THE EFFECT OF ADVERTISING AND SALES PROMOTIONS ON BRAND EQUITY *

Isabel Buil
Assistant Professor
Department of Economy and Business Studies
University of Zaragoza
Maria de Luna s/n. Edificio Lorenzo Normante
50018 Zaragoza
Spain
Tel: Int Code: +34 976 761000
Fax: Int Code: +34 976 761767
Email: ibuil@unizar.es

Leslie de Chernatony
Professor of Brand Marketing
Università della Svizzera italiana, Lugano and Aston Business School
Tel: Int Code: +44 7905088927
Fax: Int Code: +44 121 449 0104
Email: dechernatony@btinternet.com

Eva Martínez
Professor in Marketing
Department of Economy and Business Studies
University of Zaragoza
Gran Via, 2
50005 Zaragoza
Spain
Tel: Int Code : +34 976 762713
Fax: Int Code: +34 976 761767
Email: emartine@unizar.es

February 2010

Paper accepted by the 6th Thought Leaders in Brand Management International Conference

* The authors would like to thank the following sources for their financial help: CICYT (Ref: ECO2009-08283) and the project “GENERES” (Ref. S-09) from the Government of Aragon.
THE EFFECT OF ADVERTISING AND SALES PROMOTIONS ON BRAND EQUITY

ABSTRACT
This study explores the relationships between two marketing mix elements -advertising and sales promotions- and brand equity creation. In particular, the study focuses on advertising from a quantitative (advertising spending) and qualitative (general perceptions of advertising) perspective. Similarly, the study investigates the effects of two kinds of sales promotions, i.e. monetary and non-monetary promotions. Based on a survey of 411 UK consumers, findings show that the content of advertising plays a key role influencing brand equity dimensions, whereas advertising spend improves brand awareness but it is not enough to positively influence brand associations. The paper also finds distinctive effects of monetary and non-monetary promotions on brand equity. In addition the results show that companies can optimise the brand equity management process by considering the relationships existing between the different dimensions of brand equity.

KEYWORDS
Advertising; Sales promotions; Brand equity dimensions.
THE EFFECT OF ADVERTISING AND SALES PROMOTIONS ON BRAND EQUITY

1. Introduction

Brand equity has become a top priority for many organisations (Keller and Lehmann, 2006). As a significant asset, research has focused on understanding how to build, measure, and manage it. As well as developing further insights into the measurement of consumer-based brand equity, it is therefore important to examine the sources of brand equity. This enables managers to identify the drivers that contribute to the strengthening of brand equity and those that adversely affect performance.

This study examines the relationships between two marketing mix elements - advertising and sales promotions - and brand equity creation. In particular, the study focuses on advertising from a quantitative (advertising spending) and qualitative (general perceptions of advertising) perspective. Similarly, the study investigates the effects of two kinds of sales promotions, i.e. monetary and non-monetary promotions.

This research builds on the framework proposed by Yoo, Donthu and Lee (2000) and extends it in several ways. First, it examines in depth marketing communication tools’ effects on brand equity dimensions. Unlike previous works which have simply studied the influence of advertising spending and monetary promotions (Yoo et al., 2000; Villarejo, 2002; Bravo, Fraj and Martinez, 2007), this research analyses other advertising characteristics, such as advertising’s content, and non-monetary promotions, which have received less attention in the literature. Second, it analyses the causal order amongst brand equity dimensions. Despite some studies suggesting the existence of a hierarchy in terms of the importance of brand equity dimensions and potential causal order (Agarwal and Rao, 1996; Maio Mackay, 2001; Yoo and Donthu, 2001; Keller and Lehmann, 2003; 2006), few have empirically examined how brand equity dimensions might be related.

The paper opens by developing the hypotheses, based on the literature. The research methodology and findings are provided. Finally, the overall implications and limitations of the research are considered.

2. Conceptual framework

Focusing on a consumer perspective, a large number of studies have drawn on different dimensions to conceptualise and measure brand equity. Following Aaker’s (1991, 1996) and Keller’s (1993) conceptual frameworks, the four dimensions of consumer-based brand equity examined in this study are brand awareness, perceived quality, brand associations and brand loyalty.

