

# **Towards a consumer price perception formation framework: A systematic review**

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## **Abstract**

Pricing is regarded strategically as the most important variable of the marketing mix because it is linked directly with profitability. The study of pricing involves the analysis of price perceptions, willingness to pay and actual purchase behaviour as three important but interrelated elements that are often considered from different viewpoints. In addition, pricing is a dynamic construct which constantly re-calibrates after purchase behaviour has occurred and new price information is received by a subject. The aim of this systematic review is to reconcile various strands of the literature on price perception formation in order to provide a better understanding of the factors shaping buyer response to price information.

## **Background**

Consumer price perceptions are interlinked with consumers' purchase intentions (Monroe, 1973) and are consequently a very relevant subject matter for both researchers and practitioners in marketing. Interestingly, price perceptions affect consumers' willingness to pay (Adaval & Wyer, 2011), and this is reflected in the subject's purchase intention of a product or brand (Werthenbroch & Skiera, 2002). Chintagunta & Lee (2012) demonstrated that purchase intention is an antecedent of the purchase behaviour thereby extending the link between price perceptions and purchase behaviour. Therefore, this relationship between the constructs of price perception, willingness to pay and purchase behaviour suggests the existence of a process in which the consumer transitions from one construct to another in a pricing cycle. Importantly, this pricing cycle is circular as subjects recalibrate their price perceptions after a new purchase encounter or after receiving new price information.

Price perception is therefore a dynamic construct that not only affects willingness to pay (Adaval & Wyer, 2011) but is also affected by internal factors such as brand familiarity (Abhijit, 1992), price consciousness (Alford & Biswas, 2002), and attitudes and prior experiences (Rosa-Diaz Isabel, 2004). In addition, it is also affected by external factors such as reference prices (Kumar, Karande, & Reinartz, 1998), store choice (Tang, Bell, & Ho, 2001), asymmetries of information (Stephan, 2008) and even emotions (Stephan, 2011). This dual phenomenon (price perceptions affecting both the willingness to pay and being affected by internal and external factors) would seem to suggest that price perceptions are a mediating factor in the purchase process.

It is also important to state that the evidence base on price perception formation is broad. It covers research undertaken in the fields of psychology, economics and marketing. A pricing framework will therefore allow us to synthesize what is known in the purchase process. Some authors have developed frameworks around specific areas of the purchase process, such as perceptions of multi-dimensional prices (Hyeong & Kachersky, 2006) or price fairness (Xia, Monroe & Cox, 2004) but not around the purchase process, ranging from price perception to

purchase behaviour. In this research, we consider consumer price perception from the marketing (business and management) and psychology perspectives only, rather than opening the discourse on the whole concept of price perception (e.g. incorporating other academic fields such as economics or finance).

### **Theories supporting the formation of price perception**

The concept of consumer price perception is deeply rooted in the field of consumer behaviour that, in turn, is concerned with the area of psychology. This systematic review relies on prior understanding of how certain theories explain the formation of price perceptions. The various theories supporting the formation of price perceptions are summarized in Appendix A. The discussion of price perception around the theories supporting its formation is necessary, as it shows how the consumer's perception of prices can be viewed from numerous different theoretical perspectives, and it also suggests how difficult it might be to devise a single construct model for the formation of price perceptions or even attempt to establish a single measurement method for investigating such price perceptions. For example, a study by Niedrich, Subhash, & Wedell (2001) presented behavioural experiments in which it is possible to determine in which cases these theories best explain behaviour, and this is useful because it provides evidence that price perceptions can actually be measured.

In addition, the number of theories used to explain the formation of consumers' price perceptions demonstrates the complexity of the topic. Firstly, these theories take for granted the notion that consumers use different price formation strategies based on a number of factors and develop a particular perception of prices before the purchase behaviour takes place. Secondly, each theory considers the consumer from different perspectives, and this might be necessary since there is an assumption in the literature that consumer heterogeneity<sup>1</sup> exists (Lichtenstein, Ridgway, & Netemeyer, 1993) and that consumers use different price formation strategies (Moon & Voss, 2009). However, this assumption of heterogeneity poses a challenge when it comes to measuring price perception formation. In the framework, this heterogeneity is presented as antecedents to the formation of price perceptions.

