lombart C, Louis D, Labbé-Pinlon B (2016) Price image consequences. J Retail Consum Serv 28(1):107–116. https://doi.org/10.1016/j.jretconser.2015.09.001

Lourenco CJS, Gijsbrechts E, Paap R (2015) The impact of category prices on store price image formation: an empirical analysis. J Mark Res 52(2):200–216. https://doi.org/10.1509/jmr.11.0536

Lu Z, Bolton LE, Ng S, Chen H (2020) The price of power: How firm's market power affects perceived fairness of price increases. J Retail 96(2):220–234. https://doi.org/10.1016/j.jretai.2019.09.004

Maxwell S (2008) The price is wrong. understanding what makes a price seem fair and the true cost of unfair pricing. Wiley, New Jersey

Muthén LK, Muthén BO (2017) Mplus user's guide, 8th edn. Muthén and Muthén, Los Angeles

Namkung Y, Jang SC (2010) Effects of perceived service fairness on emotions, and behavioral intentions in restaurants. Eur J Mark 44(9):1233–1259. https://doi.org/10.1108/03090561011062826

Nisbett RE, Ross L (1980) Human inference: strategies and shortcomings of social judgment. Prentice-Hall, Englewood Cliffs

Nyer PU (1997) A study on the relationships between cognitive appraisals and consumption emotions. J Acad Mark Sci 27(2):184–206. https://doi.org/10.1177/0092070397254002

O'Cass A, Frost H (2002) Status brands: examining the effects of non-product-related brand associations on status and conspicuous consumption. J Prod Brand Manag 11(2):67–88. https://doi.org/10.1108/10610420210423455

Palma D, de Dios OJ, Rizzi LI, Guevara CA, Casaubon C, Ma H (2016) Modelling choice when price is a cue for quality: a case study with Chinese consumers. J Choice Model 19:24–39. https://doi.org/10.1016/j.jocm.2016.06.002

Peine K, Heitmann M, Herrmann A (2009) Getting a feel for price affect: a conceptual framework and empirical investigation of consumers' emotional responses to price information. Psychol Mark 26(1):39–66. https://doi.org/10.1002/mar.20261

Pesämaa O, Zwikael O, Hair JF Jr, Hueman M (2021) Publishing quantitative papers with rigor and transparency. Int J Proj Manag 39(3):217–222. https://doi.org/10.1016/j.ijproman.2021.03.001

Plumeyer A, Kottemann P, Böger D, Decker R (2019) Measuring brand image: a systematic review, practical guidance, and future research directions. Rev Manag Sci 13(2):227–265. https://doi.org/10.1007/s11846-017-0251-2

Popp B, Woratschek H (2017) Consumer-brand identification revisited: an integrative framework of brand identification, customer satisfaction, and price image and their role for brand loyalty and word of mouth. J Brand Manag 24(3):250–270. https://doi.org/10.1057/s41262-017-0033-9

Roseman IJ, Spindel MS, Jose PE (1990) Appraisals of emotion-eliciting events: testing a theory of discrete emotions. J Pers Soc Psychol 59(5):899–915. https://doi.org/10.1037/0022-3514.59.5.899

Rousta A, Jamishidi D (2020) Food tourism value: investigating the factors that influence tourists to revisit. J Vacat Mark 26(1):73–95. https://doi.org/10.1177/1356766719858649

Rucker DD, Galinsky AD (2008) Desire to acquire: powerlessness and compensatory consumption. J Cons Res 35(2):257–267. https://doi.org/10.1086/588569

Schindler RM (1989) The excitement of getting a bargain: some hypotheses concerning the origins and effects of smart-shopper feelings. Adv Consum Res 16:447–453

Schindler RM (1998) Consequences of perceiving oneself as responsible for obtaining a discount. J Consum Psychol 7(4):371–392. https://doi.org/10.1207/s15327663jcp0704_04

Schnittka O, Sattler H, Zenker S (2012) Advanced brand concept maps: a new approach for evaluating the favorability of brand association networks. Int J Res Mark 29(3):265–274. https://doi.org/10.1016/j.ijresmar.2012.04.002

Sivakumar K (2003) Price-tier competition: distinguishing between intertier competition and intratier competition. J Bus Res 56(12):947–959. https://doi.org/10.1016/S0148-2963(02)00267-9

Sivakumar K (2014) National culture and inter-tier price competition. J Prod Brand Manag 23(2):131–138. https://doi.org/10.1108/JPBM-08-2013-0374