In brand equity research, several factors have been identified as drivers of consumer-based brand equity: market size and perceived risk (Ailawadi, Lehmann and Neslin, 2003); order of entry and age of the brand (Simon and Sullivan, 1993); external brand communications (Berry, 2000); country of origin (Ashill and Sinha, 2004; Pappu, Quester and Cooksey, 2006); product innovation (Sriram, Balachander and Kalwani, 2007); trust, customer satisfaction and relationship commitment (Kim et al., 2008), etc. Interestingly, the marketing mix elements have been identified as one of the main drivers of brand equity. These elements are important not only because they can greatly affect brand equity but also because they are under companies’ control (Keller, 1993; Berry, 2000; Yoo et al., 2000; Villarejo, 2002; Ailawadi et al., 2003; Herrmann et al., 2007).

This study focuses on the role of two specific marketing communications tools: advertising and sales promotions. The individual contributions of advertising and sales promotions to brand equity remain unclear (Chu and Keh, 2006) and scholars have highlighted the need to examine the effect of these variables (Netemeyer et al., 2004). Thus, this analysis should better help understand the role of these elements. Specifically this study
addresses from a quantitative (advertising spending) and qualitative (general perceptions of advertising) perspective how advertising influences brand equity dimensions. Similarly, the study focuses on two kinds of sales promotions, monetary and non-monetary.

Advertising

Several authors have investigated how actual and perceived advertising spending influence brand equity and its dimensions (Simon and Sullivan, 1993; Cobb-Walgren, Ruble and Donthu, 1995; Yoo et al., 2000; Villarejo, 2002; Bravo et al., 2007; Sriram et al., 2007). Both approaches have found positive relations between advertising spend and brand equity.

Advertising spend can influence brand equity dimensions in several ways. When judging the product’s quality, consumers use different intrinsic and extrinsic cues (Rao and Monroe, 1989). Perceived advertising spend is one such extrinsic quality cue (Milgrom and Roberts, 1989; Kirmani and Rao, 2000). Several studies have found positive relations between perceived advertising spend and perceived quality in laboratory experiments (Kirmani and Wright, 1989; Kirmani, 1990; 1997) as well as in real conditions (Moorthy and Zhao, 2000). Similarly, advertising spend on a brand can increase the scope and frequency of brand appearance, and as a consequence, the level of brand awareness (Chu and Keh, 2006; Keller, 2007). Thus, the higher the advertising spend, the higher the awareness levels are likely to be. Finally, favourable, strong and unique brand associations can also be created by advertising (Cobb-Walgren et al., 1995; Keller, 2007). Like brand awareness, brand associations arise from consumer-brand contact. Thus, advertising can contribute to brand associations through its ability to create, modify or reinforce associations with each new contact. Hence, the higher the advertising spend of a brand, the stronger and more numerous will be the associations in the consumer’s mind.

These positive relationships between advertising spend perceived by the consumer and perceived quality, brand awareness and brand associations have been empirically supported by Yoo et al. (2000), Villarejo (2002) and Bravo et al. (2007). Thus, we propose:

**H1:** Consumers’ perceptions of advertising spend undertaken by the brand have a positive influence on: a) perceived quality; b) brand awareness and c) brand associations.

Researchers recognise that the content, nature and quality of advertising can also play an important role in brand equity dimensions (Cobb-Walgren et al., 1995; Keller and Lehmann, 2003; 2006; Bravo et al., 2007; Sriram et al., 2007). However, little attention has been paid to these issues.

Advertising is a powerful way of communicating a brand’s functional and emotional values (de Chernatony, 2006). In general, the effectiveness of this communication tool depends on its content (the message), the execution or how the ad conveys the message, and the frequency with which a consumer sees the ad (Batra, Myers and Aaker, 1996; Kotler, 2000). As mentioned earlier, advertising creates brand awareness, links strong, favourable, and unique associations to the brand in consumers’ memory, and elicits positive brand judgments and feelings (Keller, 2007). However to achieve these results, the advertising needs a suitable design and execution. In particular, one of the main concerns in devising an advertising strategy is related to the creative strategy (Kapferer, 2004; Keller, 2007). Given the increasing number of brands competing in the same markets, firms need to develop creative and original communication strategies. This helps capture consumers’ attention to the advertisement and contribute to brand equity.

