An application of sweeney’s risk-price-quality-value framework through a consideration of store brand merchandise

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Key Words
Customer Relationship, Brands Value, Retail Settings, Service Quality.

Abstract
This study endeavoured to examine the antecedents of customers’ willingness to buy store branded household cleaning products. The study examined this phenomenon in a retail setting by considering the key constituents of perceived value, as proposed by Sweeney, Soutar & Johnson (1999). Respondents were recruited through an in-store survey and the data analysed using PLS path modelling. The results verify those identified by Sweeney et al. Strong relationships between perceived relative price and perceived product value, as well as between perceived product value and willingness-to-buy, were found to exist. A powerful negative relationship was observed between perceived product quality and perceived risk. The results indicate that establishing a value perception is critical in the buying process. Tangible cues exhibiting high quality (e.g. packaging, shelf space, media placement, etc) need profound attention. Furthermore, it is suggested that risk, which plays an important part in the consumer decision process, is minimised through optimal retail service quality and customer reassurances.

Introduction
Store brands, also commonly referred to as ‘own brands’ or ‘private label brands’, consist of merchandise produced and then sold by a specific retailer or chain of retail stores (Kumar and Steenkamp, 2007). These brands are often thought of as being of inferior quality to mainstream (i.e. national) brands, however research by Verhoef, Nijssen and Sloot (2002) suggests that opinions are changing and that store brands are becoming acceptable to many consumers. The growth of store brands has also been accentuated by the rise in power of retailers who are increasingly pushing this agenda (Nirmalya, 2007). In due course, retailers are being empowered to extract higher profit margins, develop customer loyalty and to increase bargaining power over manufacturers (Batra & Sinha, 2000).

Nonetheless, adoption of store brands in South Africa remains weak. This is due to a multitude of factors including risk aversion and the modest development of these brands (Beneke, 2010). Richardson, Jain and Dick (1996) found that customer inclination towards purchasing a store brand depends on, inter alia, notions of perceived quality,
perceived risk and perceived value. This article investigates the influence of such factors on willingness to buy store brands.

**Research Statement**

Based on the conceptualisation of Sweeney, Soutar & Johnson (1999), the objective of this study was to determine the influence of perceived product quality, perceived relative price and perceived risk, respectively, on customer perceived product value and ultimately their willingness to buy store brands. As considerable research has already been directed towards middle to upper income consumers, this study assumed the position of investigating lower income consumers who purchased entry level store brand household cleaning products.

**Conceptual Overview**

Evidence has been produced to reveal that customer perceived product value is a multidimensional and highly subjective evaluation of factors, thus gaining an understanding of the various dimensions of customer perceived value becomes crucial for developing effective positioning strategies (Peterson & Yang, 2004; Ulaga & Chacour, 2001; Zeithaml, 1988). This is because customer perceived product value not only dictates how the organisation is seen in the mind of its customers, but also suggests the types of communication channels that a company might use in order to maximise the probability that messages are interpreted as intended (Sweeney & Soutar, 2001). Retailing texts include perceived value antecedents as “quality related”, “price related” and “risk related” (Peterson & Yang, 2004; Sweeney, Soutar & Johnson, 1999).

Perceived product quality may be defined as the way in which a customer views a product’s brand equity and overall superiority compared to the available alternatives (Richardson, 1997; Aaker, 1991). According to Ágarwal and Teas (2004), customers will use product performance, as well as the degree to which the product conforms to manufacturing standards and product-specific attributes, to judge product quality. Multiple studies have found a correlation between perceived product quality and perceived value (Snoj, Korda & Mumel, 2004; Cronin, Brady & Hult, 2000; Rangaswamy, Burke & Olivia, 1993; Dodds, Monroe & Grewal, 1991).

Wangenheim & Bayon (2007) and Ralston (2003) assert that the perception of price is significant as it represents an extrinsic cue and offers one of the most important forms of information available to customers when making a purchasing decision. Whilst there is general agreement that a higher price alludes to a higher quality of product (Etgar and Malhotra, 1981 and Gerstner, 1985), Zeithaml (1988) indicates that sacrifice in terms of price is most relevant to respondents’ perceptions of value. Therefore, it has been found that a significant negative relationship exists between perceived price and perceived value (Kashyap & Bojanic, 2000; Desarbo, Jedidi & Shina, 2001) in that a high price erodes purchasing power.
The issue of perceived risk also merits attention. Mitchell (1998) contends that perceived risk is actually a ‘multidimensional phenomena’ which can be segmented into various different risk components. The more common components of perceived risk include functional/performance, physical, financial, social and psychological risk (Laforet, 2007; Schiffman & Kanuk, 2004; Murphy & Enis, 1986; Shimp & Bearden (1982); Peter & Tarpey (1975) and Jacoby & Kaplan (1972). Customers are certainly conscious of the losses that may arise due to product failure (Sweeney, Soutar & Johnson, 1999), hence a product with a relatively high perceived likelihood of malfunction will lower its perceived value (Narasimhan & Wilcox, 1998; Livesey & Lennon, 1993).

