Customer-based brand equity: A study on interrelationship among the brand equity dimension in Malaysia

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Brand equity is a concept born in 1980s. It has aroused intense interest among business strategists from a wide variety of industries as brand equity is closely related with brand loyalty and brand extensions. Besides, successful brands provide competitive advantages that are critical to the success of companies. More recently, brand equity has increasingly been defined in customer-based contexts. The customer-based brand equity refers to the consumer response to a brand name. Customer-based brand equity measurement studies are constructed mainly on four dimensions of brand equity namely, brand awareness, brand associations, perceived quality and brand loyalty. This study aims to examine the interrelationships among the brand equity dimensions. The study concluded that all dimensions of brand equity are relatively important. All the dimensions are found to be positively correlated.

Key words: Brand equity, customer-based, loyalty, interrelationship, awareness.

INTRODUCTION

Brands provide the most critical points of differentiation between competitive offerings. Branding reduces consumers' perceived risks and search costs while making purchase decisions. Hence, increasing brand’s equity becomes one of the most dominant trends over the past decade.

Since the late 1980s, brand equity has developed into one of the key marketing concepts throughout management theory and practice (Srinivasan et al., 2005; Burmann et al., 2009) and it is the key strategic asset that needs to be monitored for maximum long-term performance (Sriram et al., 2007). High brand equity levels are known to affect consumer increased profits (Keller, 2003), improved market capitalization value (Lassar et al., 1995), competitive advantage (Kocak et al., 2007), brand extension (Keller and Aaker, 1992) and consumer's willingness to pay premium prices (Anselmsson et al., 2007). Principally, brand equity can be categorised into two principal perspectives that are financial and customer based. The first perspective of brand equity is from a financial market’s point of view where the asset value of a brand name is appraised (Farquhar et al., 1991; Swait et al., 1993). Customer-based brand equity definition approaches the customer’s perception and response to a brand name (Keller, 1993; Shocker et al., 1994; Lassar et al., 1995). The rationale for concentrating on customer-based brand equity is that the power of a brand lies in what customers’ experiences over time (Keller, 2003).

Brand equity is defined as brand assets linked to a brand’s name and symbol that add to, or subtract from, a product (Aaker and Joachimsthaler, 2000). More recently, brand equity has increasingly been defined in customer-based contexts (Keller, 2001; Sriram et al., 2005; Yoo et al., 2000, Yoo and Donthu, 2001, 2002; Washburn and Plank, 2002). Customer-based brand equity measurement studies are constructed mainly on dimensions of brand equity proposed by Aaker (1991, 1996) and Keller (1993, 1998) as well as some other previous research findings (Yoo and Donthu, 2001, 2002) conceptual model comprises of four dimensions which are brand awareness, brand associations, perceived quality and brand loyalty.

Although considerable evidence exists to support the relationship between the brand equity dimensions and...
brand equity, the interrelationship between the brand equity dimensions and their role in building brand equity are scarce. This study aims to explore interrelations of the four dimensions of brand equity, namely, brand awareness, perceived quality, brand associations and brand loyalty on Malaysian brands. The research results should lead to a deeper understanding of Malaysian brand equity concept.

LITERATURE REVIEW

Customer based brand equity has been conceptualised as multidimensional construct (Cobb-Walgren et al., 1995; Sinha et al., 2000; Yoo and Donthu, 2001; Yoo et al., 2000; Washburn and Plank, 2002). These researchers measured customer-based brand equity by four constructs, namely brand awareness, brand association, perceived quality and brand loyalty. In the next session, these four dimensions are discussed.

A conceptual framework and research hypothesis

In this study, customer-based brand equity is conceptualised in accordance to Aaker (1991, 1996) and Keller (1993)’s models. The dimensions and their constructs on which the customer-base brand equity is based is examined and tested in the succeeding sections of this study. The proposed conceptual framework is shown as Figure 1

Brand awareness and perceived quality

Almost all brand equity models identified brand awareness as a key determinant of brand equity (Aaker, 1991; Keller, 2003; Washburn and Plank, 2002; Yoo and Donthu, 2001; Pappu et al, 2005). Brand awareness is defined as accessibility of the brand in the customer’s memory (Chattopadhyay et al., 2008). It is reflected in consumer’s ability to identify the brand under different circumstances (Keller, 1993). Aaker (1996) identified four levels of awareness ranging from mere recognition, recall, top-of-mind to brand dominance, where the brand is the only brand recalled.