Therefore it is expected that through an original and innovative advertising strategy, organisations will be more likely to capture consumers’ attention. In turn, this leads to higher brand awareness, a higher perceived quality and contributes to forming strong, favourable and
unique associations (Aaker, 1991; Kirmani and Zeithaml, 1993; Villarejo, 2002). The following hypothesis synthesises the above arguments:

**H2:** Consumers’ perceptions of advertising undertaken by the brand have a positive influence on: a) perceived quality; b) brand awareness and c) brand associations.

**Sales promotions**

Most previous research on sales promotions has focused on monetary promotions. Although there is still some discussion about the effect of this tool on brand equity (Garreston, Fisher and Burton, 2002; Palazón and Delgado, 2005), past literature has mainly proposed that monetary promotions have a negative impact on brand equity.

Focusing on the direct effects on brand equity dimensions, it is expected that monetary promotions will have a negative influence on perceived quality and brand associations. Price is one of the most important cues used by consumers to infer the quality of a product (Milgrom and Roberts, 1986; Rao and Monroe, 1989; Dodds, Monroe and Grewal, 1991; Agarwal and Teas, 2002). Price promotions may reduce reference prices, which in turn can lead to unfavourable quality evaluations (Mela, Gupta and Jedidi, 1998; Raghubir and Corfman, 1999; Suri, Manchanda and Kohli, 2000; Jørgersen, Taboubi and Zaccour, 2003; DelVecchio, Henard and Freling, 2006). Similarly, monetary promotions can erode brand associations. Martínez, Montaner and Pina (2007) and Montaner and Pina (2008) find that these type of promotions have a negative impact on brand image. In addition, these campaigns are not long enough to establish long-term brand associations and can create uncertainty about brand quality (Winer, 1986), which results in more negative brand perceptions.

In short, the frequent use of price promotions has a negative impact on perceived quality and brand association dimensions because this tool leads consumers to think primarily about price, and not about the brand (Yoo et al. 2000). Thus the following hypothesis is proposed:

**H3:** Consumers’ perceptions of a brand’s monetary promotions have a negative influence on: a) perceived quality and b) brand associations.

Although non-monetary promotions are widely used in marketing, they have been insufficiently investigated. Recent studies have shown that non-monetary promotions may help to reinforce brand equity (Palazón and Delgado, 2005; Martínez et al., 2007; Montaner and Pina, 2008). In the case of non-monetary promotions the incentive is not directly seen in a lower purchase price. Therefore it is more difficult for this type of promotion to influence the internal reference price (Campbell and Diamond, 1990). Consequently, when consumers are exposed to non-monetary promotions, it is less likely that such promotions negatively influence perceived quality and brand associations.

Similarly, non-monetary promotions can differentiate brands and communicate distinctive brand attributes, contributing to the development and reinforcement of brand equity (Papatla and Krishnamurthi, 1996; Mela et al., 1998; Chu and Keh, 2006). While monetary promotions are primarily related to utilitarian benefits, non-monetary promotions are more related to hedonic benefits (Chandon, Wansink and Laurent, 2000). These benefits, such as entertainment and exploration, are related to experiential emotions, pleasure and self-esteem. Non-monetary promotions can therefore evoke more associations related to brand personality, enjoyable experience, feelings and emotions. Furthermore they link more favourable and positive brand associations to the brand (Palazón and Delgado, 2005).

Thus it is expected that non-monetary promotions will have a positive influence on perceived quality and brand associations, as postulated in the following hypothesis:

**H4:** Consumers’ perceptions of a brand’s non-monetary promotions have a positive influence on: a) perceived quality and b) brand associations.
Relationships amongst brand equity dimensions

Brand equity dimensions are closely interrelated. While some studies propose associative relationships amongst them (e.g., Yoo et al., 2000; Atilgan Aksoy and Akinci, 2005; Pappu et al., 2005; 2006), others posit causal relations between some brand equity dimensions (e.g., Kirmani and Zeithaml, 1993; Villarejo, 2002; Ashill and Sinha, 2004; Esch et al., 2006; Bravo et al., 2007; Martínez, Polo and de Chernatony, 2008).