There is strong support from the literature that customers depend on perceptions of quality to form perceptions about risks (Batra & Sinha, 2000; Settle & Alreck, 1989). Prior research has emphasised that the higher the level of perceived quality, the lower the risk in a particular product category (Batra & Sinha, 2000; Narasimhan & Wilcox, 1998; Hoch & Banerji, 1993).

Two mediatory functions were also uncovered. Research by Monroe (1979) describes the positive relationship that price has with perceived product value, through its influence on perceived quality. This highlights the possible mediating nature of perceived product quality with regards to perceived relative price among customers purchasing store branded products that will be tested in this study. Furthermore, it has also been put forward that perceived risk is a mediator between perceived product value and perceived product quality (Snoj, Korda & Mumel, 2004; Argawal & Teas, 2001). This, too, will be catered for in the study.

Based on the above synopsis of the literature, and following in the footsteps of the work by Sweeney, Soutar & Johnson (1999), we arrive at the following hypotheses:

**Hypothesis 1:** Perceived product value influences a customer’s willingness to buy store brand household cleaning products

**Hypothesis 2a:** Perceived product value is a mediator of perceived product quality and a customer’s willingness to buy store brand household cleaning products.

**Hypothesis 2b:** Perceived product value is a mediator of perceived relative price and a customer’s willingness to buy store brand household cleaning products.

**Hypothesis 2c:** Perceived product value is a mediator of perceived risk and a customer’s willingness to buy store brand household cleaning products.

**Hypothesis 3:** Perceived relative price influences the customer perceived product value of store brand household cleaning products.

**Hypothesis 4:** Perceived product quality influences the customer perceived product value of store brand household cleaning products.

**Hypothesis 5:** Perceived relative price influences the customer perceived product quality of store brand household cleaning products.

**Hypothesis 6:** Perceived product quality is a mediator of customer perceived relative price and perceived product value.
Hypothesis 7: Perceived risk influences the customer perceived product value of store brand household cleaning products.

Hypothesis 8: Perceived product quality influences the customer perceived risk of store brand household cleaning products.

Hypothesis 9: Perceived risk is a mediator of customer perceived product quality and perceived product value of store brand household cleaning products.

Conceptual Model
Figure 1 represents a visual summation of the relationships hypothesised in this study.

<table>
<thead>
<tr>
<th>Perceived Risk</th>
<th>Perceived Product Quality</th>
<th>Perceived Product Value</th>
<th>Willingness-to-buy</th>
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Figure 1: Conceptual model of hypothesised relationships
Adapted from Sweeney, Soutar & Johnson (1999)

Methodology
The methodology of this study was based on, and adapted from, that of the Sweeney, Soutar & Johnson (1999). A non-probability convenience sampling technique was employed, with the target population consisting of supermarket shoppers between 21 and 65 years of age (excluding full-time students) who had actively purchased the chosen store brand household cleaning product within the last six months, or intended to do so in the short term.

Upon the completion of field work, 165 questionnaires had been distributed in total, of which 157 were deemed valid and used for the computation of results. The data was transferred into SmartPLS 2.0 and path modelling was executed. The researchers elected to use Partial Least Squares (PLS) analysis, as this is a predictive statistical technique that enables exploring the significance and strength of relationships in the conceptual model (Henseler, Ringle & Sinkovics, 2010).

Results
Scale Purification
Confirmatory factor analysis was conducted in order to assess the validity of the constructs in the model. As the items of every construct loaded successfully onto a single factor, all constructs were considered valid. Internal consistency and reliability of the model was measured by conducting an Item Total Reliability analysis of the constructs. The Cronbach Alpha’s of each construct ranged between 0.78 and 0.93, exceeding the critical value of 0.7 (Field, 2005).
Measurement Model

Structural equation modelling, using Partial Least Squares (PLS) analysis, was conducted in order to test the conceptual model depicted in figure 1. In order to test the convergent validity of the model, Average Variance Extracted (AVE) values were considered. These ranged from 0.69 to 0.83. AVE measures the amount of variance explained by an unobserved construct in relation to the variance due to random measurement error. The adequate cut-off for this measurement is considered to be 0.5 (Vasilecas, 2005). Discriminant Validity was assessed through the Fornell Larcker criteria. This will hold if the loading of a construct on its allocated construct is higher than its cross loadings on all other constructs. The loading of a construct on its allocated construct is calculated by taking the square root of the AVE pertaining to that construct. In all cases, that was deemed to be true.