Perceived quality is viewed as central to brand equity (Aaker, 1996; Keller, 2003). Perceived quality is the customer’s judgment about a product’s overall excellence or superiority in comparison to alternatives brand (Aaker, 1996; Keller 2003). It provides value to customers by providing them with a reason to buy and by differentiating the brand from competing brands (Kayaman and Arasli, 2007). It is quite difficult for customers to make rational judgement of the quality, they are likely using quality attributes to ‘infer’ quality (Ophuis and Van Trijp, 1995; Acebro´n and Dopico 2000). These attributes includes colour, flavour, form, appearance of the product as well as the availability of production information (Bernue et al., 2003).

Consumers’ brand awareness is likely to be high when they perceive the quality of the brand to be high (Kayaman and Arasli, 2007). Repeat exposure to brand communications enhances customers’ familiarity and leads to increases on customers’ trust on the quality of the familiar brand (Mitchell and Olson, 1981). Besides, consumers tend to ascribe brands with greater awareness with positive quality value (Aaker, 1996). This relationship is summarised in the following hypothesis:

H1: Brand awareness has a significant positive relationship with perceived quality.

Brand awareness and brand associations

Brand associations have been widely employed in brand equity frameworks. Brand associations contain ‘the meaning of the brand for consumers” (Keller, 1993). Brand associations consist of all brand-related thoughts, feelings, perceptions, images, experiences, beliefs and attitudes (Kotler and Keller, 2006).

Chen (2001) suggests that brand associations can be structured around two perspectives, namely, product associations and organizational associations. Product
associations focus on the performance of the product (Aaker, 1996; Lassar et al., 1995). Customers evaluate the product by whether the product perform the functions for which it is designed but the reasons to buy this brand over the competitors (Aaker, 1996) such as brand’s fault-free and long-lasting physical operation and flawlessness in the product’s physical construction (Lassar et al., 1995). Besides, consumers also link the symbolic attributes of a product that meet consumers’ needs for social approval, personal expression or self-esteem (Keller, 1993; Pitta and Katsanis, 1995) to the brand. The symbolic attributes includes social image of a brand (Lassar et al., 1995; Keller, 2003; McAdam and Leonard, 2003). CSR is important as the public is interested to know what, where, and how much brands are giving back to society. CSR is influencing the development of brands (Blumenthal and Bergstrom, 2003).

Aaker (1991), Keller (1993), Yoo et al. (2000) and Pappu et al. (2005) suggests that brand awareness and brand associations are highly correlated. Consumers have to be aware of the brand before they can develop a network of associations (Washburn and Plank, 2002).

**H2**: Brand awareness has a significant positive relationship with brand associations

**Brand awareness and brand loyalty**

Brand loyalty is one of the core components of brand equity and also positively and directly affected brand equity (Keller, 2003; Atilgan et al., 2005; Gil et al., 2007). Aaker (1991) defines brand loyalty as ‘the attachment that a customer has to a brand’. Several levels of brand loyalty have been described. Behavioural loyalty can be indicated by number of repeated purchases (Keller, 1998, 2003) or commitment to rebuy the brand as a primary choice (Oliver, 1997, 1999; Anselmsson et al., 2007). Cognitive loyalty which means that the consumers’ first choice when the need to make a purchase decision arises (Keller, 1998, 2003). Another indicator of loyalty is the customer’s willingness to pay higher price for a brand in comparison with another brand offering similar benefits (Aaker, 1996; Chaudhri and Holbrook, 2001; Anselmsson et al., 2007). Loyalty begins with the customer’s becoming aware of the product (Aaker, 1991). In this way, brands with higher level of awareness would be more likely to be purchased (Yasin et al., 2007). Thus, consumers tend to buy a recognized brand than an unfamiliar brand. Awareness can affect consumers’ perceptions which lead to different brand choice and eventually brand loyalty (Aaker, 1996; Keller, 2003). Furthermore, high levels of brand awareness decrease vulnerability to competitive marketing actions (Keller, 1993, 2003). Thus, the hypothesis can be constructed as:

**H3**: Brand awareness has a significant positive relationship on brand loyalty

**Perceived quality and brand associations**

Perceived quality and brand associations are important dimensions in Aaker’s (1991) brand equity framework. Both of the dimensions differentiate the brand in consumer’s mind and provide a reason to buy. Perceived quality is a type of association that includes the perceptions of brand quality as one of its component (Aaker and Joachimsthaler, 2000). This relationship is summarised as:

**H4**: Perceived quality has a significant positive relationship on brand associations

**Perceived quality and brand loyalty**

Customers’ perception of quality will be associated with their loyalty as well as repeat purchase (Pappu et al., 2005; Delong et al., 2004). The more brand loyalty a customer is, the more he/she perceived the brand as superior. High quality brand provides repurchase motivation and influences brand loyalty through perceptions of price-value and customer satisfaction (Cronin et al. 2000). Kayaman and Arasli (2007) suggested that perceived quality was positively linked to repurchase behaviour and loyalty. This relationship is summarised in the following hypothesis:

**H5**: Perceived quality has a significant positive relationship on brand loyalty

**Brand associations and brand loyalty**

Associations represent the basis for purchase decision and for brand loyalty (Aaker, 1991). One of the preliminary steps in maintaining customer loyalty is to build and sustain positive brand image (associations) (Kayaman and Arasli, 2007). Gladden and Funk (2001) suggested that there is a link between brand loyalty and brand associations. This study examine whether this relationship exist:

**H6**: Brand associations has a significant positive relationship on brand loyalty
Table 1. Reliability analysis of the dimensions of brand equity.

<table>
<thead>
<tr>
<th>Brand equity dimensions</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Awareness</td>
<td>0.710</td>
</tr>
<tr>
<td>Brand Associations</td>
<td>0.876</td>
</tr>
<tr>
<td>Brand Loyalty</td>
<td>0.840</td>
</tr>
<tr>
<td>Perceived Quality</td>
<td>0.897</td>
</tr>
</tbody>
</table>

METHODOLOGY

Research design

The data collection instrument is a structured questionnaire. A pool of 30 items compiled from the literature was incorporated in the questionnaire. Five items were included for brand awareness, sixteen for brand association, five for perceived quality and four for brand loyalty. A likert-scale of 1 to 5 was adopted for all the brand equity measures with the anchors ‘strongly disagree’ (1) and ‘strongly agree’ (5). The items were developed with reference to the empirical studies of Yoo and Donthu (2001) and Lassar et al. (1995). The reason for referring to their scale development studies is that their scales are the most commonly accepted measure of customer-based brand equity (Washburn and Plank, 2002). The distribution of the questionnaires was around major cities in Malaysia, especially cities around Klang valley like Kuala Lumpur and Selangor area, Kuching, and Kota Kinabalu. The distributions of the questionnaire were by email and face-to-face method. The study was conducted based on Malaysian brands. Respondents were requested to name and evaluate one Malaysian brand of product that they had bought or used in the past year. The real consumers who had used the products in the past year were used in this study. The data was collected via a mall-intercept survey of shopping malls in the selected metropolitans in Malaysia. A 2-stage of cluster sampling was employed. Five metropolitans were randomly chosen as primary sampling units. 550 questionnaires were drafted and 489 usable questionnaires completed for a return rate of 89%. Sekaran (2000) highlighted that the size of samples would be 10 to 20 samples. Another opinion has suggested that a homogeneous group should exceed 30 participants (Delbecq et al., 1975; Birdir and Pearson, 2000). Malhotra (1999) suggested that the minimum sampling size for problem solving research is 200 samples. Thus, 489 respondents have been considered as sufficient enough in this study.

Demographics

The sample indicates a balance between males (51.7%) and females (48.3%). Majority of the respondents are those age 35 (60%) and monthly income of RM 3,001-RM 5,000 (41%). With respect to the regions respondents currently stay, majority is from Sabah and Sarawak (32.5%) and followed by central region (19.8%) and southern region (19.2%). The breakdown of the study in terms of regions could be considered representative of the population of Malaysia since most of the regions are represented in the sample.

RESULTS AND ANALYSIS

Validity and reliability

To establish construct validity, the measures were evaluated for conformity to the empirical studies as well as theoretical definitions. In order to test internal reliability of the overall scale, Cronbach’s alpha scores were evaluated. An alpha of 0.7 or above is regarded as acceptable for assuming homogeneity of items (Burns, 2008). This scale produced an overall reliability coefficient (Cronbach’s α) of 0.946 which is highly acceptable. Table 1 demonstrates that all reliability coefficients were deemed acceptable, since they exceeded the benchmark of 0.7.