This study builds on the traditional hierarchy of effects model. Although this framework has been challenged by some researchers who have proposed alternative hierarchy models (Krugman, 1965; 1966; Ray et al., 1973; for a review see Barry, 1987), this theory has been proposed as a useful framework for studying the causal order amongst the dimensions of brand equity from the perspective of the consumer (Cobb-Walgren et al., 1995; Agarwal and Rao, 1996; Maio Mackay, 2001; Yoo and Donthu, 2001; Keller and Lehmann, 2003; 2006; Roberts et al., 2004; Tolba and Hassan, 2008). According to this paradigm (Lavidge and Steiner, 1961; Solomon, Bermossy and Askegaard, 2002), behaviour is divided into three components: cognitive, affective and conative. Therefore, the evolution of brand equity can be depicted as a learning process on the part of the consumer consisting of these stages: consumers’ awareness of the brand leads to attitudes (e.g., perceived quality and brand associations), which in turn will influence attitudinal brand loyalty (Gordon, Calantone and di Benedetto, 1993; Konécnik and Gartner, 2007).

The process of building brand equity begins with increasing brand awareness. Consumers must first be aware of a brand to develop a set of brand associations later (Aaker, 1991). Then brand awareness affects the formation and also the strength of brand associations, including perceived quality (Keller, 1993; Pitta and Katsanis, 1995; Aaker, 1996; Na, Marshall and Keller, 1999; Villarejo, 2002; Keller and Lehmann, 2003; Konécnik and Gartner, 2007). When consumers acquire a more positive perception of the brand, loyalty results (Oliver, 1999). Thus high levels of perceived quality and positive associations can enhance brand loyalty (Keller, 1993; Chaudhuri, 1999; Keller and Lehmann, 2003; Pappu et al., 2005). We therefore postulate:

H5: Brand awareness has a positive influence on perceived quality.
H6: Brand awareness has a positive influence on brand associations.
H7: Perceived quality has a positive influence on brand loyalty.
H8: Brand associations have a positive influence on brand loyalty.

Figure 1 shows the conceptual framework developed above.

3. Methodology

Hypotheses were tested by collecting data through a survey of 411 consumers in the UK. Product categories and brands were selected based on the Best Global Brands 2006 ranked by Interbrand. The use of rankings and secondary research to select product categories and brands is usual in brand equity research (Cobb-Walgren et al., 1995; Krishnan, 1996; Netemeyer et al., 2004). From this published list, the authors chose four diverse product categories: soft drinks, sportswear, consumer electronics and cars. The categories reflect a broad set of consumer products to provide some generalisability. They differ in terms of associated risk, price and purchase frequency. For each of the product categories, two strong mature brands were selected: Coca-Cola and Pepsi for soft drinks; Adidas and Nike for sportswear; Sony and Panasonic for consumer electronics; and BMW and Volkswagen for cars. All these brands are widely available and well-known to UK consumers, which is desirable to understand brand equity (Krishnan, 1996).
Data was collected at several locations in the city of Birmingham using quota sampling (by age and sex). In total 417 completed questionnaires were collected. Amongst these, 411 were considered valid and were used for empirical analysis. Eight different questionnaires were designed, one for each brand. Each subject considered only one brand. Customers were asked to answer questions with respect to brand equity, its antecedents and consequences and some demographic questions.

The measures for the marketing mix elements and brand equity dimensions were adapted from previous research. Only the scale used to measure the general perception of advertising was developed by the authors, since no adequate measures were available. All the variables were measured using 7-point Likert-type scales. The Appendix describes all the scales.

4. Results

Prior to testing the hypotheses, the multi-item scales were evaluated using exploratory and confirmatory techniques to assess reliability, dimensionality and validity. To assess the reliability of the measures Cronbach’s alpha and the item-to-total correlation for all scales were used. Results from exploratory factor analyses, using varimax rotation principal components analysis suggested that the corresponding items of each scale grouped into a single factor with significant factor loadings and the explained variance exceeded 60% in each case. Only the items of brand associations dimension loaded on three different factors (items ASS1, ASS2 and ASS3 refer to perceived value; items ASS4, ASS5 and ASS6 refer to brand personality; and items ASS7, ASS8 and ASS9 are related to organisational associations).