Slack N, Singh G, Sharma S (2020) Impact of perceived value on the satisfaction of supermarket customers: developing country perspective. Int J Retail Distribution Manag 48(11):1235–1254. https://doi.org/10.1108/IJRDM-03-2019-0099

Smith CA, Ellsworth PC (1985) Patterns of cognitive appraisal in emotion. J Pers Soc Psychol 48(4):813–838. https://doi.org/10.1037/0022-3514.48.4.813

Strack F, Deutsch R (2004) Reflective and impulsive determinants of social behavior. Pers Soc Psychol Rev 8(3):220–247. https://doi.org/10.1207/s15327957pspr0803_1

Sweeney JC, Soutar GN (2001) Consumer perceived value: the development of a multiple item scale. J Retail 77(2):203–220. https://doi.org/10.1016/S0022-4359(01)00041-0

Sweeney JC, Soutar GN, Johnson LW (1999) The role of perceived risk in the quality-value relationship: a study in a retail environment. J Retail 75(1):77–105. https://doi.org/10.1016/S0022-4359(99)80005-0

Teas RK, Agarwal S (2000) The effects of extrinsic cues on consumers' perceptions of quality, sacrifice, and value. J Acad Mark Sci 28(4):278–290. https://doi.org/10.1177/0092070300282008

Tedeschi JT (1981) Impression management theory and social psychological research. Academic Press, New York

Tsai D, Lee H-C (2007) Will you care when you pay more? The negative side of targeted promotions. J Prod Brand Manag 16(7):481–491. https://doi.org/10.1108/10610420710834931

Vaidyanathan R, Aggarwal P (2003) Who is the fairest of them all? An attributional approach to price fairness perceptions. J Bus Res 56(6):453–463. https://doi.org/10.1016/S0148-2963(01)00231-4

Varki S, Colgate M (2001) The role of price perceptions in an integrated model of behavioral intentions. J Serv Res 3(3):232–240. https://doi.org/10.1177/109467050133004

Vigneron F, Johnson LW (1999) A review and a conceptual framework of prestige-seeking behavior. Acad Mark Sci Rev 1:1–15

Völckner F, Hofmann J (2007) The price-perceived quality relationship: a meta-analytic review and assessment of its determinants. Mark Lett 18(3):181–196. https://doi.org/10.1007/s11002-007-9013-2

Walsh G, Shiu E, Hassan LM, Michaelidou N, Beatty SE (2011) Emotions, store-environmental cues, store-choice criteria, and marketing outcomes. J Bus Res 64(7):737–747. https://doi.org/10.1016/j.jbusres.2010.07.008

Wang Y, Griskevicius V (2014) Conspicuous consumption, relationships, and rivals: women's luxury products as signals to other women. J Consum Res 40(5):834–854. https://doi.org/10.1086/673256

Weiner B (1985) An attributional theory of achievement motivation and emotion. Psychol Rev 92(4):548–573. https://doi.org/10.1037/0033-295X.92.4.548

Wiedmann K-P, Labenz F, Haase J, Hennigs N (2018) The power of experiential marketing: exploring the causal relationships among multisensory marketing, brand experience, customer perceived value and brand strength. J Brand Manag 25(2):101–118. https://doi.org/10.1057/s41262-017-0061-5

Xia L, Monroe KB, Cox JL (2004) The price is unfair! A conceptual framework of price fairness perceptions. J Mark 68(4):1–15. https://doi.org/10.1509/jmkg.68.4.1.42733

Xia L, Kukar-Kinney M, Monroe KB (2010) Effects of consumers' efforts on price and promotion fairness perceptions. J Retail 86(1):1–10. https://doi.org/10.1016/j.jretai.2009.10.003

Zeithaml VA (1988) Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. J Mark 52(3):2–22. https://doi.org/10.1177/002224298805200302

Zielke S (2010) How price image dimensions influence shopping intentions for different store formats. Eur J Mark 44(6):748–770. https://doi.org/10.1108/03090561011032702

Zielke S (2011) Integrating emotions in the analysis of retail price images. Psychol Mark 28(4):330–359. https://doi.org/10.1002/mar.20355

Zielke S (2014) Shopping in discount stores: the role of price-related attributions, emotions and value perception. J Retail Consum Serv 21(3):327–338. https://doi.org/10.1016/j.jretconser.2013.04.008