Structural Model

Figure 2 reveals the path coefficients related to each hypothesized relationship in the model. Path coefficients determine the strength and directional nature of the relationships in the model. Figure 2: PLS Model (Path Coefficients)

Within figure 2 it can be seen that the coefficient between perceived product value and willingness-to-buy is 0.493. This indicates a moderately strong positive relationship between the two constructs. A moderately strong (0.515) positive relationship also exists between perceived relative price and perceived product value.
However, a weak (0.319) positive relationship occurs between perceived product quality and perceived product value, and a weak (-0.143) negative relationship connects perceived risk and perceived product value.

An $R^2$ value of 0.696 (in the case of willingness-to-buy) indicates that 69.6% of the variation in the model is explained by the antecedents identified.

**Assessment of Hypotheses**

**Hypothesis 1:** Perceived product value influences a customer’s willingness to buy store brand household cleaning products.

The above PLS output indicates a significant relationship between perceived product value and willingness-to-buy, with a t-value of 6.001. In addition, this influence is a positive one due to the path coefficient of 0.493, meaning that a positive perceived product value might lead to an increase in customers’ willingness to buy such products. Therefore, $H_1$ can be accepted at the 1% significance level and concluded that perceived product value influences a customer’s willingness to buy store brand household cleaning products.

**Hypothesis 2a:** Perceived product value is a mediator of perceived product quality and a customer’s willingness to buy store brand household cleaning products.

The relationships between perceived product quality and perceived product value, between perceived product value and willingness-to-buy, as well as between perceived product quality and willingness-to-buy, have t-values of 4.030, 6.001 and 4.666 respectively. Therefore, $H_{2a}$ can be accepted and concluded that perceived product value is a partial mediator of perceived product quality and a customer’s willingness to buy store brand household cleaning products.

**Hypothesis 2b:** Perceived product value is a mediator of perceived relative price and a customer’s willingness to buy store brand household cleaning products.

The relationships between perceived relative price and perceived product value, between perceived product value and willingness-to-buy, as well as between perceived relative price and willingness-to-buy have t-values of 7.014, 6.001 and 0.558 respectively. Therefore, $H_{2b}$ can be accepted and concluded that perceived product value is a full mediator of perceived product quality and a customer’s willingness to buy store brand household cleaning products.

**Hypothesis 2c:** Perceived product value is a mediator of perceived risk and a customer’s willingness to buy store brand household cleaning products.

The relationships between perceived risk and perceived product value, between perceived product value and willingness-to-buy, as well as between perceived risk and willingness-to-buy have t-values of 1.964, 6.001 and 1.108 respectively. Therefore, $H_{2c}$
can be accepted and concluded that perceived product value is a **full** mediator of perceived product quality and a customer’s willingness to buy store brand household cleaning products.

**Hypothesis 3**: Perceived relative price influences the perceived product value of store brand household cleaning products.

The PLS output indicates a significant relationship between perceived product value and perceived relative price, with a t-value of 7.014. In addition, this influence is a positive one due to the path coefficient of 0.513. Therefore, H1 can be accepted at the 1% significance level and it can be concluded that perceived relative price influences the customer perceived product value of store brand household cleaning products.

**Hypothesis 4**: Perceived product quality influences the customer perceived product value of store brand household cleaning products.

The PLS model output indicates a significant relationship between perceived product quality and perceived product value due to the t-value of 4.030. This relationship is a positive one, based on the path coefficient of 0.319. Therefore, H4 can be accepted at the 1% significance level and concluded that perceived product quality influences the customer perceived product value of store brand household cleaning products.

**Hypothesis 5**: Perceived relative price influences the perceived product quality of store brand household cleaning products.

The PLS model indicates a significant relationship between perceived relative price and perceived product quality, based on the t-value of 4.030. The path coefficient is 0.303, which indicates a negative relationship. Therefore H5 can be accepted at the 1% significance level and concluded that perceived relative price influences the customer perceived product quality of store brand household cleaning products.

**Hypothesis 6**: Perceived product quality is a mediator of perceived relative price and a customer’s perceived product value of store brand household cleaning products.

The relationships between perceived product quality and perceived product value, between perceived product quality and perceived relative price, as well as between perceived relative price and perceived product value have t-values of 4.030, 4.030 7.014 and respectively. Therefore H6 can be accepted and concluded that perceived product quality is a **partial** mediator of perceived relative price and a customer’s perceived product value of store brand household cleaning products.

**Hypothesis 7**: Perceived risk influences the customer perceived product value of store brand household cleaning products.
The PLS output indicates a significant relationship between perceived risk and perceived product value due to the 1.964 t-value. This relationship is a negative one, based on the path coefficient of -0.143. Therefore, H7 can be accepted at the 5% significance level and it can be concluded perceived risk influences the customer perceived product value of store brand household cleaning products.