We followed Anderson and Gerbing’s (1998) two-step approach for structural equation modelling. EQS 6.1 and the robust maximum-likelihood estimation were used (Bentler, 1995). Confirmatory factor analysis (CFA) suggested deleting item ASS6 since the $R^2$ was below 0.4. After this, CFA of the multi-item scales produced an acceptable fit to the data, as shown in the Appendix. All factor loadings are above 0.5 and statistically significant. Likewise, the coefficients have a clear relation with the underlying factor ($R^2>0.3$). In addition, the average variance extracted (AVE) and composite reliability (CR) values are greater than 0.5 and 0.7 respectively (Bagozzi and Yi, 1988). Results also show that the confidence interval around the correlation estimate between any two factors do not include one, suggesting that discriminant validity is supported.

We next examined the hypothesized paths in the proposed model. Previously, since brand associations dimension loaded on three different factors, individual items scores were averaged under each of these three factors. Then, scores were used as indicators to derive the brand association dimension. Results are shown in table 1.

Table 1 here.

With respect to the effect of the perception of advertising spend on perceived quality, brand awareness and brand associations (H1a, H1b and H1c), results obtained only confirm hypothesis 1b ($\beta = 0.370, t = 4.34$). Thus, the higher the advertising spend, the higher the awareness levels are likely to be. Contrary to our expectations, advertising spend has a negative influence on perceived quality ($\beta = -0.285, t = -2.83$), and brand associations ($\beta = -0.199, t = -1.94$). Therefore, we did not find support for hypotheses H1a and H1c.

The content of advertising seems to play an important role in brand equity dimensions. As such, consumers’ perceptions of advertising characteristics have a positive and significant influence on perceived quality ($\beta = 0.345, t = 3.52$), as predicted in hypothesis 2a. Perceived quality ($\beta = 0.208, t = 2.31$) and brand associations ($\beta = 0.491, t = 4.79$) are also notably dependent on consumers’ perceptions of advertising, which supports hypotheses 2b and 2c.

Our findings also support H3a. Monetary promotions have negative effects on perceived quality ($\beta = -0.109, t = -1.96$). H3b suggested that monetary promotions would have a negative effect on brand associations. However, no empirical evidence is found for this.
hypothesis ($\beta = -0.062, t = -1.01$). Similarly, we did not find a significant effect of non-monetary promotions on the perceived quality ($\beta = 0.063, t = 1.03$), failing to support H4a. By contrast, hypothesis 4b, which suggested that non-monetary promotions were positively related to brand associations, is supported ($\beta = 0.122, t = 1.87$).

Hypotheses 5 and 6 predicted that brand awareness, one of the brand equity dimensions, is an antecedent of perceived quality and brand associations. Results reveal a significant positive relation between brand awareness and perceived quality ($\beta = 0.546, t = 8.54$) and brand awareness and brand associations ($\beta = 0.429, t = 6.27$). Hence, H5 and H6 are supported. In H7, perceived quality was proposed as having a positive impact on brand loyalty. However, the relationship is weak and insignificant ($\beta = -0.041, t = -1.03$). Thus, hypothesis 7 is not supported. Finally, hypothesis 8, which posited that brand associations enhance brand loyalty, shows a positive and significant coefficient ($\beta = 0.746, t = 14.87$), supporting this hypothesis.

5. Conclusions

Brand equity is one of the most important assets in any business. It is therefore critical to understand its key drivers. The purpose of this study was to examine the impact of advertising and sales promotions on brand equity. We approached this objective by studying advertising from a quantitative and qualitative perspective, as well as analysing both monetary and non-monetary promotions. In addition, the research attempted to understand how the underpinning brand equity dimensions are related amongst themselves.