Descriptive statistics

The means and standard deviation of all the study variables are presented in Table 2. All the variables exceed 2.5 out of 5.0. Thus, this study has proved that all variables are very important in measuring brand equity.

Correlations

A set of Pearson correlations were computed to determine if there were any significant relationships between brand awareness, brand associations, brand loyalty and perceived quality. Table 3 demonstrates the correlation coefficients among the study variables. The correlation coefficient ranged from 0.65 to 0.79. None of the correlation coefficients were equal to or above 0.9, providing empirical support for discriminant validity.

Test of relationship between brand awareness, perceived quality, brand associations and brand loyalty

The correlation coefficient between brand awareness, perceived quality, brand associations and loyalty was 0.75, 0.67 and 0.65 accordingly (p-value = 0.000 < α = 0.01). Therefore, it can be concluded that there is a significant positive relationship between brand awareness, perceived quality, brand associations and loyalty. This implied that higher brand awareness and higher perceived quality, brand associations and loyalty.

Test of relationship between perceived quality, brand associations and loyalty

The correlation coefficient between brand awareness, brand associations and loyalty were 0.78, and 0.75 (p-value = 0.000 < α = 0.01). Therefore, it can be concluded
Table 2. Descriptive statistics analysis.

<table>
<thead>
<tr>
<th>Brand awareness</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can recognise this brand among competing brands.</td>
<td>3.60</td>
<td>1.19</td>
</tr>
<tr>
<td>This brand is the only brand recalled when I need to make a purchase decision on the product.</td>
<td>3.16</td>
<td>1.08</td>
</tr>
<tr>
<td>This brand comes up first in my mind when I need to make a purchase decision on the product.</td>
<td>3.12</td>
<td>1.14</td>
</tr>
</tbody>
</table>

**Perceived quality**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>This brand is of good quality.</td>
<td>3.40</td>
<td>1.01</td>
</tr>
<tr>
<td>I can expect superior performance from this brand.</td>
<td>3.38</td>
<td>1.00</td>
</tr>
<tr>
<td>The brand is made so as to work trouble free.</td>
<td>3.33</td>
<td>0.99</td>
</tr>
<tr>
<td>This brand is safe to use/consume.</td>
<td>3.51</td>
<td>0.99</td>
</tr>
<tr>
<td>During use, the brand is highly unlikely to be defective.</td>
<td>3.37</td>
<td>0.98</td>
</tr>
<tr>
<td>This brand is very reliable.</td>
<td>3.38</td>
<td>0.91</td>
</tr>
<tr>
<td>I don’t have difficulties in finding the information that I need from the label of the package.</td>
<td>3.33</td>
<td>1.02</td>
</tr>
</tbody>
</table>

**Brand associations**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have difficulty in imagining this brand in my mind.</td>
<td>2.40</td>
<td>1.29</td>
</tr>
<tr>
<td>I can quickly recall the logo of this brand.</td>
<td>3.40</td>
<td>1.03</td>
</tr>
<tr>
<td>In its status and style, this brand matches my personality.</td>
<td>3.24</td>
<td>1.02</td>
</tr>
<tr>
<td>The brand is well regarded by my friends.</td>
<td>3.22</td>
<td>1.02</td>
</tr>
<tr>
<td>I am proud to own a product of this brand.</td>
<td>3.14</td>
<td>1.03</td>
</tr>
<tr>
<td>I consider the company and people who stand behind the brand are very trustworthy.</td>
<td>3.20</td>
<td>1.00</td>
</tr>
<tr>
<td>The brand is well priced.</td>
<td>3.35</td>
<td>0.99</td>
</tr>
<tr>
<td>Considering what I pay for the brand, I get much more than my money’s worth.</td>
<td>3.29</td>
<td>1.25</td>
</tr>
<tr>
<td>This brand is different compared to other brand(s) of the product in terms of the colour/flavour/form/appearance.</td>
<td>3.14</td>
<td>0.98</td>
</tr>
<tr>
<td>I can get the same benefits from this brand when compared to the imported brand(s).</td>
<td>3.20</td>
<td>0.93</td>
</tr>
<tr>
<td>I buy/use this brand of product because it is a Malaysian brand.</td>
<td>3.06</td>
<td>1.15</td>
</tr>
<tr>
<td>The brand’s country of origin/manufacture is important in choosing this product.</td>
<td>3.23</td>
<td>1.03</td>
</tr>
<tr>
<td>I consider the company and people who stand behind the brand have the expertise in producing the product.</td>
<td>3.30</td>
<td>0.93</td>
</tr>
<tr>
<td>I believe that this company and people who stand behind the brand are socially responsible.</td>
<td>3.29</td>
<td>0.96</td>
</tr>
<tr>
<td>I believe that this company does not take advantage of consumers.</td>
<td>3.31</td>
<td>0.96</td>
</tr>
<tr>
<td>I believe that this company is contributing to the society.</td>
<td>3.37</td>
<td>0.95</td>
</tr>
</tbody>
</table>