**Hypothesis 8:** Perceived product quality influences the customer perceived risk of store brand household cleaning products.

The relationship between perceived product quality and perceived risk is significant, based on the t-value of 10.840. The path coefficient is -0.596, which implies a negative relationship. Therefore, H8 can be accepted at the 1% significance level and concluded that perceived product quality influences the customer perceived risk of store brand household cleaning products.

**Hypothesis 9:** Perceived risk is a mediator of perceived product quality and a customer’s perceived product value of store brand household cleaning products.

The relationships between perceived risk and perceived product value, between perceived product quality and perceived risk accepted, as well as between perceived product quality and perceived product value have t-values of 1.964, 10.840 and 4.030 respectively. Therefore H9 can be accepted and concluded that perceived risk is a partial mediator of perceived product quality and a customer’s perceived product value of store brand household cleaning products.

**Discussion & Managerial Implications**

This study found that perceived product value has a significantly positive influence on a customer’s willingness to buy store brands. Perceived product quality and perceived relative price have significant positive relationships with perceived product value, while perceived risk has a significant negative relationship with perceived product value.

The study also identified further relationships between the constructs which define perceived product value. Perceived relative price is positively related to the perceived product quality, while perceived product quality is negatively related to the perceived risk of store brand household cleaning products. In addition, it was found that perceived product quality influences a customer’s willingness-to-buy through the mediation of perceived product value, perceived relative price was found to influence a customers perceived product value through the mediation of perceived product quality of the product, while perceived product quality was found to influence a customers perceived product value through perceived risk of the product.

Hence, it was determined that our results correspond to those documented by Sweeney, Soutar and Johnson (1999).
This study highlights that customer perceived product value is paramount in the decision process. Pricing, as a key variable, therefore requires considerable attention. Although low pricing erodes an image of quality, it creates the perception that the merchandise is of superior value. Relative pricing between national and store brands needs to be significant in order for the savings to justify the risk in opting for a ‘lesser’ brand (Peterson and Yang, 2004). However, marketers should remain aware of ‘stuck in the middle’ pricing whereby the price is not low enough to generate a sale, yet sends a signal of inferior quality, relative to the category leaders (Zielke & Dobbelstein, 2007). Further research is required in the case of individual product categories.

Lower socio-economic groups appear to be particularly susceptible to perceived risk. For example, it has been found in South Africa that lower income consumers, particularly those dwelling in the townships, are not always in a position to assume the risk of brand failure. Hence, they invariably opt for safer, tried-and-trusted, national brands which are invariably more expensive than their store brand counterparts (Beneke, 2010). This conundrum is evident in the relationship between perceived risk and perceived product value.

In order to alleviate these negative signals being sent to consumers, emphasis needs to be placed on providing noticeable affordability (i.e. allowing for a significant differential in pricing) whilst at the same time minimizing consumer risk. The latter may be achieved through superior returns policies, in-store taste tests, the progression of customer reassurances, etc. This should operate in tandem with efforts to increase product quality (e.g. insisting on high manufacturing standards) whilst reaching compromise with suppliers, so as not to unnecessarily drive up costs.

Quality cues are absolutely crucial. This may include shelf space development (e.g. attractive signage at the point of sale and appropriate lighting to showcase the products) and promoting the products in a media context which casts them in a positive aura. Marketers may therefore opt to steer away from high-volume, low print quality publications such as mass market newspapers and may choose to promote such products in niche publications, such as glossy magazines, instead. This may infuse a sense a quality into the perception of the merchandise. Anecdotal evidence suggests that this has yet to be achieved.

Consumer education to the merits of store brands may also establish a sense of quality. Education campaigns punting a ‘as good as the leading brands’ message is likely to build credibility and highlight the advantages of buying such brands. It is suggested that social media channels, particularly those that encourage electronic word-of-mouth, represent a low cost, high impact platform for disseminating the message and growing brand affinity (Brown, Broderick & Lee, 2007).

Operational factors and supply chain management maintain their crucial importance in this setting. Ensuring that retail service quality (e.g. minimizing stock
outages, ensuring friendly staff, appealing atmospherics and cleanliness, as well as optimized store layout and design, etc) is upheld is likely to create a positive halo effect for the store brand (Vahie & Paswan, 2006). Sadly, it would appear that such issues are neglected in lower-end mass market supermarket stores, which may serve to tarnish the image of the store brand range.

Acknowledgements

The author would like to highlight the contribution of three postgraduate students, namely Ryan Flynn, Tamsin Greig and Melissa Mukaiwa, in conducting this study.

References