With respect to the effect of advertising on brand equity dimensions, interestingly, results showed that the qualitative facet of this marketing communication tool is important when creating brand equity. Findings showed that by using an original, creative and different advertising strategy, companies can develop higher brand awareness and positive perceptions of their brands. Our research also revealed that perceived advertising spend has a positive effect on brand awareness. However, it does not necessarily enhance perceived quality and brand associations. This result can be explained by the fact that advertising spend can reach a saturation point beyond which it does not significantly contribute to creating brand equity (Chu and Keh, 2006). Thus, consumers can perceive that a brand is intensively advertised or seems to spend a lot on its advertising compared to competing brands. Nevertheless, these perceptions cannot contribute to the improvement of perceived quality and brand associations. In addition, Keller and Lehmann (2003) posit that the amount of financial investment in marketing does not guarantee success in terms of brand equity creation. By contrast, these authors state that the key factor to increase brand equity lies in the qualitative aspects of the marketing program. Thus, as our research shows, the content of advertising plays a key role influencing perceived quality, brand awareness and brand associations.

As suggested in the literature, the effect of sales promotions on brand equity differs according to the type of promotional tool used. Monetary promotions were found to negatively influence perceived quality whereas non-monetary promotions had a positive effect on brand associations. Despite the fact that monetary promotions and non-monetary promotions had a non-significant impact on brand associations and perceived quality, respectively, these results are interesting. In the literature there is still some discussion about the effect of sales promotions on brand equity (Sriram et al., 2007). By studying both types of sales promotions, this study further contributes to knowledge.

Finally, the results indicated that brand equity dimensions are related amongst themselves. Brand awareness was found to have a positive influence on perceived quality and brand associations, which in turn influenced brand loyalty. Contrary to our predictions, perceived quality did not have any influence on brand loyalty. Other studies have not supported this
relationship (Bravo et al., 2007). A possible explanation for this non-significant effect could be that all the brands analysed are of high quality.

Based on the study results, there are several managerial implications. First, advertising is an important marketing mix tool for companies influencing brand equity dimensions. However, due to the growing number of brands competing in the markets with the same elements, advertising spend perceived by consumers improves brand awareness but it is not enough to positively influence the associations related to the brand. In this context, companies should pay special attention to those aspects related to the design of their advertising campaigns in the media, trying to develop original and creative strategies. Second, marketing managers should be aware of the effects that promotional actions have on consumers’ perceptions. Findings here hold significant implications for brand managers. While price promotions are common, the results of this study indicate that frequent use of monetary promotions dilutes some brand equity dimensions. Consequently, brand managers should be aware of the dangers of using this type of promotion. By contrast, it would be wiser to use non-monetary promotional tools, since they appear to be more consistent with the brand equity creation strategies. Finally, findings imply that attention should be paid to the causal order amongst brand equity dimensions. Companies can optimise the brand equity management process by considering the relationships existing between the different dimensions of brand equity. In this respect, managers should first build brand awareness as a means of anchoring the different associations that consumers have of the brand, such as those related to perceived value, personality or organisation, as well as the evaluations of perceived quality. Later, attention should also be paid to associations as a way of generating greater loyalty.

There are several limitations to our research. Given our findings, it would be useful to investigate further the relationships between marketing mix elements and brand equity dimensions. For example, actual measures of marketing mix elements could be used with perceptual measures such as those employed in this study. Additional antecedents of consumer-based brand equity might be also included in the model to reach a better understanding of the brand equity creation process. Moreover, this study could be extended by considering different product categories and brands.
References


Barry TE. The development of the hierarchy of effects: an historical perspective. In Leigh JH. and Martin C. Current Issues and Research in Advertising, Graduate School of Business Administration, University of Michigan, 1987; 25: 251-296.


Kirmani A. Advertising Repetition as a Signal of Quality: If It’s Advertised so Much, Something Must Be Wrong. Journal of Advertising 1997; Fall: 160-171.


Villarejo AF. La Medición del Valor de Marca en el Ámbito de la Gestión de Marketing, CEADE. Sevilla, 2002.