### **Methodology**

This systematic review surveyed theories involved in the formation of price perception in the literature areas of pricing and consumer behaviour, synthesized the evidence base according to the systematic review questions and produced a theoretical model that seeks to explain the price perception formation. The review followed the model proposed by Tranfield, Denyer & Smart (2003) and considered the following systematic review questions:

1. What does the literature say about how price perceptions are formed?
2. What does the literature say about what internal and external factors affect price perception formation?

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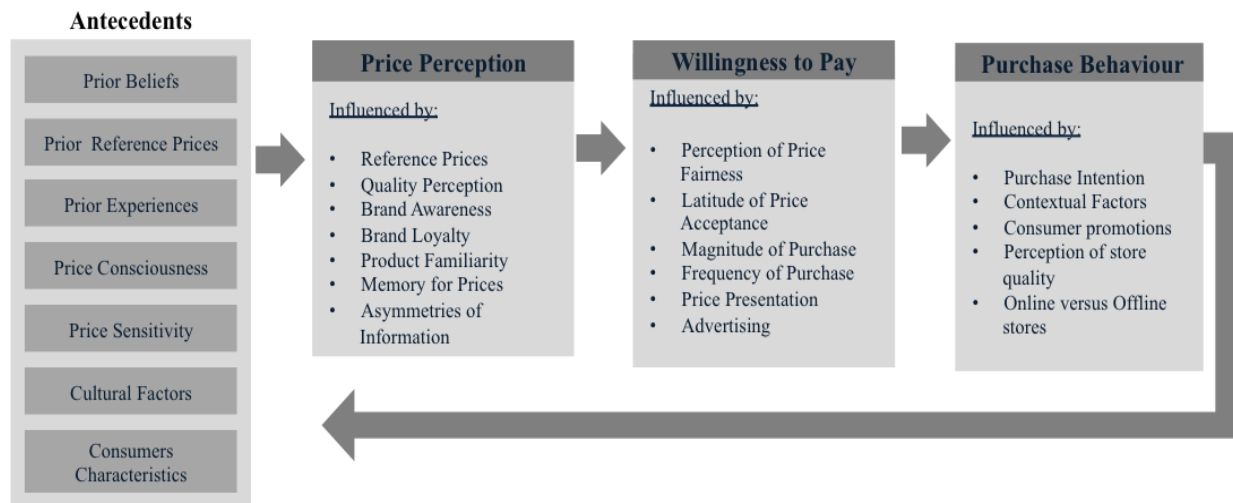
<sup>1</sup> This is explained in the way that consumers are not equal, and therefore their approaches to prices, perceptions and purchase characteristics are heterogeneous.

A complete description of the systematic review methodology used is available upon request.

### A theoretical framework of price perception formation

The evidence around the formation of price perceptions can be summarized in a theoretical framework, developed by the authors, and illustrated in Figure 1. In this framework, price perception formation is regarded as a process with the formation of price perceptions affecting willingness to pay which in turn affects purchase behaviour. According to our framework, the formation of price perception is originally framed by a number of factors that include prior beliefs (Alba, Broniarczyk, Shimp, & Urbany 1994), prior knowledge of reference prices (Rosa-Diaz, 2004), prior experiences (with the product or brand in consideration) (Wheatley, Walton, & Chiu, 1977), price consciousness (Gabor & Granger, 1961), consumer's own price sensitivity (Goldsmith, Flynn, & Kim, 2010), consumer characteristics (Zielke, 2009), and cultural factors (Meng & Nasco, 2009). These antecedents to the formation of price perception are broadly used in the literature to explain differences in price perception between consumers even when exposed to similar stimuli.

**Figure 1: A Framework of Price Perception Formation**



Next, the formation of price perception is influenced by the exposure to reference prices (both internal and external), quality perception, brand awareness, brand loyalty, product familiarity, price memory and asymmetries of information. According to the literature surveyed, price perception in turn affects consumers' willingness to pay. Both price perception and willingness to pay are regarded in the literature as separate steps in the purchase process. Consequently, willingness to pay is influenced by the perception of price fairness, latitude of price acceptance (thus suggesting that consumers are willing to accept a price within a range of prices which seemingly suggests a 'price zone of tolerance'), magnitude and frequency of purchase, price

presentation (thus suggesting that the way prices are presented to the consumer might produce different willingness to pay) and advertising.