**Brand loyalty**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>After using the brand, I grow fond of it.</td>
<td>3.31</td>
<td>0.93</td>
</tr>
<tr>
<td>I will definitely buy this brand of product again.</td>
<td>3.33</td>
<td>1.02</td>
</tr>
<tr>
<td>I will definitely buy this brand of product although its price is higher than the other brand(s) of the product that offer similar benefits.</td>
<td>3.05</td>
<td>1.08</td>
</tr>
<tr>
<td>I will not buy other brands, when this brand is available at the store.</td>
<td>2.94</td>
<td>1.12</td>
</tr>
</tbody>
</table>

that there is a strong positive relationship between brand awareness, brand associations and loyalty. The higher brand awareness, the higher brand associations and loyalty.

**Test of relationship between brand associations and brand loyalty**

The correlation coefficient between brand associations and brand loyalty was 0.79 (p-value = 0.000 < α = 0.01). Therefore, it can be concluded that there is a significant strong positive relationship between brand associations and brand loyalty. Thus, higher brand awareness and higher perceived quality

**DISCUSSION**

The interrelationship between the individual dimensions
of customer-based brand equity and applicability of the suggested customer based brand equity scale has been examined in this study.

The scale comprises 30 variables representing the four dimensions of brand awareness, perceived quality, brand associations and brand loyalty.

All six research hypotheses generated for this study were found to be supported. This study found that all dimensions of brand equity are inter-related and reliable. This can be referred to analysis has been done.

1. Reliability analysis for all dimensions is at least 0.7, which is at the level of recommended value.
2. The mean score for all dimensions is at least 2.5 out of 5.0.
3. All dimensions have a positive correlation and it is significant at the 0.01 level, the correlation for all dimensions are either in between moderate positive correlation (0.50) and strong positive correlation (0.75), and strong positive correlation (0.75) and perfect positive correlation (1.00).

These results contributed to the empirical confirmation of the relevance in the brand equity dimensions with the existing empirical research (Aaker, 1996; Keller, 1993; Yoo and Donthu, 2001; Pappu et al., 2005). Thus, this study clearly demonstrates that all the dimensions of customer-based brand equity need to be considered while evaluating a brand. In other words, the companies have to manage all the dimensions to enhance brand equity. This suggest that if a consumer aware of the brand and also expect that the brand to have high levels of quality, consumer is likely to be more loyal to the brand.

From a managerial standpoint, brand managers' primary task is to maximise and leverage brand equity to increase brand value. The proposed framework provides brand managers with a more comprehensive understanding of the component parts than has been presented in the literature. Brand equity scale gives managers a structured approach for formulating their branding strategies. It illustrates how different components and their relations contribute to branding strategies effectiveness. However, brand equity assessment is challenging for several reasons. This is because of the global technology market has shown positive volume development and slightly decreasing value trends. The product quality and competition within the market reached a very high level. Hence, differentiation from competition on product quality alone became increasingly hard, whereas the brand increasingly evolved as a major driver of success (Burmann et al., 2009).

REFERENCES


<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Brand awareness</th>
<th>Perceived quality</th>
<th>Brand associations</th>
<th>Brand loyalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.30</td>
<td>0.90</td>
<td>1.00</td>
<td>0.75</td>
<td>0.78</td>
<td>1.00</td>
</tr>
<tr>
<td>3.39</td>
<td>0.78</td>
<td>0.75</td>
<td>1.00</td>
<td>0.78</td>
<td>1.00</td>
</tr>
<tr>
<td>3.20</td>
<td>0.61</td>
<td>0.67</td>
<td>0.78</td>
<td>0.78</td>
<td>1.00</td>
</tr>
<tr>
<td>3.16</td>
<td>0.85</td>
<td>0.85</td>
<td>0.75</td>
<td>0.79</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Correlation is significant at the 0.01 level (2 tailed)
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