Table 1. Structural model results

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Standardised β (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Advertising spending → Perceived quality</td>
</tr>
<tr>
<td>H1b</td>
<td>Advertising spending → Brand awareness</td>
</tr>
<tr>
<td>H1c</td>
<td>Advertising spending → Brand associations</td>
</tr>
<tr>
<td>H2a</td>
<td>Perception advertising → Perceived quality</td>
</tr>
<tr>
<td>H2b</td>
<td>Perception advertising → Brand awareness</td>
</tr>
<tr>
<td>H2c</td>
<td>Perception advertising → Brand associations</td>
</tr>
<tr>
<td>H3a</td>
<td>Monetary promotions → Perceived quality</td>
</tr>
<tr>
<td>H3b</td>
<td>Monetary promotions → Brand associations</td>
</tr>
<tr>
<td>H4a</td>
<td>Non-monetary promotions → Perceived quality</td>
</tr>
<tr>
<td>H4b</td>
<td>Non-monetary promotions → Brand associations</td>
</tr>
<tr>
<td>H5</td>
<td>Brand awareness → Perceived quality</td>
</tr>
<tr>
<td>H6</td>
<td>Brand awareness → Brand associations</td>
</tr>
<tr>
<td>H7</td>
<td>Perceived quality → Brand loyalty</td>
</tr>
<tr>
<td>H8</td>
<td>Brand associations → Brand loyalty</td>
</tr>
</tbody>
</table>

Fit Indices

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S-B χ² = 817.47 (308) (p&lt;0.001)</td>
<td>CFI = 0.927</td>
</tr>
<tr>
<td>RMSEA = 0.063</td>
<td>IFI = 0.927</td>
</tr>
<tr>
<td>NFI = 0.888</td>
<td>NNFI = 0.916</td>
</tr>
</tbody>
</table>