A third step in the process is the purchase behaviour (or actual purchase) that is regarded as separate from purchase intention (Chintagunta & Lee, 2012). According to the literature, the actual purchase behaviour is influenced by the purchase intention, contextual factors (store format, location, timing, out of stock situations, and others), promotions (both in-store and external promotions), and perception of store quality. In addition, the literature poses a distinction between the purchase behaviour of consumers in both online and offline stores.

In this theoretical framework, it is considered that the formation of price perceptions is a dynamic process and the consumer constantly updates their perceptions, therefore, there are reciprocal relationships between price perceptions, willingness to pay and purchase intention. In other words, the framework suggests that once the purchase behaviour occurs, there is a re-calibration of the consumer's price perception, because new purchase experiences and new information may provide the stimulus for that recalibration.

## **Conclusion**

The review of the evidence provides some understanding of how price perceptions are formed and adjusted during the purchasing process, which allowed the authors to develop a framework for the formation of price perception based on a synthesis of the available literature. This allows us to develop an understanding of the factors impacting upon price perception formation, knowledge which has not previously been synthesized. Price perception formation is presented as a linear purchasing process where the formation of price perception, willingness to pay and the purchase behaviour are regarded as interrelated factors each themselves influenced by a number of other factors. The framework considers that there are antecedents to this process that explain the differences in price perception between consumers. It also regards the process as cyclical in which the price perception is re-calibrated after purchase behaviour occurs.

A more detailed consideration of the price perception formation process is of importance to academics and practitioners as it explains how the consideration of prices is affected during the purchasing process and which key theories influence this process. Our framework suggests that despite a positive price perception, willingness to pay and even a purchase intention, the outcome of the purchase behaviour can be affected, for example, by contextual factors such as store promotions, for example. In such a situation, marketers would be advised to consider this effect in their marketing strategies. Similarly, a cyclical process where consumers re-calibrate their perceptions after the purchase occasion advocate marketing strategies oriented, for example, towards ensuring positive purchase experiences on each occasion as they will be antecedents in a subsequent purchase process. Prices it would seem may only be as good as the last price paid.

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## Appendix A : Theories supporting the formation of price perception.

**Table 1. Theories supporting the formation of price perception.**

| Theory   | Description   |
|--|---|
| Adaptation-Level Theory                                    | According to this theory, consumers use historical prices as a reference, but then adapt this reference based on different stimuli that can be focal (related to the brand in consideration) or contextual (related peripherally to the brand considered), thus suggesting that price perception is not a static construct but rather can be influenced by internal and external factors. |
| Anchoring  | Suggests that consumers anchor their reference price in a specific price that can be the weighted average of the lowest and most recent prices, the highest and more recent, the most recent, the most extreme prices, and the lowest price as a result of considerations of price fairness or the lowest prices as result of the context.  |
| Assimilation-Contrast Theory                               | This theory suggests that consumers will be willing to accept moderate attitude changes and will reject changes that are perceived to be too extreme. This theory explains the influence of price variations in price judgments, as consumers will accept moderate changes in prices but extreme changes will be rejected.  |
| Mental Accounting and Consumer Choice (Thaler, 2008)       | Extended the work on Prospect Theory by introducing the concept of transaction utility as a two-stage process where consumers evaluate potential transactions and then analyses these transactions according to their coding of gains and losses.   |
| Prospect Theory (Urbany & Dickson, 1990)                   | Enriches the discussion on the formation of price perception by distinguishing between losses (when the actual price is higher than the consumer's reference price) and gains (when the actual price is lower than the consumer's reference price), thus extending the understanding of the effect of reference prices on price perceptions.  |
| Range Theory (Chris & Lichtenstein, 1999)                  | Suggests that consumers assess prices according to a range of prices available and it supports the notion that consumers use a range of prices in the construction of an internal reference price.  |
| Range-Frequency Theory (Niedrich, Subhash, & Wedell, 2001) | Proposed as a model of psychological judgment in which the formation of price perception includes all prices in a contextual set. Accordingly, this contextual set is composed by selected prices (for example, only prices of brands that are of interest to the consumer) rather than the entire set of prices available to the consumer.   |