Note: **p<0.05; *p<0.1
## Constructs and measurements results

### Perceived Advertising Spending  
*Yoo et al. (2000)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADS1</strong></td>
<td>Brand X is intensively advertised</td>
<td>0.890</td>
<td>0.792</td>
<td>0.898</td>
<td>0.747</td>
</tr>
<tr>
<td><strong>ADS2</strong></td>
<td>Brand X seems to spend a lot on its advertising compared to advertising for competing PC brands</td>
<td>0.814 (24.41)</td>
<td>0.663</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ADS3</strong></td>
<td>The advertisements for brand X are frequently shown</td>
<td>0.886 (28.67)</td>
<td>0.784</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### General Perception of the Advertising  
*Ad hoc scale*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAD1</strong></td>
<td>The advertisements for brand X are creative</td>
<td>0.928</td>
<td>0.861</td>
<td>0.904</td>
<td>0.760</td>
</tr>
<tr>
<td><strong>PAD2</strong></td>
<td>The advertisements for brand X are original</td>
<td>0.886 (29.92)</td>
<td>0.785</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PAD3</strong></td>
<td>The advertisements for brand X are different from the advertisements for competing brands of PC</td>
<td>0.796 (23.74)</td>
<td>0.634</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Monetary Promotions  
*Yoo et al. (2000)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MPR1</strong></td>
<td>Brand X frequently offers price discounts</td>
<td>0.936</td>
<td>0.877</td>
<td>0.930</td>
<td>0.817</td>
</tr>
<tr>
<td><strong>MPR2</strong></td>
<td>Brand X often uses price discounts</td>
<td>0.963 (34.28)</td>
<td>0.927</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MPR3</strong></td>
<td>Brand X uses price discounts more frequently than competing brands of PC</td>
<td>0.804 (23.09)</td>
<td>0.646</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Non-monetary Promotions  
*Yoo et al. (2000)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NMPR1</strong></td>
<td>Brand X frequently offers gifts</td>
<td>0.930</td>
<td>0.864</td>
<td>0.943</td>
<td>0.792</td>
</tr>
<tr>
<td><strong>NMPR2</strong></td>
<td>Brand X often uses gifts</td>
<td>0.953 (34.63)</td>
<td>0.909</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NMPR3</strong></td>
<td>Brand X uses gifts more frequently than competing brands of PC</td>
<td>0.777 (16.82)</td>
<td>0.603</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Brand Awareness  
*Yoo et al. (2000); Netemeyer et al. (2004)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AWA1</strong></td>
<td>I am aware of brand X</td>
<td>0.785</td>
<td>0.616</td>
<td>0.900</td>
<td>0.642</td>
</tr>
<tr>
<td><strong>AWA2</strong></td>
<td>When I think of PC, brand X is one of the brands that comes to mind</td>
<td>0.740 (18.90)</td>
<td>0.548</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AWA3</strong></td>
<td>X is a brand of PC I am very familiar with</td>
<td>0.772 (15.69)</td>
<td>0.596</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AWA4</strong></td>
<td>I know what brand X looks like</td>
<td>0.850 (16.81)</td>
<td>0.723</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AWA5</strong></td>
<td>I can recognize brand X amongst other competing brands of PC</td>
<td>0.854 (15.69)</td>
<td>0.730</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Perceived Quality  
*Pappu et al. (2005, 2006)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PQ1</strong></td>
<td>Brand X offers very good quality products</td>
<td>0.886</td>
<td>0.785</td>
<td>0.929</td>
<td>0.766</td>
</tr>
<tr>
<td><strong>PQ2</strong></td>
<td>Brand X offers products of consistent quality</td>
<td>0.882 (21.98)</td>
<td>0.779</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PQ3</strong></td>
<td>Brand X offers very reliable products</td>
<td>0.928 (28.40)</td>
<td>0.861</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PQ4</strong></td>
<td>Brand X offers products with excellent features</td>
<td>0.799 (20.67)</td>
<td>0.638</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Brand Loyalty  
*Yoo et al. (2000)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOY1</strong></td>
<td>I consider myself to be loyal to brand X</td>
<td>0.898</td>
<td>0.807</td>
<td>0.906</td>
<td>0.763</td>
</tr>
<tr>
<td><strong>LOY2</strong></td>
<td>Brand X would be my first choice when considering PC</td>
<td>0.903 (30.61)</td>
<td>0.816</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOY3</strong></td>
<td>I will not buy other brands of PC if brand X is available at the store</td>
<td>0.817 (23.54)</td>
<td>0.667</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Brand Associations  
*Lassar et al. (1995); Aaker (1996); Netemeyer et al. (2004); Pappu et al. (2005, 2006)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Description</th>
<th>$\lambda$ (t)</th>
<th>$R^2$</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASS1</strong></td>
<td>Brand X is good value for the money</td>
<td>0.812</td>
<td>0.659</td>
<td>0.878</td>
<td>0.707</td>
</tr>
<tr>
<td><strong>ASS2</strong></td>
<td>Within PC I consider brand X a good buy</td>
<td>0.934 (22.88)</td>
<td>0.872</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASS3</strong></td>
<td>Considering what I would pay for brand X, I would get much more than my money’s worth</td>
<td>0.768 (15.39)</td>
<td>0.590</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASS4</strong></td>
<td>Brand X has a personality</td>
<td>0.846</td>
<td>0.716</td>
<td>0.868</td>
<td>0.767</td>
</tr>
<tr>
<td><strong>ASS5</strong></td>
<td>Brand X is interesting</td>
<td>0.905 (19.48)</td>
<td>0.820</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASS6</strong></td>
<td>I have a clear image of the type of person who would use the brand X *</td>
<td>0.903</td>
<td>0.816</td>
<td>0.923</td>
<td>0.799</td>
</tr>
<tr>
<td><strong>ASS7</strong></td>
<td>I trust the company which makes brand X</td>
<td>0.895 (25.69)</td>
<td>0.801</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASS8</strong></td>
<td>I like the company which makes brand X</td>
<td>0.884 (23.93)</td>
<td>0.781</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fit indices

- $SB \chi^2 = 811.98$ (419) $p<0.001$;  
- RMSEA = 0.048;  
- CFI = 0.954;  
- IFI = 0.954;  
- NFI = 0.909;  
- NNFI = 0.945

*Note: * items eliminated during validation process; $\lambda$: standardised factor loading; t: t-values; CR: Composite Reliability; AVE: Average Variance Extracted; S-B $\chi^2$: Satorra-Bentler Scaled Chi-square; RMSEA: Root Mean Square Error of Approximation; CFI: Comparative Fit Index; IFI: Incremental Fit Index; NFI: Normed Fit Index; NNFI: Nonnormed Fit Index.